Florida International University
The Tenth Annual College of Education and Graduate Student Network Research Conference
Saturday, April 23, 2011

The Cornerstones of the College of Education: Honoring Inquiry, Promoting Mentoring, and Fostering Scholarship

The purpose of the Florida International University Annual College of Education and Graduate Student Network Research Conference (COERC) is to enhance the existing research culture. The conference provides a meaningful vehicle for the preparation, mentorship, and presentation of scholarly work by students, faculty, and alumni.
COERC 2011

Proceedings of
The Tenth Annual College of Education and Graduate Student Network Research Conference

April 23, 2011
Florida International University
Miami, Florida USA
Proceedings of
The Tenth Annual College of Education and Graduate Student Network
Research Conference

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Acknowledgements

The FIU College of Education and Graduate Student Network Research Conference Steering Committee would like to thank the College of Education faculty and students for supporting the tenth annual COE research conference. Special thanks must go to the Office of the Dean under the guidance of Dean Delia Garcia for their sponsorship and generous support of the tenth annual conference and for the invaluable work of Maria Gonzalez and Maria Tester. Maria Tester has been assisting with the logistics of the conference for ten years. We would never have solved many logistical problems without the support of Maria.

The Graduate Student Network (GSN) has assisted the conference for several years by volunteering at the registration table, putting together packets, and other odd jobs. For the fifth year, there will be an award for the best student paper sponsored by the Graduate Student Network. This is the second year of our full partnership with GSN. In addition to volunteering to assist with registration, set up, and assorted committees, GSN is sponsoring breakfast. This organization’s support has been crucial to the success of the conference. Thank you GSN!

Teresa Lucas and Maria Plakhotnik facilitated the review process. This includes locating faculty to review, prompting reviewers to return reviews, and doing additional reviews when needed. Teresa has been invaluable in securing monitors, reviewers, and assisting with getting the poster review process up and running. Special thanks must go to Adriana McEachern and Sarah M. Nielsen who have worked on behalf of this conference since its inception in 2000-2001 and the first conference in 2002. Adriana continues to support the conference by chairing the sponsorship committee, the awards committees, and helping with logistics. Filomena Martin and Adriana McEachern continued the campaign to secure sponsors. They secured about $360 dollars in donations and additional gifts for our raffle.

Maria S. “Masha” Plakhotnik has stepped up and volunteered to assist with the review and selection committee, program planning, marketing, and proceedings editing. Masha organizes and records all submissions, sees that papers are tracked during the review process, and monitors accepted papers and authors responses to reviewers’ comments. Masha, Sarah, Teresa, and Adriana are the core of the steering committee; their dedicated service has contributed much to the professional conference we put on each year.

Masha, Sarah and Debbie edit every paper in the proceedings. They work with authors to address grammar, formatting, APA, and sentence structure. Their work contributes to the high quality of the papers published each year in the proceedings. This year we have a new committee, the poster review and selection committee, chaired by Diana Valle-Riestra. The members include Liz Cramer, Teresa Lucas, Masha Plakhotnik, and Chaundra Whitehead. Chaundra has assisted this process by processing the poster submissions, assisting with the review process, and other duties supporting the committee’s work.

Without the continuing support of so many, this conference would not exist, so thank you again for making our tenth annual conference so successful!

Tonette S. Rocco, Chair, COE GSN Research Conference Steering Committee
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Creating Latino Access to a Valuable Education (CLAVE). The recently awarded project involves 85 Hispanic students in the completion of graduate degrees in Urban Education and Higher Education. The project has been conceptualized based on the identified professional development needs of teachers and administrators in the district and our local student population in Miami Dade County Public Schools. http://education.fiu.edu/research_and_grants.html

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Dr. Tonette S. Rocco
Dr. Patricia Barbeta
Dr. Delia Garcia
Keynote Speaker

David Lawrence, Jr.

“Making Engagement Personal”

David Lawrence Jr. retired in 1999 as publisher of The Miami Herald to work in the area of early childhood development and readiness. He is president of The Early Childhood Initiative Foundation and “University Scholar for Early Childhood Development and Readiness” at the University of Florida. Gov. Charlie Crist named him to the Children’s Cabinet in 2007. In 2002 he led the campaign for The Children’s Trust, a dedicated source of early intervention and prevention funding for children in Miami-Dade – with an 85% reaffirmation from the voters in 2008. He is the “founding chair.” Named by Gov. Jeb Bush to the Florida Partnership for School Readiness, he chaired that oversight board twice. He serves on the board of the Foundation for Child Development in New York and the Executive Advisory Board for the Frank Porter Graham Child Development Institute of the University of North Carolina-Chapel Hill. In 2002-3 he chaired the Governor’s Blue Ribbon Panel on Child Protection. In 2002, he was a key figure in passing a statewide constitutional amendment to provide pre-K for all 4 year olds. He is a board member and former chair of the Early Learning Coalition of Miami-Dade and Monroe. The David Lawrence Jr. K-8 Public School opened in 2006 across from the north campus of Florida International University. A fully endowed chair in early childhood studies is established in his name at the University of Florida College of Education.

Before coming to Miami in 1989, he was publisher and executive editor of the Detroit Free Press. Previously he was editor of the Charlotte Observer, and earlier in reporting and editing positions at four newspapers. (During his tenure as Miami Herald publisher, the paper won five Pulitzer Prizes.)

He is a graduate of the University of Florida and named "Outstanding Journalism Graduate" and subsequently from the Advanced Management program at the Harvard Business School. In 1988, he was honored with Knight-Ridder's top award, the John S. Knight Gold Medal. His 12 honorary doctorates include one from his alma mater, the University of Florida. His national honors include the Ida B. Wells Award "for exemplary leadership in providing minorities employment opportunities” and the National Association of Minority Media Executives award for "lifetime achievement in diversity." His writing awards include the First Amendment Award from the Scripps Howard Foundation and the Inter American Press Association Commentary Award. He chaired the national Task Force on Minorities in the Newspaper Business, was the 1991-92 president of the American Society of Newspaper Editors and the 1995-96 president of...
the Inter American Press Association. He was inducted into the Florida Newspaper Hall of Fame in 2010.

He has served the Miami Art Museum, United Way and the New World School of the Arts as chair, and is a life trustee of the University of Florida Foundation and a member of the national board of the Everglades Foundation. He was the local convening co-chair of the 1994 Summit of the Americas. And he co-founded a non-profit vocational-technical school in Port-au-Prince, Haiti. He chairs the University of Florida Regional Council.

He and Roberta, a master’s graduate in social work from Barry, live in Coral Gables and have 3 daughters, 2 sons and 5 grandchildren. His honors include: “Family of the Year” from Family Counseling Services and “Father of the Year” by the South Florida Father’s Day Council. Last year he was been honored with “Humanitarian of the Year” awards from both the American Red Cross and the Beacon Council as well as with the Henry M. Flagler Award for Visionary Leadership from the Greater Miami Chamber of Commerce. This year he and his wife Roberta were honored with Barry University’s Laudare Medal for Outstanding Service. Nationally, he has been honored with the American Public Health Association Award of Excellence, the Lewis Hine Award for Children and Youth and the “Children’s Champion” award from the National Black Child Development Institute.
Lunch Panel Discussion

“Engagement of Communities and Schools: A Two Way Street”

A panel discussion with

President Mark Rosenberg, Dean Delia Garcia, and Superintendent Alberto Carvalho

Mark B. Rosenberg is the fifth president of Florida International University, one of the 25 largest universities in the nation. A political scientist specializing in Latin America, Dr. Rosenberg is the first FIU faculty member to ascend to the university’s presidency; he has more than 30 years of higher education experience. Under his leadership as president, FIU has increased enrollment to almost 44,000 students and now boasts Sun Belt Baseball and Football Championships, as well as a Football Bowl Championship.

From 2005 to 2008, Dr. Rosenberg served as chancellor for the Board of Governors of the State University System of Florida. As chancellor, Dr. Rosenberg led the system’s strategic development and financial planning and policy initiatives, working closely with Gov. Charlie Crist and the legislature to secure support for SUS priorities. The SUS currently enrolls more than 300,000 students, employs more than 12,000 faculty and operates a $9.3 billion budget. Prior to becoming chancellor, Dr. Rosenberg was integrally involved in the expansion and development of FIU into a major public research university. As Provost and Executive Vice President for Academic Affairs from 1998 to 2005, Dr. Rosenberg spearheaded the establishment of a law school in 2002 and a medical school in 2006. Under his leadership, FIU increased enrollment, implemented major campus construction projects, and was invited to join the select national honor society Phi Beta Kappa. Dr. Rosenberg was also instrumental in moving FIU into the top tier of Carnegie Foundation research universities.

Dr. Rosenberg’s academic career began at FIU in 1976 as an assistant professor of political science. In 1979, he founded the FIU Latin American and Caribbean Center, which today is one of the nation's premier federally supported research and teaching centers focusing on the region. Dr. Rosenberg subsequently served as the Founding Dean of the College of Urban and Public Affairs and Vice Provost for International Studies. He has also been a Visiting Distinguished Research Professor at The Peabody College of Vanderbilt University and a Visiting Professor at the Instituto Tecnologico de Monterrey (ITESM) in Mexico.

Dr. Rosenberg earned a B.A. in 1971 from Miami University of Ohio and a Ph.D. in Political Science with a graduate certificate in Latin American and Caribbean Studies from the University of Pittsburgh in 1976. He has written or co-edited seven books and numerous scholarly articles in leading journals. His latest book, The United States and Central America: Geopolitical Realities and Regional Fragility (2007), is a Harvard University project co-authored with Luis Guillermo Solis of Costa Rica. Governmental and media organizations have frequently sought Dr. Rosenberg's expertise on Latin America. He is a member of the Council on Foreign Relations, has testified before Congress numerous times, and has served as a consultant to the Department of State and the U.S. Agency for International Development.
Firmly committed to community service, Dr. Rosenberg has also been active with the Jewish Federation of Greater Miami and was a founding contributor to the Organization for Leadership Advancement in Miami. He serves on the Board of Governors of the Greater Miami Chamber of Commerce and on the South Florida Commission on the Nursing Shortage, the Board of Directors for the Holocaust Memorial as part of the Greater Miami Jewish Federation, and the Board of Directors of the Coalition of Urban Serving Universities (USU). Most recently, he was appointed to serve as Treasurer of the President's League for the Sun Belt Conference, on the Board of Directors of City National Bank of Florida, on the Board of Directors of Community Anti-Drug Coalitions of America (CADCA), as member of the Florida Task Force on Educational Excellence and on the Executive Committee for the Science and Mathematics Teacher Imperative (SMTI) as part of the Association of Public and Land-grant Universities (APLU).

Dr. Rosenberg and his wife of 36 years, Rosalie, are members of Temple Menorah in Miami Beach. Both of their children, Benjamin and Ginelle, are students at FIU.

**Delia C. Garcia, Ed.D.,** is Dean and Associate Professor of the College of Education at Florida International University. Prior to her appointment, she served as Interim Dean, as well as Chairperson of the Departments of Educational Leadership and Policy Studies and Leadership and Professional Studies.

Dr. Garcia has been the recipient of federal, state, and foundation grants totaling more than $12 million, focusing on urban teacher education and family literacy efforts. Her teacher education projects have generated tuition scholarships for more than 250 teachers in the Miami-Dade County Public Schools (MDCPS) providing a means for the completion of a graduate degree in urban education. Through her work with family literacy programs, a model of family education for linguistically and culturally diverse populations (FLASH) has been created. The FLASH program aims to increase the participation of linguistically and culturally diverse families in the educational process of their children by improving their English/literacy skills, enhancing their abilities to work with their children in instructional activities, and assisting them navigate the educational system in the United States. The program was recognized by the U.S. Department of Education as an Academic Excellence project and its model has been replicated nationwide. The program has served the needs of over 35 local schools in the area of parent involvement, reaching over 3,000 families in the wider South Florida community. Dr. Garcia has been a leader in the area of community engagement for the past 30 years, forging university-school partnerships that address community needs and that focus on problem-solving.

Recently, Dr. Garcia was awarded a U.S. Department of Education, Office of Post-Secondary Education Title V grant, in the amount of $2.8 million. The five-year grant will support FIU, as a Hispanic-serving institution, to expand its capacity to serve Hispanic-Americans obtain greater access to graduate educational opportunities. Through this program, the College of Education is able to offer tuition scholarships to teachers and administrators from the MDCPS in the pursuit of master’s and doctoral degrees as well as enhance student support services and mentoring opportunities for all graduate students in the College.
Dr. Garcia has published in the areas of family involvement, teacher and parent efficacy, and urban teacher preparation. She has also developed curriculum guides for teacher education in the areas of home school relations, adult literacy, and English as a Second Language (ESL). She has exercised leadership roles in professional organizations in her field, including receiving gubernatorial appointments to Florida’s State Advisory Committee in the area of family literacy, serving as President of the Bilingual Association of Florida (BAF) for over five years, and chairing state and district advisory committees that focused on issues of narrowing the achievement gap in our schools, and the preparation of adult educators in the state. She possesses a Doctor of Education degree in Administration and Supervision from Florida International University and a Bachelor and Master of Education degrees in Curriculum and Instruction from the University of Miami.

Alberto M. Carvalho is Superintendent of Miami-Dade County Public Schools (MDCPS), the nation’s fourth largest school system, serving a diverse student body of over 400,000 in PreK-Adult. MDCPS has an annual budget of almost $4.3 billion; 53,000 employees; and over 47.5 million square feet of facilities. A nationally recognized expert on education reform and finance, as well as an outspoken advocate for high quality education for all students, Mr. Carvalho became Superintendent in September 2008.

Under Mr. Carvalho’s leadership, MDCPS’ business operations were restructured, resulting in an increase in financial reserves of over 2000 percent, despite the national economic downturn. Insisting on transparency in the budgeting process, he restored public trust and community support for Miami-Dade’s public schools. By bringing a renewed focus to the classroom, student performance has improved significantly. In 2010, the District posted its highest high school graduation rate ever and through a data-driven approach to school performance improvement, decreased the number of “F” high schools in Miami-Dade from 13 to one. In addition, a majority of schools earned a grade designation of “A.” MDCPS students consistently have outperformed their national peers on the 2009 Reading, Mathematics and Science NAEP, a measure considered to be the gold standard of performance accountability.

A leader in innovation, Mr. Carvalho is spearheading the transformation of education, pushing for the migration from textbooks to digital content and is developing cutting edge educational environments to meet the demands of today’s learners. He has been selected to lead statewide committees charged with charting the future of public education in Florida. He successfully chaired the Governor’s Race to the Top (RTTT) Working Group which led to Florida’s successful bid for RTTT funding resulting in $700 million for Florida’s schools. He was also tapped as chair of Florida’s Task Force on Educational Excellence which has been charged with crafting the framework for the reform efforts driven by Race to the Top. Most recently, Mr. Carvalho was recognized by the Greater Miami Chamber of Commerce as the 2010 “Visionary Leader of the Year” award and by eSchool News as one of the Top 10 Tech-Savvy Superintendents in the U.S. in 2011. Under his leadership, Miami-Dade County Public Schools has been selected as one of four finalists in the nation for the prestigious Broad Prize for Urban Education. He is the President-Elect of the Association of Latino Administrators and Superintendents (ALAS). A versatile leader, Mr. Carvalho is the only superintendent in the nation who is the self appointed principal of two award-winning schools – the Primary Learning Center and the iPrep Academy - and teaches Physics in selected high schools across the district. He has been featured on CNN,
The Lorraine R. Gay Award for Excellence in Research and Scholarship

The purpose of the award is to acknowledge, in the name of L. R. Gay, outstanding research scholarship on the part of students and their supporting faculty in the College of Education of FIU.

L. R. (Lorrie) Gay, the founding professor of educational research for the FIU College of Education, was dedicated to students, to the rigorous pursuit of educational excellence and to research scholarship. She chaired the first doctoral dissertation awarded in the College of Education. She published textbooks in educational research, tests and measurement, and educational psychology. They were published as L.R. rather than Lorrie because the publisher felt a female author would not be as accepted as a male, so initials were used. The educational research text became the best-selling book of its kind and her publisher estimates that 1 out of every 2 students in the field has used this text.

The recipients of this award walk in the shadow of someone who cared for every student, and fought to make our course in educational research the best of its kind because she knew this was the way to best serve students. If you have taken the course you know what it requires and as you realize the skills you have attained through her efforts, you appreciate her efforts to this day, years after her passing.

It is anticipated that one award will be presented annually to the student whose research best exemplifies Lorrie’s high standards. In the case of multiple authors for the same paper, multiple awards will be bestowed.

The awards are determined based upon papers submitted for presentation at the College of Education and Graduate Student Network Annual Research Conference. Award decisions are determined by the judgment of the faculty members serving as the L. R. Gay Award Sub-Committee. Members of this sub-committee are to be selected by the entire Steering Committee. The current members of the L. R. Gay Award sub-committee are Adriana G. McEachern (Chair), Melody Whiddon, Gwyn Senokossoff, and Joy Blanchard.

L. R. Gay Award Recipients

2010    Martin J. Wasserberg, “I’m Trying To Bring the Scores of My School Up, Man!” Standardized Testing, Stereotypes, and High-Performing African American Elementary School Students
2009    Debra Mayes Pane, Reducing the Discipline Gap Among African American Students: Learning in Classroom Communities of Practice
2008    Antonio Delgado, Speaking Up: A Phenomenological Study of Student Perceptions of Being Silenced in their Higher Education Classrooms
2008    Tekla Nicholas and LeTania Severe, School Segregation, Educational Disparities, and Impacts on Haitian Youth in South Florida
2005    Victoria A. Giordano, A Professional Development Model to Promote Internet Integration into P-12 Teaching Practices
2004    Kandell Malocsay, The Effects of Cultural Distance on Student Socialization and Departure Decisions
2003    Sarah M. Nielsen, High Stakes and No Takers: The Impact of Florida Comprehensive Assessment Test (FCAT) Writing on Students’ and Teachers’ Perceptions of Writing
2002    Loraine Wasserman, The Effects of a Family-based Educational Intervention on the Prevention of Lead Poisoning in Children
The College of Education Graduate Student Network
Best Student Conference Paper Award

The College of Education Graduate Student Network (COE-GSN) was started by Debra Pane and Claudia Grigorescu in 2005 to unite graduate students and find ways to enhance the graduate student experience. During the last four years, GSN has held several fundraisers to support graduate student COE Research Conference (COERC) attendance, donate funds for those in need (e.g., Tsunami disaster relief), and provide a monetary award for best student presentations and best student papers at previous years COERC. GSN hosts workshops throughout the semester, invites guest speakers to its general meetings, and supports the needs of fellow graduate students through activities such as the GSN Dissertation Writing Group held in previous years. As a student-run organization, GSN hopes to continue the spirit of academia by fostering, supporting, and altogether creating a graduate student culture.

This year, GSN is giving an award for the Best Student Conference Paper 2011. Under the guidance of the GSN 2011-2012 President, Chaundra L. Whitehead, the GSN team conducted a blind review of all the student manuscripts and selected the winner based on research and writing guidelines developed by the GSN executive board and its members.

COE-GSN Award Recipients

2009 Debra Mayes Pane, Reducing the Discipline Gap Among African American Students: Learning in Classroom Communities of Practice
Barnes & Noble Best Faculty-Student Paper Award

The purpose of the award is to acknowledge, in the name of Barnes and Noble, outstanding scholarship on a paper written by a faculty-student(s) team and presented at the College of Education and Graduate Student Network Annual Research Conference.

It is anticipated that one award will be presented annually to a faculty-student team. In the case of multiple authors for the same paper, multiple awards will be bestowed.

The awards are determined based upon papers submitted for presentation at the College of Education and Graduate Student Network Annual Research Conference. Award decisions are determined by a panel of faculty and students serving as the Barnes & Noble Award Sub-Committee. Members of this sub-committee are to be selected by the entire Steering Committee. The current members of the Barnes & Noble Award sub-committee are Adriana G. McEachern (Chair), Melody Whiddon, Gwyn Senokossoff, and Joy Blanchard.

Barnes & Noble Award Recipients

2010  Maria I. Bendixen and Martha Pelaez, Effects of Contingent Maternal Imitation vs. Contingent Motherese Speech on Infant Canonical Babbling
### Moderators and Graduate Student Network Volunteers

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College of Education and GSN Research Conference Peer-Reviewed Papers
Social Learning Theory and Prison Work Release Programs

Vivian Astray-Caneda, Malika Busbee, and Markell Fanning
Florida International University, USA

Abstract: The authors’ review of literature about Bandura’s (1977) social learning theory and self-efficacy leads to implications on how this theory can positively affect prison work release programs and inmate post-release outcomes. Additionally, several causes of deviant behavior have been explained by social learning theory concepts.

Six hundred fifty thousand prisoners are released each year from federal, state, and private prisons into the communities of America (Coley & Barton, 2006). When these ex-inmates re-enter society, they seek employment, but with limited education and low literacy levels their prospects for becoming employed are reduced (Coley & Barton, 2006). A three-year study of 1,205 releases showed a strong positive relationship between prisoners obtaining education of any kind in prison and the reduction of recidivism (Haer, 1995). Because education has been shown to reduce recidivism, federal, state and private prisons offer correctional education classes to inmates. The most widely offered correctional education classes are Adult Basic Education, General Education Diploma (GED) preparation, and vocational training (Coley & Barton, 2006).

Career and vocational training programs have the longest tradition and are considered by many correctional experts to have the most potential for positive results (Snarr & Wolford, 1985). Many prisons work with local businesses to offer vocational training through work release programs where inmates learn a variety of job skills, by participating in on the job training situations. These training programs involve varying degrees of counseling and support for the inmates as well as close monitoring of the prisoners. These programs may include role models and mentoring programs to increase self-efficacy. Inmates participate in these programs to help prepare them for successful reintegration into society. The purpose of this paper is to review literature concerning social conditions which may have led to crime, work release programs, and aftercare. Furthermore, this paper applies the concepts of Bandura’s (1977) social learning theory to the process of prisoners participating in these programs.

Method

To conduct our research we searched for journal articles and books, which presented theoretical viewpoints of Social Learning Theory and self-efficacy as it relates to prison work release programs and recidivism. We were interested in journals which discussed social learning theory (Bandura, 1977) and self-efficacy in relation to adult education. We searched for information on the application of social learning theory to pre- and post-release prison educational programs. Additionally, we investigated journal articles which discussed how self-efficacy impacts post-release prison outcomes. We did our search in the educational research library of Florida International University, using the following descriptors: prison work release programs, social learning theory, self-efficacy and adults, Albert Bandura, prison vocational training programs, prison education, and recidivism.

Social Learning Theory

In an effort to prepare incarcerated persons for a successful re-entry into society, work release programs need to offer more than skill based training. Educational segments of the

http://coeweb.fiu.edu/research_conference/
program need to include pro-social behavior, so inmates can better understand the consequences of their actions (Listwan, Cullan, & Latessa, 2006). Social learning theory reinforces the idea that learning occurs within a social context. People learn from observing others’ behaviors and the outcomes of those behaviors. Albert Bandura, a pioneer and a major contributor to the field of social learning, explains that social learning is a continuous reciprocal interaction between cognitive, behavioral, and environmental influences. In addition, social learning theory combines both behavioral and cognitive philosophies to form Bandura’s theory of modeling, or “observational learning,” that states humans are able to control their behaviors through a process known as self-regulation (Bandura, 1991). Self-regulation involves three processes: self-observation, self-judgment, and self-response (Bandura, 1991). Self-observation is when individuals track their own behavior. Self-judgment deals with comparing their observations with standards set by society and themselves. Self-response is when individuals reward themselves either positively or negatively, depending on their own observation of their performance (Bandura, 1991). This paper theorizes that social learning theory, when incorporated as a component of work release programs, can have a positive influence on the reduction of recidivism.

Social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concepts as observational learning which has four components: attention, retention, motor reproduction, and motivation (Bandura, 1977).

1. **Attention**: Individuals cannot learn much by observation unless they perceive and attend significant features of the modeled behavior. An example would be, children must attend to what the aggressor is doing and saying in order to reproduce the model’s behavior (Allen & Santrock, 1993, p. 139).

2. **Retention**: In order to reproduce the modeled behavior, the individuals must code the information into long-term memory. For example, a simple verbal description of what the model performed would be known as retention (Allen & Santrock, 1993, p. 139). Memory is an important cognitive process that helps the observer to code and retrieve information.

3. **Motor reproduction**: The observer must learn and possess the physical capabilities of the modeled behavior. An example of motor reproduction would be to learn to ride a bike. Once the behavior is processed from attention and retention the observer must possess the physical capabilities to model the behavior (Allen & Santrock, 1993, p. 139).

4. **Motivation**: In this process the observer expects to receive positive reinforcements for the modeled behavior (Allen & Santrock, 1993, p. 139). Each of these components of social learning is used in an experiment done by Bandura called the Bobo doll experiment. Bandura believed that aggression is learned from three aspects: aggressive patterns of behavior are developed; second, what provokes people to behave aggressively; and third, what determines whether they are going to continue to resort to an aggressive behavior pattern on future occasions (Evan, 1989). The premises of social learning are that people learn from observing behaviors. The imitated behavior itself leads to reinforcing consequences. Many behaviors that we learn from others produce satisfying or reinforcing results (Bandura, 1977). Bandura combines both behavioral and cognitive philosophies to form his theory of modeling, or observational learning that states humans are able to control their behavior through a process known as self-regulation. Self-regulation exists when a person uses judgment by comparing their own observations with standards set forth by both society and
themselves (Bandura, 1977). Bandura’s shift from a purely behaviorist viewpoint to focus on motivational factors and self-regulatory mechanisms that contribute to person’s behavior have led to his recognition as father of the cognitivist movement (Evan, 1989). Social learning is a way for people to model behaviors from each other, either positive or negative, depending on their own observation of a performance.

Environmental experiences can also have an influence on social learning. Bandura (1977) reported that individuals living in areas with high crime rates are more likely to act violently than individuals living in areas with low crime rates. This is similar to the theory of Shaw and McKay’s social disorganization. They believed that a neighborhood surrounded by culture, conflict decay and insufficient social organization was a major cause of criminality (Bartollas, 1990). People are both products and producers of their environment. They tend to select activities and associates from the vast range of possibilities in terms of their acquired preferences and competencies (Bandura & Walters, 1959; Bullock & Merrill, 1980; Emmons & Diener, 1986). Human expectations, beliefs, emotions, and cognitive competencies are developed and modified by social influences that convey information and activate emotional reactions through modeling, instruction, and social persuasion (Bandura, 1986). Inmates in prison are there because of some type of deviant behavior they have modeled from their environment before going to prison. People tend to model behaviors from others whether it is good or bad, most criminals model deviant behaviors. Social learning theorists have indicated that crime is a product of learning values and aggressive behaviors linked with criminality (Sutherland, 1993). Social learning can have a negative effect in some cases due to certain situations. The prison environment can be an environment of negativity because everyone there has committed a crime. Within the environment of the prison, there can also be opportunities for inmates to engage in some positive social learning through work release programs that provide them with an education and job skills, so they can reintegrate back into society once they are released.

**Work Release and Vocational Training Program Challenges**

Prison work release programs face many challenges in assisting prisoners in their transition from a world of prison life into a world where they are a productive part of a community. This section introduces the challenges prisoners face in terms of educational levels, environmental factors, and substance abuse.

**Education**

One challenge work release programs encounter is increasing the education level of prisoners. Prisoners typically have lower education levels than the national norm. These low education levels make it difficult to provide inmates with the necessary job skills to gain employment, where they can receive sufficient pay to support themselves and possibly their families (Bushway, 2003). Examining the issue of education through social learning theory points out that low education levels among prisoners exist because many prisoners had role models who had low education levels. The application of social learning theory would suggest that prison work-release programs provide prisoners with role models, who have education levels that meet the national norm. Additionally, a mentor who has achieved these educational goals could enhance inmates’ prospects for success by increasing self-efficacy. Goals and self-efficacy can be affected by interactions with others (Goto & Martin, 2009)

**Environment**

Another challenge work release programs face is many prisoners come from communities where the entire community atmosphere is one of being involved with illegal work (Wilson,
In this environment, the prisoner’s association with their peers may have been one of differential association which produced deviant behavior. After release from prison, ex-inmates may be returning to the same community and peers who enabled their previous illegal behavior (Listwan, Cullen, & Latessa, 2005). Social Learning Theory states people imitate other people, with whom they have close contact; therefore, close contact with peers who have demonstrated criminal behavior is a contributing environmental factor which lead to the prisoner’s original criminal behavior. When ex-inmates return to an environment where they have close contact with peers who demonstrate criminal behavior, that contact could lead to recidivism. To overcome this situation, prison work release programs would need to place ex-inmates in communities, where legal work is the norm. Aftercare is an important step in reducing recidivism. Ex-inmates often begin their re-entry into society with good intentions but as months go by and social support and services dwindle, they tend to relapse to their previous criminal tendencies (Listwan, Cullen, & Latessa, 2005).

An additional challenge for prison work release programs is dealing with motivation on the part of inmates to participate in programs, and to seek and hold jobs (Bushway, 2003). An environmental factor for increasing positive motivation for prisoners would be helping them gain the ability to reproduce the behavior of continued attendance in work release programs. As social learning theory states, to model behavior, one must have the ability to reproduce the desired behavior. A psychological factor to increase motivation would be to instill in prisoners an intrinsic value for staying in the program and continuing on to long term employment. For prisoners to gain both the environmental and psychological factors needed to maintain motivation to continue participation in work release programs, prisoners would need to alter their ideas about work release programs. Inmates could learn new information about behavior pertaining to work release programs from observing other people’s participation in similar programs.

Moreover, social learning theory advocates reward as a means of reinforcement to increase motivation. External reinforcement tactics, in the form of certificates for work accomplished and “student of the week” awards, have met with success when used by the California Department of Corrections (Thomas, 2003). People will avoid behavior which results in negative consequences, but will engage in behavior they feel will have a positive outcome. For this aspect of social learning theory to have an effect on motivation, prison work release programs need to supply reinforcement to inmates in the form of giving them information about the success of ex-inmates who have been through work release programs and successfully reentered society. Additionally, for prisoners to feel there is a positive outcome to their training, work release programs need to teach not only the skills inmates require to seek and keep a job but also the ability to use resources related to employment (Rakis, 2005). To enhance positive motivation for prisoners to participate in work release programs, prisoners should be empowered to succeed by ensuring that needed documentation to apply for jobs after prison release is available for them. Identification documents such as birth certificates and social security information, which is needed for employment is often not available upon the prisoner’s release (Rakis, 2005). The lengthy process of procuring these documents could become part of the prisoner release process (Rakis, 2005). By using external and internal reinforcement tactics, intrinsic motivation of inmates to complete work release programs and seek and maintain employment could increase.

**Substance abuse**

Substance abuse is a major challenge prisons deal with in work release programs.
On a self-report survey of inmates, 59 percent reported using drugs within one month prior to incarceration and 28 percent reported using alcohol daily within the year prior to their incarceration (Petersilia, 2005). Programs to help prisoners cease their drug and alcohol addiction are important as research shows that when prisoners complete residential drug abuse programs, it has a positive effect on the reduction of recidivism (Pelissier, et al., 2001). Furthermore, prisoners who have an addiction to drugs or alcohol will not benefit from learning job skills (Bushway, 2003). Prisoners who are addicted to drugs or alcohol came from environments where other people were addicted to drugs or alcohol; therefore, prisoners in substance abuse programs need drug free mentors as role models. Successfully completing substance abuse programs puts prisoners in the position of being able to use the skills they learn in work release programs. Social learning theory’s three steps involved with self-regulation could be incorporated into current prison residential substance abuse programs. Through guidance from counselors and mentors, prisoners could go through a process of self-observation. When given information about substance abuse and the harmful effects of addiction, prisoners could proceed to applying this knowledge to judge themselves. Finally, when given tools to quit addiction, both physically and emotionally, prisoners could move into the phase of self-response.

Social learning theory helps to bring into focus the causes which may have contributed to deviant behavior patterns in prisoners. Knowing these contributing factors to deviant behavior can provide prison policy makers with ideas to institute positive program changes, which incorporate concepts from social learning theory. Social learning theory ideas could be incorporated into work release programs’ educational curriculum, format, delivery, and aftercare. Additionally, the concepts of Social learning theory and methods to increase self-efficacy could be applied to other correctional education programs, which lead and enable prisoners to participate in work release programs. Prison policy makers should consider the positive impact social learning theory can have if its concepts are integrated into prison work release programs.

**Prison Aftercare**

Bandura (1977) stated in his social learning theory that learning would be exceeding laborious, not to mention hazardous, if people had to rely solely on their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed and in later occasions this coded information serves as a guide for action. A review of the current literature consistently suggests that pro-social behavior should be incorporated in prison educational programs to help inmates better understand the consequences of their actions (Listwan, Cullen, & Latessa, 2006). Work programs for recidivism can be placed into three main categories: jobs in prison settings, short term vocational training in prison and short term assistance in the job search process upon release (Bushway, 2003). Although these work programs for recidivism are straightforward, Bushway identified that one of the issues associated with these programs is the fact prisoners are detached from the legitimate world of work prior to entry into prison. Only 59% of state prisons inmates had high school diplomas or its equivalent and only two-thirds of inmates were employed during the month before they were arrested for their current offense (Bushway, 2003).

Many offenders are from very isolated inner city communities which are detached from the world of legal work (Bushway, 2003). A review of the literature reflects that in places where job variances are scarce, low-skilled and low prestige workers suffer as employers can afford to be more discriminating in their hiring practices (Lieman 1993; Offner & Holzer 2002). With this in mind, it is unlikely that any skill learned in prison, during a relatively short job training...
program, will fundamentally alter the cost-benefit calculus that led to the period of incarceration in the first place for more than a number of offenders (Bushway, 2003). Prison work programs can help by providing the prisoner with new skills that can be used for employment, but much of this work needs to be done after release (Bushway, 2003). Furthermore, the literature also suggests that prison environments should radically change to support educational programs that promote pro-social behavior (Bushway, 2003). In addition, the literature supports the theory that prison education systems that include cognitive behavioral treatments such as social learning theory have been found to be twice as effective as non-cognitive programs (Pearson, Lipton, Cleland, & Yee, 2003). The goal of prison educational systems is to change the inmate’s desire to want to participate in criminal activity upon release from prison.

The inmate’s transition from prison to a pro-social environment is a key component that aids in the reduction of recidivism. Research continuously reflects an inmate’s process of constructing new patterns is the most difficult part-old networks need to be abandoned and entirely new networks of friends and social support need to be constructed (Baskins & Sommers, 1998). An inmate will probably have the same network he had prior to entering prison (Bushway, 2003). With this in mind, it is critical ex-inmates receive more support upon their release. Examining work release programs through the lens of social learning theory, the goal is for all inmates and ex-inmates to reach self-efficacy. Self-efficacy beliefs regulate human functioning through cognitive, motivational, affective, and decisional processes (Benight & Bandura, 2003). Moreover self-efficacy can aid in mitigating feelings of failure which can negativity influence prisoners (Lundberg, McIntire, & Creasman, 2008). People’s beliefs in their efficacy influence choices they make, aspirations, how much effort they mobilize in a given endeavor, how long they persevere in the face of difficulties and setbacks, whether their thought patterns are self-hindering or self aiding, the amount of stress they experience in coping with taxing environmental demands, and their vulnerability to depression (Bandura, 1991). Ex-inmates who participate in work release programs need positive role models and further assistance reaching self-efficacy. Many adults have reported that core people have increased their motivation and self-efficacy (Goto & Martin, 2009). This information supports the concept of providing positive role models and mentors.

Research also reflects work release programs that support the current process of simply releasing an offender with no support, except a job search, may indicate there is almost no support for the creation of the pro-social network (Bushway, 2003). On the other hand, based on meta-analysis by Wilson (2001), inmates who participate in work release programs are less likely to recidivate than those who do not participate in a treatment program.

**Conclusion**

A review of the literature reflects prison systems that incorporate components of social learning in their vocational training and work release programs have been successful in reducing recidivism post release from prison (Bushway, 2003). Research is beginning to reflect that policy makers should assert that the success of work release and vocational training programs depends on whether prison management ultimately buys into the goal of avoiding recidivism (Bushway, 2003). Prison systems that support behavior modification programs, such as social learning, tend to spend more money and are difficult to coordinate (Bushway, 2003). However, research has shown these programs can aid in reducing recidivism when executed properly (Bushway, 2003). Many ex-inmates face barriers post-release which prevents them from obtaining suitable employment. For example, ex-inmates have to deal with the social stigma of having been incarcerated, lack of transportation to get to jobs, and having to overcome
technological advances which occurred while they were incarcerated (Klitz, 2010). Finally, motivation, determination and self perseverance were key personal traits for ex-inmates that successfully obtained employment after release (Klitz, 2010). These skills cannot be taught in a social learning program. However, social learning programs promote an atmosphere of hope, self-efficacy, and self-motivation (Bandura, 1991). Ex-inmates need the support of a pro-social community upon release which includes government and non-profit community-based organizations (Klitz, 2010). Research reflects that a strong pro-social environment upon release does aid in the reduction of recidivism (Bushway, 2003).

References


Occupational Stress: Towards an Integrated Model

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Abstract: Occupational stress impacts employees’ physical and mental health, as well as productivity and performance. This literature review provides an overview of occupational stress, highlighting two major models. The relationship between supervisory behavior and occupational stress is explored.

The Occupational Health and Safety Act of 1970 was passed in order to protect and promote employee health. The OSHA Act is a clear indication of the importance placed on providing a healthy work environment and conditions for all employees. Scholars have also taken an interest in understanding the cause, relationship, and impact of occupational stress in over two thousand articles published on this topic between 1990 and 1999 (Hart & Cooper, 2001). Although most employees experience some level of stress at work, chronic exposure to occupational stress has been linked to negative health effects, both physical and mental, such as hypertension, cardiovascular illnesses, and decreased cognitive functioning (Andre-Peterson, Engstrom, Hedblad, Janzon, & Rosvall, 2007; Bridger, Brasher, Dew, Sparshott, & Kilminster, 2010; Theorell & Karasek, 1996). The OSHA Act of 1970 has made occupational stress an area of concern, and employers must comply to provide and promote a healthy environment.

The Bureau of Labor Statistics reported 44% of occupational stress incidents resulted in 31 or more days away from work in 1999. Their study also found that white-collar workers and women reported higher incidents of occupational stress than men and blue-collar workers. Occupational stress is detrimental both to employees’ health and to organizations. It is also costly to organizations, causing a loss of productivity due to days missed, intentions to turnover (i.e., the idea of the employee to leave the current organization, or resign from their current position), decreased job satisfaction, and performance (Motowidlo, Manning, & Packard, 1998; Yahaya, Yahaya, Tamyes, Ismail, & Jaalam, 2010). The purpose of this paper is to review the literature of occupational stress by first discussing three models of occupational stress, social support and occupational stress, and an integrated occupational stress model to guide research.

Models of Occupational Stress

Selye (1936) defined stress as a non-specific response to demands. However, since his broad-proposed definition of stress, there has been a lack of consensus in the occupational stress literature for a definition of stress. Stressors are work-related demands or events which lead to strain; strain is the physical or mental outcome of stress (Beehr, 1995). Beehr (1995) defined occupational stress as occurring when work characteristics (stressors) lead to poor physical or mental health (strain). In the occupational stress literature, stress has been defined and conceptualized depending on the perspective (e.g., individual, interaction, or environment) and, therefore, is a model used to study this construct (Cox & Griffiths, 2005). Siegrist’s (1996) model of effort-reward imbalance is based on social reciprocity of the work contract, which posits that the level of effort exerted should be congruent or in balance with the level of rewards received. The effort-reward imbalance model characterizes stress as a transaction between the individual and the environment; a contractual reciprocity is expected based on an exchange of adequate rewards (money, esteem, or career mobility/job security) based on the effort (task) that
is required to complete the task (Siegrist, 2008). If there is an imbalance between the amount of
effort required and the reward received in exchange for the effort, then emotional distress will be
experienced. Two dimensions of effort exist: extrinsic (e.g., external pressures and demands),
and intrinsic (e.g., individual's motivation). Reward is characterized by three factors: money,
esteem, and career (mobility and job security). The effort-reward imbalance also has an element
of fairness that is manifested, contingent on the effort exerted and the reward received. The
action of not providing adequate rewards in exchange for effort may be perceived as unfairness;
this perception of unfairness may impact an individual’s self-esteem (Siegrist & Marmot, 2004).

Research in using the effort-reward imbalance model to understand the impact of
occupational stress on employees has found detrimental health outcomes. Additionally, high
demands and low control adds to the state of emotional distress which has been linked to poor
physical health, such as increased body mass index and cholesterol concentration (Kivimäki et
al., 2002), higher risk of coronary heart disease (Kivimaki et al., 2005), depression,
cardiovascular disease mortality, and incident type 2 diabetes (Siegrist, 2004). Organizations
need to develop policies that will lessen the incidence of stress and alleviate the impact once it
occurs. Siegrist (2005) proposed stress management training for employees and leadership
training for supervisors, focusing on how to provide esteem and recognition to employees.

The job demand-control model developed by Karasek (1979) conceptualizes stress as the
interaction between the demands of the job and the control of the individual. Psychological
demands are characterized as the demands that are placed on an individual to complete a task.
On the other hand, control or decision latitude is the degree in which the individual can impact
the load or has the skill set to facilitate completing the task. This model states that high job
demands and low control will result in job strain and therefore, lead to negative health outcomes.

The model can be further delineated to four levels of strain: high-strain jobs, active jobs,
low-strain jobs, and passive jobs (Karasek & Theorell, 1990). High-strain jobs are characterized
by high job demands and low control (e.g., nurse's aide, health technician). On the other side of
the spectrum are low-strain jobs which are described as having low job demands and high
control (e.g., repairman and architect). Active jobs are referred to jobs which have high demands
and control (e.g., surgeons and electrical engineer). On the other side of coin are passive jobs
which have low demands and low control (e.g., janitor and billing clerk; Karasek & Theorell,
1990). Personality traits have also been studied in conjunction with this model—in particular,
type A behavior and locus of control. Karasek and Theorell (1990) explored the relationship of
type A behaviors, which are characterized as having a need for control with their model. They
found that type A individuals' need for control makes the experience of having low control more
exacerbating; they are also at higher risk of heart disease when exposed to high strain.

The job demand-control model is one of the most widely used models to understand the
impact of occupational stress on health. There have been several studies conducted which have
used this model to test the impact on a variety of health outcomes. Sun, Wang, Zhang, and Li
(2007) conducted a study with industrial employees and found a relationship between high levels
of job strain (high demands-low control) and higher allostatic load, body mass index, and
systolic blood pressure. Additionally, Agardh et al. (2003) found that high job strain is
associated with type two diabetes. High levels of job strain have also been linked to increased
risk for major depression and, for women this relationship, was moderated by the level of social
support they received (Blackmore et al., 2007). Also, individuals exposed to chronic high strain,
which is characterized as experiencing strain in at least two out of the three time periods in a
longitudinal study, were associated with increased risk of recurrent coronary heart disease
Job strain has also been associated with increased risk of hypertension and increased left ventricle (Schnall et al., 1990).

Social Support and Occupational Stress

Just as there has been a significant interest in understanding occupational stress, social support has also gained momentum in the stress literature. In the last 40 years, studies have explored the relationship of social support and occupational stress. The study of this relationship was also further developed to understand how social support can moderate or buffer the perception of stress and, therefore, its impact on health. Social support has been defined as the level and quality of social interactions at work (Karasek & Theorell, 1990; Viswesvaran, Sanchez, & Fisher, 1999). Instrumental, emotional, esteem, and informational social support which have been identified in the literature (House, 1981). Instrumental support refers to providing resources, while information support refers to providing information. Emotional support focuses on demonstrating empathy, while esteem support refers to providing feedback essential to self-evaluation (Rooney & Gottlieb, 2007).

Johnson and Hall (1988) used the demand-control model to guide their study of occupational stress and included the social support construct to test whether this new construct moderated the relationship between strain and health outcomes. The authors found that employees who reported low levels of social support also reported higher levels of strain. Johnson, Hall, and Theorell (1989) explored the relationship with strain and social support further, testing whether low social support would impact the physiological outcome of strain. The authors found that employees who reported high levels of strain and low levels of social support were at higher risk of cardiovascular disease morbidity. Given these findings, the demand-control model was expanded to include a third dimension of social support, which aligns with the conceptualization of the social process of work life (Karasek & Theorell, 1990). Social support includes interactions among supervisors and co-workers to ease the high demands.

Social support is an important dimension to add to the job-demand control model. Social support has added value to the framework of this model and to the way that we view and study occupational stress. It is important to understand not only the work characteristics (stressors) that can lead to strain but also the coping mechanisms used by employees, and their gender differences. This further understanding can help in the development of interventions, which can be put in place in order to alleviate the impact of strain. For example, McGowan, Gardner, and Fletcher (2006) found that employees used different coping mechanisms, depending upon whether they perceived the demands as a threat or a challenge (task-focused vs. emotion-focused). The authors found supportive supervisors included their employees in the decision-making process; their employees perceived the additional demands as a challenge and, therefore, were better able to cope with the new demands.

Supervisors can have a direct impact on their employees’ mental and physical health due to the control they have on the work environment, job duties, and deadlines (Leiter, Gascon, & Martinez-Jarreta, 2010; Leiter & Harvie, 1998). In fact, supervisors are able to shape employees' perception of control of their demands and, therefore, impact how they respond to strain (Wong & Lin, 2007). In addition, supervisors play an important role in shaping employees' perceptions of their working environment and their sense of value to the organization. These perceptions can impact organizational outcomes such as job satisfaction, organizational commitment, job performance, and intentions to turnover. Employees who perceive their supervisors as supportive report higher levels of job satisfaction, organizational commitment, and job...
performance, and are able to cope with stressful situations (Harris, Harris, & Harvey, 2008; Rooney, Gottlieb, & Newby-Clark, 2009).

**Integrated Occupational Stress Model**

It is important for organizations to understand the causes and risks of occupational stress. The work environment is changing. Employees’ work demands have increased, staffing has decreased, the amount of hours has increased, and the barriers between work and home life are less clearly defined due to the advances in technology. These ever-present pressures heighten the importance to study and understand occupational stress. Additionally, occupational stress can cost organizations about $150 billion per year, due to loss of productivity, absences, and other health-related costs (Cartwright & Cooper, 1997). As detailed above, occupational stress impacts employees’ physical and mental health, as well as their job performance, job satisfaction, and intentions to turnover (Jex, 1998; Shirom, Toker, Berliner, & Shapira, 2008).

Literature has shifted towards a holistic approach of studying and understanding the cause and impact of occupational stress (Dai, Collins, Yu, & Fu, 2008; Peter, Siegrist, Hallqvist, Reuterwall, & Theorell, 2002). The job demand-control-support model and the effort-reward imbalance model have been used more frequently in the literature to explore the relationship between occupational stress and both health and organizational related outcomes (Choi et al., 2008; Probst, 2010). The integration of the models will help capture a more comprehensive view and study of occupation stress by exploring the dimensions of support, control, and intrinsic factors. Ostry, Kelly, Demers, Mustard and Hertzman (2003) found that the combined models explained 11.7% and 41.1% more variance than using the models separately. Dai and colleagues (2008) conducted a study combining job stress models in order to predict burnout. They found that the effort-reward imbalance model explained emotional exhaustion and depersonalization, while social support was a predictor of personal accomplishment; both models demonstrated significant power in predicting three dimensions of burnout. Adding the effort-reward imbalance to their study provided additional information on coping mechanisms of participants. Additional studies have also demonstrated the increased predictive power by combining both the job demand-control and the effort-reward imbalance models (Dai et al., 2008; Fillion et al., 2007).

Karasek (1990) found that increased control is indicative of better health and organizational outcomes. Specifically, the authors found that employees who experienced higher levels of control also decreased incidence of coronary heart disease, psychological strain, absenteeism, and increased job satisfaction (Karasek & Theorell, 1990). Individual, who experience high levels of strain and low levels of social support have been found to also be at higher risk of cardiovascular disease (Jonson & Hall, 1988). It is essential that supervisors shape employees' perception of control by including them in the decision making process, adjusting their workloads, and providing additional resources. Finally, increased control reduces illnesses, such as coronary heart disease, among full-time employees (Karasek, 1990).

As noted above, employees' perception of control has mitigated the relationship between occupational stress and strain. Social support has also played a role in this relationship; supervisors who were trained on how to provide esteem and recognition had employees who had reduced levels of cortisol secretion (Theorell, 2001). Additionally, employees’ motivation and coping mechanisms is another factor that should be measured in order to have a more holistic view of occupational stress and its outcomes. Mark and Smith (2008) proposed a comprehensive model of occupational stress. The authors’ initial findings support the important role and relationship among demands, control, and social support, especially from supervisors. Similarly, Spector (1998, 2002) proposed an occupational stress model that also highlights the pivotal role
of control and support, which stresses understanding the coping mechanisms of individuals, so that the organization can better help them alleviate occupational stress.

As the work environment and the way that we function at work evolve, we need to look towards model integration to understand the process of occupational stress. The job demand-control model focuses on the job characteristics of the organization, which are extrinsic demands and extrinsic control. The job demand-control-support model adds a third dimension of support. Karasek and Theorell (1990) propose in their model that having more decision-making latitude will reduce occupation stress and increase learning. On the other hand, low control will result in increased occupational stress (high strain). Increased psychological demands combined with increased control increases not only occupational stress but also learning—the domain referred to as active job. At the core of the effort-reward imbalance is the notion of reciprocity. Adequate rewards are received in exchange for effort that is required. Unlike the job demand-control model, this model includes both extrinsic and intrinsic factors, aiming to understand the effect of occupational stress on the employee (Benavides, Benach, & Muntaner, 2002).

Van der Doef and Maes (1999) conducted a review of the job demand-control model literature from the last 20 years. The authors found substantial support for the demand-control model and its impact on well-being. Specifically, high-strain jobs were associated with having a negative impact on both physical and mental health. About half of the studies reviewed found the demand-control-support model successful, indicating that social support affected the relationship of stress and strain. Social support mitigated the impact of stress when the support provided matched the stressor. This insight provides additional information for practitioners on how supervisors can more effectively support their employees.

The effort-reward imbalance model focuses on the social reciprocity between effort and rewards. When adequate rewards are not received in exchange, distress occurs and feelings of injustice may also emerge (Siegrist, 2005). This model provides insight on how individuals perceive the imbalance between demands and rewards and their coping mechanisms. Both the job demand-control-support model and the effort-reward imbalance model have been linked to exploring the relationship between occupational stress and health outcomes. Now, however, both models need to be integrated to understand the role of social support. Kelloway and Day (2005) reviewed the occupational stress literature and suggest an integrated model that tests specific supportive supervisor behaviors. Their review suggests that transformational leadership behaviors need to be furthered studied since transformational leadership has a positive effect on employees’ well-being, specifically, psychological well-being. Additionally, transformational leadership was also linked to increased trust and self-efficacy. In the effort-reward model, if injustice is perceived, self-efficacy decreases. Directing research efforts toward understanding transformational leadership behaviors may yield new insights in the study of occupational stress.

Literature reviewed highlights the relationship between social support and strain (Searle, Bright & Bochner, 2001). Since supervisors play an important role in the work life of their employees, it is important to identify both the supportive and unsupportive behaviors in which supervisors engage that can lead to or decrease occupational stress (Rooney et al., 2007). Supervisory support continually emerged as an important factor to the strain relationship (Andre-Petersson et al., 2006; Harris et al., 2008). Control or perceived control was also found to be an important factor in mitigating the relationship between stressors and strain. Organizations need to provide comprehensive development programs for supervisors, so that they can understand how their actions or lack of actions impact staff’s health-related stress (Andre-Petersson et al., 2007). The work environment has also changed from a strict hierarchical work structure to one
in which employees both seek more autonomy and value supervisors who trust them and provide
the same. A comprehensive and holistic model can explore the relationship of control and
supervisory social support that leads to a better understanding of how to work towards reducing
occupational stress.

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Emotions and Learning in Support Groups of Female Breast Cancer Patients

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Abstract: The understanding of emotions and learning in the participants of breast cancer support groups will assist in better preparation of how to cope with the disease these patients face. It is in working through emotional experiences that participants are able to learn and grow in support groups.

“It has to be talked about. Breast cancer - we have to talk about it. It has to change…so women know…so they don’t die. Promise me, Nanny. Promise…you’ll make it change” (Brinker, 2010, p. 147). These were a portion of the final words uttered by Susan G. Komen to her sister, Nancy Brinker, before she died of breast cancer in 1980 (Brinker, 2010). Breast cancer is the most common form of cancer in the United States; approximately one in eight women will be diagnosed with breast cancer (American Cancer Society, 2010). At the time of diagnosis, the patient is presented with a number of treatment options depending on how aggressive and how progressed the breast cancer is. The range of options may include one or a combination of treatments, such as surgery, chemotherapy, radiation therapy, hormonal therapy, targeted therapies, and complimentary medicinal approaches (Breastcancer.org, 2008). One option, complementary medicine, is becoming more prevalent.

“The goal of complementary medicine is to balance the whole person – physically, mentally, and emotionally – while conventional medicine does its work” (Breastcancer.org, 2008, para. 1). Included in the ambit of complementary medicinal approaches are spirituality and prayer and support groups (Breastcancer.org, 2008). The benefits associated with participation in spirituality and prayer includes “reducing stress and anxiety” and “promoting a more positive outlook and a strong will to live” (Breastcancer.org, 2008, para. 3). Although similar in nature, spirituality and prayer are separate entities and should be addressed as such.

Spirituality is defined as “a deep and profound sense of connectedness to something outside of oneself, as well as a connectedness emanating from within, in a transliminal sense” (Boucouvalas & Lawrence, 2010, p. 38). In contrast to spirituality, religion is slightly more structured and focuses more on “prescribed beliefs, rituals, and practices as well as established social institutional features” (Kleiwer, 2004, para. 3). Religion also focuses “on the undertaking of a spiritual search using specific means or methods, including specific rituals or behaviors within an identifiable group” (Kleiwer, 2004, para. 3). Prayer is included in the specific rituals of religion.

Also beneficial to the treatment of breast cancer is participation in support groups. Support groups are “groups of people in similar life situations who meet on a regular basis to share their concerns” (Breastcancer.org, 2008, para. 1). Support groups can include open membership or closed membership, which enables the participant to decide how active to be in the group; support groups provide opportunities for patients to use their knowledge and experience to help others (Breastcancer.org, 2008). Further, support groups can be organized through specific religious organizations in the form of prayer groups.
Patients’ participation in spirituality, prayer, and support groups leads to different types of learning such as affective learning and experiential learning. Affective learning involves emotion (Boucouvalas & Lawrence, 2010): “emotions take us to places where words alone cannot, thus elevating us to new levels of knowledge acquisition” (Boucouvalas & Lawrence, 2010, p. 37).

The purpose of this paper is to discuss the role of emotion and learning of female breast cancer patients who participate in support groups in an effort to lay out a future research agenda. First, this will occur with a description of emotions and learning. Second, three types of support groups that are available to cancer patients will be presented. Third, the role of emotions and learning within support groups will be examined. Lastly, implications and the need for further research into emotions and learning in support groups of female breast cancer patients will be provided.

**Emotions and Learning**

Emotions hold a quintessential role in the learning process by either promoting it or hindering it (Dirkx, 2001). “Personally significant and meaningful learning is fundamentally grounded in and is derived from the adult’s emotional, imaginative connection with the self and with the broader social world” (Dirks, 2001, p. 64). Emotions give way to an intricate understanding of the world and self. “Emotions always refer to the self, providing us with a means for developing self-knowledge. They are an integral part of how we interpret and make sense of the day-to-day events in our lives” (Dirkx, 2001, p. 64). Emotions take part in the process of “meaning-making” (Dirkx, 2001, p. 66); they are the unconscious feelings of dislike towards a particular situation or person that often occur without an explanation. The lack of explanation or rationale leads emotions to be regarded as irrational. The irrationality of emotions is often disregarded in a rational focused adult education environment. In formal adult education settings, the outward expression of emotions and feelings is often discouraged and the redirecting and control of these emotions is applauded. On the contrary, personal accounts of adult learners noted that the most memorable accounts of their learning experiences were those that involved emotions, suggesting that emotions are deeply related to learning (Dirkx, 2001).

Images are used to translate emotions and feelings and assist in meaning-making. Similar to the unconscious feelings of dislike, emotional images are uncontrollable and emerge unannounced (Dirkx, 2001). The images can be used to further interpret our inner emotions allowing us to better understand ourselves and the meaning of emotion in our lives (Dirkx, 2001). The examination of emotional images is used to better understand the nature of the emotions by asking questions such as, “What do these emotions remind me of? What other times have I felt this way?” (Dirkx, 2001, p. 69). Questioning of the emotional images allows for deeper understanding and meaning (Dirkx, 2001).

Similar to emotional learning experiences, Tisdell (2008) reports on four types of spiritual learning experiences: the first relates to human nature as a whole, the second with nighttime dreams that directly relate to real life occurrences, the third with “those that took place in nature or in meditation” (p. 31), and the fourth relates to a continuing growth of personal self. The spiritual aspect of learning is incorporated when, through the four types of spiritual learning experiences, a previous frame of knowledge is reinterpreted or given a sacred meaning (Tisdell, 2008). “Some people report having spiritual experiences all the time. But significant spiritual experiences of deep learning seem to happen only occasionally” (Tisdell, 2008, p. 31). Learning in spirituality, once considered implicit, has recently expanded to a more explicit category due to
increased discussion. Where spiritual experiences are discussed, the learning becomes explicit (Tisdell, 2008).

**What Type of Bra do You Wear? Support Groups Come in Different Styles**

Support groups are established to help people cope with a number of life circumstances such as a common disease, the recent loss of a close relative, or a common addiction. Support groups also range in type depending on the constituency partaking in the group; they include non-spiritual and non-denominational support groups, spiritual support groups, and prayer groups. Patients seek support groups for different reasons such as to collect information, meet others with their same disease and treatment, or follow their physician’s suggestion (Large, 2005).

**Non-Spiritual Support Groups**

Support groups are gatherings of people with common interests or similar life situations. The groups can meet anywhere and the size is based on the purpose and needs of the group (Randall, 2003). Support groups are established with open membership or closed membership. Open membership allows for more flexibility; participants can come and go as they please and attend as many or as few sessions as they wish. Closed membership is more structured; there is a limit to the number of participants for each group and there is a specific number of sessions that participants need to attend in order to remain in the group (Breastcancer.org, 2008). In addition to open and closed membership, support groups can also be run by professionals or by cancer survivors. Groups that are run by professionals such as psychologists, psychiatrists, oncology social workers, oncology nurses or pastors, are focused on assisting participants with anger or frustrations they may be feeling towards their situation or diagnosis (Breastcancer.org, 2008). The trained professionals act as a guide in these situations to assist with coping. In contrast, there are support groups that are facilitated by survivors. These support groups are able to offer support and guidance through personal life experiences (Breastcancer.org, 2008).

Face-to-face support groups offer many benefits to patients; however, access is often an issue unless the patient resides in a major metropolitan area (Vilhauer, 2010). In these cases, online support groups are offered, which can be tailored to a more specific diagnoses group and target more specific groups of people (Vilhauer, 2010). Online support groups also offer the benefit of constant accessibility; whereas face-to-face support groups only meet at a specific time and date, online groups can be accessed 24/7 (Vilhauer, 2010). Support groups can also come in the form of exercise groups which benefit patients both physically and psychologically (Emmslie et al., 2007).

**Prayer Groups**

Similar to support groups, prayer groups are gatherings of people in similar life situations; however, in prayer groups the gatherings are for the singular purpose of praying. Prayer groups meet at religious institutions such as a church, synagogue, or mosque. Prayer can be said out loud in a group or can be silent and meditated (Breastcancer.org, 2008). There are five types of prayer, (a) supplication, (b) devotion, (c) intercession, (d) gratitude, and (e) contemplation (Cassian, 1997). The first three, supplication, devotion, and intercession, aid in relaxation and meditation assisting in “shifting attention away from stressful, recurring, or destructive thought patterns and feelings leading to illness” (Stanley, 2009, p. 827).

**Spiritual Practices and Spiritual Support Groups**

Spirituality has different meanings to different people, and the definition often depends on the context in which it is portrayed. In contemporary literature, spirituality refers to a personal and individual search for a greater self or being; it is “generally seen as an individual’s
experiences of what is perceived as sacred, how one frames or understands those experiences can strongly influence one’s beliefs and behaviors” (Tisdell, 2008, p. 29). Spirituality is practiced in a variety of ways including meditation, family activities, helping others, praying alone, recalling positive memories, relaxation, praying with others, listening to or playing music, visiting a house of worship or quiet place, reading spiritual materials, exercise, meditation or yoga (Thomas, Burton, Griffin, & Fitzpatrick, 2010). Depending on the activity, spiritual practices can be participated in individually or in group settings. Some activities are more open to group settings such as exercise and yoga, but exercise and yoga are not always directly related to spirituality.

**Emotions and Learning in the Support Group Setting**

Women often feel as though they do not receive the emotional support that they need from their personal relationships. Though women may have many supportive individuals around them, they are often discouraged from expressing feelings of fear, anxiety, and thoughts of death to others. This often leads to seeking additional support in the form of support groups (Ussher, Kirsten, Buto, & Sandoval, 2006). Participation amongst support groups varies. There are many different reasons that patients participate, and the patients are often at different stages of their diagnoses and treatment (Helgeson, Cohen, Schulz, & Yasko, 2000). Breast cancer patients also differ in their goals. For example, some look for emotional support when they feel they do not have enough support at home, while others look for educational support when they feel they are not receiving enough information from their doctors (Helgeson et al., 2000). Further 34% to 86% of medically ill patients have reported using religious/spiritual cognition and activities in coping with their illness (Lieberman & Winzelberg, 2008).

A common denominator amongst breast cancer patients is a loss of empowerment. Empowerment is described as a person’s ability to meet their own needs (Stang & Mittelmark, 2008). This loss of empowerment and desire to regain is often a driving force for cancer patients to seek out and participate in support groups. Four empowerment processes that were found to be linked with learning in support groups are “(a) consciousness-raising, (b) acquisition of objective knowledge, (c) learning from others’ experiences, and (d) discovery of new perspectives about life and self” (Stang & Mittelmark, 2008, p. 2051). In consciousness-raising, the participants gained an increased awareness of their situation and were able to learn the different perspectives of the other members in the group. In acquisition of objective knowledge, the women were able to obtain factual information about their prognoses, treatments, and developments. Through learning from others’ experiences, the women were able to share stories and experiences they had had and “being different as persons promoted their learning” (Stang & Mittelmark, 2008, p. 2052). Lastly, in the process of discovery of new perspectives about life and self, the patients were able to learn to put aside the pain and suffering that they had endured or were currently enduring to reprioritize specific issues in their lives that held a higher value. Although depicted as four separate accounts, the learning portion of empowerment “was experienced as an integrated, intertwined and cyclical process” (Stang & Mittelmark, 2008, p. 2051).

Empowerment outcomes have been observed at both personal and social levels in a study involving Chinese cancer patients (Mok & Martinson, 2000). Findings concluded that positive feelings such as those of certainty, assurance, and courage were shared in coping with the illness; negative feelings of anxiety and despair when another members’ condition deteriorated were also observed. “Information support and mutual learning were considered critical elements” of the study and remain a critical element of empowerment (Stang & Mittelmark, 2008, p. 2050).
Another form of learning that occurs in support groups is self-directed learning. Self-directed learning occurs when an individual takes it upon him/herself to locate information on his or her own. Self-directed learning in support groups is not always solitary; participants in support groups learn from different aspects of the group ranging from other participants, the facilitator, and the common emotions (Rager, 2003). Emotions are often regarded as a negative impact on self-directed learning in cancer patients. Feelings and emotions of fear, depression, and anxiety often prevent patients from participating in self-directed learning. It was noted of breast cancer patients that the support groups were beneficial, but they had to find them on their own. While the patients found the support groups helpful, it was often difficult for some of them to get past their emotions and actually search for something they were interested in. When negative emotions are involved, self-directed learning is challenged because the emotions get in the way of the motivation to learn (Rager, 2003).

“Spirituality helps us to see the extraordinary in the ordinary business of life and spiritual experiences can create a new order out of chaos” (Tisdell, 2008, p. 30). In the world of a cancer patient, the diagnosis of a potentially life threatening disease can bring instant chaos; spiritual practices can evoke spiritual or sacred moments and experiences for breast cancer patients. “People construct knowledge in powerful ways through spiritual experience that leads to further development” (Tisdell, 2008, p. 34); spiritual experiences are often evoked by participation in spiritual support groups by breast cancer patients.

**Setting the Stage for a Future Research Agenda**

There is opportunity for learning in every situation. Emotions can play a key role in the learning of breast cancer patients participating in support groups. Learner’s emotions can often be thought of in a literal manner, “as windows that reveal experienced realities” (Dirkx, 2006, p. 17). For example, a participant in a support group may lash out at the facilitator for what seems to be an insignificant comment; however, the patient’s anger may express fears of her diagnoses and not necessarily a disagreement with the facilitator. It is in examining these emotional responses that participants in support groups are able to learn and move forward in their experiences. Emotions in support groups can act as a road block to learning in support groups; if patients are not prepared to deal with their emotions or do not have the motivation due to negative emotions, it can hinder positive effects that a support group may have on learning, growing, and regaining empowerment. On the contrary, emotions in support groups can be beneficial; participants who meet others experiencing the same types of emotions and feelings are able to make breakthroughs that otherwise may not occur. Participating in support groups allows for emotions and learning to assist the patients’ attempts at regaining empowerment (Stang & Mittelmeck, 2008). Emotions can hinder or accelerate self-directed learning in support groups.

More research and theory building activities need to be done to test and validate the role of emotions and learning in support groups. This will assist caregivers in understanding the negative and positive emotional consequences of support groups. Further research is also needed to examine the different support groups and individual learning styles that take place within them. Results from such studies would be useful in matching patients with appropriate support groups.

Nurse practitioners and other medical associates involved with breast cancer patients would benefit from training on the different support groups available to patients and which support group types would be most beneficial for particular patient needs. All support groups are not the same and should not be treated with a one size fits all approach.
The distinctions between spiritual support groups and prayer groups should be compared to determine their role in treatment. There is little research on the formation and practices of prayer groups. A study of prayer groups and the types of learning that occur within them would assist in the understanding of emotions and learning in this context. Deeper studies of the practices of prayer groups would provide for a better understanding of how emotions and learning are involved within the prayer groups and for whom the prayer groups would be most beneficial.

Support groups provide ample opportunities for emotion and learning to occur. Although not a cure for breast cancer, support groups can provide additional emotional support and comfort during times of great trial for cancer patients. Patients are encouraged to learn through empowerment, self-directed learning, and spiritual experiences in order to grow and become survivors. As the patients learn, they are able to better communicate and have a better understanding of breast cancer and the experiences and emotions involved; this understanding can assist the patients in preparation of the battle against breast cancer.

References


Secondary Teachers’ Knowledge, Beliefs, and Self-Efficacy to Teach Reading in the Content Areas: Voices Following Professional Development

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Abstract: This study explored 24 content area teachers’ knowledge, beliefs, and self-efficacy about teaching reading in the content areas at the end of a state-wide professional development experience. The findings suggest that the participating teachers held positive beliefs, gained valuable knowledge, and were confident about teaching reading in their content areas.

Ever since the National Commission on Teaching and America’s Future’s (1996) report, What Matters Most: Teaching for America’s Future, identified teachers’ knowledge as the chief discriminating factor in student achievement, hiring highly qualified teachers has been a goal of schools. What makes a secondary teacher highly qualified has been expanded to include not only knowledge of their content and pedagogical content knowledge, but also knowledge about literacy and pedagogical knowledge to teach literacy within their content area (Biancarosa & Snow, 2004). While most secondary content teachers believe it is their responsibility to teach their subject area accurately and effectively, they are less inclined to take up teaching of reading in their content areas. They assume that by the time student enter secondary schools, they have mastered the skills and strategies needed for comprehending content area texts. Even when they realize that not all students are able to read the often technical, dense, and abstract texts of content areas, a lack of instructional time, reading expertise, and school support often prevents them from taking up the reading instruction responsibility (O’Brien, Steward, & Moje, 1995).

Recognizing this historical problem, the state of Florida recently developed a professional development module aimed at developing content area teachers’ expertise in teaching reading in the content areas. Content Area Reading Professional Development (CAR-PD) was a 4-day institute delivered by reading experts to practicing teachers who had previously been enrolled in a state-wide professional development course in reading. The purpose of this study was to explore CAR-PD participants’ knowledge, beliefs, and self-efficacy about teaching reading in the content areas at the end of the 4-day professional development experience. From a sociocultural theoretical perspective, there is a need to first explore the opinions, or voices, of the participants following professional development, before continuing to research if this type of professional development will produce changes in instruction and ultimately, changes in student achievement.

Our research questions were: (a) What are secondary teachers’ beliefs or attitudes toward teaching literacy-embedded in their content areas? (b) What do they know about content area reading? and (c) What is their sense of efficacy to teach reading in their content area?

The reason we focused on knowledge, beliefs, and self-efficacy in this study is because they are often identified as key to teacher effectiveness. Snow, Griffin, and Burns (2005) have suggested a need to learn declarative knowledge (learning from books about child development, language, literacy and so on), procedural knowledge (how to teach reading in various situations),


http://coeweb.fiu.edu/research_conference/
and conditional knowledge (when and why to use knowledge about literacy learning). Making these types of literacy knowledge usable involves having opportunities to have conversations about literacy within disciplines. The goal is to include key elements in the professional development to make them useful for planning, assessing students, and adjusting lessons for those who need it. Self-efficacy, the belief about one’s capabilities to learn or perform behaviors (Bandura, 1994), is an important teacher characteristic that impacts content area teacher’s ability to teach reading within their content area. Teacher efficacy, the belief or conviction that they can influence how well students learn (Guskey & Passaro, 1993), is important for middle and high school teachers as it relates to integrating literacy in the content areas (Cantrell & Hughes, 2008). Even when teachers have a sense of efficacy to teach in their content, they may have a low sense of efficacy when it comes to teaching reading to struggling or unmotivated students. Teachers’ beliefs or attitudes towards content area reading have evolved over the last thirty years (Richardson, 2008). In order to teach content area reading, one must believe that it is important. A significant shift in attitude and beliefs is needed in order for knowledge to be put into practice in the classroom (Dieker & Little, 2005; Hall, 2005).

**Methods**

Participants for the study were 24 secondary teachers randomly selected from a pool of over 100 secondary content area teachers from across the state who attended a 4-day, state-wide professional development institute with a focus on teaching reading in the content area (CAR-PD). The institute included articles on content area reading strategies, which were read and discussed along with methods for implementing them in classrooms. The participants included teachers from diverse, high-density, large southern school districts, as well as teachers from small, mono-cultural northern districts.

The 24 teacher participants were divided into two focus groups of 12 each. Each focus group was seated around a conference table with multiple recording microphones placed on the desk by a highly-trained technology expert. After being assured of anonymity and consenting to be recorded, the teachers responded to a total of seven semi-structured questions (see Appendix A) dealing with their knowledge, beliefs, and self-efficacy with time for discussion of each. A facilitator asked that the participants respond in a conversational manner without waiting to be called upon.

The interview data were transcribed and then coded using a qualitative analysis software called NVIVO 8. It enabled us to identify themes under each of the three focal domains: beliefs, knowledge and self-efficacy. These themes are presented below.

**Findings and Discussion**

The qualitative analysis of data revealed the following themes about the participants’ attitudes, knowledge, and self-efficacy to incorporate reading across the content areas. At the end of the CAR-PD experience, the teachers expressed a positive attitude toward incorporating reading into their content areas. They indicated the desire to help their students read better. As one participant noted, “I don’t think I’d be here if I didn’t think that reading and writing was important to our effectiveness in teaching kids to be successful on the FCAT and to them being successful in their lives in the real world.” They believed that what they learned from this professional development was beneficial to their content area instruction. They were convinced that learning how to teach reading from the very beginning helped build a strong foundation that enabled them to better help their students succeed in content area classes.

The professional development experience also reinforced the teachers’ beliefs in the importance of reading to all content areas. The teachers recognized the critical role reading plays
in content area success and indicated a determination to create a school culture that embraces reading across the curriculum content areas. They noted that “reading is the thread that gets the different content areas together.” In the words of another teacher, “The whole idea is that you’re stressing reading in all of your content areas. Reading is truly across the curriculum and it’s an important part of every single classroom.” This sentiment was echoed by a social studies teacher who said, “What I am taking away from this is that (reading) comes first. And even though I’m a social Studies teacher, my (students’) reading and writing skills come first. Those are the things I’m going to push through my content area.”

At the same time, however, the teachers recognized that they needed administrative and peer support in making reading a centerpiece of the school curriculum. As one teacher noted, “It has to be a bottom up initiative with top down support, in other words, the principal. It has to be grassroots.” They underscored the importance of principal involvement, noting that, “If principals don’t buy into it, it’s just not going to work.” They also hoped for more financial support at the state level, saying that additional resources were needed for them to successfully implement what they had learned at CAR-PD. One teacher indicated that “Money is a strong component. We’re willing to do this, but we can’t be expected to really do it out of pocket.”

**Knowledge**

Through the CAR-PD experience, the teachers gained a more in-depth understanding of literacy and a great number of new ideas for infusion into their content areas. The following sample quotes show in the teachers’ own words their deepening knowledge of literacy and their understanding of some of the concepts and strategies to integrate in their content area classrooms:

I always saw a portfolio as an elementary thing, or a middle school thing. I teach chemistry. I think that if I have them create a portfolio throughout the year, I think I’ll get more involvement from them, and I think I’ll get more motivation out of them.

It’s writing in that journal and reflecting. I really just kind of winged it before, so now I actually have a little bit of a framework that I can use to have them keep a journal in my science class.

Two things that I learned: One thing is with the picture books. I kinda thought at first they were a little juvenile. But using them and looking at them this week, and I am like, “Oh, I can really see what’s going on.” After I teach the content. They can draw, you know, now they can see it happen.

Coming here has given the OK to use a lot of supplemental texts, and even technology. I mean, it’s just opened up a whole other avenue that you can teach your content through, rather than just using the textbook and box of supplements that the publishers give you when you buy the book.

I think the one thing I am going to take out of this is creating a more print rich environment in my classroom. As a math teacher to help them not only learn my vocabulary for the math, but to help them learn the words with prefixes and suffixes to help them learn the roots of the words…. so they can learn more for their intensive
reading classes or during those classes. The print rich environment is just something that really hit hard with me.

**Self-Efficacy**

Equally importantly, the teachers became more confident in their ability to implement what they had learned from the CAR-PD in their classroom. According to one teacher, “I feel that I’ve learned a lot of things that I can do. I feel I am going to teach my subject through reading, instead of the other way around.” They wanted to make it clear to their students at the beginning of the school year that “we will be reading and writing and thinking every day.”

One teacher expressed her determination this way,

I’m going to do now what I’ve avoided doing in the past because I didn’t want to turn kids off. I am going to name the strategies and teach them the strategies as strategies, instead of just kind of tricking them into doing things and teaching them a strategy and a tool they can then take and apply to other things.

Some teachers even came up with concrete plans to implement what they had learned at CAR-PD. As this one teacher said, “I’m going back and going to people in my department and make some suggestions for the administrators as far as our reading, helping our reading coach get more information out so that people will improve and get this information.”

Another teacher indicated,

The issue is motivating them… You have to model to your students, if you’re not reading, your kids aren’t. So I am going to put up on my door when you come to my classroom this next year, you will see the novels that I am reading at any given time.

**Summary and Conclusion**

The findings from our analysis indicate that the CAR-PD participants held positive attitudes towards teaching reading in their content areas at the end of the professional development. They expressed willingness to address students’ needs and saw the additional focus on reading as something that would help students gain knowledge in the content areas. Some even expressed a willingness to consider the reading goals above the content area curriculum goals. Another positive finding from our study is that the participating teachers reported that they gained valuable knowledge about the reading process and learned activities and strategies to implement in their instruction. Despite the challenges involved in teaching reading, the teachers expressed confidence in being able to implement what they had learned and had specific ideas for teaching reading in their content areas.

These findings suggest that the participating teachers had positive experiences with the professional development institute. The boost in their knowledge, beliefs and self-efficacy about reading will go a long way toward helping them use reading to support content area instruction. It remains to be seen, however, how the teachers translate what they have learned from their professional development experiences into classroom practices in the current high stakes testing environment. A follow-up study is needed to document the factors and issues that facilitate or hinder these teachers’ implementation of reading practices in content area classrooms.

The significance of this study is that it gives evidence that engagement in content area reading professional development contributes to the knowledge, beliefs, and self-efficacy of content area teachers to teach reading. In the future, it would be good to follow teachers in their classrooms to document the degree of implementation and the impact on their students’ achievement.

**References**


Appendix A

Questions for Focus Groups

1. Why are you here and what did you hope to accomplish?
2. Do you feel that you learned anything that was new to you?
3. What do you plan to implement?
4. What type of support do you think you will need?
5. Was there anything that you would like to have training in?
6. How important do you believe this knowledge is for teaching in your content area?
7. How can you use literacy to support learning in your own content area?
Transforming Participation: A Case Study of an Introductory Physics Student in a Modeling Instruction Class

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Abstract: We present a case study on how participation of one student changed during her first semester of introductory physics class using Modeling Instruction. Using video recordings, we explore how her behavior is consistent with a change from thinking of group learning as a parallel activity to one that is collaborative.

The Physics Education Research group at Florida International University (FIU) has been implementing Modeling Instruction (Hestenes, 1987; Brewe, 2008), a reformed physics instruction curriculum and pedagogy, with introductory students. A primary goal of this reform has been to establish a sense of community among physics students at FIU, a large, urban, Hispanic-serving institution. Establishing a sense of community among students is of value because the academic and social integration of students into the university is strongly related to students’ persistence in the university (Finn & Rock, 1997; Kreamer, 1997; Tinto, 1997). Achieving a sense of community among physics students at FIU is essential since nearly 48% of students are not retained in the first semester of physics (Brewe et al., 2010a). To evidence the formation of this community, we present a case study of one individual, Marta, and how her participation in the community of learners of her classroom changed while taking her first semester of introductory physics.

Modeling Instruction differs from typical physics instruction where students are passive and the instructor lectures. In Modeling Instruction, the laboratory and lecture components of the course are integrated into a studio format. Content is not delivered through lecture but, instead, students learn by building, validating, and extending models (Brewe, 2008). Class time is spent with students either working in small groups or discussing their ideas with the class, supplemented by information they put on portable whiteboards. Modeling Instruction changes the environment and activities in which students participate, as compared to traditional classrooms. These changes include seating arranged in groups, using experiments and whole-class discussions instead of lectures, and managing discussions to promote student-student discussions. While Modeling Instruction classes currently involve 30 student sections and, thus, impact about 15% of the physics students at our institution, students taking a Modeling Instruction course at FIU are more successful along several measures. Students completing Modeling courses show positive shifts on attitudinal surveys such as the Colorado Learning Attitudes about Science Survey (Adams et al., 2006; Brewe, Kramer, & O’Brien, 2009). They have improved scores on the Force Concept Inventory, a widely used test of conceptual understanding (Hestenes, Wells, & Swackhamer, 1992) and the odds of success are 6.7 times greater, compared to the traditional courses at FIU (Brewe et al., 2010a).

One of the goals of Modeling Instruction is to increase the successful participation of women and underrepresented minorities in physics. This goal has particular relevance for FIU, which teaches a majority of minority students. Moreover, most students commute, making access to activities that facilitate participation even more important. Students in Modeling Instruction are provided with many opportunities for participation in the classroom, where most of their
activities require active participation. Previous research has shown that we are making progress toward this goal, as the Force Concept Inventory gains for majority and minority students in Modeling are not significantly different (Brewe, et al., 2010a). Additionally, a Social Network Analysis of students in a Modeling Course and a traditional course at FIU showed that all Modeling Instruction students worked with at least one other student (and most work with multiple students) while the majority of traditional students were isolates who worked with no other students from their class (Brewe, Kramer, & O’Brien, 2010b).

We have evidence that Modeling Instruction students are experiencing gains in both their conceptual knowledge and their attitudes about learning science, and these same students feel an increased sense of community (Brewe et al., 2009, 2010a, 2010b). This has led to our investigation of whether and how a sense of community might contribute to student success. As students become part of a community of learners, the activities they participate in and their expectations about what it means to learn physics change. From a participationist theoretical perspective, this transformation of participation is learning (Rogoff, Matusov, & White, 1996; Sfard, 1998). However, what transformation of participation in a physics course looks like, at a fine-grained level, is not well understood. The case study described here is a part of our larger efforts to understand the community of learners that develops in a Modeling Instruction class and how individuals’ participation is transformed as they become part of this community of learners. As such, we endeavor to address the following research question: What evidence of changing participation can we identify from one student as she progresses through a Modeling Instruction physics course?

**Literature**

The idea of community has been discussed in multiple ways in education research. Some researchers have restricted the definition of a learning community to a group of students who participate in courses spanning multiple disciplines, which last one or more semesters (Gabelnick, MacGregor, Matthews, & Smith, 1990; Zhao & Kuh, 2004). Others have defined learning communities more broadly as a group of people with varying levels of expertise and a group goal of expanding the community’s knowledge as a whole, where no single person is responsible for or can know everything (Bielaczyc & Collins, 1999). We use Rogoff et al.’s (1996) term of a community of learners which is made up of active student learners and instructors that act as more skilled partners to provide guidance. In this community, both students and instructors have responsibilities for directing the learning. Students are expected to construct their own knowledge by participating in activities the instructor provides; within these activities, learners have choices regarding how to achieve their learning goals. In turn, instructors are expected to offer guidance but not to assume control of the learning process. The idea of a community of learners is embedded in the participationist understanding of learning, which is discussed in detail in a later section (Rogoff et al., 1996).

We use sense of community to refer to an individual student’s perception of his or her social and academic integration in the community of physics learners. This use of the term community aligns with discussions of the role of social and academic integration in student persistence. Research on what influences students’ completion of college, which is termed their persistence, gives us insight into what might affect students’ completion of a course. In his synthesis of research results on persistence, Tinto (1993) identified several factors relating to community that influenced whether students completed college: their adjustment (or lack of it) to the new norms of a college environment, their perception of their fit into the dominant culture of the college, and how well they make social connections with other students. Moreover, both
formal and informal faculty-student interactions have been shown to have an impact on integration on students in general (Tinto, 1993) and on the integration of Hispanic students in particular (Kraemer, 1997). Similar research on persistence in high school students shows the influence of their engagement behaviors, such as being prepared for and attending class, which are activities which can be supported by the classroom environment (Finn & Rock, 1997). In his comparison of commuter students attending traditional classes and those attending a class using cooperative learning to study multidisciplinary topics, Tinto (1997) suggested that learning communities improved persistence by helping students make friends, which led to more academic and social connections and more participation in the construction of knowledge.

Much of the research on persistence has focused on identifying factors that correlate to increased (or reduced) persistence. What is still missing is an understanding of how these factors appear in the daily interactions of students and faculty, and how a single individual’s participation is transformed as she becomes part of a learning community.

Theoretical Framework

A community of learners requires analysis at multiple time scales and grain sizes. We depend on a participationist framework to clarify why a sense of community is important for successful physics learning. To answer the question of how day-to-day classroom activities contribute to building a community of learners, we will need to explain how people interpret and act in individual situations. To do that, we use framing, a theoretical framework developed in the fields of linguistics and sociology.

Participation Theory

Participation theory views learning as the transformation of participation. Students’ way of participating changes as they learn the norms and practices of the community of learners, which includes developing a shared discourse with their fellow community members of students and instructors (Bielaczyc & Collins, 1999). As they engage in activities, students add to their knowledge and take on increased responsibilities in the community (Rogoff, et al., 1996). By this account, science students learn by engaging in activities such as discussions, doing experiments, and solving problems together. A student’s participation in the community of physics learners is built up by all the interactions that she has with her fellow classmates, the instructor, and other physics students with whom she studies. Thus, the participation in the learning activities contributes both to the establishment and continuation of a community and to students’ sense of how this community helps support their continuing participation.

Framing

Framing is the usually tacit process by which people answer the question, “What is it that’s going on here?” (Goffman, 1974). A person’s answer to this question is guided by her expectations of what kind of situation she is in, her past experiences of similar situations, and her perceptions of how others around her are framing the activity. For example, a student may frame working on a physics problem as an opportunity for sensemaking, which leads her to compare her computed answer to her own experiences. In contrast, framing the problem solving as requiring rote use of formulas might lead her to search though her textbook for a relevant equation. A frame becomes stable when it is repeatedly reinforced by the social and environmental context. Thus, the student in this example will be more likely to frame her physics homework as a chance for sensemaking if the other activities in her class, such as doing experiments and participating in discussions, as well as the attitudes of the other students, indicate that providing answers consistent with common sense and previous answers is valued and expected.
Methodology

Data Collection

The Modeling Instruction course is intended to be taken by students in their first or second year. The class has demographic characteristics comparable to that of the larger institution, which has a student population that is nearly 60% Hispanic, about half female and over 90% commuters (FIU Factbook, 2010). In the class, students work in groups of three, which are changed periodically throughout the semester. These groups work together to conduct experiments, analyze their results, and work on problems. About one-third of class time is spent in whole-class student-driven discussions, which are referred to as whiteboard meetings, because student groups present their results on portable whiteboards.

During the fall semester of 2010, we solicited student volunteers from the Modeling Instruction course being co-taught by Drs. Brewe and Kramer. We selected eight volunteers as study participants; they were chosen to maximize the diversity of academic and personal backgrounds represented. Each was interviewed at the beginning and end of the semester with a series of open-ended questions to elicit their perceptions of the community of physics learners and how integrated they were within it. In addition, two videographers videotaped the class of 30 students. Every day, each videographer chose a different group of three to follow throughout the day’s activities. Videographers did not target the study participants, and as a result, each participant, along with his or her current group, was videotaped six or seven times during the semester.

Marta (a pseudonym) is a non-traditional student returning to college after several years working full-time. During her interview, she stated her intention to go to medical school, and has chosen to major in physics in part because she believes it will prepare her for this. We chose Marta as the subject of this case study because in her initial interview (during the third week of the semester), she said that she was comfortable asking questions in any class, including this one, and that she already did homework with her group members; we wanted to investigate how an outgoing individual, already comfortable with traditional ways of participating in classes, might have her participation transformed by taking a Modeling Instruction course.

Data Analysis

We use a case study methodology to study Marta’s changing participation by focusing on two days of class, one in the third week of class and one in the eleventh week of class. Case studies allow in depth examination of a particular issue, in this instance, Marta’s participation (Yin, 2009). This methodology is best suited to understanding this task because it does not seek to create a description of Modeling Instruction participation as an experience common to all the students who take it, but rather highlights the individual experiences of one student (Creswell, 1998). Two days were chosen to represent Marta’s typical behavior at the start and middle of the semester. We considered the activities in which the students engaged on these days to be typical, as they are a blend of small group and whole class activities. Marta is working with a different group in each, and the particular activities of the day vary. The activities are discussed in greater detail below to illustrate how Marta’s participation as a small-group member is transformed. The analysis here focuses on Marta’s participation in small group activities, as seen in a short episode from each day. This data is supplemented with information about her behavior in the rest of the day’s class.
The beginning of the semester: Marta’s group works in parallel. On the first day that we studied, three weeks into the semester, the students spent the first 50 minutes of class in a white-board meeting, discussing the homework problems they have been working on. They then worked for 45 minutes on a worksheet of quantitative problems in their small groups. Each group prepared one problem solution to present to the class, and they spent the last 20 minutes of class in a whiteboard meeting, presenting and discussing their solutions. During the first whiteboard meeting, Marta introduced and discussed in detail a homework problem with which she struggled, presented her group’s problem solution, and asked questions of the other students. Even though she had only been in the class for three weeks, Marta asked questions, answered questions, and presented her group’s whiteboard results more than the average student.

In the episode we have chosen to represent this day, the students had been given a worksheet with several problems to solve, but had only been assigned to do the first. The problem asked the students to draw motion maps and kinematic graphs (position vs. time, velocity vs. time, and acceleration vs. time) for the following situation “A subway train in Washington D.C. starts from rest and accelerates at 2.0 m/s\(^2\) for 12 seconds.” Student 1 (S1) and Student 2 (S2) were sitting on either side of Maria. They were each writing on their worksheets, with pauses between parts of their conversations. (The length of long pauses is noted in square brackets.) S2 asked Marta several questions, including how accurate the graphs should be and whether her assumption that the train is moving in a positive direction is correct. S1 also asked Marta questions about how to calculate position and whether the initial velocity (v-naught) is zero. At the end she asked a question about the initial velocity of the object in the second problem.

1  S2: Does it have to be accurate or are you just drawing the general motion?
2  Marta: I’m drawing the general motion and then I’m putting the numbers at specific points, that are gonna be, like the end points for example. I would put it there. [22s]
3  S2: We just assume that it’s in a positive direction, right?
4  S1: Where’s your position?
5  Marta: Correct. [Looks at S2]
6  S2: Zero.
7  Marta: We just need to reference that in our motion map. It’s consistent. [Turns to S1]
8  S1: You use this one, how, v-t plus half a-t-squared for di- position.
9  Marta: Yeah-
10 S1: Oh, no that’s-
11 Marta: I did half times the base times the height. Cause this is a true triangle.
12 S1: So this here is-
13 S2: So our v-naught is zero.
14 S1: Right.
15 Marta: Right. Cause it starts at rest.
16 S1: Yeah. [66s]
17 S2: We only do the first one?
18 Marta: Yeah, he only wants us to do the first one.
19 S1: But we don’t know, [inaudible].
20 Marta: What’s that?
21 S1: Here it is saying that it comes to rest after skidding for thirty-five meters. We don’t know if they started at zero, right?
22 Marta: Right, but we only have to do the first one.

In this episode, it is striking that Marta answered all of the questions (asked in lines 2, 9, 10, 23, 28, and 36) but asked none. Neither S1 nor S2 answered any questions, with the possible exception of S2’s statement “Zero” (line 12), which seems only marginally connected to S1’s
question (in 10) and is also unacknowledged by S1. S1 and S2 addressed all their questions to Marta, and S1 even asked a question when Marta was still talking to S2 (line 10). All three students were working on separate worksheets and only looked at each other’s papers to confirm answers. This behavior is noteworthy in a Modeling Instruction class, where students often work problems together collaboratively on a whiteboard. Last, S2 does not appear to hear S1’s question or Marta’s answer about which problem they have been assigned (line 28), because she asked Marta the same question less than 15 seconds later.

Two bigger ideas about Marta’s participation are apparent in this episode. The first is that both Marta and her group mates consider her a source of knowledge, a reasonable assessment because during the entire group work session we watched since she almost always had a ready answer (although not always a correct answer). Marta did not appear to consider her group mates to be equal sources of knowledge: she asked them no questions during this episode, and when she did ask physics questions during the whole session, they were posed rhetorically, and S1 and S2 rarely answered them. (S2 does later provide a lengthy explanation on a calculus topic.) The other theme that emerged is that the three students perceive “working together” to mean “helping each other by answering questions.” S1 and S2 seemed comfortable asking any questions that they had, and Marta never appeared impatient or unwilling to answer their questions. But their work happened in parallel, as evidenced by the long pauses where they were all writing on their own worksheets and the fact that they were all working on different parts of the problem at the same time. What is missing from their idea of “working together” is the idea that they learn together: by brainstorming, clarifying each other’s questions, or by working collaboratively on the problem.

The middle of the semester: Marta’s group works collaboratively. On the second day we examined, Marta worked for twenty minutes with her small group to prepare a whiteboard explaining the experiment they conducted the previous week. In the hour-long whiteboard meeting that followed, each group presented the experiment they designed and the whole class discussed the results. The instructor then conducted a demonstration, and the last 35 minutes were a mix of students working in their small groups to make sense of the demonstration’s results and a whole-class discussion led by the instructor.

In this episode, from the start of class, the students were supposed to be preparing their whiteboards to display the results of the experiment they did the previous week. Each group had to design their own experiment to test the effect of one characteristic on friction. Marta’s group had already written up their whiteboard, so they were discussing their experiment, which was supposed to test whether the velocity of a moving cart affected the frictional force it experienced (it does not). They were unable to collect the data they wanted, so they modified their experiment; later during that experiment their instructor told them that they had tested how the mass of the object affected the frictional force it experienced.

1 S4: So I was thinking our, our, I guess
2 our project, our little thing proved that
3 um that the force of friction was
4 basically close to the force that we
5 applied by the weights.
6 S3: But we can’t determine that because
7 we have no values.
8 S4: Well, we didn’t, we didn’t uh, we
9 didn’t find out the forces of the weights,
10 right?
11 S3: No, we didn’t find, because we were
12 so stuck, we couldn’t find anything. So
13 in theory it should work, but we, we
14 have no test.
15 [Marta pages through notebook.] [80s]
Marta: Remember what values we ended up using, in terms of the weights? I think we started with like a hundred grams, and then we went up to-
S3: Two hundred. Yup.
Marta: Did we ever not use, did we not use the big, one kilogram at all?
S3: No. It was too fast. [10s]
Marta: We had four hundred in the cart, right?
S3: Yes. No. We changed it to three hundred. If you had three, and then you would take off two and leave one hundred.
Marta: I think one of those two was a two hundred. Cause it was a big fat one, and then it had like two regular ones.
S3: I don’t know. [42s]
Marta: And like the other problem was that when like say for example we had um we had it moving, but it was moving very slowly and then if we added weight it would just stop. Cause it wasn’t enough like.
S4: Yeah, it would kind of like stop either way.
Marta: And then, but when we did. Cause remember towards the end like we did a really big weight to get it really moving and then we took it off, like halfway in the middle of the air. But it was like impossible because it’s not enough length to really measure the effect of anything.
S3: We’d have to really like have that thing really high in order to [inaudible] that. [On phone] Hey. Wake up. You have class. [inaudible] in thirty minutes. Bye. [Hangs up] [inaudible]. [23s]
S4: Wait no, but didn’t we come to the conclusion that when you put more weight on the cart, you were testing the-
S3: Mass affected it.

This episode looks quite different than the previous episode, perhaps because Marta and her group are facing a problem that they cannot solve individually. In this episode, Marta both asked questions (19, 24, 27) and posed her own explanations to the group (19-21, 32-35, 45-52), and the other students also had a chance to present their explanations about the details of their experiment and what it demonstrated. When they were explaining their ideas or asking questions, the students frequently made eye contact with one or both of the other students. Last, while exchanges mainly occurred between just two people (S3/S4 in 1-14, Marta/S3 in 17-36, S3/S4 in 59-63), the partnering varies, and there was a sense that nonspeakers were still monitoring the conversation, because information was not repeated and exchanges built on previous exchanges.

In comparison to the previous episode, the participants in this episode had more equitable roles. Their actions were aligned with the expectations that each person could and should contribute something, as evidenced by the multiple conversational turns of each person and the fact that they should all pay attention to the conversation, even when not actively participating. The group also displayed a different understanding of what “working together” means, that collaborating involves contributing to the discussion by forwarding ideas but also through active listening to other group members. Further, this group showed that they valued collaborative participation. When faced with a difficult problem, they framed the activity as one that involved the contributions of all members of the group rather than the appeal to an authority figure.

Discussion and Implications
Establishing a community of learners has been a part of the successful reform at our institution, increasing the odds of success, the conceptual learning, and the ways students work with each other (Brewe, et al., 2009, 2010a, 2010b). Learning more about how individuals participate in this community and how this participation changes as their class progresses can
help us design instructional environments that better support these changes. In Marta’s case, her role in the small group changed from one of a knowledge source to a co-contributor of knowledge and her framing of learning in a group is this class changed from one where she works alongside other students to one where she can use and build on others’ ideas. This change in participation can be used to further enhance students’ sense of community and, ultimately, their persistence within physics.

This, and future related research, has important local and global implications. First, by studying how individuals change their participation, we provide evidence that is consistent with the participationist perspective on learning and further advocate its role in theories of learning. Second, we provide examples of how changing students’ participation can have valuable outcomes, such as enhanced retention within introductory physics.

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Class Placement and Academic and Behavioral Variables as Predictors of Graduation for Students with Disabilities

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Abstract: This study investigated the impact of specified variables related to academic history, behavioral history, and availability of inclusive systems as potential risk factors for dropouts, impacting students with disabilities. Results indicated that a successful academic history was the only significant predictor of graduation potential when statistically controlling all the other variables.

The national propagation of inclusion has impacted the field of education significantly (Hehir, 2005). Inclusive ideology supports the notion that every student can learn and that those with disabilities benefit greatly from increased interactions with non-disabled peers and direct exposure to the general education curriculum (Fisher & Frey, 2003; Huefner, 2000; Lee-Tarver, 2006). Given the relatively young history of inclusive practices, it is still unclear how it impacts the graduation rates of students with disabilities. Inclusion advocates assert that students with disabilities have the legal right to be educated alongside their non-disabled peers (Rea, McLaughlin, & Walther-Thomas, 2002) and point out that the educational outcomes and graduation rates of students with disabilities educated under the self-contained or pull-out models are generally poor (Rea et al., 2002). Yet, dropout rates for students with disabilities have remained steady even after inclusive practices were put into place (Bost, 2006).

The failure of students with Specific Learning Disabilities (SLD) or Emotional Behavioral Disturbances (EBD) to graduate prevails nationally. As evidence, 51.4% of students with EBD and 34.1% of students with SLD drop out (Bost, 2006), indicating the need for further investigation and continuous evaluation of the dropout phenomenon amongst these student populations. The purpose of this study was to investigate the school-related variables that predict the graduation potential of students with SLD or EBD; as well as the impact of inclusive settings on their graduation potential. The study attempted to answer three questions: (a) Do specified school-related variables contribute to the graduation potential of students with SLD or EBD? (b) Do the variables primary exceptionality, gender, ethnicity/race, grade, current enrollment, academic history, behavioral history, standardized test performance, and educational setting contribute to the graduation potential of students with SLD or EBD? and (c) Do the variables educational setting, primary exceptionality, academic history and behavioral history show first order interactions?

Literature Review

The gradual disengagement of students with disabilities from school occurs due to a myriad of social, academic, and behavioral factors that are exacerbated by limiting perceptions of what a disability status constitutes. These often result in the students’ removal from the general culture of the school and the failure to view and treat them as contributing members of the school’s milieu (Hehir, 2005). Operationally defining dropout has become difficult due to lack of consistency in the methods used to determine dropout rates (Kemp, 2006). This lack of objectivity in measuring the magnitude of the problem potentially adds to its propagation.

School attrition in special education is most prevalent in populations of students with SLD and/or EBD (Bost, 2006; NLTS 2, 2003). As empirically supported by the existing
literature, academic and behavioral variables have been consistently found to contribute to school attrition (Bear et al., 2006; Bost, 2006; Cobb et al., 2006; Dunn et al., 2005; French & Conrad, 2001; Scanlon & Mellard, 2002; Suh & Suh, 2007). Given the academic and behavioral problems students with SLD and EBD often experience and manifest, both populations are considered at a greater risk for dropping out.

Researchers have arguably identified the factors that lead to dropout, but have failed to apply these to existing inclusive models, and have generally ignored the student perspective, particularly students with disabilities. The few studies that have included student voice reported that students with disabilities do not feel they belong or are valued in school, have generally negative opinions of their relationships with teachers, and the existing educational constructs are designed to flush them out (Bear et al., 2006; Kortering & Braziel, 1999). A significant number of studies related to dropout also revealed that regardless of any existing disability, students who drop out disengage from the school’s culture (Baken & Kortering, 1999; Bost & Riccomini, 2006; Dunn et al., 2004; Lee & Burkman, 2003; Rea et al., 2002). This process typically involves extreme absenteeism or truancy and, consequently, poor academic success.

School attrition in special education is a complex issue requiring further research, an increase in advocacy efforts, and a myriad of prevention-based solutions. Inclusive settings have the potential to become part of these solutions since they can provide students with disabilities special education services within the context of general education. Related research has shown that students with disabilities in inclusion classes increase academic performance as well as pro-social behaviors (Rea et al., 2002). Based on these preliminary findings, this study investigated the impact of inclusion on the graduation potential of students with disabilities. When compared to dropout rates in general education, the steadily increasing school attrition rates in special education have become a chronic reality across the nation, particularly in the categories of SLD and EBD. Given the educational system’s legal, educational, and social responsibilities to these students and society at large, every potential avenue to provide relief must be explored. The findings of this study provide some viable solutions to this very complex situation.

Method

This study implemented quantitative methods to identify likely predictors of graduation for students with SLD or EBD. A logistic regression was utilized because its implementation does not assume a linear relationship between the dependent and independent variables and thus handles non-linear effects. The design features included random assignment and random selection. Specifically, the sample investigated included all of the students with SLD or EBD from the four participating schools. To support the reliability of the instrument employed, in this case logistic regression, the test-retest format was followed. Specifically, three trials of all the regressions and interactions were conducted in order to assess if the results were consistent. To facilitate internal consistency linear regressions were implemented to answer all of the research questions.

The sample consisted of a heterogeneous group of 573 students with SLD or EBD. This study was not designed to include only racial or ethnic minority students in the sample. However, due to the demographics of the participating schools and the phenomenon of overrepresentation in the high incidence categories of SLD and EBD (Donovan & Cross, 2002; Harry & Klinger, 2006; Hart, 2003), the entire sample consisted of minority students. Similarly, although the population was heterogeneous by design, due to the over-representation of boys in the EBD category (Sugai & Horner, 1999; U.S. Department of Education, 2007) most of the subjects were male.
Miami-Dade County, Florida, houses the fourth largest school district and the second largest population of racial and ethnic minority students in the nation. Miami-Dade County Public Schools (M-DCPS) is a vast urban district that provides services for 339,087 students. In comparison to other states, Miami-Dade County has the greatest percentage of immigrants as residents and one of the highest poverty rates amongst big cities; the cost of living in Miami-Dade County is 29.32% higher than the national average (Watnick & Sacks, 2006). As of 2008, M-DCPS housed 45 high schools, 12 of which are magnet schools, and are divided into four geographic regions. For the purposes of this study, the following conditions were established in selecting participating schools: (a) school grade of C or lower as determined by scores on the state’s standardized test, the Florida Comprehensive Assessment Test (FCAT), (b) students with SLD or EBD represent 20% or more of the dropout population, and (c) students with SLD or EBD make up more than 50% of the students with disabilities population. Accordingly, one school per demographic region was selected, totaling four.

M-DCPS produces yearly reports depicting graduation and dropout rates for all its public schools. Students from the participating schools, with SLD or EBD, who graduated in the 2008-2009 school year, were compared to those who dropped out with the purpose of identifying differentiating factors, based on academic and behavioral histories. A logistic regression was conducted using (a) primary exceptionality, (b) gender, (c) ethnicity/race, (d) grade, (e) current enrollment, (f) academic history, (g) behavioral history, (h) FCAT performance, (i) educational setting, and (j) behavioral history as likely predictor variables of graduation potential. The dependent variable consisted of enrollment (i.e., in-school or dropped out).

The data categories were extracted using archived information from yearly reports provided by M-DCPS. The independent variables were regressed onto the dependent variables using the \( Y = b + b_1 x \) equation. The standardized regression weight implemented to interpret results in linear regression or Beta weight was interpreted as a log odd estimate and compared to the odds ratio estimate, which is generally thought to be a more efficient way to show the relationship between the independent and dependent variables (Meyers et al., 2005). To interpret the overall validity of the model proposed, the Cox and Snell’s \( R^2 \) and the Nagelkerke \( R^2 \) were considered. For the purposes of this study the Nagelkerke \( R^2 \) was used because it can achieve a maximum value of 1 which is generally preferred (Meyers et al., 2005).

Interaction is the test of the multiplicative of and above the additive effects. It suggests that the effect of one variable depends on the value of one or more other variables. This study investigated the potential existence of first-order interactions between (a) educational setting and academic history, (b) educational setting and behavioral history, (c) primary exceptionality and academic history, and (d) primary exceptionality and behavioral history. These variables were tested for possible first-order interactions in the regression. Both variables were multiplied together to create the interaction variable and were coded as follows: (a) Educational Setting * Academic History, (b) Educational Setting * Behavioral History, (c) Primary exceptionality * Academic History and (d) Primary exceptionality * Behavioral History. To provide a clearer picture of the relationship between these variables correlations were also conducted.

**Results**

The results of the logistic regression conducted will be discussed in relation to answering the two research questions posed which sought to investigate: Do specified school-related variables contribute to the graduation potential of students with SLD or EBD? Do specified school-related variables show first order interactions?
Results for Research Question 1

Only academic history accounted for a significant amount of unique variance in predicting graduation when controlling for (a) exceptionality, (b) ethnicity, (c) gender, (d) grade, (e) FCAT reading, (f) FCAT math, (g) educational setting, and (h) suspension (see Table 1). The student’s academic history (i.e., passing or failing grades) was found to be the strongest predictor of graduation when including all the other variables. Only the variable ethnicity approached significance and indicated that Blacks were more likely to graduate than Hispanics when holding all the other variables constant. Since one of the main goals of study was to explore the significance of inclusive settings on graduation potential, it is important to note that educational setting (self-contained or inclusion) did not account for significant variance when holding all other variables constant or statistically controlling them.

Results for Research Question 2

A significant association between (a) educational setting and academic history, (b) educational setting and behavioral history, (c) primary exceptionality and academic history, and (d) primary exceptionality and behavioral history was found (see table 2). As also portrayed, all of the independent variables except primary exceptionality are associated with the dependent variable (i.e., enrollment). The results also yielded a significant association between being in inclusion classes and having a successful academic history, $r = .267$, $p < .001$. Specifically, 93% of the students in the sample educated in inclusive settings obtained passing grades, while in comparison, 72% of students in the sample from self-contained settings obtained passing grades. In addition, a significant association was found between being in inclusion classes and having a successful behavioral history, $r = -.289$, $p<001$. Specifically, 79% of the students from self-contained settings were suspended, in comparison to 22% of the students from inclusive settings.

A logistic regression was conducted to determine the effect of the dependent variable (i.e., enrollment) on the independent variables: (a) academic history, (b) behavioral history (i.e., suspensions), and (c) educational setting. This was done in two steps (i.e., model 1 and model 2). As shown in Table 3, the overall model without the interactions (i.e., model 1) was significant. Although model 2 was also significant (see Table 4), there was not a significant change between model 1 and model 2, $\chi^2 (3) = 3.66$, n.s. The Nagelkerke $R^2$ was used to interpret the overall variance of the model; accordingly, the $R^2$ was .84. This indicates that 84% of the variance of the dependent variable is explained by the independent variables.

The only significant variable for model 2 was academic history (see Table 4). Despite the associations between the independent variables illustrated (i.e., academic history, behavioral history, and educational setting) and the dependent variable (i.e., enrollment), when the other variables were controlled, the only significant variable was academic history. This indicates that the variance between academic history and enrollment overlaps with the variance between behavioral history and enrollment (i.e., it explains overlapping variance). Similarly, the relationship between educational setting and academic history overlaps with the relationship between educational setting and enrollment. Given that one of the goals of this study was to investigate the effect of educational setting (i.e., self-contained and inclusion) on academic history, it is important to note that it was not significant. However, the interaction between educational setting and academic history did approach significance. Therefore, the effect of academic history on enrollment might depend on the educational setting. Specifically, students in inclusive settings are more likely to have a successful academic history when compared to students in self-contained settings, which was the only significant predictor of graduation potential when statistically controlling the other specified variables.
Conclusions

This study aimed to identify the school-related variables that predict the graduation potential of students with SLD or EBD within the current educational climate which mandates inclusive practices. A critical analysis of the results yielded will be discussed throughout this section and substantiated based on the existing literature.

Dropout continues to affect students with disabilities at alarming rates (National Center for Statistics [NCES], 2007), and intensifies in EBD populations (Blackorby & Wagner, 1996; & Cobb et al., 2006). The results yielded by the quantitative component of this study not only support the latter statement, but also suggest that even within the current inclusive climate, students with EBD are still not making adequate progress within the context of graduation potential.

Based on the sample investigated, the only significant predictor of graduation across both exceptionalities was a successful academic history or achieving passing grades, when statistically controlling all the other school-related variables. Since one of the main goals of this study was to investigate the effect of inclusive settings on graduation potential, it is important to clarify that it was not found to be significant when statistically controlling all the other school-related variables. However, it is also important to note that when testing for possible interactions among the specified variables, students in inclusive settings were found to obtain better grades. Specifically, this study found the existence of a first order interaction between inclusive settings and obtaining passing grades. The latter as stated was the one significant predictor of increasing graduation potential.

The only other variable that came close to significance was the student’s ethnicity. Based on the sample investigated, Black students with SLD or EBD were significantly more likely to graduate than Hispanic students under the same disability categories. This particular finding coincides with current national dropout trends that indicate Hispanics are the ethnic group at greatest risk for dropout (NCES, 2007). Within the context of school-related variables that increase dropout among Hispanic students, (a) being held back a grade, (b) having been suspended from school often, (c) spending little time engaged in homework assignments, and (d) not being enrolled in a dropout prevention program significantly increased the likelihood of dropping out (Carpenter & Ramirez, 2007). Interestingly, having English as a second language did not significantly impact dropout. Accordingly, Hispanic students born outside of the United States were less likely to drop out than those born here (Carpenter & Ramirez, 2007).

In addressing the first set of interactions, educational setting and academic and behavioral history, this study found that there is a significant interaction between educational setting and academic achievement. Specifically, students in inclusive settings were more likely to pass their classes or achieve academically than students in self-contained settings. As evidence, only 6% of the students in the sample educated in self-contained settings had a successful academic history. These findings support Rea et al.’s (2002) conclusions, which indicated that students with disabilities in inclusive settings performed better academically, as well as this study’s contention that inclusion can be implemented as a potential dropout prevention variable for students with disabilities. Moreover, given previously stated findings which indicated that low academic achievement increases dropout (e.g., Bear et al., 2006; Blackorby & Wagner, 1996; Dunn et al., 2004; Suh & Suh, 2007), extensive consideration must be given to the idea that students in inclusion classes experience significantly better academic results than their self-contained counterparts.
The investigator gave extensive consideration to the idea that students in self-contained classes may be different than students in inclusion classes. Based on the perspectives of some of the participants, being in inclusive settings prompted them to want to learn because they saw other students display this behavior. In addition, other participants expressed that the overall environment in inclusion classrooms was more conducive to learning because there were fewer behavioral problems. From the lens of this study, the effects of inclusive settings on the students’ academic behaviors can potentially curtail existing differences among students in self-contained and inclusive settings. The potential existence of psychological factors which may potentially differentiate the two groups (i.e., students in inclusive settings and students in self-contained settings) must also be considered. This suggests the potential need for another related study with longitudinal properties, addressing the long-term academic and behavioral history of both groups. In line with studies previously cited (e.g., Bost, 2006; Cobb et al., 2006; Rea et al., 2002), which indicated that inclusive settings promoted pro-social behaviors, this study found that inclusive settings have a significant interaction with behavioral history, or a student’s behavioral record.

In analyzing the second set of interactions, exceptionality and academic and behavioral success, the investigator found that there is a first order interaction between exceptionality and academic success. Specifically, based on the sample analyzed, students with EBD were more likely to drop out than all other students. This reaffirms previously discussed findings by Blackorby and Wagner (1996) and Cobb et al. (2006), which concluded students with EBD are at the greatest risk for dropout among all other disability categories.

When considering the previous interaction which indicated that students in inclusive settings experienced better academic outcomes, one can imply that students with EBD are not being included as much as students with SLD. Bost (2006) also found that students with EBD were the least included. Given the inherent behavioral problems generally associated with the EBD label and its detrimental effect on graduation potential (Blackorby & Wagner, 1996; Cobb et al., 2006), it was surprising to find that based on the sample analyzed, students with SLD were more likely to be suspended from school than students with EBD. However, in further scrutinizing this finding, when it comes to students with disabilities, school districts are required to determine whether the problem behavior is a manifestation of the student’s disability. If the latter is found to be the case, considerable restraint and caution is generally exercised when determining if suspension or possible expulsion applies. Consequently, given the myriad of potentially troublesome behavioral manifestations associated with the EBD label, these can perhaps curtail the type and magnitude of consequences imparted. Moreover, inclusive settings seldom follow the structured behavioral programs oftentimes implemented in self-contained settings, which as stated were most effective in reducing dropout associated with anti-social and/or aggressive behaviors (Cobb et al., 2006).

**Recommendations for the Practice**

In considering the educational ramifications of the findings of this study, which among others included that achieving passing grades was the only significant predictor of graduation, significant measures must be taken when addressing the academic needs of students with disabilities. To achieve this, general education teachers in inclusive settings must become familiar with accommodations\(^1\) and adaptations\(^2\) and must also be given adequate support from

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\(^1\) Accommodations: Supports and services given to students with disabilities without changing the actual curriculum or related expectations.

\(^2\) Adaptations: Changes made to the curriculum expectations to meet the needs of students with disabilities.
administrators and special education experts (Hehir, 2005). It is also recommended that pre-service teachers spend more time at actual school settings (Fisher & Frey, 2003) in order to learn within the context of the demands of daily practice.

Findings of this study also suggest that students with EBD were more likely to drop out than all other students. Consequently, the way in which this population is being educated within the context of current inclusive mandates must be urgently addressed. Results of this study yielded that students with SLD or EBD did receive better academic grades in inclusive settings. Based on this, it is suggested that students with EBD be exposed to inclusive settings more frequently or for longer periods of time. Significant attention must be given to findings that indicate students with SLD were suspended more often than students with EBD, perhaps due to the lack of structured behavioral programs in inclusive settings. Accordingly, a structured behavioral program including a generalization phase is followed in inclusive settings, with the support of the special education teacher (Cobb et al., 2006). Dropout trends have been moderately reduced in general education since the early 1990s (Bost, 2006); it is both a moral and a professional obligation to ensure that the same occurs in special education.

This study was found to have several potential limitations. School districts have significant freedom in selecting which type of statistical procedure they implement to quantify the number of students who drop out, generally the event cohort model is implemented which is often the least accurate method (Kemp, 2006). Consequently, the data analyzed potentially underestimated the number of students with SLD or EBD who dropped out. Lack of longitudinal information can also potentially underscore significant existing differences between the students who made up the educational settings investigated (i.e., inclusion and self-contained). Another potential limitation was that there were no White students in the sample, which can potentially limit the generalization of this study’s results to students from primarily Black or Hispanic school districts.

Implications for Future Research

To continue investigating the impact of inclusive settings on students with disabilities, it is recommended that a study with longitudinal properties be conducted where the long-term psychological, academic, and behavioral histories of the sample would be taken into account. Importantly, NTLS (2001) conducted a similar study, but not within the context of the current educational climate where most students with high incidence disabilities are included for most of the school day. To further explore how the general culture of the school affects dropout trends, and given that the sample selected in this study was from schools graded ‘C’ or lower, a similar study can be conducted in ‘A’ and ‘B’ schools. Specifically, the significance of the school’s grade as it relates to dropout trends in special education can be investigated.

References


**Table 1**

*Significant Variables*

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<th>Variable(s)</th>
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**Table 2**

*Correlation of Variables*

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<td>.000</td>
<td>.041</td>
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Table 3

*Model Summary of Change in Statistics for Correlation Variables*

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Table 4

*Variables in Model 2*

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Note. The (X) indicates the variables were multiplied
An Analysis of a Small Favela-Based Youth Organization

Bryn Hafemeister
Florida International University, USA

Abstract: This research identifies the value of a community-run NGO (non-governemental organization) in its work to advocate for a more positive image of Rio’s favelas (urban slums). Basic interpretive inquiry is used to analyze interviews with the principle spokesperson for the organization. Recommendations for further research are made.

In June of 2009, I was introduced to Morrinho, an arts-based community youth organization in the Pereira da Silva favela, urban slum, in Rio de Janeiro, Brazil. I spent the summer volunteering with the NGO. The physical site of Morrinho is a 350 square meter model made of painted bricks of the city’s favelas, which can be seen on the surrounding hills. Morrinho’s unique story is that this model was started as part of a game by a group of kids in the late 1990s when the community was at the height of its drug war. The game involves role-playing favela life as the youth see it: neighbor interactions, local dances, as well as gang and police violence. A new generation of local boys still plays the original game, but the organization also now works in tourism, as a film studio, travels nationally and internationally reproducing the original model in arts festivals, and works to supplement the public school education of the local youth. The story of how Morrinho grew from a child’s game to a non-governmental organization (NGO) intrigues many who come to know the project. However, when I was first introduced to the project, there was no information addressing Morrinho’s value to the local community. This posed a problem for the organization since they sought external funding and wanted to broaden their image as valuable. Also, Morrinho is the only social program in the Pereira da Silva community.

In order to address this problem, the purpose of this research is to answer one central question: According to its original founding member, what has been the value of Morrinho over the course of its history? When I began this research, Morrinho was facing the real prospect of closure if they did not get additional funding. This research was used to provide more detailed information in order to attract funding for the project. Due to time constraints, this paper used one principle source, whom I will call Thiago. Thiago originally conceptualized of the game, and has since been an integral part of the project since its inception. Although Morrinho is a team project, my research through dozens of newspaper and magazine articles on the project, and experience volunteering with it since 2009, has led me to believe that Thiago is the primary spokesperson. Therefore, interviews with him are a good place to start in this initial analysis.

Context of the Study

A general understanding of favela history and culture will help to elucidate the specifics of the Morrinho project. Since their beginning in the late nineteenth century, there have been nearly continuous government plans to either destroy, displace, or integrate Rio’s favelas (Medeiros, 2007). Present-day estimates place approximately 20% of the city’s residents in a favela. The most common images that come out of Rio de Janeiro’s more than 600 favelas are of drug trafficking, violence, and poverty. This culture of violence began in the mid-1980s, when cocaine supply networks in the Middle East were dismantled, and “Rio emerged as an important...
transshipment hub for Andean cocaine en rout to Europe and North America” (Arias & Rodrigues, 2006, p. 61). Over the next 10 years, drug dealing and crime networks consolidated under the umbrella of only a few prison-based networks. At the same time, these drug traffickers began to employ favela residents in their operation. In exchange, they would provide assistance to the poor such as “financial assistance for funerals, water service and vans to take residents to and from stores and hospitals” (p. 61). In contrast to the social services provided by the crime bosses, the lack of government coordination led to “many bureaucrats, police and politicians [taking] kickbacks or otherwise [working] with traffickers to accomplish personal objectives” (Arias, 2004, p. 3).

This cycle of corruption and entrenched crime, combined with Brazil’s recent history of a military dictatorship, resulted in an official heavy-handed police approach in the favelas, with a murder rate that stands out by international standards. In 2008, Rio’s police “acknowledge killing eleven hundred and eighty-eight people who were ‘resisting arrest’ . . . . By comparison, American police killed three hundred and seventy-one people - classified as ‘justifiable homicides’ - in the entire United States in the same period” (Anderson, 2009, p. 50). Other research finds that the most common victims of marginalization and of police violence in Rio are young Black males who have not finished their elementary education and live in a favela (Rieter, 2009; Roth-Gordon, 2009). Important to this study is that this is the category with which Thiago and many of the Morrinho youth identified.

With several hundred favelas in the city of Rio de Janeiro, the history of violence and abuse cannot be generalized. Pereira da Silva, located in the wealthy southern zone of the city, is the favela where Morrinho is located. Today, Pereira da Silva is a small and peaceful community, home to about 6,000 residents (Rocha, 2009). However, until the spring of 1999, the community had regular bouts of violence. Due to its small size, close proximity to the governor’s mansion, and easily controlled exits, the community was one of the first to be integrated by the government’s favela-bairro, favela-neighborhood, model (Rocha, 2009). According to this model of integration, first, the local organized crime was targeted. The government then provided sanitation systems, other basic infrastructure, and spatial and social integration to the community.

Streets were connected with surrounding neighborhoods and space was set aside for the operation of social projects (Freire Medeiros, 2007, p. 581). Pereira da Silva remains one of the few pacified Rio favelas, and one of the only favelas, which had a successful execution of the favela-bairro plan. Though, during my two-month stay in Pereira da Silva the summer of 2010, I realized that the community is not immune to gang control and drug trafficking. I witnessed regular selling of cocaine and marijuana. There was also one instance when Rio’s military police entered the community with the assumed aim of attacking the gang presence. A few months after I had returned home to the United States, I received word that a male youth who was involved in drug-trafficking in Pereira da Silva was killed by the military police. I found no news coverage of the event, but my contacts in Pereira da Silva all said that the murder was unjustified.

**Methodology**

Given that this is a basic exploratory study and there is scant literature on the Morrinho organization, I used basic interpretive inquiry. Merriam (2002) describes basic interpretive research as one in which “the researcher is interested in understanding the meaning [that] a phenomenon has for those involved” (p. 37). Social constructionism is the basic theoretical framework of this study. According to Merriam (2002), constructionism posits that “individuals
construct reality in interaction with their social worlds” (p. 37). I show in the following pages that the social reality of the Periera da Silva favela, and the boys’ experience in this social context, led to them creating the game of Morrinho.

During the initial five weeks that I worked at Morrinho’s headquarters in Rio, I was present during and filmed a number of interviews that Thiago gave for the purpose of promoting the project. I chose to use two and a half hours of two interviews as data for this research. One interview, lasting one and a half hours, was conducted by Guillermo Planel, a photojournalist who is well known for his work covering the violence that exists in Rio’s favelas. The second interview was conducted by Zezinho Yube, a representative of the Vídeo nas Aldeias organization. This took place during a cultural exchange between the members of Morrinho and their team of Ashaninka and Hunikui peoples from the Brazilian state of Acre. These interviews were chosen because of their comprehensive nature. All interviews were loosely structured, and Thiago often started telling aspects of Morrinho’s story without being prompted. My experience working with Thiago since June of 2009 led me to believe that he gives much richer information when allowed to talk about loosely guided topics.

I transcribed and coded 45 minutes of the interview with Mr. Planel, but due to time constraints, I devised a note-taking system for the rest of the data. I noted verbatim only key statements, and noted the exact time in the video, which allowed for easy referencing. I coded and chunked all data into emergent themes, then designed interview questions to ask Thiago about issues that I believed needed clarification. I then transcribed, coded, and chunked the final interview into themes. Finally, I coded and organized the data two more times further deducing emergent themes to arrive at my conclusions. Through this analysis, I constructed a narrative of the context in which Morrinho was born. I also found three overarching messages which Thiago said are central to Morrinho’s value in Pereira da Silva.

I used a variety of trustworthiness strategies during my analysis process. I found that the richness in Thiago’s descriptions of the history and relationship with Morrinho allowed me to see recurring patterns in the data. I was able to achieve data saturation as Thiago repeated the same messages through all interviews. Merriam (2002) addressed member checking as a common integrity strategy “you ask the participants to comment on your interpretation of the data” (p. 26). I worked closely with Thiago via telephone, e-mail or instant messenger to validate the analysis that I was undertaking. According to Merriam (2002) another trustworthiness strategy is peer review, which “can be conducted by a colleague either familiar with the research or one new to the topic” (p. 26). During the research process, I worked with a group of fellow graduate students that became familiar with my research over the course of a few months. These colleagues helped me to take a step back from Morrinho, so I could analyze the data of the project that I myself had become so familiar with over my continuous association since mid-2009. Finally, I sought the insight of a Rio-based researcher who knows Morrinho, and another Miami-based researcher familiar with community development issues. Both researchers were able to offer me guidance in scientifically structured research methods.

The Early History of Morrinho

The following section is a narrative of Thiago’s experience with favela life and the beginnings of Morrinho. This data is used to deduce the value that he places on the project. Thiago came to live in the community in 1997 when Pereira da Silva had a reputation for being very dangerous. Moving to Pereira da Silva at the age of 14 from a small rural town in the state of Rio de Janeiro, Thiago found himself in a much different environment than what he was used to. He found himself at a severe societal disadvantage. In the interview with Guillermo Planel,
he says, “everything was very different for me. Everything that I saw was a show for me. The police coming in, the manner in which they confronted the youth, the way in which they confronted them” (Thiago and Planel). Thiago and his family experienced much discrimination from the police and other favela residents, and witnessed much violence in his first years in Pereira da Silva. Thiago saw his family targeted quite a bit. “They abused us, offended us, they kicked us [long pause], they beat us up . . . . It was just like that. Ignorance, general ignorance by the police; they are trained to be like that” (Oliveira and Hafemeister). Furthermore, school, the institution that would generally be expected to be a source of normalization for children in such a situation, did not help much. Thiago describes how his learning environment was adverse to organized structure. “There were a lot of kids smoking pot inside of the classroom, there were kids that didn’t want to study and they made a lot of confusion . . . so, I was kind of lost” (Thiago and Planel). In this type of environment it is not surprising that most of his teachers did not provide the type of support he needed as an impoverished inner-city youth.

Many times in my data, Thiago refers to memories of prejudice and violence but admits to important lessons that he took from his experiences. “I came into this world fighting. My brother fought too. We did whatever we had to. I think opportunity came and I went after that opportunity” (Thiago and Planel). Thiago later told me, “I learned that I had to respect myself, I learned that I couldn’t lower my head to anybody; that I had to become a real fighter” (Thiago and Hafemeister). Thiago also says that he was more curious about his surroundings than scared or surprised. Referring to the violence by Rio’s military police in the initial phase of the favela-bairro plan, Thiago says

Ugly, ugly didn’t scare me . . . . I wanted to understand why. Why was it that they were killing the kids of the community? Why was it even that they were coming into the community? Why were they killing and shooting? Why did they oppress people inside of their own homes? Why would they provoke us, talking, calling us names? (Thiago and Planel)

It is within this context, and with this curiosity that Thiago started a game that would become a long-term hobby and profession. When newly introduced to city life, and admittedly not knowing what a favela was, or even that he lived in one, Thiago and his friends started to construct Rio’s hillside communities as he could see them from afar. Spending long hours in the rather expansive hillside land around their family’s modest house, Thiago and his younger brother Samuel began to tinker with the materials that their father used for his job in construction. The brothers realized how to get bricks to look like the houses in the hills. Soon after, this game attracted the other boys of the community. Poverty necessitated creativity, and before the ‘residents’ of the model favelas graduated to being Lego-characters, they were painted bottle caps that were found from what others considered to be trash. To Guillermo Planel, Thiago admits, “The more violence that I saw, I played in that same way at the model. After a while, we started to copy the exact reality, the gangs, we started building the model” (Thiago and Planel). This game imitating a local reality proved to be popular with the local boys.

Thiago says that “there were times when there were 30 boys here wanting to play. They wanted a space at the model. They wanted to make their own shack” (Thiago and Planel). In this way, Morrinho grew to be much larger than what Thiago claims that he could have done alone. “As a team, we’ve constructed more than 40 favelas of pure creativity; I could not have done this all by myself” (Thiago and Planel). As Morrinho the game grew to attract more youth, it started becoming a popular pastime for boys that may otherwise have been attracted to the local organized crime.
Since, at times, there were dozens of boys that wanted to participate in the building and play at Morrinho, Thiago says that there came a time to make rules. He was considered by others to be the “boss” of the project, so “I started to make the rules, as if it were a game of reality” (Thiago and Planel). Demonstrating the seriousness of the play at Morrinho, Thiago emphasized the reality aspect of Morrinho. He described how the boys were playing at the model, but the play was not taken lightly. “There wasn’t Superman at the model . . . . I never liked this idea of playing with these kinds of characters . . . . Inside of a favela, reality is reality . . . . If you die, you die for good” (Thiago and Planel). In reality, there is no point in rules if there is no rule of law. Being considered the boss of Morrinho, the young Thiago made sure the rules were followed. If the rules were not being followed, “I would come and take the games of the other kids . . . . It was a bad idea to cross me . . . . If you don’t follow the rules, it was mandatory that we kick you out” (Thiago and Planel). This aspect of the Morrinho game would later prove instrumental in pursuing the project’s objectives.

Critical to Morrinho’s impressive nature is that nobody taught Thiago or the other boys how to build the model. On a piece of hillside land, not cleared of foliage for any type of construction, over the course of a few years, the boys had populated a few hundred square meters of land with model favelas. To Mr. Planel, Thiago recounts, “We disguised our own reality in Morrinho. All of the negativity that we took from the violence we saw in our day to day lives, we threw all of our energies into Morrinho.” For years Morrinho was a game that the boys kept to themselves within the Pereira da Silva community. “For us, it’s just something that we like a lot. It helps with the stress” (Thiago and Yube). “If you are ever having a bad day, it’s much better to take it out with a Lego character at Morrinho, than to unleash your negative energy at home” (Thiago and Planel). Not everyone in the community liked the game, but it proved to be so popular amongst the boys that they would regularly skip other obligations to play at Morrinho.

Thiago says that a pivotal moment in time came when he and some of the boys started taking classes near Pereira da Silva in order to finish their basic education. Laughing, Thiago remembers, “the whole class was all girls. There were 34 girls and six boys” (Thiago and Planel). When the teacher asked about the root of the gender imbalance, Thiago says that the girls told him, “The guys don’t come to class, because they are all at Morrinho. We girls control the classroom and the boys control Morrinho” (Thiago and Planel). Soon the teacher realized that if he was to understand what was so important for these boys, he would need to see Morrinho for himself. However, the boys were still distrustful of those from outside of the favela. Demonstrating a divide that is often felt between favela residents and those from wealthier neighborhoods, Thiago was worried that Morrinho would be copied and he and the other boys would not be given the intellectual and artistic credit as that he says was common to ingenuity that originates in the favelas. However, after much persistence, this teacher gained the boys’ trust, repeatedly asking for permission to visit Morrinho, and showing that he respected the boys for their talents.

After several visits and several more months, this teacher introduced Morrinho to a friend that worked as a filmmaker. As Thiago describes, this was the slow process of opening a homegrown, private project of a group of impoverished boys to the larger population of Rio de Janeiro, then to the world. “We visited various countries in Europe, some states in Brazil . . . . And I think that something that is born inside of the community here, many, many, many people talk of how this reality is hidden. Almost very few can see, and I think that we’ve opened up like this” (Thiago and Planel). This communicated what Morrinho identifies as its mission. My analysis of the specific value of the project according to the data for this research follows.
Morrinho’s Value

Today Morrinho is an incorporated non-profit organization with an international presence and a history that spans over a decade. However, Thiago is currently the only full-time employee of the organization, and devotes part of his time to showing today’s youth this positive alternative to organized crime. I have found that Morrinho’s value is the message that it broadcasts of empowerment, socioeconomic equality, and change from the official lines of government and press.

Youth Empowerment

My data reveals that the most demonstrative role that Morrinho has played is in its importance to the youth in the Pereira da Silva community. As described in the history of Morrinho, and most illustratively with Thiago’s own story, Morrinho allowed him to change from untrusting of those from outside of the favela, to someone with confidence in spite of discrimination, who now works to bridge the divide between social classes. The pride and confidence that Thiago takes from Morrinho is furthered by the inclusion of about 10 boys that now regularly participate in the upkeep of the Morrinho model. Each boy has one or more model favelas that he takes care of. This is a requirement, since several years ago the boys started giving tours of the Morrinho model, and now receive an average of 10 visitors per week.

In accordance with the rules that Thiago established when Morrinho was a much newer project, only when a youth properly takes care of his model can he participate in the cultural exchanges that take place amongst different communities. According to Thiago, when the boys are at Morrinho, “They are not playing, they are working. They are doing better for their families [being here], than they would be at the bottom of the hill smoking pot” (Thiago and Planel). Thiago says, “If it’s against favela, it’s against our organization. If it brings problems for the favela, it’s problematic for our organization” (Thiago and Planel). This discipline and structure works to instill pride in youth that do not have many other positive outlets through school or community programs.

Socioeconomic Equality

Similar to its message of local youth empowerment, Morrinho also communicates messages of social equality in their public image. However, it is by this message being communicated through role-playing with two-inch tall characters made out of Lego-blocks that brings humor to an otherwise tragic issue, and in turn allows the message to be broadcast to a larger audience. At the beginning of his interview with Mr. Planel, Thiago has Lego characters talking into the camera. In a high-pitched voice, adult Thiago communicated a message of racial equality, representative of the majority racial minority that resides in the favelas of Rio de Janeiro, Thiago communicates through a Lego character the equality that Morrinho strives for:

He’s Black, he’s White, he’s dark skinned, he’s brown, he’s Indian . . . . This is not something to kill each other over and to fight about. There’s no reason for this . . . . Let’s think about this a bit, let’s stop being asses, because the worse ass is one that doesn’t try to improve himself . . . . (Thiago and Planel)

Later, when talking about the general discrimination that any favela resident may face regardless of relative wealth, or skin color, Thiago communicated through a Lego character, “It’s not easy living in the favela. You have to be careful. You have to be disciplined. Whoever lives in the favelas has to be creative, be educated and cultured” (Thiago and Planel). Referring to Pereira da Silva’s centuries-old history, Thiago communicates through a Lego character, “This thing about wanting to study the communities [favelas] to destroy them, I don’t like this at all my brother. We’ve got 100 years of history here my friend . . . . [The government] has to think of
schools, in education” (Thiago and Planel). Later, Thiago emphasizes the social divides that Morrinho bridges. “The project opens a vision for other people of what a favela is like, it shows that it’s not all war and violence [here], it shows a positive side. Now a lot of people come to the community and love it” (Thiago and Planel). The socioeconomic inequalities in Brazil are seen as being connected to the official government discourse, which leads to the last message.

Official Change

Finally, the data revealed that Morrinho broadcasts a message of change that needs to come about through official channels like the media and the government. Without any major changes to the status quo, Thiago does not see any promise for the betterment of the underprivileged of Brazil. During 20 minutes of the interview with Planel when Thiago communicated through the Lego characters, he criticized the press’s portrayal of the favelas. “Whoever wants to speak the truth, the press covers it up. This is what it’s like. Are we in agreement? The truth needs to come out” (Thiago and Planel). In another interview, Thiago says, “The media is always going to portray that the young kid is the drug trafficker, not those who are students” (Thiago and Yube). The press was not the only source of official discourse that was identified as being biased.

Communicating through the Lego characters once again, Thiago criticized the government’s aggressive policing strategies of the favelas.

The government is stupid, it’s blind, it doesn’t know how to use its head. It’s stocking up on weapons, see. It’s using technologically advanced weapons. This isn’t helping at all. I don’t know when this is all going to end. (Thiago and Planel)

While my analysis has broken down the Morrinho’s message into the three components of youth empowerment, social equality and official change, Thiago gives a concise, yet holistic mission for Morrinho:

Our point of view is to always show the positive side of the favela. The game shows confrontation, but this is the day to day of our lives. This isn’t something only of Brazil, but of the whole world. People all over the place go through personal emotional, and community violence. I don’t think there is any way to get away from this, this prejudice, and violence, and racism. (Thiago and Planel)

Implications and Recommendations

Through a basic interpretative approach, I have found that Morrinho’s main value lies in the messages that it broadcasts. According to my analysis, Morrinho works to counter negative stereotypes of favela life by focusing on the messages of youth empowerment, socioeconomic equality, and official change. In order to make the conclusions of this study more robust, it is suggested to collect data and conduct analysis of the perceptions of the other 10 incorporating members of Morrinho. This analysis also raises several questions for future study. How does Morrinho’s positive message of the favelas coincide with the violence played out in the game? It is possible that the violence portrayed as a game makes the reality of the Morrinho youth more digestible to someone who would otherwise not pay attention to the daily reality of a favela resident. Another question asks what the real benefit is of participating with the Morrinho organization. All of the Morrinho youth that have not been victims of the drug and police violence are still living in poverty in Pereira da Silva. None of them are university educated and all of them face bleak employment prospects. Is it possible that participation in Morrinho provides a stronger sense of identity to combat racism commonly faced by favela youth and that participation deters an individual’s association with the local drug trade? These questions are
suggested for further research in pursuit of understanding the role of this unique community-based youth organization.

**Interviews**

**References**
Adult Learners and the Work of Amnesty International

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Abstract: This study explores how various adults perceive their work and learning in a chapter of a human rights-based non-governmental organization using the Characteristics of Adults as Learners (Cross, 1981) model of adult learning.

Human rights have been promoted by non-governmental organizations such as Amnesty International (Thakur, 1994). At the center of protest work is education campaigns of various forms to raise the consciousness of people and teach them ways to agitate (Buchanan, 2002). Volunteers and others who deal with Amnesty International learn in various ways (Marlin-Bennett, 2002).

Adult learners arrive at learning with various backgrounds and characteristics. Adults also learn with varying levels of time commitment. The learning can be directed in different ways. These issues can be dealt with in an adult learning model that is used to find the best strategies to help the learning of adults with different characteristics (Cross, 1981).

Adults make up a significant part of the people who deal with Amnesty International in one way or another. Understanding how the diverse characteristics of these adults may affect their learning inside Amnesty International can improve instruction and also the activism that results from it. Research on the applying of an adult learning model to the education of adults with diverse characteristics in Amnesty International is needed. This is a problem in terms of adult learning research but subsequently is a problem for the promotion of human rights.

The purpose of this qualitative case study is to explore the characteristics of adult learners in an Amnesty International chapter and find ways to improve the learning and subsequent human rights promotion that goes on. This study explores the following questions: How do adult learners in Amnesty International fit into the Characteristics of Adults as Learners (CAL; Cross, 1981) model? How do the characteristics of these adult learners specifically affect their learning in Amnesty International? How can learning opportunities be improved in Amnesty International in order to promote better understanding and human rights activism?

This study is important because adults are an important group in the promotion of human rights. First this study explores the nature of Amnesty International. Then the CAL (Cross, 1981) model is explained as a theoretical framework. Then the methodology, results, and conclusions of the study are discussed.

Amnesty International

Amnesty International is sometimes considered an international watchdog group publicizing and fighting human rights violations through non violent protests (Thakur, 1994). After various political struggles to release political prisoners internationally, Peter Benenson with the help of several other people founded Amnesty International in the early 1960s in Britain. Amnesty International quickly developed from its beginning as a series of publicity campaigns to a full fledged political movement. Amnesty International would eventually become a Noble Peace Prize winning volunteer organization with various branches throughout the world. Amnesty International uses events, workshops, conferences, letter writing drives, and

Amnesty International has teamed up with educational institutions to promote education on human rights through experiential learning, service learning, and other strategies (Marlin-Bennett, 2002). The work and materials of Amnesty International is used by many organizations (Lohrenscheit, 2002). Global educators and English language teachers have used materials and activities that incorporate the work of Amnesty International into their curriculum (Cates, 1990). Amnesty International is a non-governmental organization that plays a complementary role to the work of the United Nations and the promotion of the Universal Declaration of Human Rights (Thakur, 1994). Working with Amnesty International has had a strong affect on young people and students because they often see the results of their campaigns. A letter writing campaign for example can lead to the release of a prisoner giving the writer a sense that they have made a difference in the world (Roker, Player, & Coleman, 1999). Education within the larger institution of Amnesty International and outside of it has been researched (Marlin-Bennett, 2002). Research is needed however on education within Amnesty International to volunteers of various backgrounds who join small local chapters and who must learn to do the work needed to participate in events.

**The Characteristics of Adults as Learners Model**

Cross (1981) integrated various adult learning theories such as andragogy and experiential learning into the CAL model. The CAL model focuses on the personal and situational variables that affect learners and learning. The personal issues include the learner’s stage of development, age, life phases, and intelligence abilities. The situational variables include whether the learning is done full time or part time, whether the learning is compulsory or voluntary, and how the learning is administered. Much of adult learning is self directed and problem centered. The CAL model suggests that different learning strategies may have to be used to accommodate learning with different personal and situational characteristics than their peers (Cross, 1981). This study uses the CAL model as a theoretical perspective to explore how the learning that goes on in Amnesty International can improve to accommodate the different personal and situational characteristics of the people who work and learn in one of its branches.

**Method**

This was a qualitative study using participant observation of Amnesty International meetings, surveys and semi-structured interviews to answer the following research questions: How do adult learners in Amnesty International fit into the CAL (Cross, 1981) model? How do the characteristics of these adult learners specifically affect their learning in Amnesty International? How can learning opportunities be improved in Amnesty International in order to promote better understanding and human rights activism?

**Sample**

Four adult learners, with whom the researcher had been previously acquainted, were purposely chosen using the convenience sample technique and given pseudonyms. The participants were personally contacted at an Amnesty International meeting. The researcher acted as a participant observer and also contributed data to the study under a pseudonym. The researcher attended three Amnesty International meetings to find the participants. This chapter of Amnesty International meets on the first Wednesday of each month and the researcher attended meetings in the fall of 2010 for the purpose of this study. The researcher is a long time member of the chapter he observed.
Data Collection

The participants were given a survey with the three research questions and participated in semi-structured interviews with probing questions based on their answers. The survey was primarily a discursive tool. The participants could write on the surveys or discuss answers with the interviewer. Note taking was used to collect verbal responses. The respondents were given a minimum of 20 minutes to complete the survey and the interview and more time was given if the respondents needed it. The collected data and preliminary interpretations were shared and member checked with the respondents and revised if needed.

Before data collection, the researcher briefly explained his research aims and the CAL (Cross, 1981) model and gave some examples of how it could apply to his own education within the organization. The researcher briefly showed how the survey could be answered and what the semi-structured interview would be like. During the semi-structured interviews, the researcher used open-ended questions about learning and questions specific to the CAL model (Cross, 1981). The participants for example were asked to describe the education process within the organization and, as the interview went on, were asked about their life phase. The nature of the probing questions in the semi-structured interview depended upon the individual responses of the participant. If a participant, for example, discussed their intelligence abilities as being related to visual learning, the researcher would ask questions about the visual facets of what went on in the education process in Amnesty International. Because the researcher was also an observer, the researcher would ask about behaviors observed during the meeting that were pertinent to the research study. If the participant, for example, was observed using downloaded information with a higher font type than other participants, then the researcher would ask about that in the semi-structured interview.

Observation was also important in gaining information about the characteristics of the adults learners because during discussions in the group, the participants would frequently mention these characteristics as part of the meeting. When the participants, for example, discussed leaving a position in the group where they have to study a human rights case because work and family only allows for part time learning, the researcher took note of this and then brought it up during the surveys and interview sessions.

As part of the case study method, the researcher also made notes and graphs about the setting and collected any documents or resources related to the meeting. The researcher also used graphic organization to describe discussions during the meetings since they could be important for the research done after the meetings. Actual time spent conducting the interviews varied as participants were eager to help in the study. The study was helped by the fact that in this group members were used to keeping discussions going long after the meetings as a way of keeping touch with each other on a personal level. The data was analyzed, summarized, and coded for themes related to the CAL (Cross, 1981) model using the constant comparison method.

Results, Findings, and Discussion

The following is a summary of what was learned from the participants Joyce, Karen, Roland, Adam, and Daniel in this study for each of the research questions.

How do Adult Learners in Amnesty International Fit into the CAL Model?

Joyce’s personal variables including being a married professional in her early 30s. She is stable, mature, and is at a point in her life where she can concentrate on social issues. In terms of situational variables, Joyce learns about Amnesty International issues in a part time, voluntary basis either online, through social networking, personal communication, or through chapter meetings. She learns the most through doing things and watching the example of others. Joyce
has had activist experience in other organizations promoting social justice issues before becoming a member of Amnesty International.

Karen’s personal variables include being employed at a community college in her early 30s. Karen’s situational variables include being stable, married, and mature. Like Joyce, she believes she is in a window in her life where she can spend time on Amnesty International issues before other events distract her from it. Karen learns about Amnesty International issues in a part time, voluntary basis either online, through social networking, personal communication, or through chapter meetings. She learns the most through doing things and watching the example of others. Karen also has had activist experience in other organization promoting social justice issues before becoming a member of Amnesty International. Karen is also an experiential learner who learns best by doing and following examples.

Roland’s personal variables include being a mature lawyer in his 50s. He is very connected to online resources because of his work but prefers to read print copies of resources when possible. This is due in part to his eye sight issues. In terms of situational variables, Roland learns about Amnesty International issues in a part time, voluntary basis either online, through social networking, or through chapter meetings. Roland is very organized and while communicative, is shy with people. Roland’s degree of participation in certain social events is tied to his comfort level with the ideology and personality of the people involved. For example, Roland dreaded going to a protest event he was interested in because he feared the crowd would be shrill communists who would act in a way that is counterproductive to the cause.

Daniel’s personal variables include being a single musician in his late 40s who is very creative, passionate, and organized. Daniel learns about Amnesty International issues in a part time, voluntary basis either online, through social networking, through workshops and conferences, or through chapter meetings. Daniel is an avid traveler and has taken on case study materials provided by Amnesty International to make presentations. Daniel is the longest serving member of this chapter by several years and has experience in all facets of what is done in Amnesty International.

Adam is a single stable and mature educator in his late 30s who learns from reading, observing, note taking, and critical reflection. Much of his learning of Amnesty International issues is done at chapter meetings, reading from the chapter’s newsletter, personal communication, and by attending events related to Amnesty International. Adam brings to Amnesty International knowledge of social justice and cultural issues that he uses to understand and discuss new issues presented to him at Amnesty International. Adam has been a member of the chapter for several years. Adam learns from Amnesty International in a part time volunteer basis.

All the participants demonstrate verbal, reading, language, and communication related intelligences. While their participation in Amnesty International is compulsory and part time, their roles in Amnesty International demand more time and energy be spent on Amnesty International than is the case for other members of the group. Because all the participants take on leadership roles in the Amnesty International chapter, the learning is problem centered not just in the sense of learning about larger Amnesty International issues but also in managing, interpreting, and teaching that information to the other members in the chapter and to people who attend the meetings for the first time and could become potential members. Because these other people have different backgrounds and differing knowledge about Amnesty International, they have many questions and problems that Joyce, Karen, Roland, Adam, and Daniel must resolve.
In essence, their problem centered learning is often centered on the problems of these other Amnesty International participants.

**How do the Characteristics of These Adult Learners Affect Their Learning in Amnesty International?**

Both Karen and Joyce have taken the formal role of co-presidents or co-leaders in the AI chapter. They are both in charge of running the Amnesty International meetings, coordinating events, and coordinating the members involved in those events. This means that both Joyce and Karen bring the educational materials to the meetings. Karen in particular creates the monthly newsletter the chapter publishes and sends out through the chapter’s email list. Karen and Joyce have taken over a leadership role once held by a law professor and practicing attorney who has left the chapter to take on a leadership position in the larger Amnesty International organization. They are basically running the meeting in the exact style their predecessor ran it. They have both effectively social learned from the role model of their predecessor and are follow her example. They are also learning by doing, especially Karen whose hands on work on the newsletter where she is organizing and presenting information informs the way she understands that information and how she presents that work in the meetings.

Joyce has also tapped into the learning she has gained from other organizations and people. Joyce, for example, has learned to incorporate Amnesty International into a wide range of events, including art exhibitions and nightclub events, and to link the Amnesty International chapter to local public television, educational institutions, and other activists and activist groups she has encountered in the past.

Roland’s technology savvy coupled with his need to learn from reading hard copy documents leads him to print out much of the online information Amnesty International distributes. Roland uses the resources of his law office to make copies for himself and extra copies for the people who attend the meetings. These copies use a large type that is good for the eyes of older learners. It also creates a tangible educational tool he and others can write on to make notes and to keep for future reference. These copies also are a good discursive tool for him to be social with the group and yet be on task and on topic.

Daniel uses his artistic creativity to recreate Amnesty International information into other forms. Often he makes postcards that members can use to write on behalf of a prisoner of conscience. He also uses his musical talents and connections to advocate for issues through concerts. His study of the case study material given to him by Amnesty International is then reinforced by his presentation of what he has learned from them to the rest of the chapter participants. While Daniel maybe learning experientially, he is also using organizational skills as the chapter’s treasurer. Daniel keeps track of who pays their dues and of budget issues.

Adam and Daniel sometimes take on the role of informal experts in the chapter. Daniel is often asked by Joyce and Karen to explain how Amnesty International has done things in the past. Because Daniel has done every role in the chapter, he can refer to his experience. Karen and Joyce encourage Adam to present what he has learned at the events. For example, Adam attended a conference on diversity with workshops on a range of issues such as human trafficking, religious tolerance, immigration reform, racial, ethnic, gender discrimination, and conflict resolution. Adam took notes and observed and then had to summarize what he learned and critically reflect on it for the chapter. This allows everyone in the chapter to learn about these issues and give new members a sense of what is possible. Through critical reflection Adam takes broad issues and makes them personal. Through observation and note taking, he
makes confusing issues into easier concepts to understand. He usually tries to create a personal example of what he has learned and to describe his thinking and decision process.

How Can Learning Opportunities be Improved in Amnesty International?

Karen and Joyce have learned from their predecessor how to run an Amnesty International chapter by following that role model and doing the work. The predecessor is a valuable tool, but had Karen and Joyce taken on leadership roles without a model, they would have had to figure out what the ideal of leadership would be for themselves and how it would affect their work at Amnesty International. This plays itself out in many ways. Their predecessor was a lawyer who ran a meeting the way a lawyer in a firm would. The main points are brought up and then each person going in a clockwise direction would speak, and there would be a verbal vote on issues. Karen and Joyce follow this model. Without the model, they could have chosen several others ways to hold a meeting. Karen and Joyce, for example, could choose to have an anonymous vote which would keep participants from feeling pressured by others. New leaders need a mechanism for seeing all options instead replicating old leadership styles.

Adam finds it necessary to not only critically reflect on Amnesty International issues and to personalize them but to try to help new members make a personal connection to and critically reflect on Amnesty International work. Missing from Amnesty International work is a way for new participants to feel comfortable with all their actions. Through observation, Adam has noted, for example, that a new member may come and want to do something about a particular political prisoner, but when given the names of several prisoners throughout the world they know little about, these new members feel overwhelmed. These new members are insecure about lending their names to causes they have not fully investigated. Adam sees this and in discussions makes it clear to members that they should not feel pressured to deal with all the Amnesty International causes, that they can respond later, or that they can choose to do nothing at all. The void Adam senses is a kind of discussion of the etiquette, personal assessment, and protocol one needs for being the kind of activist Amnesty International encourages. A participant can be overwhelmed when their values have to be put into practice in less than ideal conditions in an institution like Amnesty International. An overwhelmed participant can quickly become someone who does not return to Amnesty International and is lost as a social justice resource.

Daniel as an expert on how things were done in the chapter. He reveals that while Amnesty International as a larger organization is strong, its chapter is a fragile, grassroots organization that is dependent on a small group of people. Without Daniel who is a treasurer, there is no mechanism for memory in the chapter. There is lacking a way to learn about the chapter in detail as there would be in another organization. The way that Daniel is able to coordinate events like a concert on short notice or that Karen and Joyce can take over the reigns of the chapter and network it with other groups is complex. This is based on having learned a lot from previous role models and from work they did in other organizations. There is no formal mechanism in the chapter for a novice to learn to do that. Karen and Joyce have noted that individuals in other chapters have created an Amnesty International 101 course that goes over the basics of being an activist. This could be a power point presentation and video with some activities and resources. Karen and Joyce hope to incorporate that into the chapter in the future as something that would be done before each meeting. It is important because life stage changes may cause Karen, Joyce, and others to change or reduce their roles in Amnesty International.

Roland’s adaptation of online materials into a large font type hard copy reveals that a small fragile grassroots organization like the Amnesty International chapter does not have
limitless resources to help learners with a diverse set of needs. It is unfortunate because people with challenges like these are often in situations where they need to protest to help themselves and others. Ironically, they may also be in a better position to dedicate time, money, and energy to a protest than someone without the same challenges.

Roland, Daniel, and other members have been improving the social networking capabilities of the chapter. This allows resources specific to the chapter to be assessed by everyone in the chapter at all times. This is important because more people are in the chapter than appear in the events or in the meetings. Adam also sees opportunities to improve learning in the bookstore the chapter meets. New members who need some background on a subject could be given a book list that they can use to find resources there with for example.

**Suggestions, Implications, and Conclusion**

More work needs to be done with grassroots organizations to help learning processes. In conclusion, this study shows that characteristics of adult learners affect learning and the pursuit of social justice. Further research is needed in the education process within human rights organizations like Amnesty International because these groups can help people whose rights are in danger. Also as the population of activists age, there is an in flux of people who may join or leave organizations like these. Furthermore, one of the most important tools in fighting for human rights is education and the way people within organizations like these learn from each other affects what they teach to people outside their organizations.

**References**


Biopolitical Implications of the Surveillance, Spectacle, and Performance of AIDS Education in Rural China

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Abstract: This conceptual study explores China’s reaction to the AIDS crisis using a Foucauldian concept of biopolitics in order to theorize the implications of AIDS education in the culture of rural China in terms of the surveillance, spectacle, and discipline of biopolitics.

China is considered a major battleground in the fight against the HIV/AIDS epidemic. In the early years of the epidemic, the Chinese government painted AIDS as a Western disease that could be isolated away. In time, the disease spread through whole communities and provinces. It became clear that governmental action was not working (Wang, 2007). More education was necessary for restraining the disease. One program sought to teach medical students about the disease so that they could pass the knowledge down to other people. A major concern for China was the young, smart, urban students who were crucial to the social economic future of the country (Gao, Lu, Shi, Sun, & Cai, 2001). With time, it became clear that people in urban areas also needed help (Cheng et al., 2008). In essence, urban educators would have to come into rural areas and help people change their way of life (Gao et al., 2001). A variety of cultural issues has also affected the fight against AIDS in rural areas (Wu et al., 2002).

AIDS can create a social death for people in rural China (Kutcher, 2003). In biopolitics, governments offer people a range of life choices that could help people thrive if they support them or lead to a form of social death if they go against the government. Educators are one of the main agents of biopolitics (Foucault, 1979). The problem is that the biopolitical implications of having AIDS educators serve in rural China have not been explored. This conceptual study explores the biopolitical implications of AIDS education in rural China. The purpose of this study is to add to the literature on AIDS education and modernity. The research question explored in this study is: *What are the implications of AIDS education in the culture of rural China in terms of the surveillance, spectacle, and discipline of biopolitics?*

This study is important because AIDS education and modernization are major issues in China and the rest of the world, and what affects one country affects all others (Rosen et al., 2003). First, China’s reaction to AIDS, the use of education in rural areas, and rural China’s cultural issues are discussed. Then a Foucauldian framework, methodology, results and discussion, and conclusion from a case study using biopolitics to explore how China’s cultural issues are affected by AIDS education is explored.

China’s Reaction to AIDS

The first reported case of AIDS in China occurred in 1985 to a foreigner, leading China to paint AIDS as a foreign disease in a 1987 governmental plan. Denial and quarantine measures followed (Wang, 2007). The disease continued to spread and as the government learned more about the disease, the response promoted by a 1990 plan became moralistic. It centered on specific groups, such as female sex workers (FSW), intravenous drug users (IDU), and men who have sex with men (MSM; Sun et al., 2007). The government had to expand its focus on safety measures and other groups when many victims became infected through blood donations and transfusions. A 1998 plan argued for long range goals for specific groups with more education,

but a 2001 plan showed a growing awareness of the issue for the general population (Balzano & Ping, 2006). China moved from passive surveillance of HIV/AIDS surveillance to a more aggressive approach over the years. Instead of simply noting cases, a large online database was created for various institutions to frequently report and become informed about AIDS-related information.

Behavior is a major focus. AIDS is monitored by a vast range of clinics, hospitals, and other healthcare-related institutions. Various institutions have been set up to monitor AIDS in specific groups, such as rehabilitation centers for IDUs and research groups who monitor FSWs in the field (Xiao, Kristensen, Sun, Lu, & Vermund, 2007). Many groups, such as law enforcement agencies, that routinely deal with AIDS victims have also been added to the network. China has used a top-down approach with the government sending out messages about AIDS through red-header documents to give the people an idea where the country stands on an issue. Over time, AIDS awareness has begun to enter the legal system and mainstream (Balzano & Ping, 2006). China’s reaction to AIDS is spurred in part by pressure from outside forces such as the United Nations (Hesketh, 2007), the fear of economic problems such as those created by the SARS epidemic which affected trade and travel to and from China (Jiang, 2003), and fear that the disease will wipe out populations important for the future of China (Cheng et al., 2008). In order to spread AIDS awareness and prevention to the population, the government has had to educate itself on the disease (Wu, Sullivan, Wang, Rotheram-Borus, & Detels, 2007).

The Use of Education in Rural Areas

For much of Chinese history, sex education was practically non-existent. In ancient China, the family of the bride may have left a small manual or set of illustrations hidden in a gift to be revealed after a wedding, for example. In the last century, Chinese leaders began to see a need for it, but plans were derailed by the cultural revolution. In the last two decades, the first sex education textbooks began to appear. The AIDS crisis in China has spurred a push for sex education, in general, as well as HIV/AIDS education, in particular (Gao et al., 2001).

The AIDS epidemic has pushed China to send delegations of government officials, health professionals, academics, and researchers on international tours to learn from other countries, such as Australia, Brazil, and the United States. The government has also begun to promote AIDS education within the various departments of its network including those not directly related to health issues. AIDS education has been sent down the system to include universities as well as hospitals (Wu et al., 2007). The economics structure has created a mobile population, outside of family restraints, that is prone to high-risk behavior (Wang, 1997). Urban university students are a particularly mobile population who affect or could affect various institutions in Chinese society presently and in the future (Li et al., 2004). Medical students, in particular, have been taught AIDS education so that they could, in turn, teach it to others (Gao et al., 2001). Rural students lack secondary, or higher, education and need AIDS education because they leave school and become active in the social world earlier (Cheng et al., 2008). Therefore, AIDS educators needed to go into rural areas since the disease was gaining strength in those areas and the governmental presence was not as strong there. As the AIDS epidemic and AIDS education developed, the promotion of sex education, in general, and AIDS education, in particular, was affected by cultural issues in rural China (Gao et al., 2001).

Rural China’s Cultural Issues

Although rural China faces AIDS in a different way than urban China, China’s educational program is based on urban realities. For example, the government’s education program focuses on sex work and intravenous drug use, which are more rampant in urban areas,
because populations there are employed and can afford it. In rural China, men often have to leave town to find work, and their wives and children sell their plasma to make up for the loss of their income. Improper use of tubes, as well as town leaders who take advantage of the men being away to sleep with local women, helps spread the disease (Wu et al., 2002). Age is also a factor. Many older Chinese people, for example, do not want young people to learn about sex because they fear it promotes promiscuity (Li et al., 2004). There is also a fear and hatred of homosexual men and Westerners. Many rural people still see both Westerners as primarily responsible for AIDS transmission and AIDS as punishment for homosexuality (Kutcher, 2003). There is also a taboo on direct sex talk. Sex, if discussed at all, is discussed in euphemisms, indirect talk, or allegorical imagery that is confusing. Two butterflies may be used to symbolize intercourse for example. This is further complicated by the fact that many rural Chinese people are also so unfamiliar with modern resources, education, and sex education concepts that they can perceive instruction in distorted ways. A rural couple, for example, could not understand why they continued to have unwanted children after being taught how to use a condom. It turned out that the husband took instruction from a sex educator literally and wore the condom on his finger in the same way the sex educator had done so in a demonstration (Gao et al., 2001). There is also an orthodoxy to the way governmental laws or messages are viewed. A rural person may look at an AIDS education message and agree with it in public but disagree with it in private and in practice, in part, because it comes from the government. For example, rural people may look at AIDS as a Western problem even after the government contradicts that message. The fact that the government is perceived to have lied in the past (Kutcher, 2003) or contradicts itself because of outside forces (Jiang, 2003) makes the issue worse. Finally, AIDS creates a social death in rural China, where not only the victim is ostracized but everyone related to the victim. Houses can be burned down and people run out of town (Kutcher, 2003).

**Foucauldian Framework**

In modernity, people begin to see their identity as part of a nation and not just as individuals, members of a family, tribe, or other group or association. Even though they can not come into contact with everyone in that nation, they can believe themselves to be part of an imagined community of the nation through the media presence of the nation in the forms of narratives, concepts, and symbols. Books, newspapers, and other instruments of communications make this possible (Anderson, 1982).

According to the concept of biopolitics, promoted by Foucault (Foucault, 1979), countries were once ruled by kings who literally had the power of life or death over their subjects; those citizens who obeyed the king were allowed to live, and those who did not were allowed to die. In modernity, the state replaced the king and expanded the power of life or death to a wider range of options for citizens; options promoted either a better life in various ways for the citizens who obeyed the state or a social death, lesser life, or literal death for those who disobeyed the state (Foucault, 1979).

Biopolitics could play out in the spectacle of an event. For example, an execution was a performance that displayed the power of the state since the condemned broke a state law and the state, represented through the executioner, could punish the criminal without consequence to the state. The spectacle was public so the audience could learn from the event. The state enforced discipline not only by punishing the condemned but also, in the process, by showing what is possible and not possible within the state. As modernity progressed, many institutions such as prisons and hospitals became areas where people, like the condemned, could be placed in a fixed space and monitored. The state began a process of surveillance by taking notes, making reports,
and conducting other observations both to improve the way it did things and to enforce obedience and discipline to the state (Foucault, 1979).

Education became another key institution for promoting the state and biopolitics. Those who learned to obey the state through school were rewarded with better careers or opportunities than those who failed school and disobeyed the state. For biopolitics to flourish, there had to be order. Education had to become a spectacle that could be performed, viewed, learned from, and graded. The state had to go into the private sphere and set up surveillance of the activities of its citizens. Through education, the state had to discipline and punish the citizen/student in order to gain obedience. This meant taking students out from their homes or traditional schools and putting them into modern schools with desks ordered for surveillance, setting up schedules for learning such as class periods, and creating ways to measure their progress such as testing and the use of standardized content and pedagogy (Foucault, 1979). Eventually states began using this approach beyond their own borders in order to expand their empires. In Egypt, for example, the modernization and colonization of the country was helped by the school system model brought from Europe that promoted surveillance, spectacle, and discipline (Mitchell, 1988).

Eventually it was not necessary for citizens to be in institutions such as schools in order to become part of the modern state because the structures, regulation, and discipline of these organizations followed them throughout all facets of their life. There is no private sphere as the state intrudes more and more into the lives of its citizens, making everything public (Foucault, 1979). Images, concepts, and symbols of what it means to be part of this imagined community and how a person defines himself or herself develop (Anderson, 1982). Modernity can shape gender and sexual identities about what is male or female, feminine or masculine, and what is acceptable to the state in terms of gender and sexuality and its performance (Butler, 1990).

In many countries, formal and informal literacy campaigns into rural areas not only affect literacy but also promote nation building and a common culture and ideology (Torres, 1991). Health literacy campaigns such as AIDS awareness campaigns, however, can cause people to rethink what it means to be a citizen (Robins, 2004). Rural China is a space where health literacy is needed but the presence and surveillance structures of the state are not as strong as in the rest of the country. The government of China is still seeking to demystify what is going on in rural China. Sending educators into rural China to promote AIDS education is a part of that process (Wu et al., 2002).

This study takes the perspective that the biopolitics of AIDS education can lead not only to the literal life or death of a student but also to a range of social life options for the citizen that follows the state and social deaths for those that do not in modern rural China. The culture in rural China has to be put into order through spectacle, surveillance, and discipline for the biopolitics of AIDS education to flourish and create the modern Chinese citizen.

Methodology

AIDS education in the culture of rural China is explored as a case study in order to answer the research question: What are the implications of AIDS education in the culture of rural China in terms of the surveillance, spectacle, and discipline of biopolitics? In order to gain a deeper understanding of the biopolitical implications of AIDS education in rural Chinese culture, the researcher conducted a literature review of AIDS education in rural China using search terms such as “AIDS”, “Health literacy”, and “Rural China” in search engines including Google Scholar and ERIC. The search focused on scholarly journals and medical journals primarily since AIDS is a constantly changing phenomenon and China’s AIDS response has changed dramatically in recent years. The content of the selected articles was read by the researcher and
notes were taken about their content. The articles and resulting notes were compared and analyzed for common themes. The researcher also kept a journal. The aforementioned rural Chinese cultural issues of age, orthodoxy, fear of homosexual men and Westerners, indirect sex talk, unfamiliarity with sex education, social death, and the contrast of urban versus rural realities appeared as themes in the analysis. The researcher reread and analyzed Foucault’s (1979) *Discipline and Punish: Birth of a Prison*, taking note of how Foucault described the way education was used in biopolitics. The researcher decided to focus on the biopolitical concepts of spectacle, surveillance, discipline, and punishment because these issues lent themselves to the practical realities of campaigning in China more fruitfully. Focusing on the physical space of the school was impractical, for example, since the government could not construct more modern schools in rural China in time to stem the epidemic. It was easier to send educators to villages and existing schools. The researcher then viewed the themes in the literature reviewed through the biopolitical concepts of spectacle, surveillance, and discipline, and punishment to theorize implications for AIDS education by taking the perspective of the state, rural citizen, and educator in dealing with rural Chinese cultural issues during an AIDS educational campaign.

**Results and Discussion**

When it comes to age, the spectacle of the young urban university student pits the authority of the young expert against the Chinese elder. The implication can be that young people may seek to model themselves on the younger AIDS educator and not their elders. The sending of a youthful educator to conduct an AIDS education campaign sends the message that the state cannot let elders in a village overrule their authority. The AIDS educator is also the surveillance of the state in human form. The implication can be that they are seen with suspicion since rural people may believe that they are there to spy on them on matters unrelated to AIDS. In terms of discipline, the age of the AIDS educator can be a factor. A young AIDS educator has incorporated the discipline of the government’s message on AIDS and citizenship into their thought processes and actions. They can discipline their students in the way they think aloud and perform their work. They limit what is possible since by the time they enter a rural village they have a polished message instead of a contested concept. The implication can be that they upset the balance of power in a rural village since they teach the young, who eventually become the power brokers in the village, the message of the state.

When it comes to orthodoxy, the spectacle of the AIDS educator is a proxy for the state so they may be disbelieved. However, their presence in a rural village cannot be ignored as easily as other resources that send governmental messages. The surveillance of the AIDS educator means that a message is sent and the state, through the educator, can see if the rural population follows through with it. Likewise, the rural population can see whether what the AIDS educator says is true through the lives and deaths affected by the education. The implications of discipline is that rural area people who believe what the AIDS educator says can be rewarded with more resources, which are sent through the educator, from the state. Rural areas that disobey or disbelieve are left to the ravages of the epidemic.

When it comes to the fear of the homosexual man, the spectacle of the educator provides a model for a modern Chinese man who can speak about a taboo subject. Those in a rural village upset with the message may seek to trivialize the educator by making them a proxy for a gay stereotype that is devalued in a heterosexually normative rural culture. The implication, however, is that the educator may speak about homosexuals in a way that is a further detriment to gay men. The surveillance of the educator is also a two-way street. The educator who teaches about homosexual men can attract homosexual men to a course that could improve their lives or
expose them to a community that could make their lives worse. The discipline is tied to connecting words with implementation. If the educator speaks about helping gay men but does not have the resources such as medicine or funds to do so, the message sent is that gay men are devalued by the state and homosexuality is to be avoided.

When it comes to the fear of the Westerner, the spectacle of the urban AIDS educator is complex. A university student can seem more Western to a rural person since university life exposes the educator to more Western ideas. Something as simple as the spectacle of their clothing or mannerisms can make the educator both a proxy for the Chinese state and the West. The surveillance of the educator becomes the surveillance of the West since many of the AIDS education practices are imported into China from Western countries. With increasing reporting and online work, the West, in fact, gains more and more access to data gained from Chinese surveillance. What an educator in China learns can find itself in the hands of Westerners. The implications for discipline are that the educator can choose both to paint bad behaviors as Western and to promote AIDS prevention as a heroic struggle won by China. However, information gained by educators can eventually be gained by outside Western forces and be used to discipline China. The Chinese government can then pass this down back to the educator. The educator, in essence, can create the conditions for disciplining himself.

When it comes to indirect sex talk, the spectacle of the educator can create a venue for safely talking more directly about sex. The educator has to basically role model direct sex talk. The surveillance of the sex educator allows the educator to better familiarize himself or herself with local languages of indirect sex talk and translate them to the state to improve instruction. Implications for discipline are that the educator can help create a common direct language for sex talk.

When it comes to unfamiliarity with sex education, the spectacle of the educator as a constant presence in a rural area creates familiarity with sex education. Surveillance of the educator can be delegated to the students they teach who, in turn, watch the people around them. What the educator teaches to a few people can make its way throughout a whole community in a short time. People who behave against the new norm created by sex education then stand out and can more easily be confronted. The discipline of unfamiliarity becomes clear as people become rewarded by the state when they are exposed to sex education. The couple unfamiliar with sex education gains an unwanted child or exposure to AIDS. Those who obey the state gain the child they want and a chance at a longer healthier life. When it comes to social death, the spectacle of the AIDS educator may be the only person who can stop a rural village from turning on an AIDS victim. This is in part because the educator as the surveillance of the state is demystifying a tragedy that usually happens away from the eyes of the state. If the educator can get the state to grant permanent shelter to the AIDS victim in that village, then rural people must not only challenge the victim and the educator but the authority of the state itself. The AIDS victim can also be the center of social life given by the state since potential jobs related to an AIDS prevention economy spurred by the state depend on having an AIDS victim.

When it comes to the contrast between urban versus rural realities, the spectacle of the educator creates a link from the urban culture to the rural culture that helps soften differences. The surveillance of the educator gives urban China the upper hand in monitoring rural China under its own terms and frames while rural Chinese gets a glimpse of an urban person. Both urban and rural cultures are bridged and both can see how AIDS develops in different contexts. Implications for discipline are that the urban educator is a conduit for urban societies that are more advantaged to funnel resources to disadvantaged rural communities. The urban educator
also opens up rural China for urban opportunists to follow in their footsteps by tapping into the rural networks created by AIDS education campaigns. This could be good or bad. An AIDS education campaign could lead to urban China sending a literacy campaign to a rural network that helps people or to a business created by China’s new state capitalists that exploits them. What follows an AIDS campaign can eventually taint or support the original AIDS campaign. It becomes clear that the biopolitics of AIDS education in the culture of rural China suggests that educators have to think about how they are perceived and how they perceive, as well as the long-term and short-term consequences, of these actions.

**Conclusion**

This study theorizes the biopolitical implications of AIDS education in the culture of rural China. Much of the response against AIDS has taken a top-down approach from the state to the rural areas of China. This study is important because it theorizes other perspectives and the problems that could arise. It also highlights how the fighting of a disease is not only a health issue but also a cultural and political issue. In a closed society like China where the state controls much of civil society in urban areas and where society in rural areas is isolated from contact with the rest of China and the world, questioning the politics of an education campaign can be politically dangerous. Theoretical and conceptual work is important because other research work can be hard to conduct in the political climate of China. Currently, China also faces the problems of modernity and colonization that other countries faced in the past, because it has recently become more of a super power and has started opening itself up to the rest of the world. More work is needed in this area to understand what actually happens to educators and students in these campaigns. It is important to rethink what happens in health literacy campaigns since their respective governments and other institutions make a difference in how they influence the cultures of other countries. Many of these programs may have flawed or biased ideas that create as many problems as they resolve.

**References**


Discourse Analysis of Frank McCourt’s *Teacher Man* Through a Feminist Educational Lens

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**Abstract:** This qualitative study used critical discourse analysis to highlight how educational stakeholders can examine discourses and react to power in texts using a feminist lens to problematize identity.

*Teacher Man* (McCourt, 2005) is an inspiring text used to help education students learn more about the daily challenges of teaching (Mottart, Vanhooren, & Rutten, 2009). Feminists argue that many of the texts in school have to be analyzed to see how they promote gender inequality (Dillabough, 1999). A text like *Teacher Man* has to be examined through a feminist lens to see how it affects power relations between men and women in education.

Educators must be aware of how their language and culture can empower their students or disempower them (Fairclough & Wodak, 1997). Educators must inspire students to be politically active citizens who can question narratives and discourses. Educators and other cultural workers must be public intellectuals outside the classroom too (Aronowitz & Giroux, 1991). Educators are subject to various discourses that can disempower and empower people. Critical discourse analysis (CDA) helps educators understand how language can effect power relations (Rodgers, 2004). Text and talk can help enact and produce power abuses, inequalities, and distorted socially constructed identities (van Dijk, 2001). CDA has been used to examine classroom talk (Rodgers, 2004) and debates between politicians (van Dijk, 2001). Narratives promote learning, but educators must be politically savvy about their presentation (Itkonen, 2009). CDA improves the learning advocacy of teachers (Rogers, 2004). Discourses are defined in relation to other discourses and can be contradictory (Gee, 2004). However teachers are unaware of how and why the discursive elements of language can enact and support power relations that can counter their advocacy work (Rodgers, 2004). Frank McCourt’s (2005) memoir *Teacher Man* explores his identity as a man and a teacher. Gender narratives, identities, and constructions affect everyone in the gender spectrum through the structured inequalities they support if they are not problematized and explored (Butler, 1990). Left unchallenged, discourses in *Teacher Man* can do more harm than good. The purpose of this study to add to the literature on CDA, feminism, and education by exploring *Teacher Man* through a feminist education lens. These research questions are explored: What can be learned using critical discourse analysis of *Teacher Man* to explore power relations in education through a feminist lens? How can feminist educators use this text to help all students?

This study is important because texts like *Teacher Man* are affecting the lives of future teachers and their students. This study uses CDA to examine the text of *Teacher Man* and how it could be used by feminist scholars to help all students. First, a conceptual framework incorporating CDA, power, feminism, and memoir writing is discussed. Then the methodology, results, findings, implications, and conclusions of the case study are discussed.

[http://coeweb.fiu.edu/research_conference/](http://coeweb.fiu.edu/research_conference/)
Critical Discourse Analysis

Critical discourse analysis “is a type of discourse analytical research that primarily studies the way social power abuse, dominance and inequality are enacted, reproduced and resisted by text and talk in the social and political context” (van Dijk, 2001, p. 352). CDA is a theory and a method. CDA differs from other discourse analysis methods because its scope goes beyond describing and interpreting a discourse to attempting to argue how and why they work (Rodgers, 2004). Discourse is distinctive ways of using language (e.g., verbal) in combination with using other ways of interacting, knowing, thinking, and communication in order to enact a socially situated identity. This form of discourse is often written with a capital “D” in order to differentiate it from a more simple use of language (discourse with a lower case “d”). Discourses are defined in relationship to other Discourses (Gee, 2004). CDA is used in addressing social problems. Discourse is a social action, historical, and performs ideological work. There is a mediated link between text and society. Society and culture is constituted by discourse. Power relations are seen to be discursive and discourse analysis is interpretative and explanatory (Fairclough & Wodak, 1997). Context can also affect discourses (Fairclough, 1995). In a classroom, an educator, for example, may act, perceive, and speak in a way that makes it clear they are the teacher in relation to the students who may act, perceive, and speak in a different way.

Power

Power manifests itself in various ways in the language of educational institutions and their support of and influence over the biopolitical outcomes of students as they proceed through their social lives (Foucault, 1979). Language can support hegemonic structures that hinder democracy. Public intellectuals must help the masses resist it (Gramsci, Hoare, & Nowell-Smith, 1971). For example, narratives in the press can help manufacture consent (Herman & Chomsky, 2002). Teachers can also maintain power relations through curriculum and pedagogy with languages and codes that oppress students (Freire, 1970). Teachers can fight power with language and discourse in the classroom and outside the classroom to help liberate students (Aronowitz & Giroux, 1991). Power is manifested in the elements of discourses. Through their expression, they display power relations (Fairclough & Wodak, 1997). Educators face real and manufactured crises in speaking truth to power however (Berliner & Biddle, 1995). In many discourses, power is control through inequality, social power abuse, and dominance (van Dijk, 2001).

Feminism at the University

Gender notions must be problematized to understand how identities are constructed and how inequalities are structured (Butler, 1990). Feminist critique can expose gendered constructions of the modern teacher as favoring male dominance. Rationalist and instrumentalist views of teacher professionalism suggest that teachers are actors that sublimate their personal views and autonomy to the will of the state for the sake of the economy and society by following standards passed down to them. The teacher is said to be professionalized even though they are being deskill ed and devalued. They are devalued because their own wisdom or judgment is put aside to follow what the state has mandated. The improvement of their skills is not promoted. They are asked not to create or inform a curriculum but to relate what the state deems important through standards and curriculum created outside the classroom. Teachers are not valuable in themselves but only as instruments of the state (Dillabough, 1999).

Rationality and instrumentality have always gone against women. The feminine has always been symbolically constructed as the irrational. Instrumentality may suggest that
individuals gain equality when they submit to the state, but this ignores the fact that gender has
been constructed socially and that many factors still keep women from being equal to men.
Teacher authority is not constructed through relationships with students and the creation of
knowledge but to adherence to assessment methods and standards of professionalism created by
so called experts outside the classroom that tend to take a masculine perspective. Those that
differ from that perspective risk being identified as incompetent. Women cannot have their own
knowledge if it differs from these notions (Dillabough, 1999).

Particularly troubling is the construction of women as caregivers, guardians, and
somehow part of a private sphere. Female teachers become overworked especially when these
constructions meet with the rational and instrumentalist discourse. Unless they delineate what
they are responsible for, these teachers can become scapegoats blamed for failing to meet unfair
expectations. Figuring out a feminist position in the world of instrumentality and rationality
becomes a matter of survival (Dillabough, 1999). Reassessing the public and private divide, the
roles of men and women in them, educational opportunities, and gendered constructions of
citizenship are part of the modern feminist mission (Arnot, 1997).

Memoirs

Memoirs use complex and unusual perspectives and refer to other lives beyond that of the
writer (Caws, 2007). Memoir, autobiography, biography, and lifewriting are controversial in
academia. A memoir can be as thrilling and suspenseful as the reader wonders how the life of
the writer will turn out. Readers learn about themselves by reading about others (Miller, 2000).
Memoir and life writing can enter into philosophical dimensions. A passion for the self leads to
writing of the self and comparing that written self to the historical nature of the self. There is in
essence a remembrance of the self through the writing about the self (Kronick, 2000).

Autobiographical works can be considered distinctive genres (Machann, 1994) and
develop in many forms. The nature of truth is complex. The study of autobiographies is gaining
prominence in academia. Postmodern and feminist stances on autobiography are flourishing.
Making the private public is part of a feminist vision (Miller, 2007). Narratives, from
autobiographies, journals, or memoirs, are one way women are able to create knowledge that has
been ignored or made invisible before by larger structural inequalities (Henry, 1995).

Emerging teacher narrative literatures highlight culture and power relations. When these
narratives are used in the classroom, there must be a sense of the related activities and functions
they inspire. The retelling and development of a narrative can emphasize certain themes.
Discourses, master narratives, and cultural norms inform the stories people tell and how they are
valued and understood. Discourses can frame stories that restrain people. Only through
reinterpretation via other perspectives can learning, awareness, and liberation be unleashed
(McVee, 2004).

In the past, for example, autobiographers deliberately forgot certain things as part of
structural concerns. The authority of a male writer is limited and conditional. Autobiographies
create an identity for males defined in relation to how they treat women (Broughton, 1999).
Recent language acquisition memoirs paint men as heroic figures with women downplaying their
achievements and agency. Many narratives suggest that men make things happen and things just
happen to women (Pavlenko, 2001).

Teacher Man

Teacher Man is Frank McCourt’s (2005) memoir of his days as a public school teacher
before his success as an author. McCourt discusses the everyday challenges of teaching while
unsuccessfully pursuing a dissertation, working several jobs, and facing relationship problems.
In essence, it is how he developed as a man and as a teacher (McCourt, 2005). *Teacher Man* describes the disposition of a teacher who must show up and teach several classes a day to students who do not care what challenges that teacher is facing in or outside of the classroom (Ginsberg & Whaley, 2006). McCourt continuously questions whether he feels validated by his choices. The teaching career is discussed as both a distraction to his career as a writer and an important foundation for it (Amato, 2006). McCourt uses entertaining stories about himself as material in the classroom to hide the required education the students resist (Cohen, 2006). Narratives like the *Teacher Man* are used to help education students reflect on what they would do in key moments in the classroom by providing imaginative engagement, points of critical reflection, and inspiration for empathy not present in regular textbooks (Mottart, Vanhooren, & Rutten, 2009). *Teacher Man* is lauded for portraying the human failings of a teacher, giving creative solutions to teaching problems, highlighting problems within a school, and exploring how the teacher was affected by his students and vice versa. Sections of the narrative that dealt with his life outside the classroom are seen as unnecessary by some (Carlson, 2006). However *Teacher Man* is part of a recent trend in autobiographical material that highlights the success of male teachers in certain historical circumstances in contrast to works by underprivileged women who find success in less predictable ways (Austenfield, 2009).

**Theoretical Framework**

Rationalist and instrumentalist conceptions that downplay the skills and wisdom of women as professionals and teachers are part of a system that supports patriarchy and the state (Dillabough, 1999). Power is a kind of social control promoted through discourses that support abuse, dominance, and inequality (van Dijk, 2001). Discourses in recent teaching memoirs can help support these inequalities (Austenfield, 2009). This study takes the perspective that discourse examination of texts reveals gender and power constructions that promote inequality. CDA can be used to explore the discourses in a teaching memoir and expose how power is abused and supported by these discourses and how we can look to address the larger issues that support these problems and affect everyone.

**Methods**

This is a case study of a written text using reading, notes, and journal taking to reflect on how the text could be viewed through a feminist lens and how it could have implications for educators. The text is the memoir *Teacher Man* by Frank McCourt (2005).

**Data Collection**

The researcher read the text and used content analysis via note taking and reflective journals. The researcher was arguably analyzing as he gathered notes. The researcher would read a page and then take notes and then continue the process again. The notes would be discourses that were found. After a chapter, the researcher would revise notes and begin journal writing about the discourses and how they relate to power and a feminist educational lens. The researcher would then reread or revise notes as deemed necessary. The process was continued for the entire book.

**Data Analysis**

The units of analysis are the basic points the author made through words, sentences, implied and unspoken assumptions and ideas, and sentence fragments that add up to a discourse or to discourses. The data is grouped into different discourses. The researcher used critical discourse analysis to see how aspects of language express power through a feminist lens. The notes and journal writing segments were organized according to how they expressed power and could affect feminism directly or indirectly. Particularly noted were moments where power was
expressed as coercion, control, inequality, and abuse and where women were judged in terms of instrumentality and rationality in respect to supporting patriarchy (often represented through McCourt). The discourses were titled, described, and examples were noted. These research questions were explored in the study by developing themes from the note taking and journal writing: What can be learned using critical discourse analysis of *Teacher Man* to explore power relations in education through a feminist lens? How can feminist educators use this text to help all students?

**Results, Findings, and Discussion**

These are two samples of the many discourses observed and analyzed from the text. The title of the first discourse is the pursuit of education. It can be described as instances where McCourt seeks a higher form of education. Examples of this discourse include moments in the memoir when McCourt pursues a dissertation outside the United States, attempts to teach at the postsecondary level, and leaves doctoral work to gain his teaching credentials. The title of another discourse is the pursuit of writing. It can be described as instances where McCourt seeks to be a serious author. Examples include moments in the memoir when McCourt views teaching as a distraction from writing, idolizes his literary heroes, and begins to see himself as superior to a published author he meets.

What can be learned using critical discourse analysis of *Teacher Man* to explore power relations in education through a feminist lens is that this construction of a male teacher comes at the expense of women. Pursuing knowledge, idealization, and the corruption of education are major themes of power found in the many discourses observed. The pursuit of knowledge for McCourt seems based on the idea that the males have knowledge that is recognizably valuable, masculine, and heterosexual. For example, McCourt as a novice author meets a published writer who could help him but McCourt sees him as a romantic rival and destroys the relationship. McCourt questions his skills as a teacher, seeks improvement, frets over being fired by male administrators, and decides that his best teaching occurs spontaneously. His wife, a continuously employed and successful teacher, is ignored and rendered invisible as a potential resource for learning how to improve. McCourt’s spontaneous teaching style seems to devalue her methodical approach as if she should be following a male created curriculum, but it is radical that he teaches with the more feminine idea of spontaneously using recipes. Pursuing a meaningful dissertation as a source of powerful knowledge for McCourt means idolizing male writers while having meaningless affairs with women. If the affairs are meaningless, then they should go unmentioned unless they exist to enforce his masculine image. Idealization is another major theme. The ideal woman in McCourt’s view often plays a madonna, trophy, or innocent child role. Men ideally play heroes and martyrs. For example, McCourt is the heroic teacher that reaches a troubled student who dies a martyr in Vietnam. The madonna mother figure idolizes her fallen son and the teacher he worshipped in a trinity that seems to play into religious and artistic overtones. McCourt muses about women, glory, and money as rewards for being a successful writer or a teacher. The successful man is rewarded with objectified women as commodities. McCourt’s daughter plays an innocent child role that seems to purify a bad marriage. Real heroes and villains in McCourt’s life are aggressive men. The heroic male McCourt fights male guidance counselors and principals. Female teachers do not decide the fate of students.

The corruption of education theme plays out in anecdotes where women who are seen as bad affect the way McCourt perceives his educational role. McCourt’s former lover plays the role of Eve by revealing the forbidden knowledge of how education really works in multiple
educational contexts. She betrays McCourt and years later, she is dead. The death almost seems like she is being punished for knowing too much. McCourt’s literary genre use is biased. A doomed multicultural relationship between students is set up as a parallel to the story of Romeo and Juliet. However only the girl is hurt because she is rejected by the boyfriend. Thus the female is punished for crossing cultural lines. Another moment reveals how McCourt’s anger at his wife is projected into violence against a male student. McCourt juxtaposes a scene of a bad morning with his wife with a later moment where he slaps a male student for behaving badly. McCourt claims he does not know why he reacted like he did. No connection is made between the scene with the wife and the slap of the student. This is disingenuous for a skilled writer who put scenes together for a reason and because through out the book, he is sensitive about himself. McCourt possibly slaps the child because he can not slap his wife or because he is symbolically slapping a weaker form of his self that has been bothered by women. The final corruption of education is the larger arc of the book. A feminine, passive, and often irrational education career is a prologue to the agency, activity, and power McCourt gains moving from educator/ teacher to writer/man.

How can feminist educators use this text to help all students is by analyzing the text not just at face value or through the prism of patriarchal heteronormativity but through the entire spectrum of gender, race, and culture in order to gain larger truths via reflection based pedagogy. McCourt can be seen as an agent of patriarchy. This kind of teaching memoir can be seen as an instrument that helps promote patriarchy. In this case, this memoir was explored through a certain kind of feminist lens. It is necessary to allow students to look at it through various lenses including race, gender, and culture. Feminist educators should also address the larger problems that make these discourses possible. A memoir market and literary culture for example supports the genre of McCourt’s work. This can be emblematic of larger economic structures that divide people. Through journal writing and discussion feminist educators can have students reflect on scenes and discourses in texts like these and the larger problems they symbolize. The voices of a class can counter that of the individual as agent of patriarchy or that of the state. Through discussion groups of people that patriarchy silences can find a voice and work together to create new forms of knowledge, discourses and forms of activism that fight power abuses and promote equality.

This analysis also can make an educator who acts in an instrumentalist and rational fashion realize that by teaching with this text as part of a patriarchal curriculum, they are helping to impose the power that devalues them. Specifically, the feminist educator can look at the way the women in McCourt’s memoir are ignored, devalued, or seen as irrational when they are not supporting him. Images of women that McCourt choose to highlight can be problematized. Feminist educator may even have exercises where students write the counter story to what McCourt describes. It would also be a mistake to simply support the creation of a teacher woman memoir to counter the teacher man memoir. Alone it would be playing into a construction that is already against designed against women and men since their identities are more complex that those categories of sex and profession suggest. More importantly, feminist educators can not limit feminism or feminist education to feminists or the feminine since inequality for one group is often inequality for all. It would also be a mistake to paint the McCourt memoir as a success for the agents of patriarchy. McCourt’s construction of his identity as a man and a teacher may have given him some success both in and out of the classroom under patriarchy, but it also limited what he saw in himself and what he could have been as well as his relationship to those
around him. An unreflective acceptance of the discourses in this text could do the same for someone following in his footsteps in and out of the classroom.

**Implications, Limitations, and Conclusions**

An implication for future research is the need to explore other gender perspectives in texts like these. Limitations and delimitations include observer bias and the study’s scope. In conclusion, this is one example of research which offers one perspective on how educators can learn about power through discourses. Further studies may need to look at discourses that appear in a less literary and traditional way because students now have other resources they can learn from. This study is important because texts like *Teacher Man* are used in teacher education and other college programs. What students learns or do not learn from these text can influence what they teach others and affect society as a whole. In conclusion, this study shows that a lot can be learned about power relations in education by using a critical discourse analysis of *Teacher Man* through a feminist lens. Feminist educators can use this text to help all students in many ways.

**References**


Understanding Grade Point Average Perspective in the Ninth Grade as Part of an Overall College Plan

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Abstract: This case study explores intervention strategies for social capital improvement of ninth grade students so that they can gain a grade point average perspective.

Schooling can be a system of activities, assignments, tasks, and communications that needs to be understood holistically and not as individual events by students. If this system is used by students properly, it can lead to rewards such as academic success and support (Russell, 1997). Social capital theory suggests that some students have the advantage of relationships, access to resources, and a kind of cultural mindset that allows them to understand how the education system works and interpret the valuable codes of schools and how to use it to their advantage (Coleman, 1988). Students with enough social capital often self-track into college and those without it are tracked out of it (Bowles & Gintis, 1976). Some students, for example, are taught by parents or others early on to be able to see assignments, tests, and other activities as part of the larger process of planning for college. Consequently, the attainment and maintaining of a high grade point average (GPA) is a major factor in deciding what educational future students can attain and what support such as scholarships they can gain along the way (Zimmerman, Caldwell, & Bernat, 2002). Some students can gain a GPA perspective wherein everything is judged in terms of how much it supports the highest GPA possible. In college, this can be a problem because students do not learn for the sake of learning (Rabow & Hernandez, 1988).

The ninth grade can be a major turning point in the development of a good GPA and an overall academic career (Neild, Stober-Eby, & Furstenberg, 2001). College students may have too much of a GPA perspective (Rabow & Hernandez, 1988) but many secondary students lack a GPA perspective, lack the social capital to succeed in school, and consequently may find themselves unprepared for college and even drop out of high school (Newman, Lohman, Newman, Meyers, & Smith, 2000). Intervention programs between colleges and public schools could help improve the situation, but most students do not have access to them and find themselves on their own. Many students see their teachers as social capital resources who could help them improve their chances for academic success (Peterson & Stroh, 2004). The problem is that many researchers look at GPA in technically narrow ways, such as the way it is self-reported or how it differs amongst groups (Zimmerman et al., 2002). There needs to be more research on how educators can raise social capital within the secondary school to improve how GPA is perceived amongst students. The purpose of this study is to add to the literature on social capital, GPA perspective, and academic success by exploring the case of two secondary educators and how they intervene in the lives of ninth graders to help them develop a GPA perspective. The research question examined in this study is: What in depth understanding can be gained from educators developing a GPA perspective amongst ninth graders that can improve their students’ social capital for college?
This study is important because secondary educators are not only the primary educators of their students but also the primary educators of themselves, their institutions, and their communities. First, this study explores the concept of GPA. Then social capital theory is presented as a conceptual framework. A case study of two secondary educators and their intervention for ninth graders who lacked a GPA perspective is explored and discussed. Finally, conclusions are made for improving interventions for creating a GPA perspective throughout a secondary school.

GPA Perspective

In college, where the situation is more organized and where students can select and assess their professors, students can take the perspective that achieving a high GPA is more important than developing critical deep thought and learning. College students often organize themselves and examine what is expected in coursework with an eye to position themselves for getting the best GPA possible and avoid courses that could hurt their GPA (Rabow & Hernandez, 1988). At the secondary level, many minority urban students from less affluent backgrounds lack a GPA perspective. Although they are prepared for college, the lack of a GPA perspective can keep them from ever going to college. The ninth grade is a critical point for urban students because if they do not transition well into high school, they are more likely to drop out of school. Bad math and reading instruction in middle school makes students perform worse in high school because more math and reading is promoted in high school in preparation for college (Neild et al., 2001). Students describe the transition from middle school to high school as including new academic challenges, a more complex environment, new social demands, and new interactions with teachers. High GPA performers mention fewer challenges than low performers. High performers receive more support from family and many have friends who support their academic goals (Newman et al., 2000). The higher the GPA, the more high school students attend to other activities in the school (Hossler & Stage, 1992). Secondary students beyond ninth grade are employed more, may have more homework, and may study more to maintain a GPA as high as ninth graders who do not face these challenges (Peterson & Stroh, 2004).

Although calculating GPA may seem to be a simple matter of calculating a weighted mean to some math experts, many students have trouble correctly calculating and understanding GPA. GPA deals with the relationship between credits assigned to a course and the number of courses taken by a student. Lack of quantitative understanding among students often inspires basic errors in calculating GPA (Pollatsek, Lima, & Well, 1981). Furthermore, GPA and class rank are calculated at the high school in a variety of ways depending on the district. Parents and students can find transcripts and classwork not jiving with the actual GPA because districts can decide not to count certain classes taken and weigh them differently (Siegel & Anderson, 1991). Public school students often self-report the wrong GPA and tend to report a GPA much higher than what is actually on their transcript for a variety of reasons. This flawed self-reporting affects minority students differently than other students (Zimmerman et al., 2002). For Hispanic students, language proficiency can be a major factor in predicting GPA (Adams, Astone, Nunez-Wormack, & Smolukaka, 1994).

Improving GPA is often up to student agencies, their relationships, and how they view themselves (Newman et al., 2000; Anderman, Anderman, & Griesinger, 1999). An academic self-concept where students can see themselves in the present and in the future doing scholarly work is related to changes in GPA. A social self-concept where a student is concerned with fitting in at school, being popular, and working on relationships, however, does not support a change in GPA. Arguably, students with a bad GPA may lean more towards a social self-concept
than an academic self-concept since they may feel they can succeed more socially than academically (Anderman et al., 1999). Urban students improve their social capital with in schools to improve GPA with three kinds of coping strategies. Individually, students try to cope by being dedicated and staying focused on their work; their academic coping strategy can manifest itself through studying and keeping up with homework, and their social coping strategy can lead them to congregate with the right people (Newman, Lohman, Newman, Meyers, & Smith, 2000). Many students believe that teachers and counselors are potentially the most helpful in helping students learn about college planning although they report they get little actual discussion or help from teachers and counselors. Many students believe that high school has not prepared them for college (Peterson & Stroh, 2004). Intervention programs between university and school systems can help improve the college awareness of students in the public school system. These programs can create awareness of the requirements for college and the positive and negative realities of college but many students do not have access to them (Carlisle, 2006). It often falls to individual secondary teachers to intervene in some way.

Theoretical Framework

Social capital is access to actual and potential resources through networks of obligations and connections. Social capital can sometimes be converted into other forms of capital (Bourdieu, 1986). Coleman (1988) interprets social capital as norms and social controls through social organizations of relationships and interactions via structures and actors. Social capital is intangible, defined by its function, consists of levels of trust exemplified through obligations and expectations, access to information channels, and the promoting of the common good over self-interest through norms and sanctions. Parents, for example, with social capital can help guide their children to better options by contacting other people and institutions in their network (Coleman, 1988). The structure of capitalism affects schooling (Bowles & Gintis, 1976). Social class leads to social capital access that students can use to affect learning and life outcomes (Coleman, 1988). Uneven capital distribution across schools and communities supports suffering, inequality, and injustice (Kozol, 1992). Culturally biased educational content, materials, and processes favor students from higher class backgrounds (Berliner & Biddle, 1995). Lower class children are hindered by a culture of poverty (Lewis, 1961). Social class is constructed differently in American schools, arguably creating a structure where students from different social classes are segregated, given different sets of opportunities, and given different expectations (Bowles & Gintis, 1976). Many factors in school can make the social class of students visible and easier to track and regiment (Coleman, 1988). This study takes the perspective that educators can help improve the social capital of ninth grade students by improving their grade point average perspective through classroom intervention.

Method

This is a qualitative case study used to gain in depth knowledge of GPA perspective interventions to answer the research question: What in depth understanding can be gained from educators developing a GPA perspective amongst ninth graders that can improve their students’ social capital for college?

Two ninth grade educators were convenience and purposely sampled for the interviews. A third was observed only. This was in part because there was a pre-established relationship with the educators and because the study could also work as action research to help these educators in their day to day work.

The two educators who participated fully in this study are Mrs. Greer (pseudonym) and Mr. Martinez (pseudonym). Greer is a veteran language arts teacher who teaches in a Florida
secondary school and helped Mr. Martinez with the curriculum of his language arts classes. Greer developed a GPA calculating worksheet and pedagogy used in the ninth grade classes of both teachers early in the school year. Students are basically given a worksheet with sample grade data and a formula and shown how a GPA is calculated from that data. Then students are asked to add their own grade data to the worksheet and calculate their GPA along with their goals, expectations, and plans. The assignment is tied to the release of progress reports and grades at the school so students can get an accurate representation of their situation.

Data was collected using semi-structured interviews, note-taking, and observation. The researcher was able to observe how educators dealt with GPA perspectives by noting how the educators used a GPA worksheet to teach a lesson on understanding GPA, progress reports, and other related materials. The researcher took notes on how the lesson progressed and how the educators dealt with the subject. The researcher developed notes after the observation sessions, transcribing what happened and also discussing the lesson before and after it was presented with the educators. The researcher was also able to observe more educators using the worksheet than the two who were interviewed.

Semi-structured interviews were done before and after the lessons. Much of the structured part of the interview was simply about making sure the educators and the class they taught dealt specifically with the subject of the study. These were questions like: Which periods do you teach primarily ninth graders? There were also structured questions about the subject taught and the demographics of the teachers for the sake of background.

GPA perspective was explained before the interviews and examples were given of it as it occurs at the university and secondary schools. Social capital promotion was also briefly discussed and examples were given. The semi-structured interviews began with the main research question: What in depth understanding can be gained from educators developing a GPA perspective amongst ninth graders that can improve their students’ social capital for college? This question was reiterated in the interview in various forms such as the following: (a) How are you helping the students develop their social capital with this lesson? (b) How is this lesson going to help them get to college? The researcher also used open ended questions during the interviews such as the following: (a) What comes to mind when you think about GPA perspective? (b) What happens in your class?

Since this was a case study, the researcher also developed questions based on the context. This meant, for example, that notes were taken about the organization of the room. Then the educator would be asked to explain if the organization of the room affected the way they developed a GPA perspective in their classroom. Depending on the response, probing questions would be used. For example, the researchers asked about how the seating arrangements and the use of a Smartboard affected the promotion of a GPA perspective. The educators were also asked to bring up anything pertinent to study from the past as well as the specific classes observed.

The researcher also developed several questions that dealt with how GPA lessons were handled in the past and how it would be followed up in the future. The researcher also asked several questions dealing with the construction of the GPA lessons and what supports there were in and outside the school for that kind of lesson from administrators, department heads, parents and other interested parties. The participants were interviewed again after the data collection was analyzed. The observations occurred over several days through several periods. The interviews occurred over several days in several sessions that lasted ten to twenty minutes.

The data was analyzed in terms of social capital promotion through the development of a GPA perspective. The data was member checked and put into themes.
Results

The themes of (a) practice, (b) system illustration, (c) contextualization, (d) interpretation, and (e) reinforcement developed from the study.

Practice

“Do you know your GPA I ask students. Is it a good GPA?” Mr. Martinez says. The practice of manually calculating the GPA demystifies the concept of GPA and reveals the thought processes of students. Mr. Martinez, for example, argues that GPA is easy to find in college but then challenges secondary students to actually find a GPA score in their documents. Many cannot find it. Both Greer and Martinez have their students practice with each other to see where they have gone wrong in thinking about GPA. “If two students have the same grades than they should have the same score. If they do not we can see why.” Mrs. Greer says.

Greer also makes the worksheet a kind of contract between the student, teacher, and parent by demanding that the student return the worksheet with a parent signature so that all of them are aware of the GPA and what the student’s expectations, plans, and goals are. “I tell them to take it home and get it signed.” Mrs. Greer explains. Greer may refer to the worksheet during future student, parent, and teacher conferences. Both Greer and Martinez see students reassessing their expectations, goals, and plans when they realize they are put to the light of teachers, parents, and other students. “Sometimes they joke around but when they realize that their parents are going to see it, they get serious and rewrite it.” Mr. Martinez says. These relationships thus inform new norms and offer new resources of social capital.

System Illustration

“I tell them that they can get out of here early. They can start college early. They don’t have to be in high schools for years. They have to be proactive.” Mr. Martinez says. Illustrating the GPA related system is necessary on many levels. The educators discuss various elements of the school system such as how Honors and Advanced Placement classes lead to higher GPA points and the possibility of eliminating college classes. “We can work it out on the board,” Greer says. Greer also incorporates PowerPoint and Smartboard technology in the teaching of a GPA perspective to help visual learners.

“They need to look at every assignment as an important step.” Mr. Martinez explains. Greer carefully links GPA calculation to the assignments and expectations in her class so that students can predict their GPA in her class as well as their cumulative GPAs. Martinez pushes students to figure out what they have to do to get a good grade in other classes. “People are well meaning. They are warning kids that they should avoid summer school and that there might not be a summer school. It is more than summer school or the semester. It is their whole lives,” Mr. Martinez explains. The educators also discuss scholarship, degree, and job requirements as part of the system of education. Martinez discusses Bright Futures, and asks students to ask counselors about it and to look it up online. Bright Futures is Florida’s scholarship program that gives students with high GPAs opportunities to attend a Florida public college or university for free or for reduced rates. By having students become open about plans, expectations, and goals, the door is open to discussing realistic routes to their attainment. “They have to know what they can do,” Mr. Martinez says. A common point Martinez makes in his class, for example, is that degree and job requirements can guide decisions in high school. Martinez often notes that students lacking the social capital of a doctor or engineer in their family who seek to be in those professions are already off track in secondary school when they do not take math seriously. For example, degree and job requirements for doctors and engineers reveal the need for calculus. To become a doctor or engineer, that student has to have the agency and self-marketing skill to
succeed in class and prove to teachers and counselors before their senior year that they can handle a calculus class. Without early calculus exposure, these students are at a disadvantage in college. Students with similar goals but different social capital levels are encouraged to work together and help each other in this regard. Greer and Martinez have and share social capital to illustrate these issues.

**Contextualization**

Contextualization means looking at GPA perspective and social capital level in the student’s environment. The make-up of Greer’s school allows for students of differing social capital levels, cultures, and GPA perspectives to interact. “I have the classroom set up this way on purpose,” Mrs. Greer says. Greer uses group seating and group work to promote interactions. Greer also seeks a more transformational teaching approach, heavy on reflection and with access to college level reading materials and resources to prepare everyone for college culture. Martinez uses his bilingualism to communicate to immigrant students the need to develop a GPA perspective and to learn English to counteract their lack of the social capital needed for college culture. “Even if learning English doesn’t help their GPA in high school, they can avoid remedial classes in college,” Mr. Martinez says.

Martinez exemplifies the problems with the larger academic system within the classroom by having students represent education statistics for the nation that show that at each stage of education from secondary to post graduate work, half the students participating fail or drop out. “If this class is the USA, then those students in the rows left of center represent the high school drop outs.” Mr. Martinez says. The half who succeed have a smaller and smaller proportion of minority students with low social capital.

Greer and Martinez recontextualize a GPA perspective and the attainment of social capital as not just a struggle for free college or a classroom assignment but as an acknowledgement of socioeconomic struggle, the pursuit of justice, and an opportunity for this generation of students to honor, help, and transform others. “In California, a college class that once cost a thousand dollars now costs a thousand and three hundred dollars and that is a public university. When you look at the history of Education you have to wonder if they are trying to keep certain people out,” Mr. Martinez says.

**Interpretation**

“It is one thing to have a tough calculus class hurt your GPA but often students have a bad GPA because they did not do the easy assignment or pass the easy classes,” Mr. Martinez says. Interpretation of the GPA perspective means that educators have to encourage students to judge every detail of their lives in GPA terms by going over examples in and out of class. For example, Martinez quizzes his students on their physical education classes. Martinez notes that by not dressing out, students can gain an F in a relatively easy class and hurt their GPA for the day, the semester, and for their entire secondary school career. Martinez then asks students to imagine how they will feel as seniors knowing they could have dressed out and improved their GPA.

“A college student has an easier time picking the class that works for them. A high school student is more locked into a particular class,” Mr. Martinez says. Martinez also helps students with mixed messages they receive from counselors and other educational stakeholders by discussing the messages and asking students to be realistic about what they can do. Martinez may encourage students to try to switch out of classes that do not work for them or to take Honors and AP classes. However, counselors cannot offer every student the classes they want and are weary of putting students in higher level classes for fear that they will fail. The requirements of
administration goals for secondary graduation rates and other extra curricular activities at the school like sports and band also promote a passing GPA level students believe to be good. Greer and Martinez make it clear that this is at odds with the thriving GPA levels necessary for not only graduating high school or getting to college but for getting college free or at a discount.

**Reinforcement**

“Yes. It is about a chance at free college too,” Mrs. Greer says. Reinforcement of a GPA perspective is necessary. Martinez asks off task students if they are rich, if they are willing to take on a job, or if they hate their parents since by being inactive they are purposely hurting their GPA and guaranteeing that college will not be free.

“Mrs. Greer does not want them to just pass the class. She wants them to change their lives and the lives of others,” Mr. Martinez says. Greer has dedicated a wall in her room to pictures of her standing with former students at graduation, allowing current students to visualize when they could be there. Upon entering the room, students read inspiring words. A GPA perspective discussion is not a one class event but brought up formally and informally throughout the rest of the school year during teachable moments, problematic moments, or when grades are raised as an issue.

**Conclusions**

Exploring these themes gives an in-depth understanding of the work of developing a GPA perspective as political, personal, social, and complex. It is political because these educators paint the attainment of a high GPA as part of a social justice struggle for their students. It is personal because they try to link the GPA perspective to how it affects the lives of their students. It is social because they highlight how a GPA perspective is affected by everyone in the social environment of the student. It is also complex because of the mixed messages about GPA that must be analyzed. GPA perspective work should occur in all classes because the work of Greer and Martinez are only small moments in a busy curriculum in a busy school year. The implication of this study is the need for more research in this area.

Attention should be paid to making GPA awareness interventions a formal school-wide and school system-wide phenomenon and not the informal work of a handful of educators. Attention should be paid to how technology is affecting GPA perspective. Although in many school districts it may be easier to find a GPA calculation electronically, many students do not really understand its importance or how it can be transformed. Many parents also do not understand it. A GPA calculation can seem to hide in plain sight if a student does not have the social capital to identify and use this information. There is also a major focus on standardized testing in the United States that often places more importance on a test score than it does on an overall GPA. The concept of a GPA perspective is also important because it is becoming increasingly harder both academically and financially to attend college.

**References**


Mathematics: Going Beyond the Academic Discipline

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Abstract: Mathematics is rigidly classified as an academic discipline. This determines curriculum content and teaching and evaluation methods. These methods can give rise to negative views of mathematics, resulting in increased math anxiety. Educators, therefore, need to look beyond the discipline to provide a classroom environment that meets students’ needs.

Mathematics is considered an academic discipline (Favero, 2006). As such, it can be described, analyzed, impersonalized, and memorized (Schiro, 2008). Inherent within its status as a discipline is the methodology for teaching and learning. Such a methodology dictates that the teacher be the source of all mathematical values, skills, and meanings (King & Brownell, 1966) —the transmitter to the receiving learner (Schiro, 2008). Locke (1693/1970) made reference to young children as “white Paper, or Wax, to be moulded and fashioned as one pleases” (p. 261), giving rise to viewing a learner as a tabula rasa (blank slate) (Burns & Brooks, 1970). While some educators take delight in filling the tabula rasa, learners are objecting to being positioned as information receivers (Erickson, et al., 2008). As receivers, learners are forced to set aside their own mathematical thinking and accept “teacher-imposed methods of getting to the correct answer” (Geist, 2010, p. 25). With added focus on repetition, memorization, and timed tests for skill building, learners may, therefore, not perform well. This focus gives rise to an overall perception of mathematics as a high-risk activity, leading to higher levels of math anxiety (Geist, 2010; Popham, 2008). Krantz (1999) defines math anxiety as “an inability by an otherwise intelligent person to cope with quantification” (p. 100). Various studies found that positive attitudes towards math decline as students age, with as many as 63% of a college level math class expressing anxiety over math tests (Betz, 1978; Stodolsky, 1985). The purpose of this paper is, therefore, to discuss the negative effects that mathematics positioned as an academic discipline is having on learners, and the need to go beyond such a rigid classification in order to counter math anxiety. The paper opens by discussing mathematics as an academic discipline, followed by the effects of mathematics as an academic discipline on learners. It closes with a call to go beyond the academic discipline confines to reshape mathematics curricula and how mathematics is perceived.

Mathematics as an Academic Discipline

A discipline is defined as “a field of study” [or] “a rule or system of rules governing conduct or activity” (Merriam-Webster, 2010, n.p.). An academic discipline is, therefore, defined as the “knowledge, ways of working and perspectives of the world” (Favero, 2006, p. 1) manifested by scholars of that community. Five aspects of an academic discipline typified by mathematics are how it (1) is classified, (2) views knowledge, (3) views the learner, (4) is taught, and (5) is evaluated.

How Mathematics is Classified

A discipline can be classified as hard or soft, depending on how clearly defined its laws are with regard to “defining, ordering and investigating knowledge” (Favero, 2006, p. 2). As such, mathematics or physics would be considered hard disciplines. Social sciences or education would be considered soft disciplines as there is great debate over what constitutes new Hoyte, J. (2011). Mathematics: Going beyond the academic discipline. In M. S. Plakhotnik, S. M. Nielsen, & D. M. Pane (Eds.), Proceedings of the Tenth Annual College of Education & GSN Research Conference (pp. 87-94). Miami: Florida International University. http://coeweb.fiu.edu/research_conference/

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knowledge or appropriate methods of inquiry in these subjects. Disciplines are further divided into pure and applied: “pure fields are those that are viewed as less concerned with practical application, such as mathematics, history, and philosophy” (p. 3), whereas applied disciplines would include law, education, or engineering. Indeed, Biglan (1973b) found that for small colleges, mathematics content is determined empirically while a more creative approach is used for subjects like Philosophy or English. Thus, mathematics would be considered a pure, hard discipline.

**How Mathematics Views Knowledge**

A hard discipline would “specify the appropriate problems for study and the appropriate methods to be used” (Biglan, 1973b, p. 195). New knowledge for the discipline has to be discovered and sanctioned by members of the community of discourse, then tested against how well it “reflects the essence of the discipline” (Schiro, 2008, p. 40). Thus, research plays a critical role in sanctioning and testing new knowledge. As found in Biglan’s (1973a) study, faculty in hard-discipline areas are more involved in research but less committed to teaching than those in the soft-discipline areas. This approach to mathematics as a subject with clearly defined theorems, proofs, content, and pedagogy would exclude consideration of ethnomathematics, the study of cultural adaptations of problem solving (Kilpatrick, 2008). Phenix (1962) definitively states that “there are kinds of knowledge which … [are] unsuitable for teaching and learning . . . psychological needs, social problems. . . are not appropriate to the determination of what is taught” (p. 58).

**How Mathematics Views the Learner**

Such didactic knowledge is “repeatable and impersonal . . . can be repeated without losing its point and special circumstances are not needed for its transmission” (Schiro, 2008, p. 40). Thus, all that is needed for this knowledge to be received is the mind of the learner—“man’s schooled power of knowing, of understanding” (King & Brownell, 1966, p. 20)—with no consideration for the cultural diversity, emotions, identity nor language of the learner (Fang He, Phillion, Chan, and Xu, 2008; Schiro, 2008). “The child is thus viewed as a mind, the important aspects of mind being those ‘powers’ that are capable of being ‘schooled’ within the academic disciplines” (Schiro, 2008, p. 41). This mind lodges the facility for storage and reason. Thus, the storage can be filled, and the reason can be shaped by the knowledge of the discipline to manipulate that which is received. Learners are seen as *neophytes* who must be groomed to maturity in the discipline. The methods for such grooming are also dictated by the discipline as learners perform similar activities to the *scholar* who is seen as the top of the mastery hierarchy.

**How Mathematics is Taught**

As Schiro (2008) states, “the very nature of the discipline dictates the way in which it is to be learned and taught” (p. 43) with didactic instruction being used to “help students acquire organized knowledge sanctioned by a discipline” (p. 45). Indeed, Gardner (1998) voices that precious class time is better spent having a good teacher explain on the blackboard than having students work with manipulatives. Thus, the teacher plays a key role as scholar, who embodies the discipline by being uniquely qualified to transmit this most sacred cultural tradition to waiting ears.

Other methods of the discipline include supervised practice and Socratic discussion. Supervised practice is aimed at learners acquiring “intellectual skills associated with a discipline” (Schiro, 2008, p. 45), such as when they practice multiplication. Learners can also test previously acquired intellectual skills by using Socratic discussions with the teacher and other learned members of the community to analyze what they have learned. In a Socratic
discussion, information is systematically questioned “to elicit a clear expression of a truth supposed to be knowable by all rational beings” (Merriam-Webster, 2011, n.p.). The aim is to provide disciplined conversation similar to how scholars communicate with each other (Schiro, 2008). As Phenix (1962) shares, “Education should be conceived as a guided recapitulation of the processes of inquiry which gave rise to the fruitful bodies of organized knowledge comprising the established disciplines” (p. 64).

Since the mind is the receptacle, the methods of the discipline encourage grouping learners of similar ability to make it easier for instruction tailored to each level. Thus, learners at any age can be considered “ready to learn” (Schiro, 2008, p. 44) once material has been simplified to their level and concepts are broken down into a set of rules and operations that are taught in sequence. For example, the Saxon Math curriculum is structured information that is presented in incremental, explicit chunks. Students continually review previously learned concepts, and assessment is frequent and cumulative (Resendez, 2008).

**How Mathematics is Evaluated**

Frequent, cumulative assessments are possible since the objective view of an academic discipline enables mathematics to be evaluated in an objective fashion. Students are tested on their ability to “re-present to members of the discipline that which has been transmitted to them through the curriculum” (Schiro, 2008, p. 48). Data collected from such tests can then be used to make comparisons as a measure of academic performance for promotion or graduation. Data aggregates are also used for comparing schools and school districts and for holding students and schools accountable (American Educational Research Association, 2004). Thus, the focus is more performance- than improvement-oriented. This rigid view of mathematics affects learners in different ways and can give rise to a negative view of math.

**The Effect of Mathematics as an Academic Discipline on Learners**

According to the Chorpita (1998) model of the development of vulnerability for anxiety and depression, low-perceived control in children leads to inhibitions and, as the children continue to experience situations over which they have little control, becomes feelings of uncontrollability leading to anxiety and depression with age. Feelings of vulnerability and loss of control are heightened when core needs are violated (Fiske, Morling, & Stevens, 1996). Core needs have to be satisfied in order for individuals to feel socially accepted. Three such core needs that are affected by the view of mathematics as an academic discipline include the need to: (1) make meaning of the world or to be able to understand what is going on and why; (2) see the world as being benevolent, as being a safe place where needs can be fulfilled and efforts rewarded; and (3) develop high self-esteem, to feel worthy of being a part of the group and to be able to contribute competently and effectively to the welfare of the group (Fiske et al., 1996).

When in a place of powerlessness, individuals no longer feel in control of the outcome of their actions, lose their confidence to contribute, and, since their worth to the group is measured by their ability to contribute, thereby, lose their self-esteem. As individuals lose faith in themselves, they also lose faith in being rewarded for their efforts and the world is no longer seen as a safe, benevolent place.

**Effect of How Mathematics is Classified**

Treating mathematics as a pure discipline with no concern for application widens the gap between what is studied in the classroom and what is experienced in daily life. This dichotomy created between theory and practice is considered an obvious pitfall in teaching that causes schooling to seem unrelated to world affairs (Kliebard, 1965), thereby, violating the core need to make meaning of the world. Indeed, as Trujillo and Hadfield (1999) found, passive classrooms
and students’ inability to see the relevance of mathematical topics are contributors to math anxiety. Adult learners, in particular, who are more proactive about their learning and seek education as solutions to daily life’s problems (Betz, 1978) would be alienated by this environment.

**Effect of How Mathematics Views Knowledge**

To qualify as knowledge, mathematical information has to be repeatable and impersonal. Thus ethnomathematics is decried as “. . . rain forest math . . . practiced by cultures other than Western especially among primitive African tribes” (Gardner, 1998, p. 1). This violates the need to “develop a curriculum of shared interests . . . that values the cultural and linguistic heritages of students” (Fang He et al., 2008, p. 231). Mathematics’ classification as an academic discipline also positions it as a core subject, making it a required course for many degree programs. Thus, when students fail at math, the door is closed to further advancement, affecting an individual’s ability to contribute to the group’s welfare. Mathematics therefore serves as a gatekeeper to determine who achieves economic access, full citizenship, or a higher education (Stinson, 2004).

**Effect of How Mathematics Views the Learner**

A student’s comfort is also affected by the way the academic discipline approach focuses on the mind of the learner. Turner and colleagues (2002) found that “students may also need motivational and affective support through interaction with their teachers and peers” (p. 91). Students will notice if the teacher is not highly motivated and this too can cause math anxiety. As students detect their teachers’ negative attitudes they may be discouraged from seeking the help they need (Turner et al., 2002), lowering their performance further, leaving their core need of competence and effectiveness unsatisfied, and fulfilling teachers’ low expectations.

Viewing the mind as a clean slate enables the thought that “by repeating the same action, till it be grown habitual in them, the Performance . . . will be natural in them” (Locke, 1693/1970, p. 64). This “learn-by-repetition” (Erickson et al., 2008, p. 208) dictate of the discipline has become a “drill-and-kill” (p. 208) pedagogy acerbated by low scores on the frequent assessments. In addition, the grouping system which was meant by the discipline to maximize learning by placing like-ability students together is now being used to stream already unmotivated students into holding pens with even lower opportunity for learning.

**Effect of How Mathematics is Taught**

Children are already constructing structures needed for mathematical operations before they reach age five (Geist, 2010). However, as they enter school, the focus shifts from the learners to the teacher or the textbook as expert. Such is the case with academic disciplines where the teacher is the expert and the transmission method is used for teaching. Turner and colleagues (2002) associate the transmission model of learning with a low-mastery-oriented classroom—more concerned with students’ ability to outperform each other and less focused on understanding. Low-mastery-oriented classroom teachers showed “little enthusiasm about learning and did not convey high expectations for all” (p. 90). This could be attributed to the academic discipline scholar’s view of learners as neophytes with differing abilities, some of whom would make it to the apex of academia and others who would not.

Having a teacher established as the authority, with minimal scaffolding and a controlling instructional discourse, was found to create a classroom environment focused on evaluation for performance, causing students to be avoid situations that made them seem unknowing (Turner et al., 2002). Students felt forced to become passive receivers of knowledge which caused them to consider both mathematics to be a non-thinking subject with no room for creativity and themselves to be willing subjects (Boaler, 2000). If they are not willing to be passive receivers,
students who may be capable of excelling in mathematics consider mathematics to be contrary to their identities.

Teachers’ lack of mathematical knowledge can also adversely affect students’ level of comfort. After being presented as the experts, if teachers are unable to maintain control of the learning environment or to provide prompt and sure feedback, students become apprehensive (Jackson & Leffingwell, 1999; Turner et al., 2002). The less emphasis placed on teaching by the academic discipline adherents may appear to be lack of interest to the students. This lack of interest is interpreted by the students as a reflection of their capabilities (Jackson and Leffingwell, 1999), resulting in lower performance since their self-esteem is affected.

**Effect of How Mathematics is Evaluated**

Timed tests are considered to be artificial and cause a negative attitude towards mathematics when students do not excel (Popham, 2008). Indeed, replacing the child’s inherent constructivist approach to learning with emphasis on correct answers instead of concept development, speed instead of understanding, and rote repetition instead of critical thinking has been shown to increase anxiety in children and adults (Geist, 2010). Boaler (2000) argues:

> The idea that learning mathematics requires no or little thought, as students are only required to reproduce procedures, suggests that students are engaging in ritualistic acts of knowledge reproduction rather than thinking about the nature of the procedures and the reasons why and when they may be applied. (p. 179)

**Beyond the Academic Discipline**

Viewing mathematics as an academic discipline has given rise to certain misconceptions about education, which have resulted in mathematics instruction being implemented in ways that are not beneficial to all students. By freeing mathematics from such rigid classification and tradition, it could be made more accessible to all.

**Beyond How Mathematics is Classified**

Despite the commonly exalted status of disciplines, no “field of study must present an approved pedigree in order to be admitted to membership as a discipline” (Klieber, 1965, p. 338). Furthermore, teaching the discipline was not meant to be “searching for the structure and then transmitting it in toto” (p. 338). Rather, applicable principles and concepts were to be adapted for learning. This opens the door to adapting mathematical topics to the needs of the students, adapting the way mathematics is presented to the learning styles of the students, and most importantly, satisfying students’ core needs so that anxiety is averted.

**Beyond How Mathematics Views Knowledge**

On the one hand, Phenix (1962) urges a coming-together of the academic scholar and the professional educator. The academic scholar, is more concerned with erudition and less with pedagogy, while the educator is more concerned with teaching and learning “with little understanding or concern for the standards of rigorous scholarship” (p. 59). Phenix’s view of educators stems from his view of mathematics as a discipline that should be based on teachable content and not psychological needs, as shown earlier. Kilpatrick (2008), on the other hand, sees the mathematics educator as “concerned with how mathematics is learned, understood and used, as well as what it is” (p. 7). To this end, the educator goes beyond applied mathematics to how people think about mathematics, how learners can make use of mathematics on a daily basis, and how these uses and school learning can be connected. While some educators consider ethnomathematics to be fuzzy math, others “understand the value of taking into account the mathematical systems of the cultures from which students come” (p. 8), without sacrificing understanding of mathematical concepts.
**Beyond How Mathematics Views the Learner**

Though the academic discipline recognizes that learners have varying abilities, the intention was that the same level of education was to be given to all (Adler, 1982). Thus, even though some students may branch off to vocational education, they would still have the opportunity of acquiring an academic education (Schiro, 2008). The whole student must be considered for mathematics to be effectively understood. Turner and colleagues (2002) speak of the need to create a classroom environment that is high-mastery/low-avoidance by not only providing cognitive support but also focusing on motivational and affective support. This is because all students are “educable—not just trainable for jobs!” (Adler, 1982, p. 7).

**Beyond How Mathematics Is Taught**

Due to limited time in the classroom, it is necessary to determine which information should be taught and which is not as essential, but how that information is taught and how students learn have to be considered in achieving understanding. Erickson et al. (2008) speak of the “need to look much more closely and thoroughly at the conditions within school life itself, in which students affiliate and disaffiliate with the project of school learning” (p. 207). Geist (2010) shares that “we must look for environmental variables to explain the intertwining outcomes of poor achievement and negative attitude toward mathematics” (p. 27).

Providing learning in a developmentally appropriate fashion is certainly critical, but it need not be the repetitive step-by-step method of the Saxon curriculum (Resendez, 2008). Unlike those who feel that interesting activities detract from true learning (Geist, 2010), Williams (2000) found that students who practiced with a computer program were better prepared for a multiplication fact assessment. Indeed, technology is being used more widely in the classroom today. Not only does it boost efficiency of class time, but it also enables distance learning, access to online resources, and deeper, more interactive, experiences for students (Means, 2008). With a change in how mathematics is acquired and understood comes the need to change how it is evaluated.

**Beyond How Mathematics is Evaluated**

Multiple choice tests give credit for arriving at the correct answer, not for the process involved. Yet, multiple choice tests provide the only viable means of frequent assessments. As a result, either time has to be invested in grading meaningful assignments, or the need for such frequent assessments has to be rethought. The whole approach to teaching and learning mathematics needs to be re-examined if mathematics is to be transformed from an “ideal of the gods reproduced by a few students, into a human endeavor produced [and accessible] by all students” (Stinson, 2004, p. 16). Jackson and Leffingwell (1999) encourage teachers to step off the scholar pedestal and openly discuss with students how they overcame math anxiety and specific strategies that students can use. Teachers can also take the following steps: (a) consciously share their enthusiasm with the students; (b) provide constant reinforcement; (c) make the classroom environment a safe haven instead of one in which students feel embarrassed and can lose face; and (d) make the subject matter meaningful, relevant and interesting. To this end, the curriculum needs to be reshaped into one that (a) can be used to solve everyday problems, not by applying empty formulas, but by students understanding enough to know when to use ethnomathematics, and when to use the academic discipline; and (b) fits the “customary way of thinking and acting of working class [and other] students” (Erickson et al., 2008, p. 207). The need for meaning and safety are core needs that must be satisfied to reduce students’ anxiety and increase their ability to learn math.
References


Challenges for College-Level Learners of Academic English Writing in China

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Abstract: English learners in Chinese universities feel it is difficult to write academically. The difficulty lies in but not limited to linguistic differences; it also stems from other factors including cultural origins, educational values, rhetorical strategies, and reader awareness. Recommendations towards overcoming these barriers are put forward in this paper.

Differences between the first language (L1) and the second language (L2) may generate transfer hindrances and challenges for English as a foreign language (EFL) students. These challenges in L2 learning or narrowed down to L2 academic writing are rooted not only in a linguistic arena, but also deeply and essentially in the differences in philosophies, values, rhetorical strategies as well as reader awareness derived from cultures. Many theories and research studies, particularly Chinese-specific ones, have paved the way for seeking effective approaches to identifying and overcoming these difficulties and thus improving writing competency for Chinese EFL writers.

This essay will firstly elicit the academic writing (Swales, 1990) and the L2 writing process (Silva, 1997). It will then review the literature which elaborates on the differences between Chinese and English academic writing in tertiary education from various perspectives. Finally, some recommendations will be made in order to inform and inspire both English teachers and EFL learners’ questing for improvement of tertiary academic writing in China.

Academic Writing in L2

Academic writing for EFL learners is difficult because of its multi-faceted nature. Swales (1990) defines academic writing as a socio-rhetorical community of both writers and readers functioning in communicating goals, conventions, and socialization processes on the basis of genre analysis. This definition embraces sociocultural and rhetorical aspects, together with communicative goals (i.e., building writer-reader relationships as well as genres), all of which will be discussed later in this paper. Swales’s definition does not specify academic writing in L1 or L2, while Silva (1997) moves into L2 writing by explaining that the L2 writing process includes strategic, rhetorical, and linguistic differences from the L1 writing process. Silva’s explanation echoes Swales’ and contributes the strategic factor to the existing multiple differences. Cumming (2001) furthermore restates that complexity and variability in academic writing and L2 learning constitute great barriers for L2 writers in obtaining overall competency. Cumming’s statement is integrative but does not mention what attributes contribute to complexity and variability.

Challenges for Chinese EFL Writers

The barriers mentioned above are true of Chinese EFL writers in tertiary academic writing. This paper will analyse the elements causing barriers and challenges in L2 academic writing for Chinese EFL learners from four perspectives: cultural origins, educational values, rhetorical strategies, and reader awareness.

Cultural Origins

Culture differences mainly originate from distinctions of western and Chinese
philosophies. The two representative philosophies are those of Socrates and Confucius. Socrates focused on “truth and universal definitions” (Scollon, 1999, p. 17) and sought for the outcomes of a hypothesis, whereas Confucius was more interested in action.

The conceptions in the two philosophies have led to variability in teacher-centred or learner-centred class mode, ways of thinking, teachers’ and students’ roles and objectives of education (Scollon, 1999). They have also shaped the behaviours of teachers and students and the complicated notions linked to communicative interactions between students and their teachers in respective cultures. The Socratic approach to education underlies many daily activities in the Western classroom and highlights “rhetoric as a search for knowledge and education” (Scollon, 1999, p. 17). This approach is dramatically different from the Confucian philosophy because Confucius places rhetorical reasoning as secondary but gaining wisdom and complying with morality in the first place. Here morality refers only to the moral code that teacher uses to communicate with students. The Confucian philosophy also attaches great importance to “group identity and harmony maintenance” (Scollon, 1999, p. 10), which may seem to be a predominant target for Chinese students. Under the influence of the Confucian education philosophy, what teachers say is authoritative and true and these truths should be repeated and remembered instead of being questioned by learners. “Docility, passivity, and conformity” (Yen, 1987, p. 52) are what education demanded of its students in this Confucian heritage culture.

Scollon (1999) undertook a case study to identify the cultural constructs that underlie the viewpoints on the purposes of education in Chinese and Western classrooms and that influence the behaviors of students and teachers. She observed that the cultural notions stemming from the philosophies of Socrates and Confucius tacitly affect the learning processes. Brown (2007) supported the same viewpoint by claiming that L2 learning is “second culture learning” to some degree (p. 188). Therefore, Chinese EFL learners under the influence of historically dominant Confucian view tend to fail to make a hypothesis and then verify or falsify it to search for knowledge by using rhetoric reasoning.

Educational Values

Seen from the current model of English education in Chinese universities, education values vary considerably between Chinese and Western pedagogies, which cause another challenge for EFL learners in academic writing. Under the impact of the Confucian philosophy in China, books are considered as an integral of “knowledge, wisdom and truth” (Maley, 1990, p. 97). This view results in the “teacher-centered textbook-analysis-based Grammar-Translation Method” of English teaching in China for years (Yang, 2000, p. 19). As to English teaching in higher education, English curriculum in all colleges and universities in China works under the authority of a nationally unified syllabus and the College English Test (CET) examination system (Wang, 1998).

The CET is a national English standardized test for all non-English majors in four-year-degree universities. Its aim is to test whether students have fulfilled the requirements of the national syllabus. In reality, many colleges and universities have made passing CET as their top priority. In this situation, students’ diverse needs for English are hardly noticed; teachers pay much attention to teaching “language knowledge and test-taking skills” (Wang, 1998, p. 29), rather than language skills necessary for communication or English competency. As to English writing, it is not for students to generate ideas and express themselves, but to give students another chance to show what they have learned in class, especially grammar (Silva et al., 2003). English writing is still taught in the traditional way, emphasizing and correcting grammatical
mistakes instead of helping the students generate thoughts (Wang, 1998). Communicative approaches such as genre-based approaches are severely constrained by simulation tests and many test-preparation exercises for the CET.

However, despite the demanding preparation and skill-specific training, the level of university students’ English writing in CET has remained low because the students lack effective means to generate and organize their own ideas. They may produce texts of nearly grammatical perfection and appropriate vocabulary use, but the texts are still shallow in content and obscure in meaning (Mu, 2007).

Contrary to this traditional view of education, the Socratic approach results in many daily peer activities such as group work and pair work as well as teacher-student interactions in the Western classroom. It emphasizes “rhetoric as a search of knowledge and education” (Scollon, 1999, p. 17). Writing is not only about a correct word form and appropriate vocabulary, but “rational argumentation, objectivity in the writer’s position and views, and factuality in justification and proof” (Hinkel, 1999, p. 107). These differences between Chinese and Western education values produce a gap in requirements, goals, and emphasis of academic writing.

**Rhetorical Strategies**

Closely linked to the educational value and pedagogical approaches are rhetoric strategies, which will be discussed here with the aid of contrastive rhetoric studies (Kaplan, 1966). The differences between rhetoric strategies in English and Chinese may also create problems for Chinese EFL writers. Contrastive rhetoric studies which were initiated by Kaplan show differences in paragraph and text organization varying from different language and cultures. The Cultural Thought Patterns (Kaplan, 2001, p. 21) show five types of paragraph development. For example, English academic writing is linear and explicit in paragraph organization while the Chinese style is rotating or wheeling (Mu, 2007). Mu contended that if Chinese writers employ or “transfer rhetorical conventions” in accordance with norms from Chinese linguistic and cultural backgrounds, the writing may turn out to be “out of focus” (p. 78).

Another point is the use of proverbs. This is often found in Chinese texts when authors feel that they need to strengthen their argument by adopting the presumed commonsense in proverbs, but the adoption of proverbs and sayings does not embody a rhetorical strategy accepted in English academic writing (Hinkel, 1999).

The last point is cohesion. Chinese students use fewer organizing devices, such as relative clauses, conjunctions, subordinate clauses, and other grammatical or lexical links, which are widely applied in English writing to express relations between ideas and make meaning clear and logical (Mu, 2007). As a result, native English speakers (NESs) have difficulty in identifying the main points of Chinese students’ compositions because of the weak cohesion. The three points above represent only a fraction of the infinite differences of rhetorical strategies between Chinese and English writing, but they reveal major and typical aspects of challenges for EFL writers in China.

**Reader Awareness**

English and Chinese writers are also noted to be different in their writing process with regard to their relationship to their readers, which in turn can also create a challenge for Chinese EFL writers to write English essays. According to Okamura (2006), one of the difficulties for 13 Japanese scientists in writing was unawareness of how to use linguistic forms to accommodate particular readers. This corresponded with Gosden’s (1996) study, in which the Japanese researchers failed to be aware of their readers while writing their first research article in English. The reason was that eastern cultures, including the Chinese culture, require the reader
responsibility while English academic writing derives from a writer-responsible culture (Hinds, 1987). Both findings above seem to support the Cultural Thought Patterns (Kaplan, 2001). The intention of native-English speaking writers is to make writing purpose explicit and give sufficient lexical and grammatical signals to facilitate the readers. They consistently keep their readers in mind. Conversely, Chinese writers use less “landmarks” in the writing, leave readers more space of association, and assume that the readers could code and decode their writing (Hinds, 1987). Hence, Chinese writings are made coherent by internal meanings of sentences rather than apparent conjunctions or other organization links (Mu, 2007). It is accordingly inferred that Chinese writers with a reader-responsible background will inevitably meet challenges to adapt themselves into a culture of writer-responsibility.

**Recommendations**

Because there are gaps between English and Chinese writing for EFL learners in China, how should the EFL writers bridge the gaps to at least lessen the difficulties in academic writing? Some recommendations that may be useful for the struggling writers include academic interaction with NESs, extensive exposure to English reading materials, explicit understanding of English writing conventions, and exposure to the English academic text.

Academic interaction with NESs is presumed to improve EFL leaners’ academic language in a whole. This type of peer interaction facilitates English learners’ exposure to standard English and provides them with the practice and feedback required to develop sentence structure, language use, and essay organization (Scarcella, 2002). This type of interaction has solid theoretical ground called zone of proximal development (ZPD) put forward by Vygotsky (1978), an advocate of socio-cultural perspective of L2 learning. He believes that learning occurs when an individual interacts with an interlocutor within his or her ZPD, a situation in which a learner is capable of performing at a higher level because there is support from an interlocutor. EFL learners can reorganize and internalize their language knowledge during academic collaboration with NESs. For instance, Chinese EFL learners may grasp opportunities to attend academic conferences, submit to English journals, and read comments on those submissions and discuss them in academic forums.

Stotsky (1983) asserted that reading is more beneficial than grammar or extra writing practice in improving students’ writing. She further highlighted that “reading experience seems to be a consistent correlate of, or influence on, writing ability” (p. 637). Therefore, reading is inseparable from writing and EFL writers in China should be immersed in the English reading materials to improve both content and writing strategies. English learners are suggested to read academic essays in a certain genre, pinpoint their organization, find their rhetoric reasoning, and recognize cohesion symbols, all of which serve as preparation for their own writing in the same genre.

Bitchener and Basturkmen (2006) confirmed that English proficiency can not exclusively explain Chinese EFL learners’ difficulties in English writing. Chinese writers need more explicit understanding of English writing conventions. Hence, EFL writers may search on the Internet or personally attend writing-strategy workshops or focused courses in order to manage how to write in accordance with English writing conventions.

According to Scarcella (2002), a clearly written English text provides essential input for writing development, particularly citations, references, coherence, and cohesion. Therefore, it is a dependable source of academic English input in light of Chinese EFL writers. English learners can benefit from the form, format, and organization of the English text. Beside, the clearly written text is supposed to establish a strong relationship between the author and readers through
its logical cohesion.

The four recommendations above attempt to guide EFL learners in academic writing from different but related aspects, scaffolded by relevant literature and research studies to empower learners with cognitive, social, and communicative strategies. Some of the studies quoted in this paper are Chinese-specific, so they are presumed to be generalizable and feasible in Chinese EFL context and helpful to Chinese EFL writers to overcome difficulties and improve their writing competency.

Conclusion

This paper described four differences between English and Chinese cultures that lead to writing challenges for EFL tertiary students. Accordingly, some recommendations to overcome the difficulties and challenges and improve their writing competency were made. The four recommendations aim at giving effective suggestions to EFL writers in the Chinese tertiary context. It is hoped that both differences revealed and recommendations made here can be beneficial in the Chinese EFL context and for both EFL teachers and learners.

References


Hidden Communication Deficits in Children with Autism and Early Behavioral Interventions

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Abstract: Taking a behavioral systems approach to autism, early hidden communicative deficits are introduced as precursors of autistic development. This paper argues that early identification of communication (language and cognition) impairments followed by intensive behavioral interventions, as early as infancy, may have the most preventive effect on the development of autism.

Autism Spectrum Disorder (ASD) has been looked at as a genetic disorder, cognitive deficit, and linguistic or social dysfunction. Cognitive psychologists attribute ASD to one or more cognitive disorders such as impairment in theory of mind, executive function, and central coherence (Doherty, 2009). The Diagnostic and Statistical Manual identifies ASD using 12 diagnostic criteria (DSM-IV-TR; American Psychiatric Association, 2000; as cited in Ingram, 2006). The criteria are categorized into three main characteristics: (a) deficits in social interactions, (b) deficits in communication skills, and (c) narrow interests and ritualistic stereotyped behaviors. In order for children to be diagnosed as autistic, they need to meet six out of twelve diagnostic criteria. Among them, at least two of four impairments should be specified in the first and second category and at least one of four should be in the third set. Largely, psychologists believe that these cognitive deficits lead to dysfunctionality in other areas of development.

Unfortunately, their work is usually limited to a diagnosis. This, however, is not the case with behavior analysts. From a behavioral systems approach, ASD is a behavioral disorder. Although influenced by multiple factors (e.g., genetic, cognitive), it may be treated by providing intensive structured interactions with the social and physical environment.

In the case of autism or any other developmental delay, early identification of and intervention with deficits or potential deficits may help prevent the negative effects of evocative genetic-environment interactions. The purpose of this paper is to describe, from a dynamic systems approach, the critical role played by the environment in the ultimate expression of typical or atypical characteristics in the phenotype (Novak & Pelaez, 2004). In addition, this paper clarifies how infants’ stimulus overselectivity and oversensitivity to environmental stimuli (e.g., tonality of mother’s voice or stimulation) and deficit in joint attention and social referencing can evoke aversive reactions and avoidance in adults who interact with autistic children. The case is made that the interaction is quite dynamic. By being aware of these characteristics in autistic children or children with developmental impairments, adults are more likely to be able to regulate their responses and maintain reciprocal interactions, which are critical for enriching the child’s learning environment.

Hidden Communication Deficits

From a behavioral-analytic point of view, some deficits can suddenly emerge that are quantitatively and qualitatively different from previously detected ones. The same thing is true

for skill development. At a point in development, some quantitative and qualitative changes may occur that were previously undetected. These changes, called phase shifts, can be the emergence of skills such as overselectivity, or result from lack of skills, such as joint attention and social referencing, that manifest as developmental deficits.

Phase shifts, according to Novak and Pelaez (2010), happen due to “hidden skills-hidden deficits” (p. 11). Hidden skills or deficits, as stated by Thelen and Ulrich (1991), are essential components of emergent behavioral pattern in language and cognitive development, they will not be unraveled or observed except under specially controlled environment and in conjunction with other essential skills. A hidden deficit in a certain skill, or a hidden skill does not cause autism by itself; but it can be an underlying leading factor or a contributor that in coalescence with other deficits may result in autistic development (i.e., coalescent organization; Novak & Pelaez, 2004).

**Mutually Responsive Orientation**

Mutually responsive orientation (MRO) is defined by Kochanska (1997) as a positive parent-child relationship. Delay in development of mutual responsiveness on the part of the child may play a leading part in a phase shift towards autistic development. For instance, mutual responsiveness in infancy is also found to be correlated with self-regulation later, at the age of four and a half (Kochanska, Aksan, Prisco, & Adams, 2008). Joint attention and social referencing are precursors of MRO since they are important for maintaining reciprocal interactions between the child and the environment. Development of joint attention from 12 to 18 months was found to be correlated with language development at the age of two (Mundy et al., 2007). It also has a long-term effect on language development, especially vocabulary enhancement during adulthood. Joint attention together with social referencing is a prerequisite for establishing conditional discrimination (Pelaez, 2009). Lack of eye contact and lack of establishing visual discriminations for facial cues delays the development of social referencing.

According to Novak and Pelaez (2010), stimulus over selectivity, which makes face recognition or configural face processing difficult, is one factor that interferes with following basic visual discriminations and cues in the face (e.g., gaze following or emotional expressions). Sensitivity to the response that the child provides in regards to the stimuli, and coordinating the counter-response by the mother accordingly, would help establish a mutual responsiveness in mother-child interactions. Utilizing an awareness on the part of the mother, effective reinforcers can be identified and be used to maintain mutual responsiveness.

For instance, synchronized touch is identified to be a good reinforcer. The “synchronized reinforcement procedure” used by Pelaez-Nogueras et al. (1996) showed the reinforcing effect of synchronized touch on establishing, increasing, and maintaining eye contact, smile, and vocalization of the infants at risk of developmental disorders (from 1.5 to 3.5 months of age). It also demonstrated that the child response, which is gaze shifting towards or away from the mother, is essentially a communicative signal by which the child and the mother can regulate their relationship.

From a behavioral systems approach, all behavioral cusps like any patterns of behavior result from developing a learning history, a history of contingencies (Dube, McDonald, Mansfield, Holcomb, & Ahearn, 2004; Pelaez, 2009). Joint attention, social referencing, and relational frames are all learned through typical early “trials of social-cognitive-linguistic interactions” (Novak & Pelaez, 2010, p. 25). In this sense, infants who are deprived of these constructive reciprocal interactions in their environment are likely to develop hidden deficits of necessary skills for a typical development. This deprivation can occur for a variety of reasons, such as ineffective parenting that leads to the absence of social reinforcers, physiological
deficits, and/or stimulus over selectivity of non-social stimuli that interfere with purposive attention to the social stimuli provided in an interaction (Novak & Pelaez, 2010).

In children with autism, an impaired social interaction that could be covert in early ages in the form of hidden deficits in joint attention, social referencing, and relational responding makes them more isolated. That is, their impaired behavioral patterns of early communication and cognitive skills do not provide effective reinforcement for other people to establish or maintain a dyadic/social relationship with autistic children. In turn, it keeps them away from a typical learning environment that every child needs to experience in order to develop typical communicational and cognitive development. The speculation is that early history of contingencies can be replaced or re-established through early operant learning. For instance, Taylor and Hoch (2008) showed that children with ASD can learn to initiate and respond to joint attention through operant procedures.

**Is Early Detection of Autism Possible?**

Developmental deficits in children with ASD are normally identifiable as early as two or three years of age. However, some children remain unidentified until school age. But differences in behaviors of autistic and typical children are proved to be identified as early as one year of age. A study (Osterling & Dawson, 1994) of home videotapes from the first birthday of children who were later identified as autistic or typical showed possibility of this early detection. It also drew special attention to infants’ behavior in initiating or responding to eye contact and joint attention and tact- or mand-making when screening for autism. This study, in line with more recent studies by Novak and Pelaez (2010), took implications further and highlighted the necessity for early detection of and intervention with autistic children as early as infancy. Recently there has been an effort to modify the Autism Diagnostic Observation Schedule (ADOS; Lord et al., 2000) to be used with toddlers under 30 months-old and the result has been published as Toddler Module or Module T by Luyster et al. (2009).

**Applied Behavioral Analysis: An Intervential Approach**

The comprehensive approaches taken by ABA-based treatments have been successfully established in the form of training programs. They addressed a wide range of pivotal skills including cognitive skills, language skills, social-emotional skills, motor skills, academic skills, and daily living skills (Granpeesheh, et al., 2009; Rogers & Vismara, 2008). All intervention programs incorporate at least one of two teaching strategies, discrete teaching trials (DTT) or natural environment training (NET; Granpeesheh, et al., 2009).

DTT consists of very intense and structured trials, while NET (including incidental teaching, milieu teaching, and pivotal response training) focus on natural environmental reinforcement and is child-initiated (as opposed to therapist-initiated). It overcomes some limitations of DTT by making the generalization and transfer of learning to other settings more probable and results in less aversive reaction on the part of the participants (Granpeesheh, et al., 2009). These programs usually incorporate some or all of behavioral intervention approaches such as the Picture Exchange Communication System (PECS; Bondy & Frost, 1994), Pivotal Response Training (PRT; Koegel, Koegel, Shoshan, & Mc Nerney, 1999), and Applied Verbal Behavior (see LeBlanc, Esch, Sidener, & Firth, 2006 for reviews). Parent training is a key part to the interventions with a focus on joint attention skills, routines for joint action, and behavioral management in natural home settings (Rogers & Vismara, 2008).

**Early Intervention Programs**

Lovas’ (1987) longitudinal study of children with autism who received at least two years of early intensive one-to-one behavioral treatments (started before age of 40 or 46 months, for 40
hours per week) indicated that by the time children are in the first grade, 47% of them showed normal intellectual and educational achievement, as opposed to 2% in the control group. A follow-up 6 years later with the experimental group (at age 13) showed that they maintained their achievement compared to the control group (McEachin, Smith, & Lovaas, 1993).

A recent meta-analysis (Makrygianni & Reed, 2010) on 14 studies also showed that behavioral early intervention programs (EIPs) that have been established based on behavioral systems approach are very effective in improving cognitive, language, and communication development in children with ASD. It pointed out that the intensity of interventions (at least 25 hours per week) was an effective factor in the enhancement of children’s cognitive ability and adaptive behavioral skills. However, in the same meta-analysis by Makrygianni and Reed (2010), language ability showed improvement at different levels for different individuals due to their initial adaptive behavioral skills. In other words, the higher the adaptive behavioral skills were, the more improvement in language development was witnessed.

This latter finding on language development of autistic children is in line with the principle of equifinality, in the sense that even starting with the same intervention (the same intensity and duration) individuals may develop in different pathways due to multiple determinant factors, one of them being their initial adaptive behavioral skills. Interventions are helping them with developing more adaptive behavior but at their own pace. In general, ABA-EIPs are more effective that non-ABA programs when they were higher in intensity and duration and when parent training is included (Makrygianni & Reed, 2010).

An emphasis on necessity of sufficient language input for acquiring language in Cooper and Aslin (1989)’s argument also highlights the importance of the intensity of early interventions. That is, interventions need to be implemented in an intense manner so that they can sufficiently compensate for the lack of a rich language and communicative environment earlier in life. Furthermore, as the child by the age of three has already shaped a rich history of contingencies through millions of interactions with the social environment that could potentially label the child as typical or autistic, Novak and Pelaez (2010) considered training of related interventions in infancy essential for parents, teachers and caregivers. Based on this rationale, basic conditional discrimination training and identity matching procedure have been offered as training practices for very young children (Pelaez, 2009).

From a dynamical systems perspective, Early Intensive Behavioral Interventions (EIBI) are the most recommended treatments with autistic children (with the intensity of up to 40 hours per week and duration of at least 2 years; Lovaas, 1987). Aside from genetic make-up, other multiple determinations that are responsible to organize the development of an autistic pattern of behavior appear right after the birth, when the first parent-child interactions naturally emerge. In early ages, these bidirectional interactions should typically proceed in a rapid rate and in an environment rich in learning contingencies. Any factor from biological impairments to mother’s and child’s atypical characteristics may lead to establishing impaired contingencies (i.e., diverted from typical). From a behavioral systems approach, these atypical, learned contingencies are the main contributors to the phase shifts in autistic development.

Vocal Interventions

Verbal Imitation Training

Imitation is one of the early emergent skills in typical infants that play a crucial role in cognitive and language development. In other words, imitation is a behavioral cusp that leads to a typical development in language and cognition. According to Masur (2006), imitation studies
have revealed association between imitation and cognitive competence such as memory, and visual-motor coordination as well as language that is a cultural pattern of behavior.

Most verbal interventions for non-vocal children with autism include verbal imitation training before proceeding to higher level forms of speech like demands (Ross & Greer, 2003). They use different techniques such as shaping and time-delay to develop verbal imitation repertoires in autistic non-vocal children. These techniques are usually applied to a combination of motor and vocal imitations. For instance, shaping procedures follow a motor imitation first and then proceeds to a vocal imitative behavior; time-delay for vocal imitation (i.e. waiting a predetermined time for the child to respond) happens in a functional environment when a motor activity (e.g., having a meal, drawing, and playing with toys) is ongoing by the child.

Motor imitation (large motor actions like clapping hands or touching the head and small motor actions like touching the eyes or nose) just before vocal imitation showed to enhance the verbal-vocal imitation and mand initiations in five elementary-school aged children with autism (Ross & Greer, 2003). However, this association does not mean that motor imitation would be spontaneously generalized to vocal imitations for autistic children. It is not the case. Findings basically say that motor imitation may facilitate the training procedure to proceed more efficiently to a vocal imitation. In general, verbal imitation training has been used also as part of mand training procedure in most of functional communicative training packages.

Stimulus overselectivity of autistic children that make the configural facial processing difficult may distract them from facial-vocal imitation. To address this problem, Tardif, Laine, Rodriguez, and Gepner (2007), in a study on 12 autistic children and 24 typically developing children, found out that slowing down the facial-vocal expression enhances the facial-vocal imitation by children with autism in a reciprocal interactions. It suggests modifying interventional approaches that involve imitation training. Reciprocal imitation training, including techniques like contingent imitation and linguistic mapping during play as a naturalistic behavioral treatment, was also shown to have positive effect on joint attention and language development in children ages 29 to 45 months (Ingersoll & Schreibman, 2006).

Furthermore, in addition to vocal imitation of adult speech by the child in very early ages (i.e., infancy) maternal vocal imitation of the infant’s vocalization (i.e., sound-making) functions as both discrimination for “higher articulatory complexity” (Pelaez, Virues-Ortega, & Gewirtz, 2011, p.34) of infant’s vocalization and reinforcement for further vocalization by the child.

**Motherese Speech and Maternal Facial Expression**

Infants, as young as one-month-old, demonstrated perceptions of auditory stimuli by showing preference or recognition towards the motherese speech (from an unfamiliar source of speech) versus adult-directed speech (Cooper, Abraham, Berman, & Staska, 1997). As young as four-month-old infants prefer their mother’s motherese speech versus the mother’s adult-directed speech. While at one month, they were acceptant of their mother’s voice talking either motherese speech or adult-directed speech (Cooper et al., 1997).

Perceptions of visual stimuli are also present in infants of 4 to 5 months of age. In other words, infants as young as 4 to 5 months look at their mothers when faced with an ambiguous event or context and establish a perception of maternal facial expression (joyful or fearful) that can be linked to a prior experience with related contingencies (Pelaez, Virues-Ortega, & Gewirtz, 2011). Detecting any delay in typical development of infants in any of these early characteristics and addressing identified deficits by evidence-based interventions is critical to establish the right contingencies for typical development.
In order to establishing successful interventions, studying and identifying effective reinforcement is essential. Only a few studies have focused on identification of effective reinforcers of early communication skills. For instance, synchronized touch is shown to function as a reinforcement for initiating and maintaining eye contact and infants’ vocalization (Pelaez-Nogueras, et al., 1996). Motherese and contingent maternal vocal imitation in infancy also has been explored to develop communication skills in infants at risk for developmental language delays (e.g., Bendixen & Pelaez, 2010; Pelaez, et al., 2011). Bendixen and Pelaez (2010) compared motherese and maternal imitation in their effectiveness to maintain a dynamical communication (in this case, increasing babbling) with an infant.

Motherese as the reinforcer of babbling behavior showed to be more effective than contingent maternal vocal imitation for the infant at the age of 12 months (Bendixen & Pelaez, 2010). However, in younger infants, 3 to 8 months, maternal imitation of the infant’s vocalization plays a reinforcing role in increasing babbling (Pelaez et al., 2011). These findings highlight that both maternal vocal responses are important reinforcers of infants’ vocalization behavior, which is a precursor to the child’s language development and should be considered in early interventional programs.

As it was a topic of study in the above example, it is important to identify and individualize effective reinforcers that lead target behaviors in a particular individual. Effective behavioral interventions that are to establish operant learning relied on positive reinforcement. Therefore, identifying effective reinforcers in interventional approaches are determinant in promoting desirable responses and achieving developmental goals.

Summary

The consensus among behavior analysts is that children dealing with communication developmental impairments and autism spectrum disorders benefit from an early diagnosis only if they receive the early intensive interventions that will help them, at least to some extent, cope with the normal pace of their developmental course. Communicational interventions in infancy would be a good starting point to prevent impairments in language and cognition as well as to enhance communicative skills. Some early skills that need to get special attention in interventional approaches are establishing and maintaining eye contact, joint attention, imitation, and social referencing, which all lead to mutual responsiveness and provide a rich learning environment.

Early intensive behavioral interventions may even prevent forming flawed contingencies that may lead to atypical development. As emphasized by Novak and Pelaez (2010), hidden skills and deficits are leading parts in formation of autistic behavioral pattern and the early (as early as infancy) identification of and intervention with these skills or deficits would help to prevent maintaining or underpinning impaired environmental contingencies that potentially lead to coalescence of autistic patterns of behavior by the age of two or three.

In order for interventional approaches to be more effective with the autism population, interventions need to be built upon the knowledge of early typical development. Identifying early characteristics and precursors of typical communication development and also early recognition of communication impairment is the gateway to address language and cognitive deficits in autism. In other words, early interventions need to be designed in a way that foster a typical development and build the ground to replace already-learned flawed contingencies with establishing and teaching right learning trajectories through incorporating early-effective reinforcers.
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The Battle for National History Standards

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Abstract: The Common Core State Standards has revived the discourse of voluntary national standards, which in the discipline of history has been extremely contentious. What is the relationship between the federal government and the formulation of national history standards? National standards could be the key to raising student achievement.

The recent release of the Common Core State Standards has revived the discourse of voluntary national standards. The Common Core State Standards Initiative (CCSSI) is a state-led effort that is being coordinated by the National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO). Although the CCSSI has only released the math and English standards, it may release history standards eventually. The discourse of national history standards has been extremely contentious in the past. As a result, the CCSSI has distanced itself from the federal government, and it proclaims that the federal government has not had any part in developing the common standards.

Standards are what students need to know and be able to do. Since political ideology influences what one believes students need to know as well as be able to do, then different groups espousing different political ideologies will have a difficult time agreeing on standards for students. This paper will examine the following questions using a historical perspective: (a) What is the relationship between political ideology and national standards? (b) What is the relationship between the federal government and the formulation of national history standards? (c) What is the relationship between the Common Core State Standards and the federal government? Standards in education are influenced by the federal government, and specifically the United States Department of Education. They are also influenced by political ideologies of those charged with their development. This paper will examine the role of political ideologies and the federal government in the development of national history standards and the Common Core State Standards. National standards could be the key to raising student achievement. Examining the role the federal government plays in the creation of national standards may help one understand the aims of the Common Core State Standards.

Method

A literature search was conducted in May 2010. The databases ERIC and Education Full Text were searched. The search terms used were political ideology, national history standards, and Common Core State Standards. In order to find more relevant literature to answer the first research question, the additional search terms right and politics, and left and politics were used. No limits were placed on the year of publication. However, limits were placed on peer reviewed and full text. Thirty-one articles were selected to read based on their abstracts and of these thirty one articles, only five were chosen to include in this paper. There were no results for Common Core State Standards. Since no results were found, a Google search using the search term Common Core State Standards was conducted. Two websites with relevant information to the research questions were found. Additionally, previously read books were included that related to the research questions.

Since *A Nation at Risk* was integral to the standards movement, it was necessary to include it. Therefore, a Google search using the search term *A Nation at Risk* was conducted. Also, after reading the literature, it was determined that it was necessary to find the original article written by Lynne V. Cheney. A Google search using the terms *Lynne Cheney* and the *National History Standards* was conducted.

**Political Ideologies**

One’s political ideology affects one’s ideas about education. Postmodernism rejects a monolithic narrative. According to Aronowitz and Giroux (1991), “Lyotard has described postmodernism as a rejection of grand narratives, metaphysical philosophies, and any other form of totalizing thought” (p. 60). Political groups compete for their narrative to dominate education. Aronowitz and Giroux (1991) explain that reforms about what students should know are focused on producing one’s culture through education. The political spectrum consists of the Right, which are conservatives, and the Left, which are liberals. One’s political ideology depends on how one views personal and economic issues. There are several different political groups that identify as conservative or liberal. Each political group has a different perspective on education. This paper will focus on only a few groups that have been influential in educational policy as it relates to the formation of national standards.

**The Conservatives**

The Right consists of several groups; however, three groups that have been influential in education are the Far Right, the Religious Right, and the Neoconservatives. Berliner and Biddle (1995) state that the Far Right believes that the problems American schools have are the fault of the federal government. Therefore, the Far Right believes that in order to fix American schools one needs to limit the role of the federal government in the educational system. Berliner and Biddle (1995) expound the Far Right wants to exclude the federal government from education thus the decentralization of education is one of their major goals. The Far Right wants states in control of education, and they do not want the federal government to be involved in education. As a result, the Far Right would be against national standards because they do not believe the federal government should be involved in the creation of standards for education. The Far Right believes that standards should be created at the state or local level of government. The Far Right believes that as the federal government has increased its role in education, it has allowed powerful groups to exercise too much influence on education (Berliner & Biddle, 1995, p. 134). They also believe that minorities constitute powerful groups that are trying to influence education. Additionally, the Far Right believes that federal involvement in education has led to the inclusion of underrepresented groups, like minorities, to the detriment of traditional education. Therefore, the Far Right does not want standards that would include a voice for minorities in the American history narrative.

The Religious Right is another conservative group. They believe that the federal government has excluded religion from public schools, and the federal government should be abolished because it endorses secular humanism (Berliner & Biddle, 1995, p. 136). The Religious Right promulgate federal laws or constitutional amendments to keep the federal government from supporting secular humanism in public schools (Berliner & Biddle, 1995).

The Neoconservatives, juxtaposed with the Far Right and the Religious Right, are different in their perspective on the federal government. Neoconservatives strongly believe the federal government should be involved in education (Berliner & Biddle, 1995, p. 137). Therefore, the Neoconservatives want the federal government to be involved in the creation of
national standards. In particular, Neoconservatives want national history standards to promote a common cultural heritage. Berliner and Biddle (1995) state:

In general, Neoconservatives argue that American schools have suffered from two serious problems: a history of social experiments concerned with peripheral issues that made too many demands on schools and diverted them from their basic missions, and excessive federal intervention to promote educational equity. (p. 137)

Neoconservatives believe that the federal government has been too concerned with including minorities in the American history narrative in order to promote equity. They believe that the federal government should focus on the common cultural heritage.

The conservatives have several beliefs in common. Berliner and Biddle (1995) state, “All three are offended by recent changes in public schools and would like to return to mythic ‘golden years,’ when schools were more to their liking. All believe that public education has recently ‘deteriorated’ ” (p. 138). This belief in the golden years of education coincides with the oppression of minorities, and the appearance of deterioration in the educational system coincides with the inclusion of minorities in the curriculum. Berliner and Biddle (1995) expound that the conservatives are intolerant of the inclusion of minorities. They believe that the inclusion of minorities is a detriment to the perpetuation of the common cultural heritage.

Different conservative groups do have some common beliefs on education, but there are some important differences. Conservatives do have diverse perspectives on education (Ramsey, 2009, p. 578). Neoliberals believe in individualism (Ramsey, 2009, p. 578). Therefore, neoliberals would have a strong belief in choice in education. Neoliberals juxtaposed with neoconservatives believe in individualism while neoconservatives believe in communal bonds (Ramsey, 2009, p. 579). These divergent beliefs effect which political groups are advocating for national standards.

The Liberals

The liberals consist of several groups. Some of the groups want the federal government involved in creating national standards. Some believe that the federal government will create equity and diversity. However, some groups do not want the federal government involved in creating national standards because they feel that the states are better able to include issues of equity and diversity in the standards. Advocates who opposed national standards believed that schools did not need an extensive fix (Evans, 2004, p. 169). Many liberals espouse the point of view that schools are not damaged, therefore they are against national standards.

Liberals are concerned that minorities are left out of standards. A postmodernist perspective is that there is no grand narrative, and thus the inclusion of minorities is essential to the explanation that culture is a contested area. Apple (1986) states, “The knowledge that is taught is always someone’s knowledge and debates over it sponsor certain groups’ visions of legitimate culture and disenfranchise others” (p. 130). History standards become contentious because liberals perceive that minorities are excluded from the standards. Buras and Apple (2008) state, “It is through history that we might re-educate desire, initiate the infinite process of rethinking schools and ignite a renewed confidence in the possibilities of imagination, an imagination that is marginalized by the neoconservative movement” (p. 299). The exclusion of minorities from the history standards marginalizes the valuable perspective that minorities have on history. According to Keller (1997), conservatives criticized the national history standards because it:

(1) presented a negative view of American history; (2) omitted references to important historical figures while including numerous references to lesser figures for purposes of
fostering a non-sexist/multicultural or politically correct agenda on the schools; (3) omitted references to important historical documents; (4) left out important events in order to present a socially and politically correct history; (5) neglected important economic contributions; and (6) fostered a liberal view of American history. (p. 310)

Liberals want standards that are inclusive of minorities and their narrative. Otherwise, liberals cannot achieve the equity in society that they desire.

**Historical Overview of the National History Standards**

Social studies has transformed over the years. The changes in the content of social studies have been shaped by the differing political ideologies of different political groups. Educational policy is inherently political (Apple, 1986, p. 130). In the 19th century, history dominated social studies in the United States (Evans, 2004, p. 18). However, soon different disciplines began advocating for a larger role in the curriculum. In addition, although there were still advocates for a history dominant paradigm, the era of the new social studies concentrated on inquiry and issues (Evans, 2004, p. 154). Historians opposed diminishing the role of history in the curriculum. Evans (2004) explains that historians in the mid-1970s were shocked that history was not being taught as much in schools. Historians began to advocate for an increased role for history in the curriculum. As Conservatives began to rise in politics in the mid-1970s, the progressive social studies education began to decline (Evans, 2004, p. 149). The rise of conservatives juxtaposed with the advocating of history by historians resulted in the examination of state history standards.

The creation of national standards became an educational policy objective. The national standards movement began during a time of conservative restoration (Evans, 2004, p. 162). At the same time that conservatives were on the rise politically, reports were released on the status of education. The conservatives received support from various reports on the declining status of education in the United States (Evans, 2004, p. 152). However, the definitive report on the declining status of education was *A Nation at Risk* published in 1983. The National Commission on Excellence in Education (1983) warned that there was a crisis in education, and student achievement in the United States was falling behind other countries. *A Nation at Risk* is a predecessor of the standards movement because it emphasized a coherent curriculum (Ravitch, 2010, p. 29). Therefore, *A Nation at Risk* shaped the standards movement significantly. Even professional organizations were caught up in the standards movement. The National Council for the Social Studies (NCSS) chose to create standards for social studies (Evans, 2004, p. 164). However, since the NCSS is a professional organization, no state was obligated to adopt the history standards.

The federal government stepped into the creation of standards, and unlike the professional organizations, the federal government could institute standards nationally that states would have to follow. However, the federal government was focused on creating voluntary national standards. America 2000 and Goals 2000 were federal government programs that pushed for national standards from the federal government (Evans, 2004, p. 163). America 2000 did not mention social studies; instead it mentioned history and geography (Evans, 2004, p. 163). Ravitch (2010) explains that the federal government gave states money to write standards through the Goals 2000 program, but the standards were vague. In the early 1990s, voluntary national standards were developed. Ravitch (2010) explains that grants were awarded, by the United States Department of Education, to develop voluntary national history standards. The history standards were divided into two categories: historical thinking skills and historical understandings, and the National Center for History at the University of California, Los Angeles...
created the standards (Evans, 2004, p. 167). However, *The National Standards for United States History* was soon steeped in controversy. Lynne V. Cheney, the former Director of the National Endowment for the Humanities, criticized the history standards before they were released, claiming they were politically biased (Ravitch, 2010, p. 17; Cheney, 1994, para. 14). According to Evans (2004), the standards were criticized for describing Europeans and Americans as oppressive. Historians also differed on what should be included in the national history standards. Some historians diverged with Cheney about the importance of different elements of the past and about historical research (Harlan, 1990, p. 805). Some historians believed that minorities should be included in the national history standards. However, the conservatives believed the national standards were politically biased in liberals’ favor, and they argued vehemently to discard them. The United States Senate rejected *The National Standards for United States History* 99 to 1 (Evans, 2004, p. 167). The rejection of *The National Standards for United States History* marked the last time the federal government was directly involved in the creation of national history standards. The controversy over the national history standards effectively ended the standards movement in 1995 (Ravitch, 2010, p. 20). However, the standards movement has changed from being led by the federal government to being led by the state governments.

**Common Core State Standards and the Federal Government**

The state governments have decided to work together toward adopting a common set of standards. The NGA Center and CCSSO have clearly stated that the CCSSI is a state-led effort (“Common Core State Standards Initiative,” n.d.). Our country is currently in a recession, and many local and state governments are reducing funding for education. Teachers are being laid off across the country. Since this initiative is being led by state leaders, without the inclusion of the federal government, then it has a better chance for being adopted by the states. However, despite the assurances of the NGA Center and CCSSO to the contrary, the federal government has not completely been cut out of the common standards adoption process. According to the United States Department of Education (2010):

> The Department plans to support state implementation efforts by providing federal funds for high quality assessments, professional development to help teachers enhance the knowledge and skills needed to help students master the standards, and research to support continual improvement of the standards and assessments over time (para. 4).

Since the federal government will provide federal funds to states that need money to implement the common standards, the federal funds become a lure to get states to adopt common standards. Additionally, the incentive federal money comes during a time when state and local governments are struggling financially because of the recession. It will be extremely difficult for states to give up access to additional federal funding for education during a recession. As a result, even though the NGA Center and CCSSO maintain that the Common Core State Standards are a state-led effort and that the federal government is not involved, it is clear that the federal government is involved in the political process to adopt the common state standards, which is effectively another name for national standards. In addition, the adoption of the Common Core State Standards by the states will mean that the United States may have national standards in history, as it has in mathematics and English.

Different political groups with different political ideologies have influenced both the federal government and the common core state standards. The process by which common standards were formed was approved by different groups, which included educators and “prominent education, business, and state leaders’ organizations” (“Common Core State Standards Initiative,” n.d.). These groups have differing political ideologies. In addition, the
federal government is influenced by these same political ideologies to support the CCSSI. This explains why the federal government would support the implementation of the standards by providing funding.

**Conclusion**

The federal government has tried to promote voluntary national standards. In particular, the battle over national history standards has been particularly contentious. One has to ask whose history is covered by national history standards. The focus on one common heritage, the foundation of which is Western civilization, inevitably leaves out the minority voices as well as the contributions of those who participated in the founding and transformation of the United States. Political groups will influence whose history is covered by national history standards. The differing ideologies of these political groups will shape the discourse of national history standards. Since the federal government has failed to get the states to adopt voluntary national history standards by having the federal government directly involved in formulating the standards, then the federal government has decided to use an indirect method to achieve national standards across the states. The federal government is using federal funding as an incentive, during a recession, to get states to adopt common standards developed by state leaders that would effectively achieve national standards for the country. Many political groups believe that national standards could be the key to raising student achievement. The use of federal funding as a tactic to achieve national standards is extremely influential. As a result, the federal government may be able to achieve national standards because of the current financial crisis over funding for education that the states currently face. If the federal government is going to be successful in getting national standards established in the United States, then the implications are whose history will be included in the national history standards as well as how competing views of history will be reconciled. The recent rise of the right, and its role in influencing public education, will shape any national standards into a common heritage based on Western civilization. However, there are many different groups within the United States, and the demographics of the United States is changing. The focus of a common heritage with the exclusion of minority groups will be detrimental to the United States.

National standards can be dangerous if conservative ideologies perpetuate the idea of Western civilization as the foundation of a common cultural heritage, without the inclusion of minorities. However, one should be suspicious of state-led efforts for common, or national, history standards, because the federal government will be involved in the process. The federal government can use federal funding as a tool to coerce states to adopt national standards. Therefore, the states should be free to create their own history standards without the lure of federal funding, which would allow their people to have more voice in the development of history standards and increase the likelihood that consensus can be reached.

**References**


Global Learning and the Human Capability Approach: Florida International University Case Study

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Abstract: This case study traced the process in which Florida International University engaged to determine what students want and need from their undergraduate education. Using grounded theory, the authors discovered that the process was reflective of the human capability approach in the development of its global learning student learning outcomes.

Florida International University (FIU) is a large, public, urban, research university in the globally connected, diverse city of Miami. The university represents a microcosm of the city, with 83% of student enrollment of over 42,000 from minority groups. FIU is the largest Hispanic serving institution in the United States, granting Bachelor degrees to almost 6,000 Hispanic students per year.

From 2006-2009, FIU engaged in an iterative dialogic process with constituents throughout the university that resulted in a five-year plan that is the university’s roadmap for enabling students to act as engaged global citizens. The embodiment of this plan is Global Learning for Global Citizenship (GL4GC; Florida International University, 2010). The purpose of GL4GC is to provide every FIU undergraduate with curricular and co-curricular opportunities to achieve the knowledge, skills, and attitudes of global citizenship through global learning. The goal of GL4GC is for students to acquire three global learning student learning outcomes (SLOs) through the active, team-based, interdisciplinary inquiry of real-world problems. These three global learning SLOs are: (a) global awareness, or knowledge of the interrelatedness of local, global, international, and intercultural issues, trends, and systems; (b) global perspective, or the ability to develop a multi-perspective analysis of local, global, international, and intercultural problems, and (c) global engagement, or the willingness to engage in local, global, international, and intercultural problem solving.

The purpose of this case study is to explore the nature of the process that led to the adoption of FIU’s global learning SLOs. The argument will proceed in the following manner. The researchers will first describe the human capabilities approach and its connection to education. They will then define the key concepts of global learning and global citizenship. Next, the process in which the FIU community engaged to determine the focus of GL4GC and the content of its global learning SLOs will be described. After that, the inclusion in the process of two key elements of the human capability approach – participatory dialogue and democratic deliberation - will be discussed. Finally the researchers will draw conclusions.

The Human Capabilities Approach and Education

The human capability approach was first developed by the Nobel prize-winning economist Amartya Sen (1987) as a broad paradigm for evaluating the effects of social policies related to human well-being. It provides the outline for the Human Development Index, a comparative measure of the standard of living, life expectancy, literacy, and education for countries throughout the world (Landorf, Doscher, & Rocco, 2008). The human capabilities approach lays out the basic components for analyzing and measuring well-being. The core components of the approach are freedom, functionings, capabilities, and agency. Freedom

relates to “the range of options a person has in deciding what kind of life to lead” (Drèze & Sen, 1995, p. 10); functionings are achievements, “whereas a capability is the ability to achieve” (Sen, 1987, p. 36). Agency is the power to bring change on a level that is of value to an individual (Landorf et al., 2008, p. 230). Sen and his followers consider education as the foundation for understanding and developing human capabilities and functionings.

**Global Learning and Global Citizenship**

Similar to the human capability approach (Sen, 1987), global learning requires education for its enactment and presupposes a broad perspective of human development. Global learning is the process by which students are prepared to fulfill their civic responsibilities in a diverse and interconnected world (Hovland, 2006). Global learning developed in response to the ways in which globalization has transformed everyday life. Many of these changes were driven by an unprecedented acceleration in the pace, volume, and scale of information sharing during the 20th century (Castells, 1999; Thompson, 2003). Thick information networks not only opened individuals’ eyes to diverse problems and perspectives, they also enabled a new understanding of the interconnectivity of individuals and societies (Drucker, 1999). Due to the proliferation of interconnected knowledge networks, a traditional liberal education, once deemed global because of the breadth of exposure students received in discrete disciplines, no longer suffices. In order to gain knowledge, skills, and attitudes appropriate for citizenship in an increasingly globalized world, students need an education that “prepares them to deal with complexity, diversity, and change” (American Association of Colleges and Universities, 2007). As an educational process, global learning provides the conditions for students to gain this preparation by explicitly focusing on interconnections between disciplines, perspectives, people, problems, trends, and systems.

In its inclusiveness of global, international, intercultural, and local issues, as well as its focus on diversity, interconnectedness, and problem solving, global learning aligns with FIU’s founding purposes - education of students, service to the community, and greater international understanding (Florida Administrative Code, Rule 6C8-1.001) – as well as its mission – a commitment to “high-quality teaching, state-of-the-art research and creative activity, and collaborative engagement with our local and global communities” (Florida International University, n/d).

Through the process of global learning, students may acquire global citizenship. Global citizenship is a distinctly different notion than that of national citizenship. Whereas national citizenship is defined as a set of rights and responsibilities granted by the nation-state, global citizenship is a disposition that guides individuals to take on responsibilities within interconnected local, global, intercultural, and international contexts (Steenburgen, 1994). National citizenship is granted by virtue of birth, heritage or naturalization, but according to Nussbaum (2004), global citizenship is an outlook developed through education:

> Cultivating our humanity in a complex interlocking world involves understanding the ways in which common needs and aims are differently realized in different circumstances. This requires a great deal of knowledge that American college students rarely got in previous eras…We must become more curious and more humble about our role in the world, and we will do this only if undergraduate education is reformed in this direction. (p. 45)

As a result of their global understanding, global citizens perceive themselves as shaping the conditions of the world rather than merely navigating them. National citizenship carries with it rights and responsibilities, but as global citizens, people are driven to define rights and take on
responsibilities as a result of their attitude of engagement. Understanding that they live in an increasingly interconnected world and that the well-being of others impacts their own well-being, global citizens accept shared responsibility for solving problems (Hanvey, 1982). What’s more, global citizens are willing to take action to solve these problems (Falk, 1994). In summary, global citizens view themselves as change agents. They base their actions on an in-depth understanding of interrelated world conditions and a multi-perspective analysis of problems. The GL4GC (2010) initiative defines global citizenship as “the willingness of individuals to apply their knowledge of interrelated issues, trends, and systems and multi-perspective analytical skills to local, international, and intercultural problem solving” (p.14).

Methods
This is a case study of FIU’s processes of developing and adopting its global learning SLOs. One of the researchers was an active participant in these processes, and the other was an observer. Using content analysis and grounded theory, the researchers refined the data to unveil the interrelationships (Creswell, 2003) of the processes FIU used in developing and refining its global learning SLOs. Then, with constant comparison of data as they emerged (Creswell, 2003), the researchers compared the global learning SLOs to Nussbaum’s (2006) core education capabilities.

Data sources in this case study included FIU documents used to develop GL4GC from 2006 to 2009. These documents included the following:

- Data and results from focus groups the FIU reaccreditation office conducted with undergraduate students in summer 2007 on what students hoped to gain from their FIU degree.
- Transcripts of focus groups the Office of Global Learning Initiatives (OGLI) staff conducted with faculty in fall 2008 on the meaning of and best approaches to implementing global learning across the undergraduate curriculum.
- Transcripts of focus groups the OGLI staff conducted with students in fall 2008 on the meaning of and best approaches to implementing global learning across the undergraduate curriculum.
- Strategic planning documents.
- Academic program self-study reports.
- Summaries of open forum discussions held at the two main FIU campuses in fall 2007 on proposals for plans to improve undergraduate student learning.
- Agendas, transcripts, and minutes of several GL4GC working committees meetings held between 2006 and 2009.
- Agendas, transcripts, and minutes of meetings held in 2008 and 2009 between OGLI staff and all colleges and schools on the development and design of GL4GC.

Data also included results of a branding research study conducted for FIU by the higher education marketing firm, Stamats. This study aimed at determining FIU’s image among a variety of stakeholder groups. Over 3,500 students, staff, faculty, alumni, prospective students, parents of prospective students, board members, and community leaders completed surveys for this study.

Results
Through analyses of the documents noted above, the researchers discovered that FIU employed two key elements of the human capability approach in the processes it employed while developing and refining its global learning SLOs. These key elements are participatory dialogue and democratic deliberation. Both of these elements play crucial, regenerative roles in the
human capability approach. According to Sen (1999), the determination of capabilities must always be contextual, fitting the needs of a particular community at a particular time, and arrived at through a constant iterative dialogic process with community stakeholders (Sen, 1999). Nussbaum (2003), who has developed an open-ended list of ten “basic human functional capabilities” that are “part of a minimum account of social justice” (p. 40), also insists on the primacy of active engaged dialogue in coming to a consensus on what it means to be human and to live well.

Dialogue is a “process that involves reflection, respect and a joining of efforts to understand and take joint action” (United Nations, 2007, p. 61). Participatory dialogue is an umbrella term that emphasizes the fact that individuals involved in dialogue “listen to each other, speak to each other, and in particular share the dialogue space with respect and consideration” (p. 65). The researchers found that participatory dialogue was most prevalent in meetings that the OGLI facilitated with academic departments, colleges, and schools to discuss the state of development of GL4GC. These meetings proceeded by an OGLI staff member first presenting the current stage of development of GL4GC in general, followed by open-ended discussion that included the relevance of the global learning SLOs to particular academic disciplines. In each discussion, when faculty members, staff, and/or administrators suggested changes to the global learning SLOs that were substantiated by reference to academic content, pedagogy, goal, or mission, the OGLI staff brought the suggested changes to light in subsequent GL4GC working group meetings.

While participatory dialogue guided the proceedings during academic meetings in the development and refinement of the global learning SLOs, democratic deliberation was the key communicative process in meetings with GL4GC working groups. Deliberation is “talk about shared problems and disagreement over what to do about them in the presence of different perspectives” (Parker, 2007, p. 26). The purpose of deliberation is deciding what to do. Forging a decision in a group in which all members have equal rights and are respected as equals, and generating and weighing alternatives together, is the essence of democratic deliberation (Parker, 2003). Each time that the GL4GC working groups received input from university stakeholders regarding the global learning SLOs, they met as a team to deliberate on whether and how to best incorporate the input into a working draft of the SLOs. Sometimes the input resulted in changes to an existing global learning SLO; sometimes a global learning SLO was added or eliminated. From January 2008, when the GL4GC Development Team drafted the first set of global learning SLOs, to June 2010, when FIU’s Faculty Senate approved the global learning SLOs that are now being implemented in all global learning designated courses throughout the undergraduate curriculum, groups of FIU stakeholders considered drafts of the global learning SLOs. Consideration included discussion on the relevance, theoretical validity, observability, measurability, and practicality of the SLOs. Those consulted included faculty and student focus groups, faculty assemblies of the 11 colleges and schools that enroll undergraduates, the Student Government Association, Student Affairs directors, members of the President’s Council and the FIU Foundation, the Board of Trustees, the GL4GC Development Team, and the GL4GC Design Team. Using participatory dialogue and democratic deliberation, the global learning SLOS were continuously refined and revised.

Discussion

For three years, FIU engaged in participatory dialogue and democratic deliberation about what students want and need from their education at FIU. The GL4GC student learning outcomes resulted from this process of engagement. There are striking parallels in the essential
processes of human capabilities approach and those used in the development and design of the FIU global learning for global citizenship initiative. The human capability approach depends on participatory dialogue and democratic deliberation to identify the doings and beings that are essential to human well-being. Evaluation is always contextual in the human capability approach. These same elements were found to be requisite in the process the FIU community used to arrive at its global learning SLOs. Participatory dialogue was a hallmark of the prolonged engagement of the university community in the development of many of the components of GL4GC. Democratic dialogue allowed for the evolution of what became quite robust global learning student learning outcomes. One could say that the very nature of GL4GC is parallel in key respects to the human capability approach.

Furthermore, the GL SLOs themselves – global awareness, global perspective, and global engagement – can be considered as functioning capabilities – personal and professional achievements (Flores-Crespo, 2004). FIU’s three global learning student learning outcomes are constitutive of Nussbaum’s (2006) core education capabilities – critical thinking, global citizenship, and imaginative understanding. Nussbaum (2006) defines critical thinking as “the capacity for critical examination of oneself and one’s traditions, for living what, following Socrates, we may call ‘the examined life’” (p. 388). For Nussbaum, and for FIU, critical thinking is crucial for global citizenship. As stated above, FIU defines global citizenship as an attitude that results from a combination of global awareness and a global perspective, or “the willingness of individuals to apply their knowledge of interrelated issues, trends, and systems and multi-perspective analytical skills to local, international, and intercultural problem solving” (Florida International University, 2010, p. 14). For Nussbaum (2006), also, young citizens can only become global citizens if “they learn how to examine themselves and think about the reasons why they are inclined to support one thing rather than another” (p. 388).

Nussbaum’s (2006) definition of global citizenship is an amalgamation of FIU’s global awareness and global perspective:

Citizens who cultivate their capacity for effective democratic citizenship need, further, an ability to see themselves as not simply citizens of some local region or group, but also, and above all, as human beings bound to all other human beings by ties of recognition and concern. They have to understand the differences that make understanding difficult between groups and nations and the shared human needs and interests that make understanding essential, if common problems are to be solved. (p. 389)

Her third education capability, narrative imagination, is the epitome of global perspective. As Nussbaum (2006) defines it, narrative imagination is “the ability to think what it might be like to be in the shoes of a person different from one, to be an intelligent reader of that person’s story, and to understand the emotions and wishes that someone so placed might have” (p. 390).

Because FIU’s global learning outcomes are constituted within Nussbaum’s core education capabilities, it is not at all surprising that FIU used key elements of the human capability approach to develop these outcomes. What remains to be seen is to what extent FIU can garner the will, the resources, and commitment to sustain Global Learning for Global Citizenship for the long-term.

Conclusions

From 2006 to 2009, FIU engaged in a broad-based process to develop and design the components of Global Learning for Global Citizenship (Florida International University, 2010). Part of this process resulted in the creation of three global learning student learning outcomes.
(GLSLOs): global awareness, global perspective, and global awareness. In this paper the authors argued that the processes FIU used to develop these global learning SLOs included two key elements of the human capabilities approach, participatory dialogue, and democratic deliberation, and that the global learning SLOs themselves are illustrative of functioning capabilities. The human capabilities approach is a promising conceptual framework for global learning in higher education.

References


Influencing Factors on Suicide in Correctional Settings

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Abstract: Suicide in correctional facilities is a major issue institutions have to face on a daily basis. Identifying potential risks and factors could help prevent suicide as well as aid in the foundation of more rehabilitative programs. This paper examines suicide and the main factors that influence this phenomenon.

Suicide remains a leading cause of death in the United States and one that is difficult to predict. A suicidal person can be defined as “one who is engaged in an expressive act designed to reduce psychological pain,” and usually this reduction of psychological pain implies a complete loss of consciousness (James, 2008, p. 180). Nearly one million people kill themselves worldwide each year (Nock & Banaji, 2007). These statistics are even more prevalent in correctional settings. Up to 75% of jail and 50% of prison deaths can be attributed to suicide, and these are 10-20 times more numerous than in the community (Stuart, 2003). Suicide has become the third leading cause of deaths in prisons, following natural deaths and AIDS (Metzner, 2002, as cited in Daniel & Fleming, 2006). Previous research has attempted to understand what factors are related to these occurrences. Stuart points out how there is a relationship between mental illness and inmate suicide, in which an increase of mental illness serves as a potential explanation for inmate suicide (2003). The author also explains how signs of suicide result in decreased coping skills and the inability for inmates to find better ways to use their time (Stuart, 2003). Factors such as mental illness, withdrawal from alcohol and drugs, and the traumatic effect that incarceration has on the individual have been also identified as potential risks for suicide (Goss, Peterson, Smith, Kalb, & Brodey, 2002), as well as inmate housing assignment and isolation (Daniel & Fleming, 2006). Educating offenders and corrections staff is imperative in order to decrease potential fatalities. If knowledge on these risk factors is imparted onto the staff, the warning signs of inmate suicide could be more readily identified, as well as prevented. Educational groups and training could aid the institution in discerning how to group their offenders based on their risk level. Overall, educating staff and offenders on the factors that lead to suicide would be beneficial for both the inmate and the institution, as some of these occurrences could be identified earlier on the sentence. Moreover, educating institutions on the severity of inmate suicide could further the development of rehabilitative programs. The relationship between incarceration and suicide is a strong one, and this paper further examines the major factors that may lead to it.

Method

A thorough search was conducted with the key words inmate, suicide, incarceration, and rehabilitation. The findings of this search revealed that research has been conducted on individual factors that affect inmates’ well being during incarceration; however, no current studies have gathered the most salient and prevalent issues while examining the relationship between each of them. The direction of this search then turned into the different psychosocial factors that are intertwined and result in mental illness as well as other psychopathological ailments. Most research that focused on rehabilitation programs and the increasing lack of funds that result in their termination mentioned how overcrowding, isolation, and offender victimization play a huge role in inmate adaptation and survival. In addition, trauma, substance

abuse, and physical/psychological abuse were prevalent in inmate rehabilitation. Traumatic life events, physical and psychological abuse, overcrowding, victimization, and isolation are further examined and explained in the following sections.

**Traumatic Life Events**

Kupers (1996) observed that many of the inmates in prisons had been victims of severe traumas as children and adults. She pointed out that these individuals “are more prone to stress response syndromes, decompensation, suicide, and other forms of psychiatric co morbidity while incarcerated” (Kupers, 1996, p. 189). Based on her experiences as an expert witness regarding conditions of incarceration and mental health quality for a period of 15 years, she conducted a thorough analysis of stress responses and confinement from her surveys. She identified staff brutality against inmates, lack of freedom, disconnections from others and the monotonous routine as major stressors. Kupers also pointed out that men who have been previously affected by trauma are more vulnerable to experience more traumas thus being likely to worsen their condition.

Other researchers support Kupers’ observations. Blaauw, Arensman, Kraaij, Winkel, and Bout (2002) conducted a study in order to determine the relationship between traumatic life events and the risk of suicide in inmates. Their sample consisted of two groups of inmates divided into low and high risk of suicide. The low risk sample had 216 inmates in it and the high-risk sample included 51 inmates. Inmates in the high-risk condition had, at some point, attempted suicide. On the other hand, inmates in the low risk condition had never attempted suicide. The mean age for these subjects was 33 years old for the first group, and 31 years old for the second. The length of imprisonment was not statistically different for either one of the groups (221 days and 171 days respectively). Suicidal ideation, suicidal intent, and traumatic life events were measured using the following scales: Scale for Suicidal Ideation (SSI), the Suicidal Intent Scale (SIS), and a modified version of the Stressful and Traumatic Events Questionnaire (STREQ). The inmates in the high-risk condition were interviewed by a trained clinical psychology student in a one-to-one situation, and given the abovementioned scales and questionnaires. The low risk condition group was interviewed in the same way and given the same measures (Blaauw et al., 2002, p. 12).

The researchers found that the subjects in the high-risk condition had reported more traumatic life events than those in the low risk condition. Their findings suggest that suicide risk is associated with traumatic life events such as sexual abuse, physical maltreatment, emotional maltreatment, abandonment, and suicide attempts by significant others. Moreover, a relationship between suicide risk and life events associated with parents, siblings, partners, and strangers was found. Blaauw et al. (2002) suggest that the time spent incarcerated should be used as an opportunity for interventions in which readjustment of inmates could be improved.

**Physical and Psychological Abuse**

Gover and MacKenzie (2003) studied the relationship between child maltreatment and adjustment to correctional facilities in juveniles. Their study was longitudinal and it was conducted between 1997 and 1998, with a sample of 509 juveniles from 48 correctional institutions. These institutions were either detention facilities or boot camps. The average age of the juveniles was 16 years old, and the average age of detention was 13 years old with an average of eight prior arrests. The average sentence length was 11 months. The method consisted of surveys conducted in classrooms-settings to groups of 15-20 juveniles. A video that explained the survey procedures was administered to the juveniles in order to standardize the
Psychological adjustment was measured by two scales, which gauged anxiety and depression. The anxiety scale was adapted from self-report measures, the State-Trait Anxiety Scale from the State-Trait Anxiety Inventory, and the Jesness Inventory. On the other hand, the depression scale was adapted from the Beck Depression Inventory and the Jesness Inventory. A nine-item scale adapted from the Conflict Tactics Scale, and the Revised Conflict Tactics Scale measured Child maltreatment. These items included neglect, witnessing interfamilial violence, physical abuse, and sexual abuse. Drug and alcohol use, peer criminality, and family criminality were measured with a 10-item dichotomous scale and four-item scales respectively. Continuous variables included number of prior arrests, number of prior commitments, age at first arrest, and current sentence length. Control variables included conditions of confinement (institutional control, activity, justice, and freedom), and the amount of time the juvenile had been institutionalized for (Gover & MacKenzie, 2003).

Gover and MacKenzie (2003) found that 75% of the sample reported physical abuse, 54% reported witnessing familial violence, 20% reported prior neglect, and 11% reported sexual abuse. Approximately 21% of the sample had family members involved in crime, and most of the sample reported high levels of peer criminality. Juveniles also reported to perceive institutional environments as restrictive and controlled (p. 385). Juveniles’ anxiety and depression scores showed that these levels slightly decreased over time. These findings suggest a relationship between the juveniles’ age, prior substance abuse, childhood maltreatment and their self-reported levels of anxiety. Juveniles who experienced more child maltreatment were significantly more anxious, as well as juveniles who reported higher substance abuse. These findings also suggest a strong relationship between juveniles’ age, prior substance abuse, childhood maltreatment, and depression. Juveniles who reported higher childhood maltreatment and higher substance abuse were significantly more depressed. Juveniles who perceived their environment as having higher levels of justice were less depressed, and juveniles who had been detained for longer periods of time were more depressed (Gover & MacKenzie, 2003). Gover and MacKenzie’s findings support the above-mentioned studies that point out a correlation between trauma, abuse, depression, anxiety, and potential suicide. The authors emphasize the need for therapeutic programs in correctional facilities that house juveniles with history of child maltreatment (p. 391).

**Overcrowding**

Alongside trauma and abuse, it is necessary to consider the effects of overcrowding in prisons and jails, deprivation of freedom, and isolation on suicide amongst inmates. Suicide can be impacted by isolation or stress periods, and relying excessively on inmate control techniques such as solitary confinement can increase its incidence (Tartaro, 2003). It is important to understand the concept of “deprivation theory,” which is defined as “a model of prisonization based on the belief that a prison subculture arises from inmates’ adaptations to severe physical and psychological losses imposed by incarceration” (Reid, 2006, p. 534). This model refers to an inmate’s lack of alternatives to alleviate his/her deprivations, and the inability to escape physically or psychologically the pains of imprisonment, and it suggests that the inmate’s social system will be functional through cooperation (Reid, 2006, p. 534).

Huey and McNulty (2005) conducted a study in order to determine the effect of deprivation theory and overcrowding theory on inmate suicide. Deprivation theory predicts that there will be more suicides in prisons in which inmates perceive loss of control over daily
routines or freedom, and where they are denied programming options. Overcrowding theory emphasizes how suicides result from the harmful effects that prison overcrowding has on the adaptation of inmates to the prison life.

The data was gathered from enumerations of the Census of State and Federal Adult Correctional Facilities from 1990 and 1995. The census provides information on prison conditions, inmate population size, design, capacity, security level, operational authority, rehabilitative programs offered and level of inmate participation in them. The sample consisted of 1,118 facilities. Security level and percentage of inmates participating in psychological/mental health counseling, self-help groups, educational and works skills training/release programs measured deprivation. Overcrowding was measured by total size of the inmate population, the difference between the total number of inmates and the design capacity of the prison, and the difference between the number of inmates and the number of correctional staff. The authors controlled for stability in the likelihood of suicide overtime and for facility age in years (Huey & McNulty, 2005, p. 497).

Huey and McNulty (2005) found that approximately 10% of US prisons showed evidence of at least one suicide in both 1990 and 1995, and about 15% of the prisons had psychiatric facilities and were more likely to house more inmates at high risk of suicide (p. 499). Suicide was most common in maximum-security (42%), followed by medium-security (19%) and minimum-security facilities (3%), which is consistent with deprivation theory. They also found that as overcrowding increased, the proportion of prisons experiencing suicide increased dramatically as well. Inmates who participated in rehabilitation, education, and work skills programs were less likely to commit suicide. Maximum-security prisons were most likely to experience a suicide. The authors determined that deprivation was consistently related to the likelihood of suicide given that suicide was less common in lower-security prisons. In addition, the authors suggest that overcrowding and deprivation theories be examined and studied together as variables affecting suicide in prisons, and be integrated as a unified theoretical framework (p. 507).

**Victimization**

Victimization between inmates may also be correlated to mental health and distress, as studied by Hochstetler, Murphy, and Simons (2004). Their main focus was the effect of victimization on post-traumatic stress and depression on inmates. In accordance with some of the aforementioned studies, these authors noted how male inmates who respondent to a survey were three times more likely to experience traumatic events when contrasted with those of non-institutionalized comparison groups. It is imperative to understand how inmates’ distress levels may be affected by victimization because they live with their offenders (Hochstetler et al., 2004, p. 440).

Their sample consisted of 208 male participants who were in a work release facility during the year 2001. All of the participants had been paroled within the last 6 months and were about to be released under community supervision. The average age was 32 years old. The participants were asked to complete a survey in a classroom setting of less than 20 males, and a proctor was available for those who needed help with the questions. The authors had three different hypotheses: (a) prison victimization is a significant predictor of depressive and PTS controlling for other variables, (b) previous trauma significantly affects distress measures, and (c) prison victimization links preexisting characteristics to post-prison distress. Depressive symptoms and post-traumatic stress symptoms were measured with a 12-item scale derived from the Symptoms Checklist 90-Revised and a derivation of the Post Traumatic Stress Diagnostic
Scale respectively. Prison victimization was gauged by a six-item measure and the exogenous trauma variable was measured by a series of questions based on the UM-CIDI. Support, exposure to violence, self-control and age were measured with item scales as well (Hochstetler et al., 2004, p. 443).

The researchers found that depression and PTS symptoms were correlated. Prison victimization, pre-prison trauma, exposure to violence, self-control and race were positively correlated to PTS symptoms as well as with depressive symptoms. The first hypothesis was confirmed as prison victimization contributes to depressive and PTS symptoms. The second hypothesis was confirmed as well as previous trauma is a significant predictor of distress, and the third hypothesis was disconfirmed, as exposure to violence was the only characteristic which had an indirect effect on victimization in either the depressive symptoms or PTS equations (Hochstetler et al., 2004, p. 450). The finding in this study suggests that experiencing stress at some point in the early life may increase the likelihood of experiencing its harmful effects later on. The study also emphasizes the importance of inmate placement in safe treatment facilities upon entry. The author also points out how inmates’ recovery from trauma during their time incarcerated as well as their time out of prison can be aided by rehabilitation (Hochstetler et al., 2004). It would be beneficial to consider the previous studies that note the relationship between distress, trauma, and potential suicide.

**Isolation**

In regards to isolation and solitary confinement, it is crucial to examine the effects these variables have on mental health issues. Haney (2003) discussed the psychological and social repercussions of solitary confinement on mental health. He paid particular attention to supermax prisons and their use of isolation. Supermax facilities and other isolation practices differ in their level and length of confinement, reasoning behind the isolation, and the means applied. In supermax facilities, the inmate is isolated from others and not allowed to participate in everyday programs or activities (Haney, 2003). The author summarizes inmates’ conditions as follows:

Prisoners in these units live almost entirely within the confines of a 60- to 80-square-foot cell, can exist for many years separated from the natural world around them and removed from the natural rhythms of social life, are denied access to vocational or educational training programs or other meaningful activities in which to engage, get out of their cells no more than a few hours a week, are under virtually constant surveillance and monitoring, are rarely if ever in the presence of another person without being heavily chained and restrained, have no opportunities for normal conversation or social interaction, and are denied the opportunity to ever touch another human being with affection or caring or to receive such affection or caring themselves. (p. 127)

Many negative reactions to solitary confinement are mentioned in Haney’s work, such as sleep disturbances, aggression, rage, hallucinations, emotional breakdowns, and suicidal ideation and behavior (p. 131). In addition to these negative reactions, Haney (2003) identifies five “social pathologies” that could lead to suicide: (a) the totality of control of the supermax facility forces the prisoners to depend on the institution to organize their existence, (b) prisoners may begin to lose the ability to initiate behavior of any kind because they have been stripped of any opportunities to do so for prolonged periods of time, (c) the presence of regular interpersonal contact or any meaningful social context creates a feeling of unreality that pervades the inmates’ existence, (d) the experience of total isolation can lead to social withdrawal, and (e) the deprivations, restrictions, loss of control, and lack of happiness may lead to frustration that could
turn to rage or incontrollable bursts of anger (p. 140). The author urges researchers not to ignore
this data and to take into consideration the psychological pain and mental health risks that
solitary confinement may impose on the inmate (Haney, 2003, p. 151).

Implications

It is important to recognize how all of these studies relate to one another and how their
findings support each other as well. Certain factors such as trauma, substance abuse,
deprivation, isolation, overcrowding, and victimization may have an effect on suicide in
correctional facilities. It has been mentioned that suicide is more prevalent in correctional
settings more so than in the community (Stuart, 2003, p. 559). Therefore, another important
aspect to consider is that many of these men could possibly be released back into society and, as
these data have shown, could experience symptoms of depression, post-traumatic stress, and
many other indicators of emotional problems that could be a disadvantage to them. Knowing
more about the factors that influence suicide in correctional institutions could guide and direct
mental health practitioners to create treatment plans that are more preventive in nature. In
addition, it could help correctional administrators become aware of the potential risks of inmate
placement thus helping their decision making process. By being able to prevent inmate suicide,
the criminal justice system would have the opportunity to rehabilitate offenders and allow them
to be reinserted into society. Also, this research can help educators identify potential risks in
juvenile offenders who may still be under-aged and attending school. Knowing how substance
abuse and any other kind of abuse plays a role in suicide not only aids its prevention in
correctional institutions, but also in a school setting. Further research could be beneficial and
influential on the instauration of more rehabilitative programs in order for offenders to be better
prepared to cope with incarceration and/or the prospect of freedom.

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Theoretical Foundations of a Study Examining Adolescent Literature and Rape Myth Acceptance

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Abstract: Adolescents are at the greatest risk for victimization and perpetration of sexual assault. This paper examines the current trends in literacy education which marginalize aesthetic reading experiences and using reader response theory, and argues that young adult literature may provide an opportunity to reduce rape myth acceptance in adolescents.

What makes reading a novel different from other types of adolescent reading experiences? The most accepted aspect of a novel that delineates it from other forms of fictional narrative is length: the novel is longer than other types of narrative such as short stories or novellas which may be read in a single sitting. Furthermore, the plots found in novels generally deal with multiple events, issues and ideas, and is generally too long to be focused on only one incident (Probst, 1988). Thus, a major distinction between the experience involved with a novel and other types of narrative is that reading a novel is a longer and more involved process. Because reading a novel may reduce the time that is available for standardized test practice, the amount of experiences many students have with novels in the classroom is diminishing.

Curricula in language arts and English classrooms have been directly influenced by the passage of No Child Left Behind, the signing on to Common Core Standards by many states, and by the implementation of the Race to the Top competition. These events have placed a premium on students’ ability to answer questions based on short reading passages as part of high stakes standardized tests. Novels do not generally appear on standardized tests and when excerpts do appear, the majority of questions related to the passages are concerned with reading comprehension and do not generally require the test taker to analyze, interpret, evaluate or make any personal connections to the text (Purves, 1990). Because the appearance of literature is rare or absent in standardized testing, there is a concomitant reduction in the appearance of novels in curricula.

The Problem with Educational Literacy

The culture of testing that has come to dominate the educational landscape has stoked the flames of a wildfire of scripted curricula programs designed to increase student performance on reading tests (Mathews, 2000). Rarely do these programs include novels as novels do not appear on the tests they are preparing students for, and the companies producing scripted curricula do not realize profit from the sales of novels (Atwell, 2010). The absence of novels as part of standardized exams and the exclusion of novels from prefabricated scripted curricula has marginalized and sometimes even eliminated the reading of novels as part of curriculum in many public schools.

The predominant literacy curricula most public school students find themselves in consists of interactions with textbooks, standardized reading materials and pre-packaged literacy programs. These types of literacy events are merely exercises rather than genuine opportunities for communication and promote an input/output ideology (Powell, 2009). Spears-Bunton and Powell (2009) describe this type of literacy instruction as “schooled literacy,” which encourages
students to conform to instructional materials and emphasizes accurate responses. Students are not unaware that the primary purpose of their literacy events is to evaluate them and often do not see the relevance of these experiences for their lives (Powell, 2009). Thus, many students robotically move through their education without seeing how it is connected to their own lives, perfunctorily trying to provide the right answers to questions they do not see as worthy of inquiry.

Research has shown that the curriculum students are exposed to at school have a long term effect on students’ ability and willingness to read and that the way reading is experienced does not foster a love of reading (Cullinan, 2000). In fact, Irving (1980) found that many students make no connection between reading and pleasure. By presenting reading as a punitive event, it is easy to understand why so many students come to the conclusion that reading is not enjoyable. Although the oppressive and disenfranchising effects of current literacy curricula are clear, we must look at the alternative: providing genuine literacy experiences in the curricula. One of the ways to achieve this is by the use of novels.

**Benefits of Novels**

Because of the length of novels, interactions with these texts are much longer and more intimate than the interactions most students encounter with excerpts in school. The use of novels as part of the curriculum encourages reading at home as students who commence reading a novel in school are more likely to engage in reading at home than students who do not read novels in school (Anderson, Fielding, & Wilson, 1988). Encouraging students to read at home is critical because reading for extended periods of time is related to growth in vocabulary, reading comprehension, verbal fluency, and general information (Anderson et al., 1988; Guthrie & Greaney, 1991; Taylor, Frye, & Maruyama, 1990). Furthermore, independent reading achievement correlates with academic success and increased independent reading (Anderson et al., Fielding, & Wilson, 1988; Guthrie & Greaney, 1991; Krashen, 1993). The incorporation of novels into the curriculum has far ranging measurable benefits for students as long as they are novels that students will be interested in reading outside of school.

**Reader Response**

Reader response theory (Rosenblatt, 1995) argues that the interpretation of texts will differ between readers based on their own experiences, world views, biases and even their purpose for reading the text. When reading a text, adolescents participate in a negotiation and collaboration with the author and use their prior knowledge to create meaning (Rosenblatt, 1978). During any transaction, a particular reader and a particular text engage in a dynamic situation where meaning is not fixed in the text, but is created by the interchange between the reader and the text (Rosenblatt, 1978). The transaction is moderated by the reader’s motivations to engage the text, which Rosenblatt labels *stance* (Rosenblatt, 1978). Stance may be either aesthetic or efferent.

Aesthetic reading is a predominantly literary reading event in which the reader’s main focus is on what happens during the actual reading and what is activated in a reader’s mind by the text is much more important than any specific information which remains after the event. Most of what people would call “reading for enjoyment” would be classified as aesthetic reading (Rosenblatt, 1978).

On the other hand, efferent reading is a predominantly nonliterary reading event in which the reader is focused on getting information from the text. Efferent readers often filter out all information except that which the reader has determined is necessary. Efferent reading requires
attention mostly to public aspects of meaning and often marginalizes, eliminates or precludes activation of personal ideas or feelings (Rosenblatt, 1978).

When students are aware they will be tested on factual aspects of a text that they are engaged in, an aesthetic reading is prevented and the efferent transaction which ensues will focus on retaining information long enough to provide correct answers to questions. The elimination of aesthetic reading from the experience of many public school students precludes them from attaining many of the benefits of independent reading, and Rosenblatt (1995) argues that the elicitation of aesthetic readings from students should be the goal of literacy curricula.

The majority of the benefits of reading novels and independent reading described by Cullinan (2000) are due to students engaging in aesthetic transactions with texts. When a student begins reading a novel at school and continues reading it at home, it is safe to conclude that the student is engaged in an aesthetic transaction with the text. These aesthetic transactions lead to increases in vocabulary, reading comprehension, verbal fluency, and overall academic success (Anderson et al., 1988; Cunningham & Stanovich, 1991; Greaney, 1980; Guthrie & Greaney, 1991; Krashen, 1993; Stanovich & Cunningham, 1993; Taylor, Frye, & Maruyama, 1990). In addition to the aforementioned academic benefits that aesthetic readings may be related to, there are other benefits for the student who engages in aesthetic readings.

Rosenblatt (1995) argues that literature provides an outlet for antisocial ideas, repressed urges and even anti-authoritarian desires to strike back at those who create social restrictions. Literature provides readers the opportunity to experience events that would normally be impossible or unwise to experience. The ability to sympathize or identify with the experience of characters in literature is the basis of the cathartic benefits of literature and in order to achieve this, a primarily aesthetic reading is required. Although catharsis in and of itself is a worthy benefit, there are numerous other benefits to aesthetic transactions that students can experience.

Besides providing cathartic release for negative emotions, literature may suggest to readers more socially approved channels for the expression of desires (Rosenblatt, 1995). This may be because literature allows readers to engage in a “process of imaginative trial and error” (Rosenblatt, 1995, p. 190). Because of their aesthetic engagement, readers can vicariously experience what characters go through in a text. This new understanding may give some perspective to the reader when it is related to problems similar to what the reader faces. For many adolescent readers, this may be a chance to realize that their situation may not be unique, and they may find solace in knowing they are not alone or that their cultures definitions of normality are too narrow. Rosenblatt (1995) argues that literary experiences may mitigate feelings of abnormality in adolescents who may not conform to the dominant cultural norms that he/she may be expected to embrace and may encourage adolescents to reexamine their perceptions of others.

Aesthetic transactions with literature can show students how their ideals may have been subconsciously internalized representations of the dominant cultural ideals that surround them (Rosenblatt, 1995). By showing students how their beliefs are influenced by their surroundings, literature may give students a choice in whether to continue embracing ideals that may be socially unacceptable. Rosenblatt (1995) argues that readers can come to understand themselves and the world around them better through examination of their emotional responses to literature. Aesthetic reading of literature may “either reinforce or weaken attitudes and images the young person may encounter through other social influences” (Rosenblatt, 1995, p. 211). Although parents and educational institutions are often thought to be the major transmitters of culture to adolescents, there is a myriad of propaganda, images and ideals that modern adolescents are
bombarded with which shapes their view of themselves and the world around them. Whether it is through television, print media, movies, music, music videos, commercials or the Internet, adolescents are indoctrinated with many myths, not all of which are beneficial for them to embrace.

**Rape Myths**

In a seminal study where the first rape myth inventory was created, the *Rape Myth Acceptance Scale*, Burt (1980) defines rape myths as “prejudicial, stereotyped, or false beliefs about rape, rape victims, and rapists” that create an environment hostile to rape victims (p. 217). In a subsequent study, Lonsway and Fitzgerald (1994) define rape myths as “attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male aggression against women” (p. 134). Rape myths (a) demean victims of rape, “only bad girls get raped”; (b) blame victims for their own assault, “if she didn’t want sex she shouldn’t have gone to his room”; (c) absolve perpetrators of guilt, “if a man is sexually excited he can get carried away”; and (d) question whether the victim truly did not want to engage in sex with the perpetrator, “any healthy woman can resist a rapist.” The acceptance of rape myths influences how a person defines rape and the definition of rape one subscribes to may be broad or narrow.

Rape myth acceptance in men has been hypothesized to be a predictor of proclivity to commit future sexual assault (Abrahms, Viki, Masser, & Bohner, 2003; Bohner, Jarvis, Eyssel, & Siebler, 2005; Malamuth & Check, 1985; Quackenbush, 1989). These studies are important because if rape myth acceptance can be reduced, there could be a reduction in perpetration of sexual assaults. For adolescents, this is of critical importance because teens are more likely than any other age group to be victims or perpetrators of sexual assault.

**Rape Statistics**

Rape is pandemic in America. The United States leads the world in number of rapes committed and leads all industrialized nations in rapes per capita ("Rapes by Country," 2010). Studies of college students show that between 24 and 50% of women will be or have been sexually victimized by the time they finish college (Koss, Dinero, Seibel, & Cox, 1988). Burt and Albin (1981) cite Los Angeles police reports that show less than 10% of rapes are reported; of those reported, fewer than 5% are prosecuted. The figures are unchanged for adolescent victims as 60% choose not to report or seek help for dating violence (Ashley & Foshee, 2005). These statistics could show that rape myth acceptance not only is a factor for males in influencing sexual assault but also for female and males who are victimized.

According to the U.S. Department of Justice (2009), the highest rate of sexual assault and rape victimization occurs to adolescents aged 12-15 years old. Also, 25% of women will experience a rape or an attempted rape before age 14 (Heppner, Humphrey & Hillebrand-Gunn, 1995; Koss, 1997). The greatest proportion of both victims and perpetrators of sexual assaults is accounted for by 14 year olds, who are more than 4 times as likely as an adult to be a victim or a perpetrator of sexual violence (Snyder & Sickmund, 1999; U.S. Department of Justice, 2004).

Although stranger rape may be the best known form of rape, adolescents are in greater danger of acquaintance rape, which is defined as nonconsensual sex between individuals who knew each other before the sex act. Date rape is a subset of acquaintance rape where nonconsensual sex occurs between two people who are in a romantic relationship. Of juvenile sexual assault victims, 93% knew their attacker, 34.2% of perpetrators were family members and 58.7% of perpetrators were acquaintances (U.S. Bureau of Justice Statistics, 2000). By the time a female is of college age, 25 to 50% will have experienced at least one act of sexual coercion (submitting to sexual advances against their will) in a dating relationship (Kanin, 1977; Korman
& Leslie, 1982; Koss, Gidycz, & Wisniewski, 1987). Clearly, adolescents are at high risk of suffering sexual assault at the hands of someone they know.

During the adolescent years, most teens begin to date, and for many adolescents, this is a time for sexual experimentation. By the 11th grade, the average teen has had six to eight dating partners, with 12 being the average age for adolescents to begin entering dating relationships (Slep, Cascardi, Avery-Leaf & O’Leary, 2001). The importance and prevalence of dating in secondary school aged adolescents should make school-based date rape prevention programs a priority in education. With adolescents and preteens representing such a disproportionately large percentage of rape victims and sexual assault perpetrators, various educational programs have been created with the intent of reducing the number of rapes and sexual assaults that occur (Post, Maxwell, Smith & Korzeniewski, 2006).

**Rape Myths and Rape Prevention**

Educators have created numerous programs that attempt to change the attitudes of both males and females toward acquaintance rape with the belief that reducing rape myth acceptance will reduce attempted rapes. There have been many studies on the effects of educational programs on changing attitudes toward dating violence in college students (Heppner et al., 1995; Johansson-Love & Geer, 2003; Hanson, & Gidycz, 1993; Foubert & Perry, 2007). Some researchers believe that educational programs dealing with sexual violence should be conducted before children develop their dating behaviors and preferences (Mandelblatt, 1999; Ackard & Neumark-Sztainer, 2001). Because adolescents of secondary school age are at the highest risk for victimization and perpetration of sexual assaults, secondary schools are a logical place for date rape prevention education. Furthermore, because the majority of secondary school students do not progress on to college, secondary school based date rape education is more appropriate since it would reach a greater portion of the population at risk. Finally, because 14-year olds may be the highest at risk age for both perpetration and victimization of sexual assaults, middle school would be the ideal setting for date rape prevention education.

**Date Rape Education**

Educators have created numerous programs that attempt to change the attitudes of both males and females toward acquaintance rape. The majority of programs have been instituted on college campuses. The majority of studies have focused on the effects of didactic based programs on college students’ rape myth acceptance (Feltey, Ainslie, & Geib, 1991; Foubert & Perry, 2007; Hanson & Gidycz, 1993; Heppner et al., 1995; Johansson-Love & Geer, 2003). Fewer studies focus on secondary school students (Ting, 2009). Those that do are similar in didactic elements to the programs used in colleges (Hickman, Jaycox & Aronoff, 2004; Jaffe, Suderman, Reitzel & Kellip, 1992). The majority of both college and secondary school interventions seem to rely on didactic methods to change participants’ acceptance of rape myths in order to reduce future sexual assaults. Interventions have shown various levels of effectiveness in reducing rape myth acceptance and even in reducing future sexual assaults.

Unfortunately, an unintended consequence of some programs has been a backlash in male participants where rape myth acceptance actually increased for some post intervention (Jaffe et al., 1992). This backlash could be caused by a variety of factors, but the didactic nature of most treatment plans and the short term duration of many interventions may not provide the opportunity for all participants to develop empathy for victims of sexual assault. A prolonged aesthetic transaction with adolescent literature may provide the solution to this problem. **Speak**
Speak, by Laurie Halse Anderson, is a young adult novel that deals with the aftermath of a date rape. The main character, Melinda Sordino, is raped by a male high school student whom she meets at a party during the summer before her freshman year of high school. She is under the influence of alcohol at the party and during the rape. Although she consents to kissing her assailant while taking a walk in the woods, she does not agree to engage in intercourse. She does not report the rape to authorities nor to anyone else, and throughout the novel questions whether or not her experience was a rape. The novel chronicles her efforts to remain in denial about the rape. The novel was a New York Times bestseller and a Printz Honor book in 1999. Because of the popularity with both teachers and students in dealing with the subject of date rape, Speak would be an excellent choice to use with adolescents to determine whether reading literature can aid in reducing rape myth acceptance.

**Statement of the Problem**

Considering the lack of research into the relationship between reader response based classroom instruction of fictional literature and adolescents’ rape myth acceptance, this paper argues the necessity for research which will seek to examine the relationship between reading a novel, Speak, and adolescents’ acceptance of rape myths.

**Research Question**

Do students who read the novel Speak have lower levels of rape myth acceptance than those who do not?

**Purpose of the Study**

The purpose of this study is to investigate whether the use of young adult novels, specifically Speak, has a relationship with adolescents’ rape myth acceptance. This study will attempt to determine the benefits from reading novels that can be measured outside of the realm of standardized reading proficiency exams. It is hoped that this study will support the argument that novels should be maintained as part of the curriculum in language arts and English classes.

**References**


Conflict and Consonance: Implementing an Evidence-Based Middle School Science Curriculum

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Abstract: This study is to investigate the middle school teachers’ concerns and perspectives during the implementation of an evidence-based curriculum that supports the development of both content knowledge and scientific practices. Two themes emerge from data analysis: consonance and conflict.

Deficiencies in middle school science curriculum have implications for America’s global economic positioning and advancement in science and technology. These inadequacies stunt the overall development of scientific literacy in students and deprive them of the necessary skills, attitudes, and values required to confront socioscientific and political issues. In order to improve middle school science instruction and learning and to attract more students into Science Technology Engineering and Mathematics (STEM) fields, teachers’ science content knowledge and their support of reform-oriented pedagogy must be enhanced (Bell & Gilbert, 1996; Koch & Appleton, 2007). Furthermore, middle school teachers should possess a coherent understanding of both scientific practices and the instructional skills needed to foster students’ critical thinking and problem solving skills (Loucks-Horsley, Hewson, Love, & Stiles, 1998). While attempts to develop, implement, and sustain coherent, reform-oriented science curriculum are undermined by teacher turnover and lack of preparedness to teach in assigned subject areas (Lankford, Loeb, & Wyckoff, 2002; National Center for Education Statistics [NCES], 1999), the need still exists for the enactment of curricula that support the development of both content knowledge and scientific practices. We define curriculum as practice in which the teacher involved in the curricular process (Grundy, 1989; Habermas, 1972) interprets the printed component as a practical action that engages learners in a process of making meaning. In our study, we investigated three middle school teachers’ enactment of a science curriculum designed to facilitate the development of both content knowledge and scientific practices contextualized in real life situations. Defining scientific practices as “specifying ways in which students should be able to use knowledge meaningfully rather than what they should know” (Shwartz, Weizman, Fortus, Krajcik, & Reiser, 2008, p. 201), the curriculum is developed around the notion that learning scientific practices is essential if students are to understand science as a way of knowing and not just a body of facts. Specifically, our research seeks to understand the concerns and perspectives of the teachers during the implementation of such a curriculum.

Reform Curriculum and Scientific Literacy

While the roles of teachers are important in contemporary curricular processes, the development of new instructional materials to promote students’ deep understanding of scientific concepts is key to reform efforts in science education. These educative materials must be designed to reflect standards-driven science-learning goals and innovative pedagogical approaches (Krajcik, McNeill, & Reiser, 2007) that will transform the way science is taught in schools. Several policy papers have proposed the development of reform curriculum that supports scientific literacy (American Association for the Advancement of Science [AAAS], 1993; National Research Council [NRC], 1996) by encouraging students to confront scientific issues or problems, express their ideas, and make relevant contextual connections as a means of
enriching their understanding of science concepts (Krajcik & Sutherland, 2010). Scientific literacy is defined by the National Science Education Standards (1986) as the understanding of science content and practices and the ability to use such knowledge to participate in decision-making that is personal or affects others in a global community. This definition suggests that students should be required to develop skills in critical thinking and inquiry, both of which emphasize the basic literacy skills of reading, writing, and oral discourse (Krajcik & Sutherland, 2010). An ideal reform curriculum, therefore, should be project-based (Sutherland, 2008) in its exploration of scientific phenomena that encourages further investigation and analysis; inquiry-based (Schneider, Krajcik & Blumenfeld, 2005), requiring students to solve real-world problems by asking and refining questions; and evidence-based (Krajcik & Sutherland, 2010) by focusing on students’ ability to critically assess claims based on the quality of evidence presented.

Investigating and Questioning our World through Science and Technology (IQWST) is a middle school science curriculum project that features scientific practices aimed at developing students’ literacy in science and reflects recommendations made by AAAS (1993) and NRC (1996). As such, the IQWST curriculum focuses on scientific practices that include the design of scientific investigations, the collection and analysis of data and the construction of evidence-based explanations of scientific phenomena (Krajcik, Reiser, Sutherland, & Fortus, n.d). One of the features of IQWST that promotes scientific literacy, and by extension, inquiry is the connection made between new ideas to prior knowledge and experiences. The elicitation of prior knowledge is particularly important when concepts are abstract and remote from the reality of students’ daily experiences (Krajcik & Sutherland, 2010). Prior knowledge may be generated from real-world or classroom experiences and forms the building blocks for the construction of new knowledge through the collaborative expansion or modification of existing ideas. The embedded narrative text and real-world text from magazines and newspapers that complement the expository text in the lessons is one of the ways in which the (IQWST) curriculum connects students’ experiences and scientific content. These reading materials promote active interaction with science concepts (Sutherland, 2008) and engage students in discussions about their diverse everyday activities while extending their understanding of activities carried out during the lesson (Krajcik et al., n.d). The opportunity for students to investigate scientific ideas with relevant context enhances meaningful and authentic learning and also aligns with recommendations for curriculum reform (Swartz et al., 2008).

A second important feature of the IQWST curriculum and its connection to scientific literacy is the exploration of scientific phenomena through inquiry and discourse. Inquiry-based curriculum not only introduces students to scientific practices that reflect the norms of real scientists as they investigate, analyze, evaluate, and rationalize scientific ideas (NRC, 1996) but also integrates literacy practices such as reading and writing (Krajcik & Sutherland, 2010). IQWST units are centered on a powerful, divergent question that connects the learning process with the natural interests and curiosities of the students. This question, also called the Driving Question (DQ), forms the foundation for the generation of various sub-questions that are collected, sorted, and posted on a Driving Question Board (DQB) typically placed on the classroom wall as a visual organizer of the ideas associated with the unit (Krajcik et al., nd; Krajcik et al., 2007; Shwartz et al., 2008). As questions are raised, they can be added to the board, which may serve the dual purpose of sustaining inquiry and mapping student learning throughout specific units (Krajcik et al., nd). In addition to driving the investigation of science content and engaging students in inquiry processes characteristic of real scientific practices, the
questioning component of the IQWST curriculum also establishes goals for the reading and guides comprehension of the accompanying text (Krajcik & Sutherland, 2010).

The third feature of the IQWST curriculum that promotes scientific literacy is the use of models to facilitate students’ explanation and prediction of scientific phenomena (Krajcik et al., nd). Students are able to create conceptual models or mental representations of a given process or concept, construct physical models to further explain or predict phenomena, and evaluate their models to ensure alignment with knowledge constructed during classroom discussions. By sharing their revised models, students clarify and advance their scientific knowledge through evidence-based argumentation, which is a fundamental component of scientific discourse. The ability to decipher models and other illustrative artifacts is an important aspect of scientific literacy that facilitates students’ comprehension of abstract and complex ideas (Krajcik & Sutherland, 2010).

Embedded in the IQWST curriculum is another literacy practice that engages students in the construction of explanations and arguments (Krajcik & Sutherland, 2010). In order to engage in this practice, students have to articulate and defend their understanding of scientific phenomena to their teacher and peers using the language of science. The IQWST curriculum is, therefore, designed to support students’ attempts to create and defend scientific explanations by dividing them into three components: claim, evidence, and reasoning (Krajcik et al., nd). Using strategies such as data gathering, scaffolding exercises, contextual activities, and written explanations, the curriculum seamlessly integrates instructional practices that support students as they learn how to use evidence for explanation and argumentation. Research indicates that students who routinely engage in argumentation enhance their understanding of the nature of science (Krajcik et al., n.d.; Sadler, 2006) and are more likely to read and write scientific ideas both as students and as citizens in a global society (Krajcik & Sutherland, 2010).

The IQWST curriculum supports the enactment of instructional practices through scaffolding to help teachers facilitate scientific inquiry and discourse, research-based comprehension strategies to promote literacy practices, and background information to support teacher understanding of science content. Despite the support available to teachers in IQWST, many teachers find the curriculum difficult to learn and enact (Schneider et al., 2005). Various studies carried out by the developers of the IQWST curriculum focus on documenting episodes of enactment with a view to improving the efficacy of educative materials. There is very little research that qualitatively describes the concerns, real or imagined, faced by teachers as they attempt to enact the IQWST curriculum. This study, therefore, investigates the following question: What concerns do teachers express during the enactment of an evidence-based curriculum that focuses on the development of scientific practices?

**Methods and Context**

**Curriculum Overview**

IQWST is a standards-based curriculum that promotes deep, coherent understanding of fundamental scientific concepts and practices by sequencing instruction across units both within individual grade levels and across the 6th-, 7th-, and 8th-grades. There are four units per grade—one each for biology, physics, chemistry, and earth system sciences—each of which focuses on selected learning goals and scientific practices. A meaningful, open-ended DQ that supports the students’ connection with prior knowledge and experiences drives each IQWST unit, which is further divided into learning sets composed of lessons. Reading assignments provide opportunities for students to improve their literacy skills while helping them to make sense of science in their daily experiences and in their extended environment. Curricula also includes
materials designed to engage students in scientific practices such as gathering, organizing, and analyzing data; modeling phenomena; constructing evidence-based explanations; and conducting investigations. For teachers, IQWST provides educative materials both to support their enactment of inquiry in the classroom and to guide formative assessment that would facilitate possible adjustment to instructional strategies. Lesson plans are comprehensive and coherent, offering pedagogical models that support deep understanding of scientific ideas and practices.

**School Settings and Participants**

The setting for this study was a developmental research school affiliated with a large university in southeastern United States. The school serves approximately 1,150 students in kindergarten through twelfth grade and, as a center of innovation for student learning, focuses on, among other things, the improvement of science instruction through state of the art educational technology. The three middle school teachers who participated in the study were Taylor, the 8th-grade teacher who has approximately four years of science teaching experience; Becky, the 7th-grade teacher who is in her first year of teaching; and Maggie, the 6th-grade teacher with four years of teaching experience (Pseudonyms are used). All teachers were certified to teach science by the state and had credentials ranging from masters to doctorate degrees in science-related areas.

**Data Collection and Analysis**

This qualitative research was shaped by constructivism. As an epistemology, constructivism purports that knowledge is formed through individuals’ interaction with their environment (Crotty, 1998). Utilizing the constructivist paradigm in this research allows us to focus on the teachers’ perspectives and their concerns during the process of curricular enactment. As such, our primary source of data was classroom observations of curriculum enactment over a period of five months. All three teachers’ science lessons were observed at least twice per week during the period of data collection. Additional qualitative information was collected from semi-structured interviews, informal conferences before and after the observed lesson, curriculum support meetings, and other informal conversations related to classroom observations. The interviews were transcribed and, along with the notes from other data sources, were read repeatedly, coded, and compared. The resulting emergent themes are indicated in Table 1.

**Findings and Discussion**

Two distinct themes emerged from the data analysis: consonance, or consensus, among the teachers’ perspectives of the efficacy of the IQWST curriculum in promoting scientific literacy; and conflicts that emerged during teachers’ enactment of the curriculum.

**Consonance**

There was a general consensus that the IQWST curriculum allowed for implementation of new instructional approaches, provided narrative texts that enhanced opportunities for students’ literacy development, supported the use of questioning as an instructional strategy, and facilitated the enculturation of teachers into the norms of scientific inquiry.

**New instructional approaches.** Participants agreed that the curriculum provided a rich source of instructional approaches for motivating and promoting deeper understanding among their students. For instance, the 6th-grade physics unit, “Seeing The Light: Can I Believe My Eyes,” included activities that explored the laws of reflection; provided evidence that light is scattered when it bounces off paper but reflected when it bounces off shiny surfaces; and investigated how shadows are formed. Maggie indicated that she would not have conceptualized these strategies without the educative materials provided by the curriculum, neither would she have been able to effectively respond to students’ common conceptions and misconceptions.
regarding this topic. She also admitted that students have shown increased motivation as they engage in the various activities that address the driving question for the unit. Additionally, the strategies included in IQWST allowed teachers to anticipate various problems or challenges that often emerge as students investigate scientific phenomena. This allowed them to plan ahead as well as to provide explanations for inconsistencies related to the data collection and organization. In the 7th-grade physics unit, “Why do some things stop and others keep going?,” students explored pendulum movement focusing on the weight of the bob and the length of the string. During the discussion, however, Becky anticipated the students’ insistence on perpetual motion as an explanation for the behavior of the pendulum activities. Data collected from previous activities provided evidence to challenge their notion of perpetual motion and provided the scaffolding needed to refine their models. Curricula offered suggestions that allowed her to use evidence-based strategies in order to address the misconception of bodies in perpetual motion.

**Narrative text.** The narrative that accompanies each lesson provides students with the opportunity to make connections with their daily experiences as well as to integrate literacy processes as they interact with science ideas. A story called “The Midnight Crime” was used to introduce a 6th-grade lesson that explored the scattering and reflection of light. The lesson connected to students’ experiences by addressing common conceptions of how individuals see shadows and their shapes and positions during the night. This story became the basis for further exploration through scientific investigations that identified claims, evidence, and reasoning. Maggie also explained that students often connected “The Midnight Crime” story to ideas discussed in subsequent lessons after the reading was completed. Three weeks after this reading, one student in her class made reference to the story in his explanation of the size of shadows and the relationship between light source, objects, and the surface on which shadows appear.

**Questioning.** The IQWST curriculum is inquiry-based and as such requires the teacher to engage the students in asking and answering questions that allow them to see the relevance of specific scientific phenomena to their lives. The curriculum provides teachers with prompts that direct classroom discourse by encouraging students to reflect on ideas developed during the lesson. The general consensus among the teacher participants was that the DQB is an innovative idea, which encourages students to ask questions that arise from their own interests or misunderstandings even if they do not immediately relate to on-going class discussions. Additionally, they agree that this level of student questioning is not typical of traditional science curricula. In conversations with Becky, she constantly muses over the “ease at which the suggested questions and prompts lead to the development of the content.” All the teachers confirmed this idea but they also recognized the benefits to students who generated their own questions in response to those being asked by the teacher. Our observations revealed several instances where students took the initiative to write their questions on sticky notes and post them to the DQB. Questioning as an important facet in the process of inquiry-based science along with the integration of literacy practices, therefore, became integral components of the daily science enactment in the middle school classrooms.

**Enculturation.** The scientific practices required for daily enactment of the IQWST curriculum allowed teachers to become enculturated into the norms of scientific inquiry. For instance, teachers using the educative materials associated with IQWST acquired an understanding of questioning strategies, scientific discourse, and integration of literacy practices in a typical science classroom. One of our teacher participants, Maggie, become very comfortable with this material, and was able to use a certain level of flexibility during enactment that allowed her to contextualize each lesson to make it relevant to state benchmarks and for her
diverse classroom. The curriculum, therefore, may be used as a cognitive tool that contributes to lifelong learning as the teachers make adaptations of the various teaching materials.

Conflicts

Despite positive feedback provided by the teacher participants, they struggled with the following issues, some of which are typically associated with the enactment of new curriculum.

Resistance. In the enactment of curriculum, science teachers are responsible for interpreting the curricular text with the focus on students’ learning. As the teachers in this study moved from using the traditional text as a curriculum to educative materials that provide a guide, they expressed a loss of control of the pace and development of their lessons and questioned the extent to which the state’s benchmarks for science were being addressed. The IQWST curriculum, as discussed prior, incorporates a logical development and iterative progression of content that is not typical of many science textbooks. As a result, pacing became an issue for the teacher participants, who previously employed other strategies to reinforce concepts. Becky and Maggie both expressed levels of discomfort with the learning progression and felt constrained by the ostensibly slow process of allowing the consensus building required by the curriculum. Additionally, they agreed that their tendencies were to move on with the development of the lesson when they “sensed” that students had grasped the concept. “I feel the students get it and we can move on,” Becky stated while, according to Maggie, “I sometimes feel that the curriculum holds back the students who are advanced.” Taylor noted that because her students would have to face the state’s assessment at the end of her year, her focus was to “cover” the benchmarks. She explained, “In the past, I get through the chapters in class and allow the students to continue learning as they read the text.”

Teachers questioned the extent to which this curriculum was designed for their students who were accustomed to learning the science in traditional ways. The approach suggested in the curriculum requires dynamic interactions with the students’ text and provides the opportunity for developing the science principles of the phenomenon under investigation focusing on claims, evidence, and valid reasoning. The interactive nature of the text requires students to document their observations, respond to pertinent questions and, at times, engage in argumentation. This organization, according to Becky, will lead to blank spaces in the students’ texts and disenfranchisement of learners because of the reliance on consistency of student attendance. She lamented the lack of an accompanying traditional text to provide easy access to the information.

Time management. The activities presented in the curriculum suggest possible time durations while encouraging adaptations in accordance with existing teaching periods. The teachers ignore the suggestions and constantly identify time and timing as areas of conflict. “Not enough time for the activities,” “the number of different activities require too much time,” and “the reading in class takes time away from instruction,” were typical responses to the issue of time requirements. A school wide policy requires routine assignment of warm-up tasks to get students settled before the formal teaching. Our observations revealed that teachers spend an excessive amount of time engaging in teacher talk about absences, tardiness with assigned work, reviewing of homework assignments and other management issues. When asked about the time taken for these non-science teaching issues, their responses highlighted the importance of these tasks in the holistic functioning of schools. This challenge, according to Taylor is not easily seen unless one is immersed in the full culture of contemporary schooling and understands the managerial requirements of subject area teachers. Another area of time constraint was observed in the assignment of complementary narrative reading as an in-class activity. When challenged and encouraged to investigate whether more of the reading could be done as homework
assignments, both Taylor and Becky agreed that it was important to have them read in class so they can be monitored as part of the school’s reading initiative. Furthermore, according to Becky, “because this is their only formal resource, I have to ensure that they get it from the text.”

**Assessment.** During the grading period, teachers were typically concerned about the nature and focus of their summative assessment instruments. These concerns were in response to the IQWST curriculum that require students to construct and refine models of their understanding through ongoing data collection and arriving at consensus over time rather than simply accumulating facts. The teachers, therefore, experienced a disconnect between assessment tasks that require recall of snippets of information versus that which measures students’ ability to engage in scientific practices that focus on claims, evidence, and reasoning.

**Efficacy.** The effective enactment of the IQWST curriculum is hampered by teacher competence and knowledge of science content. Data revealed that the materials within the instructor’s guide were not used in conjunction with other forms of cognitive support and, as a result, teachers were unable to accurately address various questions and alternative conceptions generated by students. For instance, in Maggie’s class, the term *scattering* was sometimes used interchangeably with *reflecting* although both terms refer to two distinct reactions of light rays as they bounce off different objects. There was also a general tendency not to comment on the accuracy of students’ conceptions, and teachers sometimes deferred students’ questions to the DQB “in the interest of time.” Furthermore, the lack of integrated subject matter knowledge limited teachers’ ability to provide quality feedback to questions or comments that connected the content with their experiences outside of the classroom. In other words, they were unable to expand on ideas or questions related to the content arising from students’ curiosity that also have relevance to the content under development. Teachers were also unable to effectively guide discussions when students tried to generate explanations for observed phenomena. As a result, teachers provided explanations for certain claims rather than having students *figure it out* for themselves. Also, classroom discussions were sometimes observed to involve the teacher and the extroverted students rather than engaging students in discussions among themselves.

**Conclusion and Implications**

One of the hallmarks of the IQWST curriculum is the inclusion of a coherent instructional sequence aimed at developing deeper levels of student understanding and engagement of scientific practices. Our investigation of the concerns and perspectives of the science teachers as they enacted the curriculum revealed consonance regarding their evaluation of the curriculum as a useful tool in the development of scientific literacy as well as conflicts that emerged during the implementation of the curriculum. These findings have implications for classroom research and practice. During the process of curriculum enactment, teachers should be engaged in intentional study of their own professional practice through practitioner research. Such efforts would allow them to advance their own practice and contribute to the existing knowledge base on curriculum. In addition, our findings also inform curriculum designers of the importance of teachers’ involvement in the curriculum design process and how curriculum materials are presented to teachers during pre-implementation training sessions. Curriculum should not be a static document, but rather one that is continuously being shaped and reshaped by the input of the teachers who enact it. Cases of resistance from teachers who may feel a loss of autonomy or professional creativity with the use of a scripted curriculum complemented by substantive educative materials may likely be reduced when the teachers have positioned themselves as members of the curriculum process.
References
Table 1

*Summary of Issues Associated with Implementing an Evidence-based Middle School Science Curriculum*

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<thead>
<tr>
<th>Themes</th>
<th>Codes</th>
<th>Descriptors</th>
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<td>Consonance</td>
<td>New Instructional Approaches</td>
<td>Rich source of instructional approaches</td>
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<td></td>
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<td>Anticipation of students’ misconceptions</td>
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<td></td>
<td>Narrative Text</td>
<td>Students are able to make connections with daily experiences</td>
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<td></td>
<td>Questioning</td>
<td>Encourage students to ask questions relevant to their lives</td>
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<td>Provide teachers with prompts that direct classroom discourse</td>
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<td></td>
<td>Enculturation</td>
<td>Enculturate teachers into norms of scientific inquiry</td>
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<tr>
<td>Conflicts</td>
<td>Resistance</td>
<td>Loss of autonomy with respect to development of the lesson</td>
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<td></td>
<td>Time Management</td>
<td>Extended warm-up exercises</td>
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<td></td>
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<td>Other housekeeping activities, such as organizing notebooks</td>
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<td>Assessment</td>
<td>Disconnect between summative assessments that require recall of scientific facts versus their level of engagement in scientific practices.</td>
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<td></td>
<td>Efficacy</td>
<td>Lack of science content knowledge affected the quality of the scientific discourse</td>
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Improving Student Mathematics Achievement through Self Regulation and Goal Setting

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Abstract: As middle school students’ mathematic scores decline in comparison to other countries, researchers have found self-regulation to be a tool to improve students’ mathematics achievement. The following is an action research project conducted in a middle school where result showed an increase in students’ mathematics achievement.

Middle school students’ mathematics achievement is of great concern to policy makers and educators. Compared to other countries, the United States trails behind in middle school students’ mathematics achievement. Many factors contribute to this difference such as parental involvement, students’ self-efficacy, teaching structure, and students’ self-regulated learning (Slavin, Lake, & Groff, 2009). As middle school students’ mathematic scores decline in comparison to other countries, researchers have found self-regulation to be a possible remedy for improving students’ mathematics achievement.

The purpose of action research is to increase student achievement, as defined by results in teacher-generated tests in mathematics, and to help students become managers of their own learning. In accordance with research findings, it is the hypothesis of this action research project that the implementation of self-regulation and goal setting will enhance student mathematics achievement, as measured by teacher generated exams. This study was guided by the following question: Can the implementation of self-regulation through goal setting improve student mathematics achievement?

Theoretical Foundation

Social Cognitive theory views students’ behavior and learning as a continuous interaction (reciprocal causation) between personal, behavioral, and environmental factors (Bandura, 1989). Personal factors that can influence students’ learning are their self-efficacy, emotions, knowledge, and goals. Behavioral factors are the actions that students take or fail to take. Environmental factors are the students’ physical environment (Zimmerman, 1989).

According to Bandura (1989), self-regulation provides students a foundation for purposeful action by allowing them to have control over their thoughts, feelings, and factors that affect their learning. In addition, self-regulation provides students with a system that can help them control external factors that influence them (Bandura, 1989). Self-regulation, from a social cognitive perspective, is an internal process that influences what actions (behavior) will be taken (Zimmerman, 1989). As students learn to self regulate, they begin not only how to control the way they think but also how to manipulate their behaviors and environment for the benefit of their learning.

Literature Review

The middle school years are a critical time for growing adolescents. It is during this time that young people deal with changes in their body, learn new abilities, and form positive social relationships (Meece, 2003). One of the major issues of education is students’ decreasing motivation, self-esteem, and achievement, especially during the transition to middle school. Many attribute the decrease to instructional practices, insensitivity to students’ needs, and several

other issues (Dembo & Eaton, 2000; Meece, 2003). For many students, the transition to middle school can be an overwhelming event. Elementary schools are typically supportive student-centered, mastery-based orientations. On the other hand, middle schools are performance-focused with an increase in expectations of academic achievement, teacher-centered instruction, and high-stakes testing (Cleary & Chen, 2009).

Although changes in schools can improve student motivation, one major dilemma is that adolescents often believe that they are not responsible for their achievement (Dembo & Eaton, 2000). Unfortunately, middle school students fail to realize the importance mathematics achievement has on their lives and their country. Mathematics achievement of middle school students is of great concern to policy makers and educators, for it is believed that secondary mathematics achievement is a key predictor of the nation’s economic potential and competitive strength for the future (Slavin, Lake, & Groff, 2009).

Finally, many middle school students seem to be unaware of their actions and the damaging effects their behaviors have on their academic growth. They lack a sense of responsibility for their learning and attribute that responsibility to their parents and teachers.

**Self-Regulation**

Research has found that a key source of underachievement is students’ lack of ability to control their behaviors and motivation (Dembo & Eaton, 2000). Many middle school students lack the ability to set goals and priorities, control their emotions, and assume responsibility for their actions. Research has been conducted on innovative ways to teach students to assume responsibility for their academic achievement. Many researchers have found self-regulation to be helpful (Clearly & Zimmerman, 2004; Dembo & Eaton, 2000; Dignath & Buettner, 2008; Zimmerman, 1998, 2000).

Self-regulation is defined as “the degree to which students are metacognitively, motivationally, and behaviorally active participants in their own learning process (Zimmerman, 2008, p.167). The definition focuses on students proactively using specific processes, such as goal setting, strategic planning, and self monitoring to improve their academic achievement. Self-regulation stresses the importance of self-awareness during a task, monitoring one’s progress, and finding new strategies if the original ones did not lead to success (Lizarraga, Ugarte, Cardelle-Elawar, Iriarte, & Baquedano, 2003). Self-regulated learning can be defined as the students’ self-generated thoughts, feelings, and actions taken to attain their learning goals (Zimmerman, 2001).

To maximize the efficiency of self-regulation, students may choose among a variety of self-regulation strategies (Cleary & Chen, 2009). Self-regulation strategies are techniques aimed at obtaining knowledge and skills (Nota, Soresi & Zimmerman, 2004). Commonly used academic self-regulation strategies have been identified as organizing information; goal-setting and planning; looking for information; providing self-monitoring, self-evaluation, and self-consequences; asking for help from a peer, teacher, or adult; rearranging the physical environment; and reviewing tests, notes, and texts (Garcia & Pintrich, 1994; Zimmerman & Martinez-Pons, 1986).

Following the social cognitive perspective, self-regulation strategies fall into three categories: personal, behavioral and environmental. Personal strategies consist of how the student manages information. This can include the student taking notes, summarizing, making chapter outlines, and monitoring themselves. The student may also set up goals and plan how they are going to accomplish them. Behavioral strategies consist of what behaviors or actions the student is going to take. For example, if a student determines that a factor that is affecting
their learning is not paying attention in class, they may take on a behavioral strategy such as being more attentive. Finally, environmental strategies include the student seeking help or making adjustments to his or her physical study environment (Garcia & Pintrich, 1994).

If one of the goals of education is to turn out students who are competent enough to educate themselves and manage their lives, then students need to learn how to regulate and monitor themselves. Students should be able to adjust strategies and determine what is and is not working for them (Dembo & Eaton, 2000). Finally, a shift from a teacher-directed to student-managed learning environment needs to occur. As students set goals and monitor their progress, they will learn how to adjust strategies and make corrections in their learning progress (Dembo & Eaton, 2000).

Goal Setting

Goal setting takes place when a person sets a goal, or an objective, and aims his or her actions toward the attainment of the goal (Locke & Latham, 2002; Schunk, 2001). Goals have an effect on student motivation, learning, self-efficacy, and self-evaluation (Bandura, 1997; Schunk, 1995), all of which enhance self-regulation, but enhancement is not automatic (Schunk, 2001). Five key principles of goal setting have been previously mentioned, but the goal properties of specificity, proximity, and difficulty are crucial for enhancement of self-regulation (Schunk, 2001). Specificity refers to goals being clear and specific to a standard. Goals that are specific raise performance because they are specific to the amount of effort needed to accomplish the task. Furthermore, specificity enhances self-regulation and self-evaluation (Locke & Latham, 1990). Proximity refers to the time frame set for the goal to be attained. Student self-regulation is increased when the deadline has been placed at a nearer rather than further date (Locke & Latham, 1990). Last, goals that are either too easy or too difficult for the student to achieve do not enhance self-regulation (Schunk, 1995). Goals must be challenging, yet attainable (Yearta, Maitlis, & Briner, 1995).

Self-Regulated Learning through Goal Setting

Zimmerman (1998) describes self-regulation through goal setting as a continuous cyclical activity that consists of three phases: forethought, performance, and self-reflection. The forethought phase is the process that occurs before learning effort; the performance phase is the process occurring during the learning effort; and the self-reflection phase is the phase after the learning effort is complete. Goals are entailed across all three phases of self-regulation. During the forethought phase, students set goals and plan strategies to reach the goal. During the performance phase, students perform goal-directed actions and monitor their progress. Finally, during the self-reflection phase, students evaluate their progress toward the goal and adjust strategies, if necessary, to ensure attainment of the goal (Schunk, 2001). Researchers have found that student mathematics achievement has a positive correlation to self-regulated learning (Clearly, Platten, & Nelson, 2008; Clearly & Zimmerman, 2004; Dignath & Buettner, 2008; Vrugt & Oort, 2008; Zimmerman, 2001) and student goal-setting (Hsieh, Cho, Liu, & Schallert, 2008; Meece, 2003; Okun, Fairholme, Karoly, Ruelhman, & Newton, 2006; Wolters, 2004; Zimmerman, & Kitsantas, 1997).

Method

This study used a time-series, quasi-experimental design. Students were observed for five weeks prior to the introduction of self-regulation through goal-setting. During this time, the teacher recorded each individual student’s math assessment scores, based on a teacher-generated test. After self-regulation through goal-setting was introduced and implemented, the students
were observed for another five weeks. During this time, the teacher also recorded each individual student’s math assessment scores, based on a teacher-generated test. At the end of the research, the average scores for the five weeks before and after the implementation were compared. Academic achievement, in this action research, will be linked to students’ weekly scores on teacher-generated tests.

Participants

The setting in which the action research took place was in a small middle school in Miami named RMS. In the 2010-2011 school year, RMS had a total enrollment of 800 students, comprised of 85% Hispanic, 10% White, 3% African American, 1% Asian and 1% Native American or Multiracial. During the 2010-2011 school year, RMS also employed 45 teachers and 3 administrators. RMS fosters students in grades 6-8, enforces a uniform policy, and 75% of the students receive free or reduced lunch. In addition, the school is eligible for participation in state and federal Title I programs.

The study was conducted in a regular mathematics class with 34 eighth-grade students, aged 13 to 14 years. Of the participants, 53% were female, and 47% were male. In addition, 97% of the participants were Hispanic and 3% African American.

Procedure

This study was conducted in three phases over a total of 12 weeks.

Phase 1 (Observation Period-5 weeks)

Phase 1 of the study began on the 2nd week of school and lasted until the 6th week of school. The first phase was five weeks long. This phase was an observation period for the teacher; she observed her students’ behaviors and test scores. During this phase, class proceeded as normal. Students received homework, class work assignments, and a weekly assessment. During this phase, students took weekly exams, five altogether for the phase, based on the subject matter being taught by the teacher. During phase 1, the teacher recorded the students’ weekly test scores and observed if the students’ scores were improving, declining, or remaining constant. In addition, she averaged all student test scores to attain an average weekly exam score. At the end of the first phase, the teacher averaged each of the students’ five phase 1 test scores. Then, she averaged all students’ scores, which provided a phase 1 class average score.

Phase 2 (Explanation Period-2 weeks)

Following the completion of the first phase, the study entered into an explanation period. During this phase, the teacher shared the weekly test scores for the past five weeks with the students. In addition, during this explanation period, the teacher explained the definition and purpose of self-regulation and goal-setting. The teacher explained to the students the purpose and impact of goals, based on research findings. Each student was then provided with a self-regulation folder which contained charts, a graph, and goal setting/strategic planning/self-reflection sheets. The students were then given their test scores for the past five weeks and were asked to place these scores on the chart provided and graph them as a line graph. The students were able to visually see how they had been performing for the past five weeks. After the students had seen their progress, the teacher encouraged the students to reflect on their progress and to think of factors in their life that were affecting their grades. The teacher spent the next two weeks helping students identifying factors affecting their learning and setting up achievable goals and strategies to help them accomplish their goals. For example, one student identified that one of the reasons she was doing so poorly in mathematics is that she was easily distracted or not paying attention in class. For one of her goal helping strategies, she wrote “not getting
distracted.” The student then decided that she would not sit near her friends, not talk during class presentation time, and go to sleep early so she would not be sleepy during class.

**Phase 3 (Implementation-5 weeks)**

The third phase began on the 9th week of school and ended on the 13th week of school. During this phase, the class continued as normal with the exception of the implementation of the self-regulation and goal-setting. During phase 3, students continued taking weekly exams for a total of five exams. During this phase, the students received their self-regulation folders and previous weeks test scores at the beginning of each week. The students then placed their scores on their chart and graphed their results. The students then entered into the self-reflection stage of goal-setting. Students were asked to reflect on their actions or lack of actions in the previous week. The students were asked self-reflection questions, such as did they complete all their strategies, why or why not; what strategies were working for them and how they knew they were working; and what they would do different and what they would do the same. The students then chose a new goal for that week and chose goal-helping strategies and so forth. This cyclical method continued for the five weeks of the third phase. Just as during phase 1, the teacher recorded the students’ weekly test scores and observed if the students’ scores were improving, declining or remaining constant. In addition, she averaged all students’ test scores to attain an average weekly exam score. At the end of the third phase, the teacher averaged each of the students’ five phase 3 test scores. Then, she averaged all students’ scores to achieve a phase 3 class average score.

**Results**

During phase 1, the class average weekly scores ranged from 63% to 79%. At the end of phase 1, the class had an average of 69.7% on weekly assessments, with 41% of the students averaging a below mastery level of 70% on their weekly assessments. During phase 3, the class average weekly scores ranged from 62% to 95%. At the end of phase 3, the class had an average of 81.4% on weekly assessments improving over 11% from phase 1. In addition, only 12% of students averaged a below mastery level of 70% on their weekly assessments compared to 41% in phase 1. Nearly 30% of the students improved their scores and began working at a mastery level of 70% or higher. On an individual student basis, 71% of students improved their average score on weekly assessments, while only 18% decreased, and 11% remained the same.

This study was guided by the question: “Can the implementation of self-regulation through goal-setting improve student mathematics achievement?” A paired t-test was used to test the hypothesis that students’ mathematics achievement improved as a result of self-regulation and goal-setting (see Table 1).

The excel output gives the t critical one-tail value at 1.69236 at alpha = 0.05; therefore, the null hypothesis ($H_0$) was rejected. Therefore, it is the conclusion of this study that the two population means are statistically different and that students’ mathematics achievement, as measured by teacher-made exams, were significantly gained after the introduction of self-regulation through goal-setting.

**Conclusion**

Research has shown that students who set goals and are self-regulated learners have higher achievement. The results of this study correlates with research findings. Result of this study show that the students significantly improved their mathematics achievement. Through the use of self-regulation, students learned to determine factors that affect their learning and effectively choose and adjust strategies to correct these factors.
Table 1

**t-Test: Paired Two Sample for Means**

<table>
<thead>
<tr>
<th></th>
<th>After</th>
<th>Before</th>
<th>Paired Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>81.38235</td>
<td>69.73529</td>
<td>11.64706</td>
</tr>
<tr>
<td>Variance</td>
<td>95.03119</td>
<td>277.049</td>
<td>Mean</td>
</tr>
<tr>
<td>Observations</td>
<td>34</td>
<td>34</td>
<td>Standard Error</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.548772</td>
<td>Median</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td>Mode</td>
<td></td>
</tr>
<tr>
<td>Df</td>
<td>33</td>
<td></td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>t Stat</td>
<td>4.87599</td>
<td></td>
<td>13.92813</td>
</tr>
<tr>
<td>P(T&lt;=t) one-tail</td>
<td>1.33E-05</td>
<td></td>
<td>-1.07904</td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.69236</td>
<td>Skewness</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) two-tail</td>
<td>2.66E-05</td>
<td>Range</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.034515</td>
<td>Minimum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sum</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Count</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Confidence Level(95.0%)</td>
<td>4.859755</td>
</tr>
</tbody>
</table>

Note: $U_D =$ paired difference mean; $H_0$: $U_D = 0$; $H_a$: $U_D > 0$ where $U_D = U_{after} - U_{before}$

Based on the results of the action research project and on the findings of research, the implementation of self-regulation through goal-setting had a positive impact on students’ mathematics achievement. As a result of the success of this project, self-regulation through goal-setting will be implemented at RMS as a mathematics department strategy to improve students’ mathematics achievement.

**References**


Bondage and Discipline, Dominance and Submission, and Sadism and Masochism (BDSM) Identity Development

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Abstract: Identity shapes how people make sense of the world. Sexual minorities’ sexual orientations and gender identities fall outside of heteronormative categorizations. Adults engage in diverse relationships: many of them fall outside of heteronormative boundaries. As an instrument of social justice, Adult Education can be a site for BDSM identity development.

Identity shapes how people make sense of the world and their experiences in it, including the interactions with others (Anzaldua, 2007; Cooley, 1964; Erikson, 1968; McCarthey & Moje, 2002; Sarup, 1996). Individuals’ identities develop in stages, and as culture changes; so do the questions of identity (Erikson, 1986). However, identity is not something that people find or that exists once and for all; rather, it is a process through which people try to understand their lives, personally, philosophically, and politically (Sarup, 1996). In fact, people “exist in a state of continuous construction and reconstruction; it is a world where anything goes that can be negotiated. Each reality of self gives way to reflexive questioning, irony, and ultimately the playful probing of yet another reality” (Gergen, 1991, p. 7). Categories of fixed identity can lead to oppression (Anzaldua, 2007; Gamson, 1995; Mohanty, 2003) and might cause conflict and challenges for people who develop identities outside of fixed, or traditional, boundaries.

Sexual minorities are individuals “whose sexual orientations and gender identities fall outside of heteronormative categorizations of sex, sexuality, and gender as well as outside the dichotomies of male/female and heterosexual/homosexual binaries” (Grace, Dawson, & Hillyard, 2010, p. 21 ). Heteronormativity refers to “the institutions, structures of understanding, and practical orientations that make heterosexuality seem not only coherent—that is, organized as a sexuality—but also privileged” (Berlant & Warner, 1998, p. 548). Until recently, little was known about the identity development processes that impact sexual minorities such as lesbian, gay, bisexual and transsexual (LGBT) youth, which resulted in misinformation and a distorted understanding of their lives (Savin-Williams, 2001). Many models of sexual identity development are based on a heterosexual/homosexual binary, even as they depart from traditional models of heterosexual identity development (Clarke et al., 2010). Furthermore, although some models of sexual identity development depart from traditional models of heterosexual identity development, many remain based on a heterosexual/homosexual binary (Clarke et al., 2010).

Adults engage in diverse forms of intimate relationships, many of which place them outside of heteronormative boundaries of gender, sexuality, sexual orientation, and relationship orientation (Califia, 1991; Connolly, 2006; Ernulf, 1995; Grace, Dawson, & Hillyard, 2010; Janus & Janus, 1993; Kinsey et al., 1953; Krafft-Ebing, 1983; NCSF, 1999). Bondage and discipline, dominance and submission, and sadism and masochism, or sadomasochism (collectively known as BDSM) refer to three aspects of sexuality and sexual orientation. Engaging in or practicing BDSM is a lifestyle choice that places practitioners outside of heteronormative standards (Langdridge & Barker, 2008; Yarber, Sayad, & Strong, 2010).
Grace and Hill (2004) wrote about queer as “representing our spectral community that incorporates a diversity of sex, sexual and gender differences” and queerness as “our ways of being, believing, desiring, becoming, belonging, and acting in life-and-learning spaces” (p. 167). They also wrote about the “sociocultural and political hinterland” in which queer persons are often left to struggle with issues of being, self-preservation, expectation, becoming, resistance, and belonging (Grace & Hill, 2004, p. 177). They link learning and adult education to social justice, where adult education can be an instrument for social action.

The purpose of this paper is to discuss some models and perspectives of sexual orientation and gender identity, common practices, roles and experiences of people who practice BDSM, and how practitioners learn about BDSM; as well as to show that education about and advocacy for BDSM practitioners is necessary to help individuals avoid problems related to suppressed identities, lack of knowledge and discrimination.

**Practices, Roles and Experiences of BDSM Practitioners**

Bondage and discipline (BD) refer to (a) the materials applied to restrain one’s ability to move, or the act of applying the materials; (b) the training administered by a dominant partner to her or his submissive regarding how the submissive should behave; and/ or (c) punishment and correction when the submissive fails to act in the proper manner. Dominance and submission (D/s) refer to the sexual arousal derived from the consensual domination of one partner over another partner, where someone gives up a negotiated level of control over their lives and the other person accepts the control. It is the psychological and emotional underpinnings of BDSM. Sadism and masochism, or sadomasochism (SM) refer to the consensual use of pain, intense sensation, humiliation, and power exchange for erotic enjoyment. SM may or may not refer to heavy or extreme play, and is a somewhat vague term. SM is commonly used to describe dominance and submission, just as D/s is sometimes used as an umbrella term for SM.

Historically, psychological and medical perspectives have been concerned with pathologizing SM practices, often focusing on acts that are extreme or non-consensual. Recently, interest has grown in studying SM in non-pathological ways (Langdridge & Barker, 2008). From a sociological perspective, SM is a sexual lifestyle, a subculture with its own norms, values, organizations and symbols (Weinberg, 1995), on the cutting edge of society and whose practitioners are marginalized by mental health professions and society (Kleinplatz & Moser, 2006). Kleinplatz and Moser (2006) recognize a need for greater tolerance and understanding of SM and encourage health professionals and society to adopt a more sex-friendly perspective of SM practitioners.

BDSM practitioners engage in BD, D/s, or SM on a spectrum from rarely to “just in the bedroom,” to 24 hours a day, 7 days a week. There are a variety of BDSM-related activities and roles in which an individual can engage. One might identify as a master or mistress, maintaining a permanent role over a slave, or as that slave; as a dominant person who occasionally tops (directs the actions of) another person, or as the bottom to that top. One might identify as a slave who tops, as a dominant who enjoys receiving pain (masochist), as a submissive who enjoys giving pain (sadist) or as someone who participates in all or none of these roles. On the other hand, someone might enjoy one or many of these activities without identifying as a practitioner. An estimated 14% of men and 11% of women have experienced some sort of SM (Janus & Janus, 1993). Of the 1,017 surveys from BDSM practitioners, obtained through the National Coalition for Sexual Freedom (NCSF) Violence and Discrimination Survey (1999), 51% were men, 46% were women, 1% is transgender, and 2% were intersexual. Twenty-eight percent of
the respondents were “out”; many of the rest were closeted due to fear of job loss, concerns about child custody, or potential harm to family relationships.

Cutler’s (2003) research about couples in BDSM relationships showed that dominant partners make decisions in consideration of their submissive partners, not in a vacuum; and that their activities are not determined by gender or role. A slave may feel cherished and protected when obeying or kneeling at the feet of his or her Master. A masochistic top may enjoy being whipped by his or her bottom without losing his or her stature as the partner in control. Thus, the role that one performs in the BDSM Community or relationship does not dictate, nor is it dictated by, one’s gender or sexual orientation identity.

In his research about women who practice consensual nonmonogamy, Franceschi (2006) found that no studies have looked at how consensually nonmonogamous women deal with societal and familial pressures to get married and become a mother while maintaining a divergent lifestyle. Some participants in his study view nonmonogamy as an orientation, an inborn trait that everyone has, but that some people conform to how they are “supposed to” behave. Franceschi (2006) argued that infidelity in the United States is so common that it weakens the premise of monogamy being the cultural norm.

BDSM practitioners might not form their identities in a linear trajectory, and aspects of their identity might conflict. For example, if a person believes in equality (that everyone should have equal right to pay, to vote, to marry, etc.) but desires to submit to, be hurt by, or humiliated by another person, then perhaps those aspects of his or her identities might conflict. The same might happen to someone who desires to dominate, hurt or humiliate another person; he or she might feel caught in the middle between BDSM and feminism and isolated from both communities (Eckhart, 1996). The potential conflicts and challenges related to developing or accepting such multiple identities seem diverse, could be problematic and offer opportunities for research.

In Smith’s documentary, “BDSM-Alternative Loving” (2002), several BDSM practitioners and educators discussed their practices, often sharing that they do not see it as very different from non-BDSM (vanilla) practices. Brame discussed how media has sensationalized and dehumanized sex and BDSM. She has been asked many times to demonstrate on stage how she would whip someone; yet, she doubts that anyone has invited Dr. Ruth to demonstrate how to give a man oral sex (Smith, 2002). Brame compared SM activity to bungee jumping. When someone explains that he or she went bungee jumping for the rush, the person who asked tends to understand, even if they wouldn’t do it themselves. Yet when an SM practitioner gives the same reason for their SM activities, the reaction tends to be different: incredulous, dismissing, or judgmental (Smith, 2002). A dominatrix interviewed stated that many of the men who employed her as a dominatrix were married men who had not informed their wives of their SM desires, perhaps because they are embarrassed or ashamed of them (Smith, 2002). Someone described a masochist as a person who pushes his or her body or mind beyond limits, like a runner might in order to achieve a running high, and another interviewee shared that she has developed an ability to eroticize pain in certain situations and with certain people; however, she would not enjoy the pain caused by slamming her hand in a door (Smith, 2002).

Method and Procedures

In a search of existing literature about BDSM and identity development, research pertaining to BDSM-related identities was found (Connolly, 2006; Ernulf, 1995; Kinsey et al., 1953; Kleinplatz & Moser, 2006; Langridge & Barker, 2008; Weinberg, 1995), but no models specific to BDSM identity development were found. Databases used for the search included
JSTOR, Academic OneFile, OmniFile, and Proquest. Google Scholar (2011) and Amazon (2011) were also used. A search of the terms BDSM, SM, sadomasochism, identity development and feminism produced more than 50 journal articles, many of which focused on LGBT identities or the mental health and counseling of individuals who engage in BDSM. More than 20 books were produced, which addressed topics such as the mental health, relationship dynamics, and activities of BDSM practitioners; how to find other members of the BDSM Community; and topics related to the identity development and experiences of LGBT persons. The search also produced information about websites and college groups that exist to provide support to members of the BDSM Community. Some of these websites recommended additional sources of information regarding BDSM, including blogs and online forums. The search provided books and articles that had already been gathered, as well. Based on the literature gathered, three themes were identified: sexual orientation and gender identity development; how and where learning about BDSM occurs; and the need for advocacy and support of BDSM identity development.

**Sexual Orientation and Gender Identity Development**

The most closely related models or perspectives found through the search pertained to LGBT or queer scholarship, where “models and theories related to sexual orientation and gender identity development differ in scope, format, and underlying epistemological assumptions” (Bilodeau & Renn, 2005, p. 33).

Bilodeau and Renn (2005) studied LGBT identity as it is observed and developed in settings of higher education. Considering that LGBT and BDSM orientations fall outside of heteronormativity, these theories might relate to BDSM identity development, as well. In Cass’s (1979) model of homosexual identity development, individuals go through stages of identity confusion, identity comparison, identity tolerance, identity acceptance, identity pride, and identity synthesis. Weinberg, Williams, and Pryor’s (1994) model of bisexual identity development suggests stages of initial confusion, finding and applying the label, settling into the identity, and continued uncertainty. Clifford and Orford’s (2007) model of trans-identity development suggests stages of developing an awareness of being different, starting the process, and acclimatizing to a new life. These models all suggest stages of identity development, but identity formation is not necessarily a linear process; the fluidity of identity must also be considered. For example, some individuals’ sexual attraction, behavior and identity can have more to do with the characteristics of their partner than with their gender (Diamond, 2003; Impett & Peplau, 2003). Fortunately, research in the areas of sexual orientation identity development beyond heterosexual, gay, and lesbian identities is expanding and may challenge the traditional stage models (Bilodeau & Renn, 2005). “Gender is in no way a stable identity or locus of agency from which various acts proceede,” argued Butler (1988), “rather, it is an identity tenuously constituted in time – an identity instituted through a stylized repetition of acts” (p. 519). Many young people experience their sexuality as fluid (Savin-Williams, 2005); different identities and practices might be explored and accepted, rejected, returned to at a later point in life, or not consciously acknowledged at all.

**Learning BDSM**

The Community-Academic Consortium for Research on Alternative Sexualities (CARAS) Educational Needs Assessment (Sprott, 2010) assessed the educational needs of 1,041 BDSM practitioners. More than seventy-nine percent of the respondents belonged to a BDSM organization. The respondents noted four motivations for participating in educational events: entering the community (25%); maintaining community (22%); acquisition of
instrumental skills (20%); and seeking personal relationships (10%). BDSM education happens in cities throughout the world, in large numbers, and covers a breadth of topics (FetLife, 2010).

Most major cities in the United States have BDSM support and educational groups, many of which organize meetings and seminars to help new members enter the community, learn new techniques, and socialize with like-minded people (Miller & Devon, 1995). Two such groups are the National Leather Association-International (NLA-I, 2010), a pansexual organization throughout the U.S. and Canada and the Society of Janus, a not-for-profit, all volunteer, San Francisco-based organization devoted to the art of safe, consensual and non-exploitative BDSM.

Iowa State University Cuffs is an educational group through which students learn about BDSM and safe, consensual, and non-exploitative human sexuality. Their educational topics include how to safely meet a play partner; bondage; negotiating a scene; and preventing sexual assault (CUFFS, 2010). Risk-Aware Consensual Kink (RACK) is the University of Chicago BDSM club. As a registered student organization, RACK raises awareness about kink and provides resources to interested students (RACK, 2010). Though such groups seem to be safe forums in which students choose to explore and develop their identities, not all colleges have similar groups.

Websites exist for specific interest groups, for local community members to socialize, for people looking for partners, and for academic researchers to connect and share information. Launched in 2008, FetLife is a free social network for the BDSM community, similar to Facebook and MySpace, but for people who engage in BDSM (FetLife, 2011). On November 15, 2010, the FetLife website reported 610,006 members who had shared 2,227,316 pictures and 14,990 videos; participated in 759,894 discussions in 21,085 groups; announced 2,266 events; and created 318,399 blog posts (FetLife, 2011).

Educational books that are often recommended to individuals new to BDSM address a wide array of topics such as defining common terms and practices and suggesting ways to find partners or initiate, negotiate or maintain relationships (Miller & Devon, 1995; Warren, 2000; Wiseman, 1991). Such educational resources also list organizations through which members can meet other members and offer ways for people to encourage their partners to engage in BDSM (Warren, 2000). They also provide ideas about how to give or receive bondage, pain or humiliation, how to use toys, ways to be safer, and where and how to seek help for various situations.

**Advocacy to Support BDSM Identity Development**

As a system used to determine who is normal and who is deviant, based on the maintenance of strict boundaries; heterosexual privilege also allows the sanctioned discrimination of people who deviate from those boundaries (Rocco & Gallagher, 2006). BDSM practitioners fall outside of such boundaries, more so if their masculinity or femininity falls outside the binary. Partners who engage in Master/slave relationships can be of even greater risk of mockery, shunning, and discrimination, as their relationships might be perceived as beyond simple “kinky sex” (Chasey, 2008).

Califia (1991) suggested that although major improvement has been made in terms of heterosexist mores, such as insisting that a man can be the bottom in a relationship or that a woman can have control, the meanings of all sexual acts should be challenged. Baldwin (1991) wrote about a kinky second coming out, that “kinky people, like gay people, are only supposed to do it in secret, in private, in fear, in self loathing, and most of all, in silence. And so we did. For a very long time. Until now” (p. 178). This private shame, self-loathing and silence can
have an impact on how individuals develop or perform their identities, particularly if they have a limited ability to connect or learn with other people with similar interests or identities.

Although BDSM images might appear more often in popular media than they used to, this does not mean that it is understood or more accepted by mainstream society. In fact, as Ravenstone (2010) blogged, it might be another stereotypical portrayal of BDSM to titillate viewers:

I think it more accurate to say there is more awareness of kink than to say it's 'going mainstream' in any real sense of the word. The GLBT community is much further along than we are, largely because of the efforts of educators and activists. Whether we want to become genuinely mainstream, or merely left alone, we can't rely on flawed and fleeting media images to do that for us. There's more to raising authentic awareness than that, and it requires the hard work of educating our vanilla neighbors. (n.p.)

Not everything related to BDSM will be as easy, fun, or extreme as is often portrayed in media.

The NCSF advocates for consenting adults in the BDSM-Leather-Fetish, Swing and Polyamory Communities by providing direct services, education, advocacy, and outreach. The NCSF Violence and Discrimination Survey (NCSF, 1999) was administered to gather demographic data about the SM-Leather-Fetish communities and gain an understanding of the effect of social stigma on practitioners. Of the respondents who reported experiencing violence or discrimination, only one-third were out (NCSF, 1999). Respondents experienced various forms of discrimination, including one’s doctor calling the desire for body modification “sick,” a roommate trying to “save” a respondent by reporting her interests to the practitioner’s supervisor, and being ostracized for receiving SM/Leather/Fetish publications (NCSF, 1999). Some respondents reported that they had been beaten up because someone else thought that being submissive meant it was okay to be beaten up and raped. Thirty-six percent of the respondents reported being harassed or attacked due to their sexual practices, but ninety-six percent never reported the crime, for reasons such as they did not think that authorities would believe them or take them seriously (NCSF, 1999).

During the NCSF 17th Annual Symposium in 1999, neurologist W. and NCSF Policy Director Wright emphasized to health care providers the importance of understanding the basic principles of SM in order to fulfill their responsibilities to patients (W & Wright, 1999). They provided examples of concerns that patients might be reluctant to share, such as a woman with a vaginal tear from fisting or a man with numbness and weakness in both arms due to bondage. These health concerns, which could have serious negative consequences if not treated, might not be so problematic if there was less embarrassment about consensual BDSM.

**Conclusion**

BDSM practitioners learn about themselves, other people and communities on their own, with and from other people, online or in person. Identities develop over time, through continuous construction and reconstruction, from which new meanings are negotiated. Identity both shapes and is shaped by the meaning that people make of the world and their experiences in it. Although research models and perspectives on identity development exist, few tried to investigate BDSM identity development as a consensual, non-pathological lifestyle choice. Research can contribute to a more accurate understanding of BDSM practitioners by relying less on data gathered from extreme or non-consensual acts. BDSM practitioners want opportunities to learn and socialize within the BDSM Community. BDSM education can provide a rich environment for research about adult education, especially in settings outside of heteronormative
boundaries, and can promote social justice. Policymakers and educators should understand how heterosexual privilege can negatively impact BDSM practitioners, their families, and society in general. Researchers, professionals and policymakers who want to encourage healthy identity development for individuals who will, in turn, interact in society and form group identities, should strive to understand the various process of identity formation and the challenges and successes, joys and pains that individuals experience as they strive to understand themselves and the worlds in which they live.

References


Analyzing Elementary Preservice Teachers’ Development of Content and Pedagogical Content Knowledge in Mathematics through Microteaching Lesson Study

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Abstract: This study examines the effect of Microteaching Lesson Study participation on the mathematics content and pedagogical content knowledge of 52 elementary preservice teachers. Preliminary findings, which are positive, are discussed.

Since the introduction of lesson study to the U.S. in 1999 by Stigler and Hiebert, United States mathematics educators have developed an interest in exploring the technique that has been credited with the success of Japan’s elementary students in the area of mathematics. Lesson study involves a team of teachers with an outside expert working collaboratively on the lesson planning, implementation, analysis, and revision of a research lesson (Stigler & Hiebert, 1999; Takahashi & Yoshida, 2004). Within four years of the Trends in International Mathematics and Science Study, lesson study spread to more than 335 United States schools spanning 32 states (Lewis, Perry, & Murrata, 2006). While many schools are attempting to replicate the original Japanese lesson study experience, adaptations to lesson study have emerged as U.S. schools have begun to experiment with the technique.

At the university level, lesson study has been modified for use with preservice teachers. Research over the last decade into the effectiveness of U.S. lesson study variations including those used with preservice teachers report positive findings indicating the benefits associated with the professional development technique are substantial. These benefits include improved content knowledge for teachers, enhancement of teacher pedagogy, higher teacher self-efficacy and motivation, development of teacher ability to observe and focus on student learning, improved teacher reflection ability, and creation of collaborative networks for teachers (Fernandez, 2005, 2006, 2009; Fernandez, Cannon, & Chokshi, 2003; Lewis, Perry, & Hurd, 2004; Lewis et al., 2006; Parks, 2008; Puchner & Taylor, 2006; Taylor, Anderson, Meyer, Wagner, & West 2005).

One adaption of lesson study, first developed by Fernandez (2005), Microteaching Lesson Study (MLS), has been used with secondary mathematics preservice teachers. MLS is a professional development process that blends principles of microteaching with aspects of Japanese lesson study. Similar to lesson study, MLS participants, equipped with an overarching goal for student learning, engage in a cycle of collaborative planning and lesson revision in conjunction with a mentor. The course instructor or another qualified person such as a curriculum specialist or field placement supervisor may act as the mentor.

MLS has been found to help deepen secondary preservice teachers’ content and pedagogical content knowledge while shifting their focus in lesson planning to be more student-oriented (Fernandez, 2005, 2006, 2010). Such results underscore the potential for use of MLS with elementary preservice teachers enrolled in a mathematics methods course. Elementary preservice teachers are often only required to take one to two college mathematics courses and one to two courses in teaching mathematics; yet elementary teachers are responsible for laying the foundation for students’ mathematical development. The National Mathematics Advisory Panel (NMAP, 2008), as part of its recommendations for improving K-12 mathematics

education, emphasizes the importance of mathematically knowledgeable classroom teachers. MLS may be thought of as a pedagogical approach that can be used as part of courses on learning to teach in order to promote preservice teachers' development of content and pedagogical content knowledge. The purpose of this study was to examine the effect of participation in MLS on elementary preservice teachers’ content and pedagogical content knowledge in mathematics. The research questions guiding this study included: What was the effect of participation in MLS on elementary preservice teachers’ content knowledge? What was the effect of participation in MLS on elementary preservice teachers’ pedagogical content knowledge? What were elementary preservice teachers’ perceptions of MLS?

Participants

This study involved 52 elementary preservice teachers enrolled in two different classes of a mathematics methods course at an urban university in the south. The first class met for three 50-minute sessions per week during the Spring 2010 semester for 15 weeks. The second class met twice a week for 2 hours and 40 minutes during the Summer 2010 semester for seven weeks. During each semester, prior to the implementation of MLS, each class was engaged in learning about the teaching of mathematics from K to 6th grade including class sessions aligned with each chapter of the course textbook. Both classes of elementary preservice teachers were engaged in MLS toward the end of their respective semester (i.e., for both courses all elementary preservice teachers received the treatment and neither group served as a control).

Of the 52 participants, 50 were female and 2 were male. For the Spring 2010 semester, participants were divided into a total of 10 groups as follows: 9 groups with three members in each group and 1 group with two members. For the Summer 2010 semester, participants were divided into a total of 8 groups as follows: 7 groups each with three members and 1 group with two members.

Both classes were taught by the same instructor, who also acted as a mentor for six groups during the Spring 2010 semester and all eight groups during the Summer 2010 semester. The instructor was a female doctoral student pursuing a Ph.D. in Curriculum and Instruction with a focus in mathematics education. She has taught mathematics from grade 5 to the university level and mathematics methods courses over the last 11 years. She holds a Bachelor of Science in Mathematics and a Master of Science in Secondary Mathematics Education. The Spring 2010 semester was the first time she served as a mentor for the MLS process.

Given this was the first experience in MLS for the instructor, a second female doctoral student pursuing the same degree and a coresearcher in this study assisted during the Spring 2010 semester. She has 11 years teaching experience in elementary, middle, and university level courses and holds a Bachelors degree in Mathematics and English Education and a Masters in Educational Leadership. It should be noted that the third coresearcher involved in this study developed MLS and has served as mentor for numerous groups. She is a faculty member at the university and has taught mathematics in elementary, middle, and high school levels and both mathematics and mathematics methods courses at the university level.

MLS Implementation

During the initial part of the semester, the preservice teachers watched videos, read case studies, and engaged in class discussions and activities all modeling a reform-oriented approach to mathematics teaching. The preservice teachers also completed a short questionnaire containing questions designed primarily to assess their pedagogical dispositions. MLS groups of at most three were formed so that a participant whose responses were indicative of a traditional approach to teaching, a student whose responses were mixed between a traditional and
constructivist teaching approach, and a student whose responses were representative of a constructivist approach to teaching worked together.

As the course progressed in both semesters, each MLS group was assigned a topic along with an overarching student learning goal. The overarching learning goals and mathematics topics were chosen based on the instructor and co-researchers’ experiences with and knowledge of gaps in elementary preservice teachers’ understanding of elementary mathematics. Examples of topics included multiplying fractions without the use of an algorithm or developing the connection between the area formulas for parallelograms, triangles, and trapezoids. Each MLS group was also assigned one of the two following overarching goals in conjunction with their topic: (a) to develop students’ ability to build new mathematical knowledge through problem solving by applying or adapting a variety of appropriate strategies and (b) to develop students’ mathematical reasoning and ability to study patterns in constructing relationships or concepts through experimenting, analyzing, conjecturing, and defending or justifying mathematical ideas.

At the start of the MLS implementation, time was allocated for MLS groups to develop their first lesson for their assigned topics and goals during class. During this time, a mentor (i.e., instructor or co-researcher) consulted with each group and posed questions to help guide participant thinking as they created their first lesson. Each MLS group developed, taught to their peers, and revised three versions of their research lesson on their assigned topic. Each group member taught one of the lessons, while the other two members acted as either observer or video recorder. The participants decided the order in which they taught in the three teaching cycles. All lessons were video recorded and given to the respective groups for viewing.

Following the viewing of each lesson (either live or by video), a mentor engaged each MLS group in a debriefing session. To begin the debriefing session, the MLS group observer shared observations related to the effectiveness of the lesson. The mentor used the observer’s ideas to generate a discussion amongst group members to address any issues or concerns related to the lesson. In the case that participants were unable to resolve an issue related to content or pedagogy, the mentor posed questions to help guide the MLS group to a resolution.

Participants were required to submit a final report, which included the original three lesson plans developed by the group along with a group reflection after each debriefing. Also, included in the final report was a discussion of initial issues the group experienced while developing their first lesson and an analysis of each lesson implementation.

**Theoretical Frameworks and Methods of Analysis**

To measure participants’ content knowledge prior to completing the MLS experience, a pre-assessment that covered the mathematics topics the MLS groups would be presenting was administered during each semester. The same instrument was later administered as a post-assessment for comparison after all groups had presented their lessons. The questions on the pre- and post-assessment were classified as related to content or pedagogical content knowledge in mathematics. The pedagogical content knowledge questions were developed using Shulman’s (1986) framework. Pedagogical content knowledge as explained by Shulman (1986) includes two main points. First, teachers should have knowledge of the most useful forms of representation, examples, analogies, illustrations, or explanations for the most regularly taught topics in a subject area. Second, Shulman (1986) advocates teachers understand what makes the learning of specific topics easy or difficult. This includes knowledge of preconceptions, which may be misconceptions, that students of different ages and backgrounds bring with them into the classroom. A paired t-test was used to compare the overall results of the pre- and post-assessments for all the participants and then again to compare results separately from content and pedagogical content knowledge items.
Lesson plans were analyzed using the Creating and Analyzing Lessons from the Viewpoint of Mathematical Activities (CALMA) framework (Hiraoka & Yoshida-Miyauchi, 2007) to determine growth in the elementary preservice teachers' pedagogical content knowledge. CALMA suggests levels of mathematical richness of lessons. Level I Concrete Levels consists of two phases: Ia, Introduction of a Concrete Phenomenon and Ib, Develop Mathematical Nature of Phenomenon. Level II Mathematical Levels consists of two phases: IIa, Related Mathematical Problems and IIb, Mathematical Solutions. Level III Broader Levels consists of two phases: IIIa, Concreteness of Mathematics in Broader Contexts and IIIb, Development, Creativity and Appreciation of Mathematics. Lessons are analyzed to determine levels reached, which reveal the mathematical richness of the lesson activities.

Upon completion of the MLS process, participants completed a feedback survey that contained a series of Likert questions requiring a numerical rating ranging from 1 to 5 (Strongly Disagree to Strongly Agree) along with a qualitative comment or explanation of the rating chosen. Questions were intended to capture preservice teachers’ perspectives related to the MLS experience. Also, included in the feedback survey were open-ended questions related to content and pedagogy.

**Preliminary Findings of MLS**

Preliminary findings indicate elementary preservice teacher participation in MLS helped deepen participants’ content and pedagogical content knowledge. Comparison of the pre and post-assessment using a paired t-test revealed the difference in the scores was significant for $p < .001$. When the scores for the content questions and pedagogical content questions were analyzed separately, a paired t-test on the pre and post content scores revealed a significant difference at $p < .001$. Similarly, a comparison of the scores for the pedagogical content knowledge questions revealed a significant difference at $p < .001$. Results from the content questions suggested that their peers’ teaching during the MLS lessons helped all the preservice teachers increase their understanding of the mathematics being taught. The MLS experience also helped the preservice teachers increase their pedagogical content knowledge in mathematics.

Analysis of lesson plans using the CALMA framework (Hiraoka & Yoshida-Miyauchi, 2007) for individual groups across the three research lesson revisions revealed growth in the participants’ pedagogical content knowledge. Two groups’ lessons were selected for analysis based on qualitative observations made by the co-researchers who had acted as mentors. The groups were chosen to represent extreme cases (i.e., one group was selected to represent the most pedagogical content knowledge growth and the second group was selected to represent the least growth made by MLS participants). Based on an initial analysis of the lessons, MLS groups have demonstrated growth in the mathematical richness of their lessons. For example, analysis of the first lesson plan for the group chosen to represent the most pedagogical content knowledge growth was found to fit the criteria for CALMA level Ib, while the final lesson plan was found to represent level IIIa on the CALMA scale. The group selected to represent the least growth in pedagogical content knowledge expanded their lesson activities according to the CALMA scale, from level Ia for their first lesson to level IIb for their final lesson. This finding suggests MLS participants’ lesson plans may have improved a minimum of at least one level and a half on the CALMA scale indicating growth in their pedagogical content knowledge in mathematics.

As part of the feedback survey, participants responded to a series of Likert-type statements designed to gauge their perceptions of the experience, from 1 (Strongly Disagree) to 5 (Strongly Agree). Analysis of participant responses from both semesters revealed participants valued collaboration with their peers. This is evidenced by the mean response values for statements such as, “Planning together with other group members helped me broaden my
knowledge of possible ways of teaching the desired lesson” and “Feedback from my group members helped me understand my teaching strengths and areas for improvement” were 4.4 and 4.3 as seen in Table 1.

**Table 1**

*Mean Response Values for Likert-Type Statements Taken From Participant Feedback Survey Completed After MLS Participation*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning together with other group members helped me broaden my knowledge of possible ways of teaching the desired lesson.</td>
<td>4.4</td>
<td>0.723</td>
</tr>
<tr>
<td>Analyzing each other's teaching of the lesson helped me think more deeply about my own teaching.</td>
<td>4.5</td>
<td>0.610</td>
</tr>
<tr>
<td>Feedback from my group members helped me understand my teaching strengths and areas for improvement.</td>
<td>4.3</td>
<td>0.896</td>
</tr>
<tr>
<td>Planning together with other group members helped me deepen my knowledge of the mathematics topic we taught.</td>
<td>4.1</td>
<td>0.825</td>
</tr>
<tr>
<td>The actual teaching of the lesson helped me deepen my understanding of the mathematics topic.</td>
<td>4.0</td>
<td>0.894</td>
</tr>
<tr>
<td>Preparing to teach this topic and planning the lesson caused me to engage in mathematical reasoning and problem solving.</td>
<td>4.0</td>
<td>0.883</td>
</tr>
<tr>
<td>Engaging in MLS helped me understand the importance of carefully developing mathematics exercises, problems, questions, or activities during the planning of my lesson.</td>
<td>4.5</td>
<td>0.512</td>
</tr>
</tbody>
</table>

Note: Ratings were from 1 (Strongly Disagree) to 5 (Strongly agree).

1 Data for last statement only collected for Summer 2010 participants.

**Discussion and Concluding Remarks**

Results from the feedback survey suggest that MLS participation led to improved content and pedagogical content knowledge for group members. For content, this result is supported by participants’ ratings of the following statements: “Planning together with other group members helped me deepen my knowledge of the mathematics topic we taught”, and “The actual teaching of the lesson helped me deepen my understanding of the mathematics topic,” received mean values of 4.1 and 4 respectively. The following statements support participants’ growth in pedagogical content knowledge: “Analyzing each other's teaching of the lesson helped me think more deeply about my own teaching,” “Preparing to teach this topic and planning the lesson caused me to engage in mathematical reasoning and problem solving,” and “Engaging in MLS helped me understand the importance of carefully developing mathematics exercises, problems, questions, or activities during the planning of my lesson.” Mean values for these statements were 4.5, 4, and 4.5 respectively.

An initial review of preservice teacher comments reported in the feedback survey provided further evidence that participation in MLS helped develop their content knowledge. A member of the group whose topic was to develop the properties of quadrilaterals wrote,
I did not know much on different properties of quadrilaterals other than taking geometry. The teachers (all 3) helped me understand the properties of each and why. Preparing for the teach helped me engage in reasoning because I had to not only know each quadrilateral’s property but had to know why the property was given.

Another participant whose topic was to develop the relationship between fractions, decimals, and percents wrote,

In order for me to plan the lesson I had to try to solve it. So I would use the grids and see how students would approach the problems and how they would be able to use the grids to discover the relationship we wanted to get. I think that through this lesson I better understand the relationship between decimals, fractions, and percentages.

Results of all three comparisons of the pre-test and post-test suggest participants’ content and pedagogical content knowledge improved over the course of the MLS experience. Although these scores might have been influenced by factors other than the MLS experience, it is unlikely that the extent of the significance in the paired t-test would have occurred irrespective of the MLS experience. The focus of the MLS was to engage participants in the teaching of content for which their peers lacked understanding, thus specifically targeting the development of content knowledge and pedagogical content knowledge. Similar findings were reported by Fernandez (2005, 2010) in the context of secondary preservice mathematics teachers.

Analysis of lesson plans from select groups using the CALMA framework (Hiraoka & Yoshida, 2007) revealed growth in elementary preservice teacher pedagogical content knowledge indicating the benefit of participation in MLS on preservice teachers’ lesson planning. Fernandez (2010) also reported changes in preservice secondary mathematics teachers’ lesson plans toward more reform-oriented approaches to teaching mathematics as aligned with the standards for teaching mathematics of the National Council of Teachers of Mathematics (NCTM, 1999).

Analysis of the feedback survey data suggests participants valued MLS as part of their course on learning to teach mathematics. One participant wrote, “I LOVED IT! I would have liked to [have] experienced more projects such as this one in my other courses, but now I am a senior and don’t have the opportunity.” The results of the feedback survey also indicate participants felt they learned mathematics content as well as approaches to teaching mathematics through collaborating with their group members. This finding is aligned with that of Fernandez (2006) in a study that captured preservice secondary mathematics teachers’ perceptions of MLS.

While the findings discussed in this paper require more analysis, initial results indicate participant engagement in MLS is a valuable experience. Further investigation of MLS and the mechanisms that produce growth in preservice teachers’ knowledge should be conducted. Also, studies should explore how the learning during MLS transfers to their teaching during their field experiences.

References


Teaching To Trouble: Critical Book Reviews as Pedagogy to Interrogate Education Praxis

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And Stephanie Brown, Shawna Draxton, John Erratt, Joyce Esquer, Darla Hagge, Melanie Kamae, Joanne Murphy, Christy Neria, Alaine Ocampo, Trisha Nishimura, Kirstee Radley, Jennifer Shubin, and Lawrence Taniform, Chapman University, USA

Abstract: How might education professors disrupt traditional curriculum and teaching practices that teach future teachers to label, segregate, and marginalize students with disabilities? The Disability Studies in Education (DSE) approach grounds practice on the perspectives of people with disabilities and challenges practices that isolate and de-humanize individuals. The pedagogy for eliciting critical book reviews using a DSE perspective is described.

DSE is an interdisciplinary field which unites critical inquiry, political advocacy, and approaches from the arts, humanities, and humanistic/post-humanistic social sciences to improve the lives of people with disabilities based on their expressed wishes (Gabel, 2005). A disabilities studies in education (DSE) theoretical framework relies on the experiences and perspectives of people with disabilities to challenge actions that maintain the status quo (Danforth & Gabel, 2006). The purpose of this paper is to document the pedagogy of writing book reviews that use a DSE perspective to critique the work.

Theoretical Framework

The instructional pedagogy is based on Paulo Freire's (1985) notions of critiquing and was co-created over the course of 2 semesters by one professor and 13 graduate students (6 in 2009 and 7 in 2010) and the author. Freire (1998) posited that critiquing the reading “before anything else, [is] a critical, creative, recreating activity” (p. 18). It is naturally occurring by virtue of the curiosity of the one who is studying. Studying what other people have written sets us up in a special way so that we are "Reading the word [which] enables us to read a previous reading of the world" (Freire, 1998, p. 18). That world may no longer be pertinent, but the word has captured it for us to read and ponder.

A Brief History of DSE

According to Danforth and Gabel (2006), a DSE approach relies on intellectual and practical tools as well as forms of thought and action that (a) nurture a deeper awareness among educators about disability rights, (b) lead to more inclusive participation, and (c) reveal the uniqueness and importance of disability identity. DSE is a relatively new field of study (Connor, Gabel, & Peters, 2006), beginning with the influences of the 1960s-1970s. The field was spurred into action during the Civil Rights era in the United States and the worldwide Independent Living movement.

Methods

In this section, we describe the participants, the elements of the critical book review, the criteria for a critical book review using DSE principles, and the instructional methods or interactions that elicited the reviews. We refer to key resources that support the pedagogy.
Participants

During Fall 2009 and 2010, a total of 13 doctoral students (11 females) and one professor conducted critical reviews of current books in the area of special education and related services. Many of the doctoral students were members of under-represented populations seeking doctoral degrees. All participants had completed three years of preparation for the Ph. D. and were positioned to prepare their dissertation proposals. All participants were career special educators (i.e., speech/language pathologist working with adults recovering from stroke, education program specialists, a director of curriculum development, or high school teacher of students with disabilities). Four of the participants taught in pre-service special educators at local universities or colleges while all participants conducted workshops and training sessions at their respective work sites.

Elements of the Critical Book Review

In this section, the elements of the assignment and the instructional methods for generating the critical review are described. The assignment focused on revealing to readers the content of the book by applying the intellectual tools of a DSE perspective. Danforth and Gabek (2006) posit that DSE intellectual tools include (a) interrogating the underlying foundation of phenomena, (b) engaging in a dialectic where two seemingly opposing statements can be held in mind in order to understand the Other, (c) including people with disabilities in the conversations.

The goal of the critical book review was not to summarize what the author said. Instead, book reviewers were encouraged to identify the central purpose in writing the book and analyze the significance of the book in terms of how it adds to an understanding of the subject of disability studies in education. Related purposes included: to identify and analyze the significance of important arguments made in the book, evaluate the extent to which the author succeeded in fulfilling the purpose for writing the book, and evaluate the strengths and weaknesses of the book with regard to how it adds to an understanding of the subject of disability studies in education.

Instructional Methods

We agreed to use a collaborative approach in teaching and evaluating outcomes. We co-developed a rubric that encompassed the following points in the written critique: (a) give full bibliographic information on the book, (b) state whether or not the author made his/her own perspective clear and whether or not the perspective adds or detracts from the value of the book, (c) explain your own relationship to the subject content of the book, (d) describe what is valuable about the content, and (e) explain why you would or would not recommend the book to someone who wants to understand the subject of disability studies. A key to successful critiques was to justify the decision to criticize or to commend the author and explain why by citing evidence from the work to support the stance. Each reviewer set his/her own deadlines with respect to submitting drafts to be critiqued by a peer and/or the instructor.

Participants selected a recently published book that they wanted to read and interpret with a DSE lens. The books often reflected their intended dissertation topics (e.g., studies of people with disabilities that focused on eliciting their voices and perspectives, leadership advances in international disability studies). The books that were selected for the critical reviews are shown in the Appendix.

Applying principles from critical pedagogy. Three principles from critical pedagogy formed the basis for this instructional method to elicit critical book reviews: dialogue, conscientization, and praxis. As explained by Darder (1995), dialogue creates a psychological space for learners to know what their views are; conscientization occurs when
learners become aware that they have a voice and that they can influence others' views; praxis is the learning cycle of taking action, reflecting on outcomes, taking a new action or adopting a different belief that leads to new perspectives.

**Identifying and selecting a book review process.** By the end of the second week of classes, all participants had selected a book to review, clarified key terms, participated in class discussions to critique selective examples of a DSE lens, and, by the fourteenth week of the semester, all had targeted at least one publication venue as a possible dissemination outlet. Our first step was to identify and read two alternative examples of instruction for writing a critical review (e.g., Fulwiler, 1990). We also deconstructed and critiqued Hatcher and McDonald (2011) article on how to write editorials and book reviews. These documents provided a context for collaboratively selecting the critical pedagogy approach. First, it aligned with a disabilities studies in education perspective and the professor's collaborative approach to teaching and learning. Second, the doctoral program at this university aimed to prepare stewards of the discipline and public intellectuals who were capable of critiquing (Golde & Walker, 2006).

We used an iterative cycle to prepare the critical review included submitting drafts of the review to a peer for guided feedback on writing style and cohesiveness as well as the presence (or absence) of key concepts and arguments reflecting a DSE perspective. In addition, the instructor provided substantive written feedback prior to publication of the completed reviews in a Class Big Book of Book Reviews. Because we were co-creating the class and had permission to co-author the critical book reviews, we searched the literature on teaching writing at the graduate level, notably models to explain the collaborative writing process (Isenberg, Jalongo, & Bromley, 1987; Nevin, Thousand, & Villa, 2011; Plakhotnik & Shuck, 2011). Hatcher and Rocco (2011) co-edited a handbook that showcases best practices in preparing graduate students to write for various dissemination venues (e.g., critiques, research publications, and book reviews). We read and analyzed how to create and publish non-refereed manuscripts such as editorials and book reviews (Hatcher & McDonald, 2011).

**Deconstructing/Critiquing publications that used a DSE approach.** The professor, in consultation with participants, used modeling, peer review, and feedback to guide the completion of the critical book reviews. Publications were deconstructed in order to reveal key components of successful critiques using a DSE lens (Cherland 2006; Gabel 2001; Kleege 2009; Newman 2009). For example, in her critical review, University of Regina professor Cherland (2006) offered important insights for teacher educators and K-12 school personnel who wish to decrease the impact of racism in schooling practices. Cherland makes transparent the interplay between race and disability to show how teachers interacted unconsciously bringing such consciousness to awareness serves as a stimulant for those of us who are not accustomed to seeing how our varied cultures shape our lives.

Gabel (2001) is a teacher education professor who interrogates her profession. She raises our awareness of how teacher educators can begin to apply disability studies principles to their work. Reflective practice and the value of reflexivity between personal experience and pedagogy are common research themes. However, teacher candidates often report a lack of encouragement to be reflective of their experiences with disability and the ways those experiences can inform pedagogy. In the article entitled “I wash my face with dirty water”, Gabel reports the results of a year of inquiry involving three novice teachers with disabilities. The impact of their experiences is discussed in light of their developing pedagogical knowledge. For these teachers, teaching is an encounter with the self but their encounters are an untapped resource with rich potential for the construction of pedagogical knowledge. Gabel argues that
teacher educators must facilitate reflection on experiences with disability just as we do with
gender, race/ethnicity, and other identity markers or lived experiences.

Another article provided a model for understanding how the historical context influences
one's life. Kleege (2009) critiqued the Kim Nielsen's biography, Beyond the Miracle Worker:
The Remarkable Story of Anne Sullivan Macy and Her Extraordinary Friendship with Helen
Keller. Kleege (2009) concludes her detailed review,

The book serves as an example to other historians of disability to mine the records of
institutions like Tewksbury for other untold stories of disabled lives. Even while
Sullivan's was a singular life, Nielsen puts it in the context of nineteenth and early
twentieth century American culture, highlighting the intricate interplay between gender,
class and disability that shaped it. (para 15)

A DSE approach to policy is provided by Sarah Newman (2009). She applied a linguistic
analysis to definitions of one disability category which had not yet been defined in the mandates.
Newman examines a recent policy debate by means of a particular rhetorical approach. That
approach, based on the strategic use of word definitions and repetition, is applied to the
deliberative process underlying attempts to provide appropriate special education
accommodations for students with Tourette Syndrome in the U.S. public school system.
Newman applied an explicit model for arguing and advocating with definitions. Along the way,
she examined how an advocacy organization participated in civic deliberations about disability
law in the public schools.

Exchanging roles was another instructional tool utilized by the participants and instructor. During each class (whether face-to-face or in the discussion forum online), the participants
served as leaders and moderators of the discussions along with the professor. This appeared to
help convince us that we could speak the language of DSE. We also maintained a Word Wall, to
keep track of the specific language of a DSE approach. For example, two reviewers challenged
the concepts of ableism and resistance induction.

In addition, the professor and participants practiced a constructivist process in providing
feedback on various drafts of the reviews. We served as coaches to each other and critiqued each
other’s work. We identified and used six tips that helped in giving and receiving feedback
including (a) summarize the author's argument and show integrity by attesting to strengths and
weaknesses, (b) ask questions to clarify positions, (c) reflect on what the authors are trying to say especially if the point is unclear, and (d) make suggestions on how to address the gaps or the
problems that have been identified. We agreed that each author retained “author's privilege” of
following or ignoring the reviewers' feedback.

Results

Results must be cautiously interpreted as generalizations beyond these two particular
groups of doctoral students; however, the findings appear to be robust in that the same pedagogy
was used by 2 different groups of doctoral students. Moreover, several of the critiques from both
groups have been accepted for publication in peer reviewed journals, showing a type of external
validation that the outcomes yielded publishable papers.

The process yielded a total of 14 critical book reviews: 6 in 2010 and 8 in 2009. All
were submitted for publication in a respected journal, carefully selected to influence social
services practitioners to read the book and to appreciate a DSE perspective. To date, four
have been published (e. g., in Issues in Teacher Education, Journal of Educational
Administration, and Disabilities Studies Quarterly).

The content analysis of the critical book reviews revealed that two DSE principles were
used--disability identity and forms of thought/action to nurture deeper awareness among educators about disability rights. An example of the application of disability identity was offered by Hagge (2011), a medical-based speech-language pathologist who works in an urban multicultural area with adults who are recovering from stroke. Her interests are in feminist theory and supporting socially just practices for adults with neurological impairment and their families/partners. In her review of a three-volume collection of essays about Disabilities: Insights from across fields and around the world by Marshall, Kendall, Banks, and Gover, she noted, “A significant limitation to this three volume collection is the predominate voice of the professional. Those individuals and families who are living with disabilities are not represented in this collection” (Hagge, 2011, p. 9).

In her critique, Nishimura (2011) noted that the authors showed a profound empathy with people with disabilities and raise the issue of disability silence. Teachers can address disability silence by showing and discussing documentary films that interpret disability as just another “way of being, not as a deficit, disorder or dysfunction” (Valle & Connor, 2010, p. 21). An example of the application of thought and action to nurture deeper awareness among educators about disability rights can be found in Draxton’s (2011) review, “The content [of the book] … shows the fallacy of subscribing to a medical model to address students’ educational needs” (p. 7).

Moreover, all reviewers used the intellectual tools of posing troubling questions and calling for increased dialogue. For example, Murphy (2011) noted in her review of Deborah Creamer’s Disability and Christian Theology, “The social construction of disability by society and education are tantamount with work in disability studies. Yet, the intersection of disability and theology is missing in current scholarship” (p. 11). New questions were posed as well as a call for increased dialogue. A third theme referred to disrupting the ideas that underlie current educational practices that result in labeling and segregation of those with disabilities. Taniform (2011) critiqued Disability and International Development by MacLachlan and Swartz. He noted, “Problems faced by people with disabilities in developing nations have traditionally been ignored in plans for economic development and empowerment. This much-needed book fills that void” (p. 24). Radley (2011) critiqued Susan Schweik’s The Ugly Laws, noting “This book leaves no stone unturned and looks at every avenue that may perpetuate the cycle of the ideologies that promote and maintain segregation of those who are different” (p. 22).

**Discussion**

Freire’s ideas helped authors to study texts within a critical approach. By studying what other people have written, we could enter other people’s worlds. As Freire (1985) notes, “Reading the word enables us to read a previous reading of the world” (p. 18). This world may no longer be pertinent, but the word has captured it for us to read within the context of our world. Beth Ferri’s (2006) concept of “teaching to trouble” helped us formulate our approaches to using a DSE lens to conduct the book reviews. Ferri (2006), a teacher educator at Syracuse University, explains that she purposefully troubles her students so as to challenge their prevailing unconscious assumptions about disability. Her purpose is to show them that the notions of ability and disability are constructed. In her words, Dislodging dominant paradigms requires a critical rethinking of foundational assumptions. For example, any advocates of disability studies in education, myself included, identify as being pro-inclusion. Yet, because even in inclusive models the dominant group retains the power to include or exclude, inclusion in and of itself does not automatically dislodge the privilege maintained by the dominant
Other Insights

Other insights occurred in the process of learning a DSE approach in order to apply it to the critical book reviews. During class discussions, both in face-to-face sessions and online discourse, all participants raised the issue of how to apply a DSE perspective to their work as advocates in their professional roles. Several participants addressed this directly in the critical book reviews by choosing books related to policy. Others shared dilemmas they were facing in their respective professional practice. In summary, all participants were able to show they had gained new insights for how a DSE perspective might be applied in their roles as researchers, practitioners, and advocates. Based on our experiences, we believe that teacher education professors at all levels (preservice, graduate, and doctoral studies) can easily and beneficially incorporate the development of critical review skills by assigning similar tasks in their teacher education courses. In both groups, we analyzed (interactively through face-to-face and online dialogue) who is and is not allowed access to resources and opportunities, and how access is allowed or denied.

Contributions of the Study

Gabel (2001) uses the phrase “encounters with the self” to describe the internal dialogue that can arise when reading with a critical consciousness. This stance required us to interrogate the status quo rather than taking it as given. We began to “complicate our ideas about disability” (Gabel, 2001) as well as our own professions. We learned to ask, “Who is the author and why is the author writing ‘this’ book? Who is the publisher? Who benefits from these perspectives?” As we probed our own foundational beliefs in order to critique the authors and content of the books, we experienced cognitive dissonance, confusion, and uncomfortable feelings about our own foundational knowledge bases. Freire (1970/1990) insisted that dialogical encounters can lead to a critical consciousness of social, political, and economic contradictions so that new actions may be taken against them. This process (known as conscientization in Freire’s terms) is an important skill for 21st century educators (all educators) who must teach in today’s diverse classrooms.

Even though we might resonate with the anguish that our educational system perpetuates through sorting, labeling, segregating those who are different, we may prefer to avoid a deeper examination because it highlights the more profound alienation of our general educational and special educational practices. We argue that teacher educators can guide their teacher candidates to challenge prevailing paradigms, policies, and practices that lead to presumptions of failure. Educators who are empowered to this challenge are more likely to advocate for changes that result in correcting socially unjust practices and policies. The authors of the books we reviewed agreed on the power of engaging in dialogue to facilitate the conversations out of which participants acquire more language to name themselves and their experiences.

Conclusion

The process of critiquing others' views and probing our own views, we began to change. Freire (1985) writes, “Only when the people of a dependent society break out of the culture of silences and with their right to speak —only, that is when radical structural changes transform the dependent society— can such a society as a whole cease to be silent toward the director society” (p. 73). We suggest that this is what it means to practice a liberating pedagogy. The processes we followed in writing book reviews using a DSE perspective helped us each to achieve that kind of liberating pedagogy.

References


**Appendix**

**List of Books Reviewed with a Critical DSE Lens**

**Fall 2010 Book Selections**


**Fall 2009 Book Selection**


Do Syllable Count and Word Frequency Differ Significantly in Easy and Difficult Reading Comprehension Items?

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Abstract: This study investigated the effect of the number of syllables and the word frequency of the words in the reading passages, the question stems, and the answer options of easy and difficult reading comprehension items. Significant differences were found for the easy and difficult items.

The purpose of this study was to determine whether the number of syllables and the word frequency of the words in the reading passages (texts), the question stems, and the answer options in a reading comprehension test were significantly different for easy and difficult reading comprehension items for English language learners (ELLs). This research investigates two factors that may influence an ELL’s reading processing that occurs in working memory. “Working memory refers to the information that is activated, or given mental stimulation, for immediate storage and processing” (Grabe & Stoller, 2002, p. 18).

Humans have a limited capacity for language and speech processing. “Humans are designed to process material one element at a time (think of the linear aspect of language, for example, we hear and process one sound, one word, at a time)” (Sobel, 2001, p. 48). Our limited information processing capacity may be due to working memory. The working memory can process only five to nine pieces of information at any given moment (Miller, 1956). More recent research indicates that the number may be nearer to three or four (Feldon, 2010). The working memory organizes and processes incoming information and interacts with knowledge in the long-term memory. Given the working memory’s maximum capacity of nine pieces of information (perhaps, an over estimation), it is limited to processing no more than two or three relationships at once (Novak & Canas, 2008). Crain and Shankweiler (1988) showed that sentence length is a surrogate measure of structural complexity demands on the working memory. A reader’s limited capacity for language processing suggests that the more words a reader must process during a timed test of reading comprehension, the more a reader’s cognitive capacity might constrain comprehension, and hence some test items might be difficult as a result.

For over three decades, the top-down and the bottom-up theories of reading have dominated research and the didactic literature. According to the bottom-up proponents, “reading is about processing letters and words” (Pressley, 1998, p. 52). Readers are presumed to process letters and words systematically and thoroughly (Gough, 1972). The more letters and words to be processed, the more time a reader must spend on the reading task.

In marked contrast to the bottom-up proponents, the top-down theorists believe that “based on world knowledge, people have hypotheses about what the text is going to say, and this prior knowledge goes far in explaining comprehension” (Pressley, 1998, p. 53). A single text can have different meanings for different readers because meaning is the end product of three inputs: the author’s words and text, and the reader’s prior knowledge (Beach & Hynds, 1991). Grabe and Stoller (2002), Herrera, Perez, and Escamilla (2010), and Lems, Miller, and Soro (2010) provide further explication of the top-down, bottom-up, and integrated models of reading comprehension and their relationship to teaching reading to ELLs.

Perkins, K. (2001). Do syllable count and word frequency differ significantly in easy and difficult reading comprehension items? In M. S. Plakhotnik, S. M. Nielsen, & D. M. Pane (Eds.), Proceedings of the Tenth Annual College of Education & GSN Research Conference (pp. 177-182). Miami: Florida International University. http://coeweb.fiu.edu/research_conference/
Many top-down theorists eschew a reader’s systematic processing of letters and words, claiming that readers only engage in bottom-up processing, if and when they experience difficulty in meaning-making with the text. The results from the eye-movement research paradigm suggest otherwise. For example, Perfetti (1985) and Stanovich (1980) reported that even skilled readers use orthographic information to identify words. Readers sample nearly seventy-five percent of the content words and approximately fifty percent of the function words in a text. Treiman (2001) claimed that even skilled readers fixate on a majority of a text’s words because we humans have a fairly small span of useful vision—an anatomical feature that results in a limited amount of data for processing by the working memory. The research reviewed here suggests that skilled and less-skilled readers sample a substantial number of words in a text, a question stem, and a list of answer options. A larger number of words then could well constrain comprehension and result in difficult items.

The frequency with which the words in a text, a question stem, and a list of answer options occur in written and oral communication in the target language could also have an effect on the reading processing that goes on in an ELL’s working memory during the reading comprehension process. Stenner, Burdick, Sanford, and Burdick (2006) proposed the concept of exposure theory to explain the effect that word frequency has on the development of a reader’s receptive vocabulary. The basic idea is that the more frequently a word appears in written and oral communication, the higher the probability that such a word will become a member of a reader’s receptive vocabulary.

By extension, it would seem to follow that if readers have an extensive, receptive vocabulary, and that if the words they process in a reading comprehension test are frequent and familiar, then the readers should have faster access to these words, resulting in more efficient processing of the incoming data. Words that readers don’t know because these words have been encountered less frequently and have not been added to the receptive vocabulary could prove problematic and tax the comprehension process. For many generations, reading teachers have encouraged their students to guess a word’s meaning from its context, but, as Treiman (2001) has noted, many words are only minimally predictable from context, if at all.

Based on the preceding review of the literature, I developed four research hypotheses: (a) The number of syllables in the reading passages (texts), the question stems, and the answer options would be significantly different for the easy and the difficult reading comprehension items. For this research, the number of syllables to be processed during reading comprehension is assumed to be a proxy measure of a reader’s information processing load. (b) The higher number of syllables should be associated with the difficult items. (c) The word frequency of the words in the reading passages (texts), the question stems, and the answer options would be significantly different for the easy and the difficult items. (d) The higher frequency words should be associated with the easy items.

The four research hypotheses derive from the following purported if-then conditions. If the number of syllables to be processed and the number of low frequency words not found in a reader’s receptive vocabulary pose an overload to the reader’s working memory, then the working memory may lose information to be processed, and reading comprehension fails, or is severely compromised.

Method

Data

The data analyzed for the present study were the scored item responses in the reading comprehension section of a Test of English as a Foreign Language (TOEFL) test form, which
was used in an institutional administration at a rural university in the Midwestern U.S. The 202 examinees averaged 456.99 (s=59.51) on the overall TOEFL. Twenty-five native languages were represented in the subject pool. The examinees comprised a cohort of international students who were enrolled in an intensive English language institute. The examinees planned to enroll in American universities after having attained the requisite acquired English proficiency for admission to full-time university study. This university setting was chosen because over 200 ELLs representing over 20 native languages were available for data collection. The reading comprehension section contained five reading passages, which ranged from 205 to 339 words in length, and the number of questions per passage ranged from five to eight.

Analyses

I converted the raw score summaries to their natural logarithms in order to produce perfect interval linear measures. The natural logarithms of the person and item success-to-failure ratios are necessary to represent the relative distances between raw scores. For example, the measure distance between the scores of 88 percent correct and 98 percent correct is 4.75 times greater than the distance between the scores of 45 percent correct and 55 percent correct.

For this study, an easy item was defined as having a positive natural log and appearing above the midpoint (0.0) of the person ability and item difficulty interval scale. A difficult item was defined as having a negative natural log and appearing below the midpoint of the person ability and item difficulty interval scale.

The frequency of each word in the reading passages (the texts), the question stems, and the answer options was obtained from the Carroll, Davies, and Richman (1971) frequency list. The Carroll et al. study determined the frequency with which words occurred (more appropriately, re-occurred) in a five million-word corpus of running text. For each of the three sections of the test (reading passages, question stems, and the answer options), the word frequencies were summed, and the natural log of that sum was entered into the analyses.

The Mann-Whitney U test was utilized to analyze the data because neither the homogeneity of the variance nor the normality of distribution could be guaranteed for the parametric family of statistical procedures. A large number of tie scores was encountered while calculating the Mann-Whitney U statistics; therefore, the normal approximation with tie correction was employed. The calculation of the statistic with tie correction produces a z score.

Results

Table 1 presents the item difficulties and the person abilities for the 29 items and the 202 students who sat for the exam. Table 1 shows that there were ten easy items and six difficult items. The easy items were questions 31, 32, 35, 38, 41, 42, 43, 44, 46, and 49. The difficult items were questions 39, 50, 52, 53, 54, and 59. There were three easy items associated with the first reading passage and no difficult items; the second passage, four easy items and one difficult item; the third passage, two easy items and no difficult items; the fourth passage, one easy item and four difficult items; and the fifth passage, no easy items and two difficult items.

Table 2 presents the results of the statistical tests for the differences in the ranks of the easy and the difficult items. There were significant differences in the ranks of the easy and the difficult items. There were significant differences in the ranks of the easy and the difficult items for the number of syllables in the texts, the question stems, and the answer options. The question stems and the answer options in the difficult items contained more syllables than their counterparts in the easy items, as was predicted. However, the texts associated with the easy items contained more syllables than their counterparts in the difficult items, which was exactly the opposite of what was predicted in the second research hypothesis.
There were significant differences in the ranks of the easy and the difficult items for the word frequencies of the words in the texts and the word frequencies of the words in the answer options, as was predicted. However, the word frequencies of the texts and the answer options were higher for the difficult items, which was the opposite of what was predicted in the second research hypothesis. No significant difference was found in the word frequencies in the question stems for the easy and difficult items.

**Discussion and Conclusion**

The results may lend support to the idea that a syllable count is a measure of processing load for ELL students sitting for the TOEFL reading comprehension test and that significantly more syllables in the question stems and in the answer options may make such items more difficult. The answer options for two questions illustrate the point: the options for one question were four single words, and another question had a complete sentence for each of the four answer options, a total of 70 words.

The fact that the texts associated with the difficult items may be a tempest in a teapot, i.e., not significant in the greater scheme of things for two reasons. First, there was a difference of only 134 words between the longest reading passage and the shortest reading passage. Second, there may be other factors that determine easy and difficult items.

Word frequency may not have the same explanatory power for non-native speakers sitting for a foreign language proficiency test as it does for persons who have native proficiency in the language being tested. Stenner et al.’s (2006) exposure theory is based on the idea that the more occasions a person is exposed to a word, the greater is the likelihood that that word will become part of that person’s receptive vocabulary. But mere exposure to a word does not guarantee its meaningful learning, i.e., that the word or concept to which it refers becomes assimilated into a person’s existing cognitive structures. Cognitive scientists, e.g., Ausubel (1963, 1968), Ausubel et al. (1978), and Novak and Canas (2008), define meaningful learning as the successful assimilation of new concepts and propositions into existing cognitive structures.

Meaningful learning requires three conditions: (a) the material to be learned must be conceptually clear and presented with language and examples relatable to the learner’s prior knowledge; (b) the learner must possess relevant prior knowledge; and (c) the learner must choose to learn meaningfully…Individuals may vary in the quantity and quality of the relevant knowledge they possess, and in the strength of their motivation to seek ways to incorporate new knowledge into relevant knowledge they already possess (Novak & Canas, 2008, pp. 2-3). It may indeed be the case that the students who provided the data for this research had not yet meaningfully learned enough words for word frequency to be a reliable and valid discriminator of easy and difficult reading comprehension items.

The Mann-Whitney U test indicated no significant differences in the ranks of the easy and the difficult items for the word frequencies of the words in the question stems. An examination of the question stems revealed that they comprised sentence completions, direct WH-questions, and embedded WH-questions. In other words, the sentence types (sentence structures), constituent structures, and the slot-and-filler sentence patterns were similar for both the easy and the difficult questions.

The results present one clear finding: the question stems and the answer options in the difficult items contain significantly more syllables than their counterparts in the easy items. These extra syllables constituted an increased load in the test-takers’ information processing, and this is one factor (but not a complete explanation) for the reading items’ difficulty. The remaining results are a mixed grill. The easy items associated with texts that have significantly
more syllables than the texts that are associated with the difficult items. Although the difference was significant, it may not be meaningful because there were no tremendous differences in length for any of the passages. The differences in word frequencies may also be of little relevance because the test-takers may not have meaningfully learned enough words, at the time they sat for the test, for word frequency to be a valid discriminator between easy and difficult items.

By selecting syllable counts and word frequency as the foci for this research, I did not assume that these two variables were the sole determinants of item difficulty. Reading is a multidimensional construct. “Competent reading is an integrative and functional act; that is, it requires successfully combining (integrating) a number of skills for the purpose of accomplishing concrete goals (functions)” (Goldenberg, in press, 2010, pp. 21-22).

References


Table 1

<table>
<thead>
<tr>
<th>The number of persons at a particular person ability level</th>
<th>Natural log</th>
<th>Items at a particular item difficulty level- test item numbers</th>
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<tr>
<td>n = 1</td>
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<td>n = 17</td>
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<td>n = 21</td>
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Table 2

*Differences in the Ranks of Difficult and Easy Items*

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<th>Test statistic</th>
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<th>Mean of the difficult items</th>
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<td>Number of syllables in the text</td>
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<td>Number of syllables in the question stems</td>
<td>$z = -1.04$</td>
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<tr>
<td>Number of syllables in the answer options</td>
<td>$z = -2.07$</td>
<td>16.80</td>
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</tr>
<tr>
<td></td>
<td>$p &lt; .05$</td>
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<tr>
<td>Word frequencies of the texts</td>
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<td>16.55</td>
<td>16.77</td>
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<tr>
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<td>$p &lt; .05$</td>
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<td></td>
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<td>Word frequencies of the question stems</td>
<td>$U = 30$</td>
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<td>n.s.</td>
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<td>Word frequencies of the answer options</td>
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<tr>
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A Geocentric Organizational Culture of a Global Corporation: A Phenomenological Exploration of Employees’ Experiences

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Abstract: The purpose of this phenomenological study was to explore how employees with different national identities experience a geocentric organizational culture of a global corporation. A global corporation values both profitability and social acceptance; its units mutually negotiate governance and represent a highly interdependent network where centers of excellence and high-potential employees are identified regardless of geographic locations (Perlmutter, 1985). These companies try to build geocentric, or “world oriented” (Marquardt, 1999, p. 20), organizational cultures. Such culture “transcends cultural differences and establishes ‘beacons’ – values and attitudes – that are comprehensive and compelling” (Kets de Vries & Florent-Treacy, 2002, p. 299) for all employees, regardless of their national origins. Creating a geocentric organizational culture involves transforming each employee’s mindset, beliefs, and behaviors so that he/she can become “a world citizen in spite of having a national identity” (Marquardt, 1999, p. 47). National identity refers to one’s “self-location in a group and … affect towards others in the group…[such as] feelings of closeness to and pride in one’s country and its symbols” (Citrin, Wong, & Duff, 2001, p. 74). National identity fosters a love for one’s homeland and its people, creates a sense of uniqueness and feeling of belonging, and generates a willingness to act in the interests of the group (Kelman, 2001). National identity cannot simply dissolve or be dropped (Citrin et al., 2001). However, how employees with different national identities experience this geocentric organizational culture remains unknown. A lack of this knowledge is regretful because this knowledge can assist human resource development professionals (HRD) in organizations in building geocentric organizational cultures. The purpose of this phenomenological study was to explore how employees with different national identities experience a geocentric organizational culture of a global corporation.

The Roots of Organizational Culture Research

The concept of organizational culture has been around for only 40 years but became propagated only in the past 25 years (Martin, 2002). The concept was first introduced to the U.S. management literature by Blake and Mouton (1964). In the 1960s, managers were balancing concerns for people, production, and hierarchy. Blake and Mouton (1964) suggested a new meaning of the manager’s task – “developing and maintaining a culture that promotes work” (p. ix). Pettigrew’s (1979) work is considered the first publication on organizational culture in the U.S. academic literature. For Pettigrew, organizational culture embraces such concepts as symbol, language, ideology, belief, ritual, and myth. Organizational culture relates to organizational functioning (e.g., leadership, control, norms, and purpose) and provides a system of meanings that gives people a sense of reality and direction for actions. In 1980s, the phenomenal success of Japanese businesses and the decrease in U.S. production moved researchers to re-examine knowledge on organizational management, which resulted in three bestsellers. In the first bestseller, Ouchi (1981) studied the Japanese approach to business and its
applicability to the U.S. business. Ouchi defined organizational culture as a “set of symbols, ceremonies, and myths that communicate underlying values and beliefs of that organization to its employees” (p. 41). In the second bestseller, Peters and Waterman (1982) researched 62 U.S. businesses to identify characteristics of the best companies. Organizational culture is discussed in two ways: (a) a company itself as a whole and (b) values that are conveyed in stories, slogans, legends, and myths. In the third bestseller, Deal and Kennedy (1982) popularized the term corporate culture. Because culture affects all aspects of an organization, successful corporations carefully “build and nourish” their cultures (Deal & Kennedy, 1982, p. 5) that includes their business environment, values, heroes, rites and rituals, and cultural network. As these three works turned into bestsellers, organizational culture became a frequent headline in popular business literature and a tool for businesses to increase their competitiveness in the global market (Denison, 1990).

A Geocentric Organizational Culture

A geocentric organizational culture is a corporate culture of global corporations. A global corporation is the fourth and the last phase known today in a for-profit company’s global status evolution, which is preceded by domestic, international, and multinational phases. Global companies strive to be both profitable and socially accepted. Perlmutter (1969) borrowed the term symbiosis from biology where it “connotes reciprocal relations between organisms which live in close proximity, of similar and different species. The relationships are mutually advantageous, and essential to survival” (p. 280). Therefore, the global corporation seeks to establish a new, win-win, form of relationships with other entities. The underlying premise is a possibility of finding a balance between making profit and being socially responsible, a niche and cooperation between small and large businesses, and a cautious use of non-renewable and development of renewable resources. The global corporation is characterized by a geocentric organizational culture that “transcends cultural differences and establishes ‘beacons’ – values and attitudes – that are comprehensive and compelling” (Kets de Vries & Florent-Treacy, 2002, p. 299) for all employees, regardless of their national origins or professional experiences.

Marquardt (1999) developed a Global Success Model for HRD professionals to assist organizations to move towards global status. The model incorporates six components: global corporate culture, global people, global strategies, global operations, global structures, and global learning. Global corporate culture integrates five dimensions: global vision, global mindset, global values, global activities, and globe-able heroes. Global vision is “borderless and multicultural” (Marquardt, Berger, & Loan, 2005, p. 148) and refers to a company’s goals and direction. Global mindset is the ability to view across and beyond nation or culture, division or function and to balance local and global. Global values “provide purpose and meaning for what one does” (Marquardt et al., 2005, p. 148) and include such values as global thinking, cultural sensitivity, and empowered global people, among others. Global activities refer to activities and events that help fostering global vision, global mindset, and global values. Globe-able heroes refer to members of global organizations whose qualities are respected by others; organizations also implement activities, such as mentoring, training, and development, to develop future globe-able heroes.

Kets De Vries and Florent-Treacy (2002) collected data from professional consultations, action research projects, and interviews with over 500 executives to identify how leaders create global organizational culture. The results of the study suggest that these leaders understand that all people share a “basic motivational need system” (p. 300) that ensures people’s survival. At an organizational level, two of these needs, attachment/affiliation and exploratory/assertive, become
highly relevant. Attachment/affiliation refers to people’s need of feeling connected or belonging to a group or a community. Exploratory/assertive refers to people’s need to be useful, find meaning, be creative, and experience pleasure. To meet these needs, leaders of global companies try to instill three meta-values: (a) community: the leaders encourage “good-citizenship behavior” (p. 300) by nurturing such behaviors in their employees as support, commitment, and collaboration; (b) pleasure: companies try to create work atmosphere where the employees enjoy working; and (c) meaning: companies send a message to the employees that by working for the company they improve the quality of life of others; therefore, their work has societal value.

Tolbert, McLean, and Myers (2002) proposed a Global Learning Organization model to guide U.S.-based organizations in creating a globally inclusive organizational culture and move towards a geocentric worldview. This globally inclusive organizational culture is characterized by four components: (a) executives responsible for creating the organizational climate; (b) systems and procedures that increase “diversity, creativity, and global thinking” (p. 465); (c) employee promotion and development processes that are consistent with the organization’s global approach; and (d) prioritization and maintenance of cultural awareness.

Mourdoukoutas (1999) discusses such characteristics of a global corporation as vision, competitive strategy, coordination mechanisms, communication channels, and incentive strategies. When discussing a vision of the global organization, he suggests, “the global corporation must develop a system of values that is a common denominator of ethics practiced by its stakeholders, stockholders, managers, workers, and the international and local communities” (p. 49). The author argues for using Aristotelian ethics and values (i.e., wisdom, courage, self-control, and justice) for developing the visions and common values. He contends that Aristotelian ethics have never been a part of any religion and aim at fostering harmony between an individual and his or her social environment.

Method
Phenomenology was used because this study explored the phenomenon of a geocentric organizational culture of employees with different national identities who work for global corporations. Phenomenological research aims at knowing the world in which we live and questioning the way we experience the world (van Manen, 1990).

Sampling Strategies
Participants were selected using convenience, criteria, and snow-ball sampling strategies. Convenience sampling refers to “selecting individuals or groups that happen to be available or are willing to participate at the time” (Onwuegbuzie & Leech, 2007, p. 114). Selecting individuals who worked for corporations that were located in South Florida, where the researcher resided, and had been identified as global in the literature facilitated face-to-face interviews. Criteria sampling refers to selection of individuals that meet a predetermined set of characteristics (Patton, 2002). Participants in this study had to meet the following criteria: (a) work for a global corporation for at least 3 years and (b) come from different national backgrounds. These criteria helped select “information-rich cases” (Patton, 2002, p. 230) to study and understand the phenomenon. Snow-ball sampling strategy, where the participants were asked to recommend their colleagues for the participation in this study (Patton, 2002), helped identify the participants who meet the convenience and criteria sampling strategies.

Participants
The 12 participants in the study included nine men and three women. Their age ranged from under 30 to over 60. Two participants had one bachelor’s degree; seven had one master’s degree; two participants had two master’s degrees, and one participant held a doctorate. Most of
the participants (11) had managerial positions. Their years of employment at their global companies ranged from 3 to 21. The participants were born in different countries and regions, including North America (4), the Caribbean (2), Central and South America (3), Europe (2), and Asia (1). Eleven of the twelve participants attached their national identity to one or more country. Nine participants attached their national identity to their country of birth; one participant attached his national identity to his country of birth, the Dominican Republic, and to the country of residence and work, U.S.; one participant did not attach his national identity to his country of birth, Pakistan, and described himself in terms of the country of residence and work, U.S., and also as Asian American. One participant said that he did not identify himself with any one particular country.

Data Collection and Analysis

To collect data, a semi-structured interview guide was used. Such an interview guide usually serves as a framework that outlines questions to ask and issues to discuss with each interviewee (Patton, 2002). The interview guide included main questions and probes. Once the participants agreed to participate in the study, they were contacted by email to set a mutually convenient time and place for the interview. Interviews were conducted face-to-face in quiet, comfortable, and private locations. Interviews lasted between 45 and 80 minutes.

Data were analyzed inductively, using Moustakas’s (1994) Modification of the Stevick-Colaizzi-Keen Method of Analysis of Phenomenological Data. This method consists of two phases: individual and composite. During the first phase, each individual transcript was analyzed following these steps: (a) each statement was considered in terms of its significance for description of the phenomenon; (b) all relevant statements were identified and recorded; (c) all overlapping and/or repetitive statements were excluded; (d) the remaining statements were considered “meaning units of experience” (Moustakas, 1994, p. 122); (e) these meaning units of experience were related and clustered into themes; and (f) the meaning units of experience and themes were synthesized into a textural description, or what was experienced and illustrated with verbatim excerpts from the transcript. During the second phase, based on the textural descriptions of the transcripts of all participants, a composite textural description was developed and illustrated with verbatim excerpts from the transcripts. This composite textural description documented what participants experienced as a whole. These analyses were performed using Microsoft Excel and Microsoft Word.

How Employees Experienced a Geocentric Organizational Culture

The research question asked how, or in what way, the participants experienced a geocentric organizational culture of a global corporation. The participants in this study experienced a geocentric organizational culture of a global corporation as on in which they felt connected, valued, and growing personally and professionally (see Figure 1).

Connected

In a geocentric organizational culture, the participants felt connected to the companies via business goals of achieving high profits and attracting more customers. For example, Jose said, “the pursuit of a certain number in terms of sales… [is] much of a driving force of what we do” (lines 391-393). Eva observed, “We have this thing, you see behaviors, like, salesman from Brazil who behaves the same as a salesman from China or Russia: everyone needs to reach your numbers, so you gonna be aggressive to get your numbers” (lines 287-290). Erica explained, “We are [a] high tech company, so the whole concept of being able to take the concepts that we are doing and being able to apply them and develop different applications for our customers is really pushing the organizational culture” (lines 238-241).
The participants also felt connected by the companies’ social responsibility that frames how they behave towards their customers, other employees, and the community. “Company have [sic] a set of parameters how we need to behave, you know, that’s our principles” (Jose, lines 265-266). Miguel explained:

We have to do business in a very ethical way and in case you do something wrong, you are directly responsible. You can say, “I work on behalf of this company” “No sir, you are doing this, at the end of the day you are supported by somebody in the company, but the primary responsibility is on yourself”. (lines 400-404)

Both business goals and social responsibility represent the elements of a geocentric organizational culture that help create consensus among employees of a corporation (Martin, 2002; Schein, 1983). These elements guide employee behaviors toward a common goal and outline accepted and expected behaviors (Drennan, 1992), regardless of the geographic location where employees work, the presence or absence of a supervisor or a team, or the nature of a problem that might arise on the job. These elements make employees feel connected to the company.

**Valued**

In the geocentric organizational culture the participants felt valued by the company because the participants’ creativity was welcomed and they could share their creativity with others. Nick talked about creativity in terms of “expertise, the knowledge, the products” (line 240) that he feels that his corporation welcomes from employees all around the world. Erica mentioned how relatively easy it is to pitch ideas: “there wasn’t really many roadblocks, you know, like there often are in a very large company” (lines 384-385). To Bob exchange of ideas and coming to consensus is “a general rule” in his corporation. He explained, “they like to have things discussed, socialized, and agreed on and you know, there is very much a culture ‘I need to get everyone to buy what I am doing’ here” (lines 388-390).

The participants also felt that each of them could contribute to the corporation because they had certain unique knowledge of the culture and language of their native countries that ultimately gave them advantage over other employees. For example, Marie thinks that the fact that she is French and worked for her corporation in France prior to coming to work in the U.S. helps her and her team a lot. She gave an example of a recent project that also involved “the central team that is located in France and it turned out that I knew the key people in this central team in France, so I was able to contact them in France” (line 343-345). Miguel is responsible for eight counties, including Panama. He told a story about how he has to be a chameleon when talking to potential customers in Panama. Miguel knows that Panamanians do not like to be considered Central American, but Miguel’s business card said that he represents the Central American region:

If you talk to a Panamanian, [he/she says] “No, we are not Central American.” [Miguel responds] “Well, can I give you my business card?” and it says “Central America and Caribbean” And they say “Central America and Caribbean, and where is Panama? We are not Central America; we are different.” So you have to be very careful, “I am sorry, I mean, it’s a misunderstanding, everybody says that you are a part of Central America; I know you are not a part of Central America. Sorry about that. It’s industry standards, they have to put it in my business card.” (line 128-143)

Miguel added that knowledge of the region gives him “an advantage” (line 143) because he knows how to sell to different customers and, hence, he feels in his “comfort zone” (line 142).
Creativity and unique contribution due to national identity represent the elements of a geocentric organizational culture that reflect the underlying assumption that ideas ultimately come from employees (Dyer, 1982). In a geocentric culture, people are treated as capable and motivated; they are trusted to find the best solutions and to take care of individual, team, or organizational problems. Relying on new and creative ideas of employees helps global companies feel safe when introducing an innovation and, hence, maintain their competitive advantage. Therefore, these elements foster employee involvement in the organization and make employees feel valued.

**Growing**

In a geocentric organizational culture, the participants felt that they are growing personally and professionally through the professional development opportunities provided by their companies, cross-cultural awareness, and perspective consciousness (Hanvey, 1976). To Jose, providing professional development opportunities is also one of the best attributes of the company:

I am not sure that I can say that this is one of the things that is in the top of the list of the priorities in this company, but it is high up there, and to me personally that’s a great thing to do. I think … that’s something that makes this company a good thing to work, providing good professional development opportunities. (line 311-315)

Amir has been in the corporation for 11 years, and he still thinks that there are plenty of opportunities for professional development:

So it still has a lot of opportunities for growth in different areas, like learning different things. For example, from engineering I can shift to the business side and right now I am in the middle of the two, and also I feel like going into research and development, there are a lot of opportunities there too. (line 87-90)

Edward said that to do the job well, he needs to know how people from different cultures do business: “You learn to understand how people are to understand their request” (line 405).

Haans explained:

If I go to the Bahamas and I want to do business, I will need to adjust to Bahamian style of business. And things in the Bahamas are very slow; it’s an island, very nice, beautiful weather, very nice beaches. But if you go there with Dutch or American or “let’s do business”, you know, “move on” and “push, push, push”, forget about it, they will not close anything. (line 351-355)

Participants discussed how working for a global company resulted in them becoming more aware about themselves in relation to people from other cultures. Eva said that working for her corporation raised her “awareness of how Brazilians behave” (line 309). Working for a corporation that is no longer American made Nick realize that he does not have “any type of authority or the edge or more influence than anybody else” (line 197). He added, “it’s been a wake up call, it’s been very, very healthy” (line 198).

Professional development, cross-cultural awareness, and perspective consciousness represent the elements of a geocentric organizational culture that show an organization’s assumptions about the nature of human character, activity, and diversity (Schein, 1983). In a geocentric culture, people are considered good and active; their work is evolving and intertwined with learning and joy; diversity is the best and only way for organizational survival in the external environment and for internal stability. Therefore, these elements foster employees, regardless of their national, cultural, educational, or professional background, to continuously grow personally and professionally.
Implications for Research

This study included employees of four global companies with headquarters in different parts of the world (U.S., France, Germany, and Japan/Sweden). However, the participants were interviewed while working in the companies’ offices located in only one country – U.S. Organizations, including global companies, are influenced by the local culture (Hofstede et al., 1990). Therefore, similar phenomenological studies may include employees employed by the same four global corporations and be conducted in another country(s) or region(s) of the world. Consequently, the results of these several studies could be compared to examine whether employees’ experiences with a geocentric culture vary depending on the location of their offices. This research might help understanding how a geocentric culture is shaped by national and regional cultures.

The proposed model can also be informed by collecting data from employees with different demographic characteristics. Because this study focused on experiences of employees with different national identities, the researcher had the diversity of national backgrounds as one of the selection criteria. Other demographic characteristics were not a part of the selection criteria. Most of the participants in the study held mid-level management positions. A similar study with participants who have top management positions and/or non-managerial positions might shed a light on whether an employee position in the global organization shapes his/her experiences with the geocentric culture.

The proposed model and the instrument developed and used in this study can also be used to create a survey to aid global companies in examining, building, and sustaining their geocentric cultures. In HRD research, only one other instrument (Marquardt, 1999) has been developed to assess whether a company has reached the global status. The instrument contains only seven questions to examine the culture of the global company. Marquardt’s (1999) instrument was developed based on his research of global companies as a whole; therefore, the proposed model can add the employee perspective on a geocentric culture in the development of a more comprehensive instrument. Such an instrument can also help measure the strength of each component of a geocentric culture and explore cause and effect relations among the components and between the components and other variables, such as, employee organizational identity, job performance, innovation, and creativity.

Implications for Practice

Human resource development professionals are responsible for building, shaping, and enhancing organizational culture by providing organizational development interventions that lead to the optimization of employee potential and improved organizational performance (Gilley, Eggland, & Gilley, 2002). The findings of this study can be useful for HRD professionals to increase the effectiveness of organizational development initiatives related to a geocentric organizational culture. The proposed model and the suggested questions can guide HRD professionals to design organizational development interventions in corporations that are already global and in corporations that are in transition to become global.

The proposed model can also be used in global companies to improve the socialization process for its newcomers. Socialization is a learning or adjustment process during which the newcomer learns certain domains of the organization and during which the organization creates an environment conducive to such learning (Korte, 2009). The effectiveness of the socialization process has been linked to many other factors, including employee job satisfaction, attitude, turnover, or organizational commitment. Therefore, HRD practitioners can use the proposed
model to create processes and procedures that can help newcomers learn a geocentric culture of the global company.

References


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Figure 1. A model of a geocentric organizational culture of a global corporation: An employee perspective.
Caring for the Caregiver: Emotional Challenges of Pediatric Palliative Care Nurses

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Abstract: Pediatric Palliative Care (PPC) nurses provide quality-of-life for critically ill children. This paper looks at how PPC nurses cope with caregiver emotions within the conceptual framework of emotional labor and emotional intelligence.

“Maybe this was just a lesson from life, and by tomorrow, the tumor would miraculously disappear. I could only hope. That night, the doctors sent us home for rest, but after they told us that our daughter had only 135 days to live...” (Desserich, 2009, p.8). This quote is from a parent whose six-year-old daughter was diagnosed with terminal brain cancer. Pediatric nurses have to face patients and families like these on a daily basis. An average of 56,000 children dies every year in the United States (Browning & Solomon, 2005). Pediatric Palliative Care (PPC) nurses provide quality-of-life for critically ill children who have little chance of survival (Liben, Papadatou, & Wolfe, 2007). “Such care includes the family and extends into the domains of physical, psychological, social and spiritual wellbeing” (p.1).

Constant face-to-face contact between nurses and patients obliges nurses to suppress their true emotions. Suppressing emotions is difficult. Hochschild (1983) defines emotional labor as putting on an appropriate face, regardless of actual emotion. Emotional intelligence is described as the ability to recognize and express emotion, “assimilate emotion in thought,” and reflect and regulate emotion in oneself and others (Mayer, Salovey, & Caruso, 2000, p. 396). PPC professionals face constant emotional situations and are at risk for emotional overload (Sandgren, Thulesius, Fridlund, & Petersson, 2006; Zander, Hutton, & King, 2010). Pediatric nurses undergo extensive medical training, but often lack emotional and psychological training (Browning & Solomon, 2005; Papadatou et al., 2002), leading to stress and burnout (Kedem & Bagan, 2005). Emotional psychological education in palliative care is “sporadic and fragmented” (Liben et al., 2007, p. 8). PPC nurses face strong challenges when children suffer, die, and families grieve. This paper looks at how PPC nurses cope with caregiver emotions within the conceptual framework of emotional labor and emotional intelligence.

Emotional Labor: Three Perspectives

There is no established definition of emotional labor, but three main perspectives around the common theme that individuals can adjust emotional expressions in social settings. Hochschild (1983) is perhaps most well known for focusing on the idea of emotional labor with a study showing how airline attendants had to put on a happy face at all times, regardless of true feelings, to fulfill the company's service requirements. Hochschild defines emotional labor as putting on an appropriate face regardless of actual emotion:

This labor requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others—in this case, the sense of being cared for in a convivial and safe place. This kind of labor calls for a coordination of mind and feeling, and it sometimes draws on a source of self that we honor as deep and integral to our individuality. (Hochschild, 1983, p. 7)
The sustenance of the outward face is accomplished through surface-acting; a regulation of observable emotional expressions (Grandy, 2000). Deep acting is "where one consciously modifies feelings in order to express the desired emotion" (p. 96). Hochschild makes evident how the effort of emotion modification, realized or not, creates internal tension.

Ashforth and Humphrey (1993) define emotional labor as the act of displaying appropriate emotional behaviors with the aim of expected task effectiveness. This display hinders a person's sense of authentic self. Although Ashforth and Humphrey agree with the notions of surface acting and deep acting, they disagree with the focus on the emotion regulation for the benefit of the service provider; rather, the focus is on client satisfaction.

The third perspective put forth by Morris and Feldman (1996) delineates four dimensions of emotional labor: (a) occurrence of emotional displays, (b) extent of interaction and duration of intensity of emotions, (c) diversity of emotions required, and (d) emotional dissonance. Emotional dissonance creates a sense of malaise within the individual with a tug-of-war between wanting to express true feelings and needing to display proper sentiments. The extent of interaction based on intensity of emotions parallels Hochschild's surface acting; however, Morris and Feldman go deeper into the negative consequences of the provider's discord between actual emotions and the false display of emotions. The purposeful use of emotional labor serves as a beneficial outlet for the service provider in terms of offering an appropriate atmosphere, yet may also serve as a detriment leading to burn-out and additional stress. The next section links the components of the described emotional labor concepts to PPC nursing.

**Emotional Labor in Relation to PPC Nursing**

Therapeutic relationships between PPC nurses and patients develop through long-term duration of the care process, which involves intense emotions (McQueen, 2004). This relates directly with Morris and Feldman's dimension dependent on duration and intensity of emotions. The emotional bond creates a vast sense of loss when the young patient dies. PPC nurses expectedly experience emotions of anger, sadness, anxiety, and helplessness (Morgan, 2009). Not only do PPC nurses have to deal with their own emotions, but they are often the target of frustration and anger from the patients and their families. In a study of Greek nurses who cared for children dying of cancer, nurses grieved with greater frequency than physicians over the loss of the special relationship they had developed with the patient (Papadatou et al., 2002).

Emotional labor, from all three perspectives, allows PPC nurses to put on an appropriate face through surface acting when dealing with the difficult and traumatic situations when caring for dying children and their families. "A dead child and you are alone—unable to talk about it, not even to say a word to some other person" (Papadatou et al., 2002, p. 8). This is a quote from a 33-year-old female PPC nurse expressing her frustration. Nurses are expected to remain strong when faced with suffering and death (Liben et al., 2007). Nurses can be described as "emotional jugglers who are able to match face with situation but not necessarily with feeling" (Bolton, 2001, p. 86). Ashforth and Humphrey would argue that the goal is to reinforce the service outcome, in this case, to provide a sanctuary for the sick, not to provide the nurse with a tool for self-purpose.

Additionally, the frequency of interaction and intensity of emotions plays a unique role with PPC nurses. Critical patient care is constant and intense when every patient's outcome is usually extreme suffering and death. Working under such stressful circumstances requires that nurses give of themselves, which can have personal costs (Swanson, 1993; Watson, 1990). "The more emotionally demanding the circumstances, whether due to intensity, acuity or length of contact time, the more important it is to learn to balance the two- engagement and detachment"
(Henderson, 2001, p. 133). It is precisely this strain between engagement and emotional disconnect that defines emotional dissonance.

Emotional dissonance resonates strongly in PPC nursing. Traditional nursing programs promote the concealment of true emotions to maintain a professional stance (McQueen, 2004). In a study by Henderson (2001), nurses expressed deep concern about the emotional engagement versus detachment as a component to meeting the expected organizational objectives:

An approach of detached concern forces health professionals into a paradoxical bind; on one hand, they are expected to show concern by becoming emotionally involved, and, on the other hand, they are expected to maintain intellectual distance in order to preserve their objectivity. They are consequently taught to dissociate their emotion from their thinking. (Papadatou, 1997, p. 58)

As a result, the stressful environment and internal dilemma can lead to emotional exhaustion for nurses (Kedem & Bagan, 2005; Sandgren, Thulesius, Fridlund, & Peterson, 2006). Institutions reinforce nurse alienation by discouraging any expression of grief (Liben et al., 2007). Stress and tension from continuously concealing true feelings of distress can lead PPC nurses to emotion overload and eventually to burnout.

Burnout is a term created by Freudenberger (1977) to describe physical and psychological distress. PPC nurses can experience burnout, grief, and overall stress due to constantly concealing their emotions. Nursing is considered one of the high-risk professions with respect to burnout because of the continuous exposure to patients in need as well as their family. Grief is defined as a “process that comprises a person’s grief responses and coping strategies in his or her attempt to adjust to an experience that is perceived as a loss and accommodate it into one’s life” (Papadatou et al., 2002, p. 2). A study of a neonatal intensive care unit showed only 4 out of 12 nurses remained in place due to burn-out (Morgan, 2009). Clinical findings in a study of Greek PPC nurses suggest that in order to cope effectively with the death of young patients, nurses need to go through a grieving process taking into account the "fluctuations between experiencing and avoiding grief" (Papadatou et al., 2002, p. 11). PPC nurses have to alleviate anxiety and suffering of patients and patients’ families, in addition to easing their own feelings of grief.

While the benefit of using emotional labor is evident in helping nurses provide personal and warm environment to patients despite the nurses' state of mind, it is important to recognize the detriment of the status quo. Nurses need to be able to explore their feelings and have an emotional outlet to share and work through those feelings (Papadatou et al., 2002). The purpose of emotional labor is to promote the feelings of being cared about in others, but who cares about the caregiver?

**Three Models of Emotional Intelligence**

Currently there are three major models of emotional intelligence: (a) the Mayer-Salovey model which defines EI as the ability to perceive, understand, manage, and use emotions to facilitate thinking (Mayer, Salovey, & Caruso, 2000); (b) the Goleman model based on five areas such as knowing one’s emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships an array of emotional and social competencies that contribute to managerial performance (Goleman, 1995); and (c) the Bar-On model which describes emotional intelligence as a cross-section of interconnected emotional and social competencies, skills, and facilitators that impact intelligent behavior (Bar-On, 2006).

Mayer and colleagues (2000) classify emotional abilities into four categories. The first category represents perception and expression of emotion, where one identifies and expresses...
self-emotions and the emotions of others. The second classification entails recognition and assimilation of patterns of emotions. The third area pairs emotions with actions. Anger and frustration come about because of injustice or unfairness. "Emotional intelligence involves the ability to recognize emotions, to know how they unfold, and to reason about them accordingly" (p. 400). The final and most complex grouping involves self-reflection and regulation of emotions. It is in this final area, where emotions are dissected, analyzed, and regulated, permitting closure and emotional growth. The Bar-On and Goleman models not only incorporate abilities as classifications, but also add non-ability traits, such as "personal independence, self-regard, and mood" (p. 402), making these mixed models of emotional intelligence.

In contrast to the interpersonal aspect of emotional labor, emotional intelligence depends on the intrapersonal ability to effectively understand and articulate true emotions. Emotional intelligence means to effectively manage personal and social change by rationally coping with circumstances. To be emotionally and socially intelligent is to effectively understand and express true emotions, to understand and relate well with others, and to successfully cope with daily demands, challenges and pressures (Bar-On, 2006). This presents the rationale for emotional intelligence to play a significant role in PPC nursing.

**Rationale for Emotional Intelligence in PPC Nursing**

Although emotional intelligence has been emerging in psychology literature for more than 15 years, its application to the nursing profession is more recent (Akerjordet & Severinson, 2007; Smith, Profetto-McGrath, & Cummings, 2009). In addition to technical health skills, a central element in nursing is caring (Swanson, 1993; Watson, 1990). However, caring is twofold. In nursing, caring for someone is generally associated with physical tasks, but in pediatric palliative care, nurses care for and about their patients (McQueen, 2004). An education that disregards the value and development of emotions is one that "denies the very heart of the art of nursing practice" (Freshwater & Stickley, 2003, p. 93). Emotional intelligence allows nurses to acknowledge their emotions, rather than suppress their emotions (McQueen, 2004).

"There is a call within nursing scholarship to explore the influence of emotion within caring relationships, health and healing, and organizational contexts” (Smith et al., 2009, p. 1624). PPC nurses must respond not only to patient emotions on a daily basis, but also to self-emotions, a task that is customarily overlooked. Smith et al., (2009) affirm the importance of using and supporting emotional intelligence skills related to stress in nursing to improve future retention rates. Nurses use emotional labor as a bookshelf to shelve emotions, but need to engage in emotional intelligence to process the shelved emotions for personal resolve.

This section shows how the use of emotional labor is an explicit tool for self-protection and how emotional intelligence could be useful in ameliorating the backside of those stored emotions, using two specific examples found in the literature. Clarke and Quin's (2007) study on the emotional cost of providing palliative care identifies a nurse’s expression:

With muscular dystrophy you might know the child for 16 or more years, so there is a lot of closeness there, so that's very distressing. I think the relationship is built up . . . then when the child has died and the family is not sure "can I stay in contact?" The parents always want to come back, they need that. (p. 1227)

In line with the fourth dimension of Morris and Feldman’s model of emotional labor, the duration of the intensity of the relationship plays a significant part in this instance. The nurses have shelved emotions throughout the long caring process. The family moved on to grieve with support from the nurses, yet “negotiating these endings was also important to the caring professionals” (Clarke & Quin, 2007, p. 1227). Instead of a dead end to pent-up feelings,
emotional intelligence models permit the nurses to become aware of these emotions through a process of self-reflection. Although “understanding and labeling feelings does not diminish their intensity” (Papadatou, 1997, p. 588) it does help prevent burn-out by airing out and working through emotions. Morgan (2009) reports a story from a pediatric oncology nurse. The nurse had been taking care of a 10-year-old girl and was informed one afternoon that the child’s cancer was out of remission and she was going to die:

The nurse recalled the little girl screaming and repeatedly saying that she was not going to die. The nurse stood silently almost in shock from the news and fear for the child. She did not know what to say. She just held the child’s hand and silently said a prayer.

(Morgan, 2009, p. 88)

Morgan points out the heavy emotional burden this nurse faced. In terms of emotional labor, the nurse remains silent and stoic in front of the dying child, yet is experiencing extreme sadness and distress. Mayer and colleagues’ (2000) model of emotional intelligence describes this as the third stage of emotional intelligence, pairing emotion with reaction. A step further in the model would be to analyze and break apart the emotions to permit closure.

**Implications**

PPC nursing programs would benefit from implementing training and education components that include both emotional labor and emotional intelligence as tools allowing nurses to be prepared to face demanding emotional work. Emotional labor provides nurses with an immediate outlet to put on an appropriate face in front of dying patients and their families and to ensure a safe and caring environment. In this sense, emotional labor is a tool for explicit support of PPC nurses. Emotional intelligence is a tool for implicit support of nurses that provides a method for validating and working through their own feelings of stress, grief, and sadness. PPC training should not be aimed solely to knowledge and skill, but also to the emotional support that will prevent burn-out and grief (Liben et al., 2007). Training may not reduce the intensity of emotions when dealing with death or suffering, but it can help nurses fluctuate their feelings by experiencing grief and preventing burn-out (Liben et al., 2007).

We propose a model shown in Figure 1 of continual interaction, not necessarily linear or circular, but integrative and situational. The external facet entails the nurse using emotional labor in a specific situation to benefit the patient. The internal facet includes the integration of all components in the model. Although the external and internal dimensions can be simply labeled and recognized, the complexity lies in the phases or instances of the interaction of the four components. Emotions can lead to the use of emotional labor and emotional intelligence in order to validate the nurses’ emotions. However, it can also be that through use of emotional labor, nurses are forced to suppress their emotions. The sheer recognition of needing to suppress emotions indicates nurses’ use of emotional intelligence to cope with the situation. There is no starting or end point in this model. The presence of emotional intelligence is essential to counterbalance the stress of emotional dissonance brought on by emotional labor.

Increased awareness and management of emotions within the realm of PPC nursing can lead to less stress and burn-out. Establishing a structured link between emotional labor and emotional intelligence may contribute to a better handling of stress, sadness, and grief by providing useful coping strategies. Emotional balance is beneficial to the nurses, patients, and employers. As important as it is for nurses to provide the right face at the right time, it is equally as important for them to have a means to work through their true feelings of distress. Further studies on the effectiveness of emotional labor and emotional intelligence, specifically of PPC nurses, are needed to explore how best to care for the caregiver.
Figure 1. Proposed model of interaction of emotional labor and emotional intelligence.

References


Scottsdale Community College Provides their Students Open Access with End-to-End Virtualization

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Abstract: Due to shrinking budgets and new demands for technology, Scottsdale Community College (SCC) IT department needed an effective, sustainable solution that would provide ubiquitous access to technology for students, faculty, and staff, both on- and off-campus. This paper explores how SCC implemented a complete virtualized computing environment.

Scottsdale Community College (SCC) is located on the eastern boundary of the city of Scottsdale, Arizona, on 160 acres of leased land, belonging to the Salt River Pima-Maricopa Indian Community. SCC is a two-year institution with 800 staff and about 12,000 students. It is the only public community college in the nation on Native American Land (About Scottsdale, 2010). SCC is one of the ten community colleges that make up the Maricopa County Community College District (MCCCD). With a shrinking budget and new demands for technology, the IT department needed a solution that was cost effective, sustainable, and provided ubiquitous access to technology for students, faculty, and staff, both on- and off-campus. The solution also needed to work with the existing infrastructure and provide a complete end-to-end solution. This paper documents how Dustin Fennell, SCC Vice President and CIO, implemented an end-to-end virtualized computing environment, which met all of these requirements and provided additional advantages to the institution.

Theoretical Framework

The refresh cycle both replaces technology, including outdated computers, with newer models and varies by institution. According to the 2010 Campus Computing Survey, of the 121 community college responders, 19% have a 5-year cycle, 52.1% have a 4-year cycle, 25.6% have a 3-year cycle, and 3.3% have a 2-year cycle (Green, 2010). In addition, students come to the college with many types of personal devices including laptops, personal digital assistants, smart phones, and tablets, or connect from home with a variety of personal desktop computers to the institution’s network. Colleges are confronted with varying types of students, those who are younger and more technologically driven, and those who are older and more career driven (Fullan & Scott, 2009). As part of the master plan at SCC, CIO Dustin Fennell decided to look at a different approach when it was time to replace the college’s computers.

Several reasons prompted a look at the way technology and computers were replaced. Like most states, during these tough economic times, Arizona is in extreme economic crisis. State funding for the MCCCD has decreased. As a result, SCC has experienced a 3% budget decrease since 2008, and all indications point to additional budget reductions at the college-level as state funding decreases even more. In addition, the District’s Governing Board has been reluctant to increase tuition or levy property tax increases. At the same time, Maricopa has experienced significant increases in enrollment. This increased enrollment is causing the college to serve more students with the only increase in budget coming from additional tuition (which does not cover the entire student cost).

In addition, there was a need to meet the current and future technological demands of the institution and its students. In order to provide up to date educational content, there was also the need to upgrade not only the computers but also the software. Both of these had to be done with an increasingly dwindling budget. “Continuous spending on refreshing hardware left little budget to acquire advanced technology or to purchase new educational software” (Fennell, personal communication, June 4th, 2010).

Further, SCC needed a way to strengthen its market advantage in an area with fierce competition for students from more than 15 other colleges and universities, many of which were much larger and perceived as offering more technology to their students. In addition, SCC has a strategic mandate to provide pervasive technology services to the local community, particularly to low-income residents and non-traditional students. “We wanted the IT resources to be more widely available and affordable to all students” (Fennell, personal communication, June 4th, 2010). Students were struggling to afford software required for their courses, or a particular type of computer needed to run the software. As a result, students were using student versions or trial versions of the software, which may not be fully functional or last for the entire duration of the course. Students were forced to come to campus to use one of the college PCs if their personal computer did not have the software. Having to come to the campus to use a college-owned computer is inconvenient for students, especially for those who live far away or have no transportation. Moreover, it hampers SCC’s efforts to “expand enrollment with non-traditional learners, such as working adults and people who wanted to take online courses” (Fennell, personal communication, June 4th, 2010).

Desktop virtualization, as a concept, uses software to abstract the operating system, applications, and data from the user’s physical machine (Brodkin, 2009). In this model, the virtualized desktop is stored on a remote central server in the data center. When the desktop is accessed by the end-user, it is either streamed to the end-user’s device to run locally (client-side), or the end-user is presented with a view of the desktop as it runs remotely in the data center (server-hosted). In essence, desktop virtualization centralizes the desktop management lifecycle and delivers virtual desktops as a service to the end-user. This allows users to access a desktop on any capable device, such as a traditional personal computer, notebook computer, smart phone, tablet, or thin client device connecting over the Internet or a network. For a good end-user experience, as little as 128kbs bandwidth is sufficient, though at least 256kbs is recommended (Seay & Tucker, 2010). With desktop virtualization, users are no longer tied to a particular locale or limited by a particular workstation environment, and organizations are no longer limited to applications that use platforms commensurate with the expertise of their IT-support staffs (Seay & Tucker, 2010).

Methods

Information on how SCC was successful in implementing an effective end-to-end computing environment was discovered through a process of reviewing case studies, recorded webinars, review of the literature, and personal communication with Fennell. Familiar with virtualization, Fennell decided to implement a Web portal using the Citrix Delivery Center portfolio of virtualization products partnering with Thin Client Computing (TCC). Working with TCC, a Platinum Citrix Solution Integrator, the institution created the MySCC solution, a portal that provides a single point of access and connectivity to over two hundred applications and desktops, as well as personal data and network resources.

The MySCC portal solution, located at www.scottsdalecc.edu/myscc, was implemented in two phases. First, Citrix XenApp Platinum Edition was rolled out for virtualized delivery of
many different applications, including Microsoft Office Suite, specialized math tutoring programs, Microsoft Visual Studio, and many other typical business and educational software applications. To this day, software application offerings continue to grow in response to requests from faculty, staff, and students.

Second, SCC implemented Citrix XenDesktop Advanced Edition to deliver two specialized Windows XP virtual desktops: one delivers AutoCAD, AutoDesk Revit, and Google SketchUp software and is available to approximately 100 interior design and AutoCAD program students; the other specialized desktop delivers Adobe Creative Suite to SCC’s Business Institute students as well as any other students and staff who need it (Citrix, 2009). Today, the mySCC solution supports Windows, Linux, Mac OSX, iPad, iPod Touch, iPhone, Windows Mobile, Blackberry, and Android-based devices. Virtualization enables the implementation of platform-independent solutions (Bleicher, 2007; Hutt, Stuart, Suchy, & Westbrook, 2009; Seay, & Tucker, 2010). Once the end-user logs into the virtual environment, they will have access to applications, desktops, mapped drives, personal files, and network resources. This allows for simplicity in access and a consistent user experience.

SCC continues to expand the way they leverage virtualization technologies. Fennell states that the mySCC solution continues to evolve as the technologies mature and the college IT staff learn how they can best leverage various strategies to improve services and increase access. Fennell goes on to state that one of the reasons SCC has been so successful in implementing a complete end-to-end virtual computing environment is because they took the time to implement the various technologies one layer at a time. This has ensured the solution, as a whole, remains high-performing, stable, and gives the end-user an exceptional experience. Fennell goes on to state that the most important strategy in implementing a successful virtual computing environment is to allow the end-user experience to drive all decisions.

Results

The mySCC portal is expanding and simplifying information delivery for faculty, staff, students, and the community as a whole. From vision to implementation, the solution took six months to implement. Currently, SCC has been contacted by over 100 institutions of higher education across the nation that want to implement a similar solution. Moreover, during the Spring 2010 semester, SCC completed a proof of concept where they extended the mySCC solution to three other MCCCD colleges. The proof of concept project was a huge success, showing the solution to be highly scalable. With mySCC, students no longer have to purchase software licenses (Burd, Seazzu, & Conway, 2009) or a specific brand or model of computer for coursework because the latest software is made available to them via the portal—either at the college or from home. Fennell states, “With mySCC, students are no longer required to make educational decisions based on the software they can afford or the age of their computer” (Fennell, personal communication, June 4th, 2010). The mySCC system supports virtually any computing device that can connect to the Internet.

Fennell states that the mySCC solution provides organizational, financial, and IT Department benefits to the college. Organizational benefits include providing the college with a competitive advantage; a controlled and secure un-tethered delivery of computing resources; increased availability, stability, and performance of computing resources; easy access to complex and resource intensive applications; and a superior end-user experience. Financial benefits include providing a cost-effective and sustainable solution to the technology refresh challenge; reducing technology related costs by $250,000 per year; reducing the number of IT staff required to support and expand IT services; reducing hardware and software costs by pooling resources;
extending the life of current hardware resources; and lowering the overall total cost of ownership (TCO) of providing IT services. IT Department benefits include increased availability and performance of IT services; rapid application deployment is a reality; simplified IT procedures for delivering applications to end-users through a centrally managed solution that does not require manual desktop device installation and support; reduced IT hours required to manage desktops and applications; secure access for authorized users via the Internet; enabling IT to do more with less.

The mySCC virtualization solution has simplified administration, enhanced data security (Kroeker, 2009) and kept staff needs to a minimum. Previously, the IT department had to maintain three different versions of AutoCAD on the campus PCs because the software is expensive, and some students had older versions. Delivering AutoCAD over XenDesktop means that the most current version is available to everyone over the network or the Internet and that administration is performed virtually in the data center instead of on the end devices.

The physical servers were consolidated by XenServer, which has enabled SCC to reduce server administration tasks and energy costs. Energy savings by using virtual servers can be upwards of 85% (Creager, 2008; Kroeker, 2009; Seay & Tucker, 2010). Moreover, provisioning services, which allows multiple servers and desktops to boot up and run from central golden images, significantly reduces storage space requirements. In SCC’s environment, provisioning services reduces the required storage space by over three terabytes. Provisioning services reduces administrative costs because only the golden images need to be updated during the patch-update cycle (Creager, 2008). Centralized management of the servers, desktops, and applications allows the college to use existing IT staff to support strategic needs and other areas of the institution.

**Discussion**

In his position as CIO, Fennell considered the needs of the institution during implementation of the virtualization solution by aligning with the organization’s strategic goals and objectives. Two key factors that were important in the successful implementation of the mySCC solution included the development and communication of the vision and buy-in of the vision from the stakeholders. According to Fennell, “you have to become an enabler of change” (Fennell, personal communication, June 4th, 2010). The most important factor is achieving buy-in from stakeholders. Once stakeholders got involved, implementation moved according to plan.

There was a strategic business need to increase access to technology in the institution to students, faculty, and staff. The greatest value in virtualization occurs when an entire institution, across functional units and academic disciplines, uses it to seamlessly access computing resources (Seay & Tucker, 2010). There was also a need to replace and update technology. An increase in student diversity and the need to increase market share were additional motivators to the implementation. Using virtualization, all students in a course use the same resources (Burd, Seazzu, & Conway, 2009), ensuring a consistent learning environment; students no longer have to worry about having the right software or equipment to take a course. According to Fennell, adjunct faculty who teach applications online are very pleased knowing that all students have access to the same version of software without additional cost (Fennell, personal communication, June 4th, 2010). Also, faculty can download project files and assignments into a class shared folder on the network that all the students can access (Burd, Seazzu, & Conway, 2009).

Web-based access is significantly increasing student success rates, particularly low-income students, who previously had many challenges to pursuing a college degree (Seay & Tucker, 2010). MySCC provides web-based access with no need to make an additional
investment in software or hardware. Students have access to all the software they need, regardless of their financial situation, and can progress toward their degree without having to worry about that additional hurdle. All of the on-campus computers have the software clients need to access mySCC. To use mySCC off-campus, students need to perform a one-time installation of the Citrix client software (MySCC, 2010). Although SCC has chosen to implement a Citrix solution, North Carolina State University has implemented a similar virtual computing lab using open source tools (Seay & Tucker, 2010). The mySCC system provides end-users instant on-demand access to all applications, desktops, personal data, and network resources (Fennell, personal communication, June 4th, 2010). In contrast, with the North Carolina system end-users must choose the applications and resources they wish to use, submit a request for the virtual desktop to be deployed, and then wait up to 20 minutes for the virtual desktop to be ready (Virtual Computing Lab, n.d.).

To finance the solution, the IT department redirected funds over two years that were originally allocated to the computer refresh budget at a total of $550,000. By redirecting money that would have been spent on approximately 500 PC upgrades (which would only benefit the end-users who physically sit in front of those computers), the virtualization solution provides a high-speed, highly available system that benefits every student, faculty, and staff member at the institution (Fennell, personal communication, June 4th, 2010). Not only is the institution providing access to the latest technology for all of their students, faculty, and staff, the college is saving $250,000 per year that can be applied to other strategic needs of the institution. In fact, IT is now funding $50,000 in technology grants through a Technical Improvement & Innovation Project that is being funded via savings from the mySCC project (SCC Techgrant, 2010).

According to Fennell, to be successful in the implementation process, methodologies have to be standardized and any applications and system changes tested before being delivered to the end-users (Fennell, personal communication, June 4th, 2010). He also recommends not going alone in the implementation process, but rather partnering with experienced integrators or other institutions of higher education that have successfully implemented a virtual computing environment. Perhaps the most important factor for a successful implementation, according to Fennell, is to never forget to focus on the end-user. Fennell recommends letting the end-user experience drive the decision and implementation.

Virtualization also has its thorny issues, particularly with independent software vendor (ISV) licensing. It is important to resolve any ISV licensing issues before implementing a virtual computing environment. Most vendors are good at working on agreements for virtualization of their software. However, license review is a prudent and highly recommended component of implementing a virtualization solution (Bleicher, 2007; Hutt et al., 2009).

**Conclusion**

By using virtualization, SCC can tap the growing market of non-traditional students who provide the greatest potential for increasing the college’s enrollment. Additionally, SCC is in a strategic position to compete with for-profit and other institutions of higher education. According to Fennell, the biggest opportunity for growth is in the online environment; however, there is a lot of competition. Fennell goes on to state that no other college in our service area can provide students access to applications, data, and network resources the way SCC does via mySCC (Fennell, personal communication, June 4th, 2010). All students, whether they are traditional or non-traditional, can use the same applications and network resources via any time, any place, any device access.
Virtualization is enabling SCC to fulfill its mission of providing access to students, faculty, and staff regardless of location; improving technology; and achieving a competitive advantage without having to increase the budget. Other benefits include reduced cost to the students by making learning more affordable; reduced cost of delivering IT services by $250,000 annually; reduced cost on maintenance and software updates; reduced software and hardware compatibility issues and software piracy; and an increase in opportunities for teaching and learning.

References

Appendix I: Interview Questions for Dustin Fennell

Interview Questions Scottsdale Community College

Mr. Dustin Fennell, Chief Information Officer, Scottsdale Community College

1. What characteristics are important for leadership in IT projects?

2. What types of support are needed to achieve that purpose?

3. What critical issues lead to the development of the virtualization?

4. To what extent does your institution rely on technology as a component of instruction?

5. How do faculty and students respond to the use of technology as a learning and teaching tool?

6. Are there academic integrity issues associated with the utilization of technology as a primary learning tool in the college environment?

7. How is competition from for-profit institutions changing the learning environment at the Community College level?

8. What changes are being made, or need to be looked at, in the future in order to remain competitive in regard to instructional delivery – technology, specifically?

9. What alternate sources of funding internally or externally are available to finance virtualization at your institution?

10. What is your perceived level of commitment among community colleges, in general, in regards to implementing new techniques to deliver education to your students?

11. Anything else you believe is important in the implementation process?
Classroom Reform with CMPLE:
A Cogenerative Mediation Process for Learning Environments

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Abstract: We have designed a classroom goal setting process whereby students and instructors rank, discuss, and combine their learning preferences and then rate their classroom with respect to those preferences. All participants have the opportunity to be collectively engaged in building a preferred learning environment.

In this paper, we’ll be discussing reform as it takes place within learning environments. Because “learning environments” has no set definition in the literature, we’ll relate it to an activity setting, a construct that combines peoples’ objective physical and verbal actions with “subjective features of the participants’ experience, intention, and meaning” (Tharp, 1993, p. 269). Participants in classroom-nested activity settings (learning environments) negotiate with each other using their differing conceptions. This is our basic assumption made as we clarify our idea of reform.

Recasting Reform

John Dewey wrote extensively about instructors using combined cycles of reflection and action in order to improve the quality of their teaching and the personal satisfaction derived thereof (Zeichner, 1996). He named this as “reflective action”, and defined it as, “active, persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (Dewey, 1933, p. 9). This type of activity is meant to generate inquiries into the nature of content knowledge, systemic structures, and academic frameworks. As such, learning based on reflective action is a continual process, which involves people becoming aware of, and attempting to solve, specific problems in their learning environments. In our research, people, through reflective action, enact reform. Therefore, people who engage in reflective action are engaged in reforming.

We stress that last iteration in order to make a point. Research-based reforms (RBRs), designed by well-meaning and knowledgeable people, are plentiful in the academic community. Education researchers have studied rationales why instructors have (and have not) implemented RBRs (Henderson, 2005). For cases of those who have not done so, it is common to report barriers the instructors perceived, which prevented them from adopting said RBRs. Yet, viewed from within our framework, it’s very possible the instructors do not view the RBRs as true reforms because the RBRs did not help them in their attempts to solve their specific problems. This is not to mention that in most cases, the RBRs existence was not a result of instructors’ reflective action. We view the implementation of such non-reflective changes to the learning environment as just that – changes.

This doesn’t mean instructors should not ever use RBRs. On the contrary, going through a reflective process of identifying specific classroom needs can help instructors identify RBRs whose designers have targeted the same issues upon which the instructor is interested in taking action. In other words, the “action” part of reflective action can take the form of the adoption of an RBR just as easily as it can take the form of instructors designing their own reform.

Justifying Student Participation in Reform

We believe it apropos to extend the idea of “reforming” to students as well. This discussion about reform in learning environments has focused upon the agency of instructors to engage in reform. Yet, because our unit of analysis is the learning environment, surely we must consider the agency of students. Instructors, although important, are merely one facet of learning environments.

There exist at least three reasons to include students in reform efforts. To begin with, they are active participants in learning environments (Tharp, 1993). In most cases, they are the only other participants, aside from instructors. Also, to state the obvious, there are overwhelmingly more students than instructors in the majority of classrooms. Based on that fact alone, we think it behooves instructors to collaborate with students for reform purposes.

Second, numerous studies have shown that students have higher rates of achievement in classrooms that are closer to their preferred learning environments (Fraser, 2002). We link the ideas of reforming and preferred learning environments because in our framework, to reform is to engage in a process of addressing issues and problems in one’s own environment. As such, the results of reflective action should be an environment more preferable than the original (problematic) one.

Third, to expect students to switch from learning in a common (or “traditional”) classroom environment directly into another does not respect the requisite time necessary for cycles of reflective action. That is to say, instructors’ classroom practices continually go through a process of change. From year to year, there is perhaps little discernable difference. However, over many years teachers learn to use new teaching strategies, grading policies, curricula, and classroom arrangements. Yet, depending on how different their classroom is from other instructors’, students may have difficulties adjusting to the new environment. Students play little explicit part in the construction of the classroom layout, yet they also pay the consequences of failure if they do not adjust to the new environment.

Regardless of why instructors set up their classrooms in their particular fashions, students nonetheless must unquestionably adjust and conform to that environment (Gabbard, 2003). The situation is characterized by a dualism consisting of (a) instructors as sole decision-makers, authority figures and judges of student success and (b) students as passive receivers of knowledge, removed from decision making processes that effect their education (Aronowitz, 1991).

We believe that instructors who are concerned with these issues should make conscious efforts to address them in their classrooms. We therefore have developed a method instructors can use for doing so.

Our Suggested Mediation Process – Cmple

Structure

Tobin (2008) writes about cogenerative dialogues (cogens), which emerged from the idea of students “having a voice” in their own education. He writes that, Participants in dialogue should focus on a shared experience in which each accepted responsibility for his or her part in achieving the outcomes, including stepping forward to do what it takes to accomplish agreed to changes in roles. The goal is to reach agreement on changes to improve the learning environment (p. 51).

Tobin’s cogens seemed to us a reasonable framework from which to think about classroom reform.
We have developed a long-term classroom mediation to be a cogenerative goal-setting activity. As such, we have strived for a structure that allowed for, “listening attentively; trying to understand others’ contributions; showing respect for all participants; addressing previous contributions; … striving for consensus; and sharing power among participants” (Tobin, 2008, p. 51).

Because we view cogens as a way to include the voices of all classroom participants, our constructed framework is called cogenerative mediation process for learning environments (CMPLE; pronounced “simple”). Using CMPLE, participants list, rank, discuss, and combine their learning preferences. After rating their shared learning environment (with respect to their combined preferences), they are to set specific goals in order to increase the ratings (or maintain ratings that are already preferred). We suggest using this mediation more than once (at least twice) throughout a course. Each of these steps will be explained in detail below, along with initial results from our ongoing pilot study.

Pilot Study

Here we present preliminary data from our ongoing pilot study of CMPLE. Our research question at this early stage is “Do participants consider CMPLE useful in their classroom?” In this paper, we are answering that question by focusing on the student participants.

This data was collected from a 2nd semester introductory university physics course during the spring 2010 semester. This course was taught by a professor who was open to classroom experimentation. The primary author served as a teaching assistant in this class at the time the research was conducted. However, the professor, not the researcher, conducted the CMPLE activity. The class consisted of 31 students, 10 of whom volunteered to be interviewed in three groups, after the in-class CMPLE activity. Transcripts (which have been slightly edited for clarity of speech) presented throughout the following sections are results from the third group of interviewees, comprising of three students: Pete, Lisa, and John.

Also presented here are specially designed graphics, representing the steps of CMPLE, which are displayed in the users’ guide to the pilot study (Samuels, 2011) in order to non-verbally communicate the intentions of the designers.

Listing and Ranking

This part of the process is centered on individual reflection and has been graphically represented as a group of circular arrows (see Figure 1). As it is presented in the pilot study, the

![Diagram of circles representing individual reflection on learning preferences.](image-url)

_Circles = individuals reflecting on their learning preferences._

*Figure 1. Graphic accompanying “listing and ranking” (Samuels, 2011).*
first step asks participants to “please name all your personal preferences that are important for you to learn productively and successfully. Write as many as you like. All are correct” (Samuels, 2011, p.5). These preferences can include specific aspects of students’ interactions with each other, student-instructor interactions, the subject matter, the classroom itself, their personal feelings, etc. Participants have no limitations on what they can write there. We have classified this portion as an individual (self-generated) inventory.

The second part reads, “Now that you have your list, please rank your preferences in order of how important they are to you. You can group as many preferences as you want into each ranking level” (Samuels, 2011, p.6). As in the “listing” portion, there are no limitations as to different ways of grouping their rankings. Functionally, this is a ranking task for the items generated in the inventory. Readers should note that the above steps were assigned as homework, in order to give students time to think about their elements, and to save class time during the rest of the activity.

When asked what he thought of these first steps, Pete remarked that, “You establish a way you learn over your career, which are like habits. This [part of the activity] is … like a reflection on how you actually learn, instead of how you think you learn.”

Lisa echoed Pete’s remarks when she said, “When I read [the instructions] I thought it was easy. But it took me a while to start thinking what was important and what was not. Some things that I really never noticed, I realized how important they were.”

Clearly, the students had thought about their preferences before, but had never taken the time to list and rank them. After having done so, they expressed that they valued the part of the activity that centers on individual reflection.

**Discussing and Combining**

This step and the next (rating and goal-setting) are to take place simultaneously. During class time, participants should engage in a group discussion, which serves two functions: (1) to understand each other’s preferences and meanings, and (2) to distill and combine these preferences into categories. These categories represent an idealized version of the participants’ preferred learning environment. In terms of linking this step to individual reflections, participants should be able to have collective reflections by the end of this step (see Figure 2).

![Figure 2. From individual reflection to collective reflection, via discussion (Samuels, 2011).](image-url)
For expediency, we suggest participants be prompted to discuss only their most important elements from the “listing and ranking” step. Otherwise, there might be too many elements to keep track of, especially in larger classes. We also suggest someone keeps track of these agreed-upon categories in plain sight of the whole class, perhaps on a whiteboard at the front of the room. Furthermore, participants have found it useful to limit the amount of categories to five or six.

Clarification of meanings is very important. For instance, in the pilot study, several students listed “comfortable environment” as one of their preferences. However, some were referring to attitudinal aspects like “getting along well”, while others were referring to physical attributes of the classroom, such as room temperature and cleanliness. Without asking the students what they meant, constructing generalized categories might have been difficult.

**Rating and Goal-Setting**

Here, participants are to make collective judgments about their learning environment, by rating it with respect to their idealized categories from the previous step. A Likert scale of 1-5 should be placed next to each category, and participants vote on “how well” their specific learning environment reflected those ideals (in which 5 represents a very good match).

Lastly, a discussion is to take place in which the participants construct specific action plans concerning how their class can achieve higher ratings (or maintain ratings with which everyone is already satisfied). The stars and dashed circle are representative of this step (see Figure 3).

![Diagram](Image)

**Figure 3.** From collective reflection to collective action (Samuels, 2011).

In the class from which this data was taken, the professor ended the process with the “combining” step; it is important to note the combined preferences were only verbally discussed, instead of written. Therefore, collective rating and goal-setting did not occur. However, students indicated these steps would have been beneficial. The following transcript is provided as evidence.

John, an especially talkative interview partner, was asked if there was anything he would have changed about the activity. He answered,
There’s some things that… could have been implemented. Stuff from other students’ opinions… could have been followed and used for continuation. We could have … tried some of the strategies and seen if that made a difference in the … [students’] performance and interactions.

John’s mentioning of students’ “performance and interactions” is reminiscent of aforementioned research correlating students’ preferred learning environments with higher achievement (Fraser, 2002).

He went on to say,

But basically, if the question is, “Is it fine the way we last did it?” I would say no, because I was expecting to use that information. A lot of stuff’s already done in class. Why not try it, and see what would have worked? It might have made class a little more interesting.

John considered this step to be important, and he clearly expressed that after going through the previous steps, he wondered aloud why the professor did not take up the students’ ideas. What is surprising here is that John was not aware that CMPLE was designed to include the step he thought it should have.

**Following Through with Goals**

The next step begins after the classroom activity ends. Instructors should make sure the goals and action plans are displayed in a commonly accessible area. We also suggest some periodic “checking in” with the progress towards the goals being reached. It is important that everyone is aware of the action plan, so that they can participate in transforming the classroom into their preferred learning environment. This might very well be the most difficult aspect of CMPLE, since it requires effort by all participants to realize a learning environment that was perhaps unexpected before the activity began. The radial arrows in (see Figure 3) represent participants working toward their collective goals.

**Repeating CMPLE**

After an agreed-upon time period, CMPLE should be repeated. When repeated, participants should be asked to answer the same initial questions, thereby initiating a new cycle of reflective action. In other words, because (perhaps only slightly) different elements will be listed and rated, different generalized categories will emerge, and of course different goals thereafter. This is in the spirit of continuing reflective action, and ensures CMPLE is a dynamic process that becomes a richer experience with each use.

**Benefits of CMPLE**

We will now highlight hypothesized benefits of using CMPLE, with respect to constructs related to its framework. Our intention is that participants who have completed the entire process benefit from having ownership of their knowledge, identity recognition, increased agency, and using action research to improve their classrooms.

**Motivation and Ownership of Knowledge**

Students are told in traditional school environments that they are responsible for their learning, yet they’re meant to do so in terms of those who enforce rules. Furthermore, students are not meant to question why those rules exist (Gabbard, 2003). In our framework, students will have driven the process whereby the classroom norms are produced, instead of being subjected to them. Therefore, they are more likely to feel responsible for their learning and to claim ownership of their knowledge (Roth, 2009; Wertsch, 1998). Through successive uses, we hope students’ goals of achieving their desired learning environment will gain emphasis. In other words, we hope participants will use CMPLE to increase their motivation in the classroom.
Identity Recognition
We envision an environment in which all participants feel able to openly converse using their individual and shared prior experiences, feelings, and values. To that end, during the activity, all participants will be asked to discuss reasons why they have listed their particular learning concerns. We consider these discussions to be narratives about peoples’ dispositions. Narratives that people tell about themselves and their history can function as their identity, when those narratives are internally endorsed (Sfard, 2005; Wertsch, 1998). Therefore, use of this tool can function (at least in part) as an exercise in identity recognition. The notion of people having the ability to be recognized on their own terms is a primary concern to those interested in multicultural and equitable education (Nieto, 1999).

Empowerment and Increased Agency
Participants’ conceptions of their goals will drive how they use the process. By using the process successive times, participants are encouraged to develop new goals as they proceed. The experience of exercising their agency and experiencing positive related outcomes can help students and instructors feel more empowered to take action in their communities (Orr, 2004). For instance, a series of studies has shown students to be more desirous to help find solutions to their local water pollution issues after their instructors shifted away from the aforementioned educational dualism (Roth, 2009).

Through such an activity, participants will be engaging in a form of “collective human praxis”. Praxis builds on the notion of reflective action, and can be defined as, “a unity of inquiry and action” (Schubert, 1986, p. 314), and is associated with critical and postmodern paradigms for understanding.

Action Research Opportunities
Action research is one manifestation of praxis, used for the purpose of research. Through using an action research methodology, students and teachers can begin to construct a new curriculum for themselves. We therefore propose that classroom reforms born of this kind of cogenerative praxis are indeed a form of research-based reforms.

Benefits for Education Researchers
As far as data collection is concerned, use of this mediation presents new opportunities to analyze artifacts produced as a result of this process. In addition researchers can analyze cogenerative action research projects, should students and instructors choose to pursue that avenue. Furthermore, qualitative and quantitative aspects of CMPLE can be studied and reviewed.

Preliminary Conclusions
Because these participants experienced only part of CMPLE, we feel comfortable making only preliminary conclusions. That having been said, the data we have collected indicates that students did find useful the parts they did experience. From Pete and Lisa’s statements about the “listing and ranking” section, we infer they found that section of the activity to be useful. For Pete, we base this on the apparent value he put on discovering how he “actually” learns. In Lisa’s case, this conclusion was drawn from her emphasis on both the amount of time it took her to rank her preferences, and also her consequent realization of how important those preferences were to her.

John indicated he would have found other parts useful as well, had the professor included them. Specifically, his “rating and goal-setting” comments illustrate this when he said, “I was
expecting to use that information.” The key word in that example is “use”, from which we infer he thinks that step would be useful. In fact, John’s idea to “use that information” comes without his knowledge of the full CMPLE design. We take this noticeable absence of what John expected as a preliminary validation of the design, and further evidence that students think CMPLE is useful.

Future Research

Our purpose for conducting this ongoing research is to develop a framework useful to instructors and students for identifying and addressing issues in need of reform in their classrooms. Through working with volunteer teachers from local schools and university faculty, we hope to expand the pilot study in order to determine if, and in what ways this process was useful. It certainly remains to be seen whether and in what ways participants who take part in the complete activity will find it useful. We also wish to find practical ways to help instructors readily incorporate it into their existing pedagogical frameworks.

Acknowledgments

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Sequential Logistic Regression: A Method to Reveal Subtlety in Self-Efficacy

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Abstract: This paper uses self-efficacy to predict the success of women in introductory physics. We show how sequential logistic regression demonstrates the predictive ability of self-efficacy, and reveals variations with type of physics course. Also discussed are the sources of self-efficacy that have the largest impact on predictive ability.

Over recent decades, bachelor’s degrees in physics have lagged behind the numbers being awarded in other fields. The latest American Institute of Physics poll found that only 2% of all science, math, engineering, and natural science bachelor’s degrees were awarded in physics (Mulvey & Nicholson, 2007). Specifically, women only make up about 21% of all of the physics bachelor’s degrees awarded (Mulvey & Nicholson, 2007). In order to remain a thriving field in science, physics educators need to focus their attention on increasing the representation of all students in physics, as well as the participation of women.

Equity in science literature shows that trying to understand why women are not persisting in physics is not a new area of inquiry for science educators. Researchers in physics education have focused on characterizing the gender gap on conceptual understanding assessments in physics (Blue & Heller, 2003; Hake, 2002; Kost, Pollock, & Finkelstein, 2009; Robertson, 2006) and ameliorating this gender gap (Brewe et al., 2010; Lorenzo, Crouch, & Mazur, 2006; McCullough, 2004). However, since the late 1980’s, there has been a shift in the science education literature toward focusing on creating gender inclusive classrooms (Baker, 2002). Another line of research suggests that self-efficacy may provide a predictive link between confidence in ability and success in the science classroom. Science self-efficacy has been linked to persistence in science majors and career choices in science as well as achievement (Andrew, 1998; Dalgety & Coll, 2006; Lent, Brown, & Larkin, 1986, 1987, 1989; Luzzo et al., 1999; Pietsch, Walker, & Chapman, 2003). These studies indicate that examining the details of self-efficacy may provide a mechanism for understanding why some students, particularly women, persist in the sciences while others do not.

Self-Efficacy

Bandura (1977) defined self-efficacy to be the beliefs in one’s ability to perform a specific task, emphasizing the specificity of the task. According to Bandura’s (1997) social cognitive theory, an individual’s self-efficacy is derived from interpreting information from four experiential sources. The first, and Bandura theorized the most influential, source of self-efficacy is that of personal mastery experiences (ME). Experiences where an individual successfully completes a task would have a positive impact on self-efficacy, while repeated failures would have a negative influence. The second source, vicarious learning experiences (VL), is characterized by observing another person modeling a similar task to the one being considered. Observing someone else’s success and/or failure is particularly important when the individual has little to no experience with the task. The third source, social persuasion experiences (SP), comes from messages from society, parents, or instructors. These messages, Bandura argued, are particularly influential for people who already believe themselves capable
of performing the task. Finally, the fourth source, the physiological state (PS) of a person, works by mediating other sources to amplify or undermine confidence in one’s ability to perform a task.

**Self-Efficacy and Women**

The social cognitive theory of self-efficacy provides a mechanism for understanding the information that women rely on when making decisions about their abilities to succeed in physics. Betz and Hackett (1981) published a seminal work on the relationship between self-efficacy and the career choices women and men make, finding that women had significantly lower self-efficacy scores than men with regard to completing the educational requirements of many historically male-dominated occupations, such as accounting and engineering. Betz and Hackett (1981) also linked these self-efficacy scores to the type of occupations men and women considered as career options, with men more likely to consider historically male-dominated occupations like mathematics and engineering. In another study, Matsui, Matsui, and Ohnishi (1990) showed that gender is a unique contributor to self-efficacy development in mathematics, with men having higher self-efficacy than women. Physics shares many of the same educational requirements and job duties as both engineering and mathematics, and as such, these findings are suggestive of the relationship between self-efficacy and choice of physics as a career option.

Evidence furthering the argument for using self-efficacy to understand differences in persistence for women and men comes from studies investigating the influence of gender on the four sources of self-efficacy beliefs. In a theoretical analysis, Hackett and Betz (1981) discussed Bandura’s theory of self-efficacy beliefs, by understanding how the four sources may explain self-efficacy differences between women and men in various fields. They suggested that women and men rely on different types of information in their daily lives, and that these differences most likely influence how each group considers its prospects as professionals. Similarly, Zeldin et al. (2000, 2008) examined the relationship between gender and sources of self-efficacy by completing two extensive qualitative studies with men and women who succeeded in rising in STEM careers. Zeldin and Pajares (2000) found that women recalling experiences that impacted their decision to continue in a science or math career described events that were primarily identifiable as vicarious learning and social persuasion experiences. Subsequently, Zeldin, Britner, and Pajares (2008) found that men, in similar life positions, recalled primarily personal mastery experiences. Although these results do not all tell the same story, gender differences connect them.

At this time, little research has been done investigating the development of student self-efficacy in physics, and what we have does not paint a clear picture. One study showed a negative relationship between self-efficacy and physics course achievement (Gungor, Eyilmaz, & Fakioglu, 2007); another contradicted these results by showing self-efficacy best predicted physics conceptual understanding as well as physics grade (Cavallo, Potter, & Rozman, 2004). This small body of literature indicates there is little consensus about the role self-efficacy plays in physics at this point, but from the larger science self-efficacy literature, it is clear that self-efficacy is an information rich and beneficial avenue of study for physics retention. In thinking about the role self-efficacy might play in understanding the scarcity of women in physics, it is important to carefully choose appropriate methods in both the measuring of self-efficacy as well as analyzing the impacts of self-efficacy. In this paper we will provide an argument for investigating the subtle interactions within self-efficacy.

**Method**

Investigating how self-efficacy can be used to understand the lack of women in physics requires us to take a stance on what methods are and are not appropriate. The first consideration
in this investigation is gender. As several researchers have noted, simply comparing female scores to male scores on various diagnostics, and looking at the differences between them, often leads researchers toward a framework where the underlying assumption is that women should be more like men (Baker, 2002) also often referred to as the deficit model (Baker & Leary, 1995; Gutiérrez, 2008; Nichols et al., 1998; Scantlebury & Baker, 2007). Thus, rather than characterizing differences between women and men, we choose a method that focuses on understanding the subtleties in the relationship between self-efficacy and the success of women alone. The second question then becomes one defining success. Since passing the Introductory Physics with Calculus 1 course is a prerequisite to taking any other courses in physics, and thus in becoming a major, instead of focusing on grade received in the course, we attempt to predict the probability of a woman passing the Introductory Physics course. The variables used for this prediction are the different sources of self-efficacy. Thus, our method of analysis should create models that predict dichotomous outcomes (pass/fail) through a combination of continuous (self-efficacy) and categorical (course type) predictor variables. Additionally, our method capitalizes on the self-efficacy literature that has looked at how the various sources of self-efficacy may be more important for the success of women than others. Logistic regression, as an analysis technique, focuses on creating models that predict group membership from a set of previously determined predictor variables. The ultimate goal in logistic regression is to find the best combination of predictor variables that maximize the likelihood of correctly assigning a case to the observed group (Tabachnick & Fidell, 2007). Further, a sequential logistic regression (SLR) technique allows us to specify the order with which our predictor variables enter the model and capitalize on the prior research on sources of self-efficacy. SLR also provides this mechanism through a comparison of coefficients in front of each variable in the model, allowing for a calculation of the size of the effect of each.

**Predictor Variables**

To assess the physics self-efficacy beliefs of students in the beginning of the semester, we use the Sources of Self-Efficacy in Science Courses - Physics (SOSESC-P) survey. The SOSESC-P was developed by Fencl and Scheel (2005) to probe the four sources of self-efficacy as described by Bandura (1997). The survey is a 33-item assessment that asks students to indicate how strongly they agree with statements about their ability in their physics class on a 5-point Likert scale (see Table 1 for example statements), and is disaggregated into four subscales by the four sources of self-efficacy. Internal consistency reliability alpha coefficients range from .68 (SP) to .88 (PS) with the coefficient for the total scale at .94. In addition, all SOSESC-P subscales and the total scale correlate significantly and positively with scores on the Self-Efficacy for Academic Milestones-Strength scale (Brown, Lent, & Larkin, 1986), a well-established measure of global self-efficacy in science and technology fields (Fencl & Scheel, 2005). The SOSESC-P is given to all introductory students in a PRE/POST format where the PRE portion is completed within the first 3 weeks of the start of classes. This paper focuses only on the PRE portion of the survey. In addition to collecting SOSESC-P data, demographic data including gender and ethnicity was retrieved from the university database system. The students self-report ethnicity and gender, choosing from Asian, Black, Hispanic, Native American, White, or Not Reported, and from Female, Male, and Not Reported for gender. This institution is an urban research university enrolling 39,146 students in Fall 2009, of which nearly 60% are Hispanic and 57% are female (University Factbook, 2009). Students’ final grade point in Physics with Calculus I was also retrieved from the university database system. Students who
received an Incomplete were excluded from the data analysis as the official grade may still change.

All students included in this study are enrolled in a Physics with Calculus I course. However, this Hispanic serving institution offers two types of courses in introductory physics: Modeling Instruction (MI) and traditional Lecture. MI is a reform effort that has had great success in improving student conceptual gains as well as improved retention rates (Brewe et al., 2010). The development of MI was guided by the Modeling Theory of Science (Hestenes, 1987), which focuses on the process of building, validating, and deploying scientific models. The MI course at this institution operates as a collaborative learning environment, with thirty students in a studio-format class with integrated lab and lecture. It is already well documented that the MI course significantly improves the retention of all students in the course, including women (Brewe et al., 2010). However, our intention is not to compare instructional methods, but to understand the influence of self-efficacy. Nonetheless, we have participants from two different course types to create an interaction variable between Course Type and the sources of self-efficacy (ME, VL, and SP). The original variable coding can be seen in Table 2.

**Outcome Variable**

When researchers have explored the predictive nature of self-efficacy, they typically describe the dependent variable as some form of success (Hackett & Betz, 1989; Lent et al., 1986, 1987; Stipek, 1996). Following Fencl and Scheel’s (2006) lead, we define success as retention in the Introductory Physics course. Thus, there are two options for a single student: they may successfully pass (a grade of C− or above) or fail the course (a grade of D+ or below, Drop, or Withdraw). Thus our outcome variable is a dichotomous one, Pass or Fail.

**Participants**

A total of 352 of the 620 students enrolled in the Introductory Physics with Calculus I course, in either Fall 2008 or Spring 2009, responded to the SOSESC-P survey via a total of six e-mail requests. Students who responded to the survey were representative of the larger sample in gender and ethnicity. Of the 352 students who responded to the SOSESC-P survey, 8 people completed less than 80% of the items in the survey and were removed from the data set. The data from 331 students’ responses to the SOSESC-P survey were used in this analysis. No significant differences between the sample population and the students removed from the data set were found. The demographic information for all 331 students was collected via the University Database. The demographic and Modeling Instruction/Lecture distributions of all students in this study are provided in Figure 1, and are approximately representative of the student body at this institution.

**Analytic Approach**

As discussed above, sequential logistic regression (SLR) builds models that predict a dichotomous outcome (pass/fail) through a combination of continuous (SOSESC-P score) and categorical (course type) variables, while capitalizing on prior research. The intention of the SLR technique is to focus the interpretation of results on whether a particular variable significantly adds to the model’s ability to predict the probability of the outcome when you have a theoretical ordering to the variables entered into the model (Tabachnick & Fidell, 2007). In this study, we focus on how SLR can reveal subtleties in how self-efficacy predicts the success of women in Introductory Physics. To this end, we focus both on how well the model (represented by Model 1 below) predicts the observed outcomes, as well as how the effect size (the odds ratio) of the coefficients of each variable (β₁ and β₂) in the model compare. Within
each model, maximum likelihood parameter estimates were used to determine the coefficients of
the predictor variables.

\[ \hat{Y}_i = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2}} \]

Model 1: \( \hat{Y}_i = \frac{e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2}}{1 + e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2}} \)

The sequential logistic regression analysis and statistical software used in this study are
thoroughly explained in Tabachnick and Fidell (2007) and Pallant (2007). Using SPSS 16.0, we
computed four different models using various combinations of the sources of self-efficacy to
predict the success of women in introductory physics. Goodness of fit with the observed data
was obtained through evaluating the effect of omitting a predictor variable. If a significant
difference between the predictive ability of Model 1 and Model 2 is found, then the data would
suggest that variable \( X_2 \) is necessary in the model. The goal in SLR analysis is to find the
simplest model that sufficiently predicts the observed data.

\[ \hat{Y}_i = \frac{e^{\beta_0 + \beta_1 X_1}}{1 + e^{\beta_0 + \beta_1 X_1}} \]

Model 2: \( \hat{Y}_i = \frac{e^{\beta_0 + \beta_1 X_1}}{1 + e^{\beta_0 + \beta_1 X_1}} \)

Categorical predictors were recoded into dummy variables before being entered into the
SLR models. All measures were converted to z-scores in order to allow for the comparison of
coefficients. Pearson’s \( r \) was evaluated as a test of multicollinearity between the variables.
Variables that were multicollinear were not included in the final models. As with most studies,
this one is not free of limitations. First, the sample size, when disaggregated by gender
especially, is not large. All of the statistical assumptions were met with the data set included in
the analysis, and conclusions drawn from this relatively small sample are useful and relevant for
the science education community.

Results

We completed two correlation tests on the PRE SOSESC-P data. Table 2 shows results
of correlation tests between PRE scores (Average and the four sources) and the final grade point
a student receives in the course. Results indicate a significant correlation between the average
self-efficacy and grade point (\( r = .299, p < .001 \)) as well as for individual sources of self-efficacy
and grade point for both men and women. The correlation with average self-efficacy, which
accounts for 9% of the variance in the Female grade point, suggests that our choice of using
passing as the dependent variable is a reasonable one. The second correlation tested the
relationship between scores on individual sources of self-efficacy as measured by the SOSESC-
P. As seen in Table 2, all of the sources are strongly correlated, suggesting the use of
multivariable statistics. However, the physiological state (PS) source of self-efficacy is
correlated at a very high (\( r = .848 \)) level with the personal mastery experiences (ME) source. In
order to avoid multicollinearity, which would violate the assumptions even for multivariate
statistics, we chose to remove the PS source from the rest of the analysis and allow the ME
source serve as the variable alone. This is consistent with the theoretical work of Bandura
(1997) and Hackett (1981) who showed that PS is more a mediating cofactor, varying with the
other sources, than an independent factor.

The qualitative results of Zeldin and Pajares (2000) indicate that for the purpose of
evaluating the success of female students, we should consider the influence of both the vicarious
learning (VL) source of self-efficacy as well as the social persuasion (SP) source of self-efficacy
beliefs. Accordingly, Model 1 for the female specific model includes the interaction variables
between course-type and both the VL and SP sources. As seen in Table 3, results indicate that
the fit for Model 1 to the observed data is a good with \( \chi^2(4, n = 133) = 14.247, p < .05, \) and
correctly predicts 69.9% of the cases.
Discussion

In using sequential logistic regression as an analysis technique, we focused our study on the subtleties that could be revealed in the predictive relationship of self-efficacy on success for women in introductory physics. In Zeldin and Pajares’ work (2000), their results indicated that women strongly relied on both vicarious learning experiences, as well as social persuasion experiences. However, we found in this study, as seen in Model 2 of Table 3, that when excluding the SP from the model, there is no significant difference between Model 2 and Model 1. This suggests that SP score is not a significant predictor for female students passing the introductory physics course. Moreover, in Model 3 when we eliminate VL we do see a significant difference between Model 3 and Model 1. This suggests the VL score significantly predicts female student success in introductory physics. Additionally, regardless of the other source variables present, including the ME score, the model shows no significant improvement to the fit.

A review of the parameter estimates for the Model 1, in Table 4, including both VL and SP scores further supports the inclusion of the VL score in the model. However, regarding the odds ratios for the variables, the only effect size that shows a distinct positive relationship with predicting the passing of a female student is the interaction between Modeling and VL score. All the other confidence intervals on the odds ratios range from numbers less than one to numbers greater than one. Thus the variable we can confidently say predicts the success of female students in Introductory Physics is the interaction variable Modeling*VL, with a student who has a high VL score being much more likely to pass the course than a student with a low VL score.

However, the SLR technique uncovers a further subtlety in the effect of vicarious learning experiences on retention in introductory physics. In our results we show that only VL * Modeling Instruction has a clear positive effect on the prediction of a female student passing the Introductory Physics course, while the contribution of VL * Lecture instruction is much smaller. To understand this varying result, we consider the differences between MI and traditional Lecture instruction in conjunction with literature on women in science. Many studies investigating the impact of curriculum on women found that particular features have positive influences on all students, including women: curriculum focusing on integrating student experiences, and classrooms that assessed in a variety of forms that centered on collaboration and provided opportunities for active participation (Brotman & Moore, 2007). Also, the features listed above provide opportunities for students to model tasks and get direct comparison information, providing opportunities for VL experiences. MI places great emphasis on elements such as those outlined above. For example, the MI course stresses collaboration by giving one of the three in-class exams as a group exam, where the students are expected to work together in teams to produce one final copy of the exam to be graded. MI not only provides opportunities for VL experiences, but also emphasizes their importance. In contrast, in the traditional Lecture environment, students are expected to develop knowledge completely individually, with this message being reinforced by lecture classes where students are discouraged from talking with one another, homework assignments that are randomized such that students cannot work together on solving problems, and exam grades that are often curved to the highest grade in the class. The main features of the Lecture classes provide little opportunity for the development of VL experiences. The differences between the two course types become obvious to students after the first couple days of class and the emphasis, or lack thereof, on VL experiences may play a role in reducing the size of the contribution of this source in the Lecture course.
Conclusions

As demonstrated in this paper, SLR reveals subtleties in the predictive nature of self-efficacy for success for women in physics. The very nature of the analysis shows us not only what sources best work to predict the success of women in physics, but also how those sources interact with the type of course students are enrolled in. Had we simply done a comparison study of the differences between women and men, we may have only found that they differ in sources of self-efficacy. However, through the use of SLR, we have shown that even within the group of women, the relationship of success with self-efficacy is very subtle. Thus, we make two suggestions to future researchers: (a) when using self-efficacy to predict success, keep in mind that the sources of self-efficacy may vary greatly between groups of individuals as well as by the context being examined, and (b) weigh your analysis techniques carefully, and when looking for subtleties in predictions, consider sequential logistic regression as a possibility.

References


![Figure 1. Demographics of introductory Physics with Calculus I students included in the data set. Numbers shown in the figure indicate the percentages for the total population.](image)

<table>
<thead>
<tr>
<th>Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples of SOSESC-P Items Used in PRE Survey</strong></td>
</tr>
<tr>
<td><strong>Item Number</strong></td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>20</td>
</tr>
</tbody>
</table>

*Note. R = Reverse Scored*
Table 2

Correlations Between Sources of Self-Efficacy and Grade Point for Men and Women

<table>
<thead>
<tr>
<th>Sources of Self-Efficacy (n=334)</th>
<th>Average</th>
<th>ME</th>
<th>VP</th>
<th>VL</th>
<th>PS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME</td>
<td>.939**</td>
<td>-</td>
<td>.638**</td>
<td>0.786**</td>
<td>0.848**</td>
</tr>
<tr>
<td>VP</td>
<td>.784**</td>
<td>.638**</td>
<td>-</td>
<td>0.678**</td>
<td>0.581**</td>
</tr>
<tr>
<td>VL</td>
<td>.890**</td>
<td>.786**</td>
<td>0.678**</td>
<td>-</td>
<td>0.743**</td>
</tr>
<tr>
<td>PS</td>
<td>.920**</td>
<td>.848**</td>
<td>0.581**</td>
<td>0.743**</td>
<td>-</td>
</tr>
</tbody>
</table>

**p<.001

Table 3

Logistic Regression Models: Evaluation of Female Model - Predicting Passing of Introductory Physics

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>-2LL</th>
<th>$\chi^2$ diff</th>
<th>Adf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Specific Models (n = 133)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1 - VL and SP</td>
<td>14.247*</td>
<td>4</td>
<td>148.412</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2 - VL Only</td>
<td>10.280*</td>
<td>2</td>
<td>152.379</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference between Model 2 &amp; Model 1</td>
<td>3.967</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 3 - SP Only</td>
<td>7.987*</td>
<td>2</td>
<td>154.672</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference between Model 3 &amp; Model 1</td>
<td>6.26*</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 4 - VL, SP, and ME</td>
<td>16.56*</td>
<td>6</td>
<td>146.099</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference between Model 4 &amp; Model 1</td>
<td>2.313</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<.05, ***p<.0005

Table 4

Logistic Regression Models: Parameter Estimates of Female Model - Predicting Passing of Introductory Physics I Course

<table>
<thead>
<tr>
<th>Interaction Variables</th>
<th>Coefficient</th>
<th>Odds Ratio</th>
<th>95% CI on Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modeling*VP score</td>
<td>-3.928</td>
<td>0.02</td>
<td>[0, 1.520]</td>
</tr>
<tr>
<td>Modeling*VL score</td>
<td>5.262</td>
<td>192.845</td>
<td>[1.885, 1972.3]</td>
</tr>
<tr>
<td>Lecture*VP score</td>
<td>0.26</td>
<td>1.296</td>
<td>[0.261, 6.42]</td>
</tr>
<tr>
<td>Lecture*VL score</td>
<td>0.225</td>
<td>1.253</td>
<td>[0.296, 5.307]</td>
</tr>
</tbody>
</table>

Model Evaluation

| Chi-Square          | 14.247* |
| Percentage of correct classification (PCP) | 72.42 |

Note. All variables are standardized such that SD =1. CI = Confidence Interval.

*p<.05, ***p<.0005
Women in Nontraditional Career and Technical Education

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Abstract: The purpose of this research is to outline several of the issues that serve as barriers to women participating in nontraditional career and technical education in an effort to prompt solution based strategies on the part of career and technical instructors, adult education practitioners, and administrators.

Career and technical education (CTE) programs can provide means for students to achieve starting salaries commensurate with those students who attend 2-year or baccalaureate programs. Not all CTE programs will result in positions with high salaries; however, many of the programs dominated by men have considerably higher salaries than those programs customarily held by women. Along with higher salaries, these positions often have more options for growth. Occupational segregation has secured male dominance in many of the higher-paying vocational fields, while women largely participate in unpaid domestic services within the family (Bagilhole, 2002) or careers composed of low-mobility, low wage, and low-skilled jobs (Mastracci, 2004). Numerous career and technical education areas have remained gender segregated with significantly different earning potential. Low-wage and part-time positions filled by women do not provide viable income for females to support families.

Numerous males in the workforce are shifting to other industries or aging out of their traditional vocations. The lessening availability of qualified labor workers can be supplemented by female workers. Women offer a critical difference to the employment atmosphere beyond just a partial remedy to the shortfall of numbers. For the most part, females are socialized to build and maintain relationships through cooperation. Characteristics that were once termed as “feminine” and negative in the workplace have found their place in business and industry leadership. These beneficial talents of women are concentrated in a handful of traditional occupations. Increasing the occupational skills and employment possibilities of women is a pragmatic, economical approach to fairness that can be accomplished through CTE (Gordon, 2008). In the current environment of global competitiveness and an increasingly diverse population, vocational career paths cannot afford to have individuals in any segment of the population consider themselves ineligible for any career field because of their race/ethnicity, gender, disability or other characteristics (Lufkin, 2009).

Institutional barriers exist in schools and present limitations to career development. Some difficulties are beyond the control of the institution. However, many of the barriers can be mediated by awareness. Women are at a disadvantage in selecting and completing nontraditional training that would prepare them for higher paying jobs (Gordon, 2008) because they are not presented the option. Economic and societal factors have caused stark inequities in some CTE programs, some of which can be overcome with the willingness of educators and administrators. The purpose of this paper is to discuss the following: (a) career and technical education, (b) traditional and non-traditional careers, (c) barriers women encounter to those careers, and (d) recommendations to reduce these barriers. The barriers presented here are in no manner exhaustive. This list represents those barriers that can most be influenced by instructors and administrators through training and awareness.

http://coeweb.fiu.edu/research_conference/
A positive factor that should prompt instructors and administrators to promote the advancement of females in CTE is the income stream it could provide to the educational institutions. Decreased numbers of students participating in programs can be detrimental to an institution. A remedy would be to solicit female students. The point is not to simply shuttle women into programs for the numbers, but rather to redress the problems of sex-role segregation and provide training so that women are in the best position to make career choices.

What is Career and Technical Education?

CTE education prepares students for jobs that are based on manual or practical activities, customarily non-academic and specifically related to a precise trade, occupation or vocation. Vocational education has more recently come to be referred to as CTE. According to the 2006 Carl D. Perkins Career and Technical Education Improvement Act, CTE provides technical knowledge and skills aligned with academic standards that are needed to prepare for careers. Prior to 2006, most organizations referred to their programs as vocational education; once the Perkins Act changed its language to career and technical education, most institutions followed suit. Several leading organizations and governing bodies changed their names to include some form of the term career/technical education.

CTE programs are often offered in high schools and undergraduate institutions across all levels and sectors, such as at 4-year, 2-year, and less-than-2-year institutions in the public, private not-for-profit, and private for-profit sectors. The programs offered in CTE are directly related to current or emerging occupations that do not require a baccalaureate degree (Gordon, 2008). A number of occupational paths fall under CTE, including agriculture, business, mechanics, construction, childcare, food service, health care, and various types of production. The types of credentials awarded vary by institution. Upon completion of CTE programs students may be awarded certificates, associate’s degrees, or bachelor’s degrees (Levesque et al., 2008). CTE student demographics and enrollment characteristics vary with each career path. CTE covers a wide spectrum of fields; therefore, it is difficult to create a profile of a typical student. Students entering CTE programs are not limited to those who have completed high school (or obtained a GED); some certificate granting programs will admit those without diplomas.

What is Traditional and Nontraditional?

The terms traditional and nontraditional are dynamic and context based. The definitions can vary with industry demands or changes in the economic structure, such as the Industrial Revolution or the Technology Boom. Nontraditional careers are typically defined as occupations with less than 30% of workers of the same sex (Perrone, 2009). Examples of nontraditional careers for women include science, engineering, and careers in the trades and construction. Examples of nontraditional careers for men include social work, nursing, elementary education, and full-time fathering. Bagilhole (2002) defines nontraditional occupations as any occupation which is, or has been, traditionally undertaken by a man. Similarly, Gordon (2008) addresses the concept as nontraditional students are those program enrollees, both male and female, who enroll in areas of study traditionally considered appropriate for the opposite sex.

Policies, such as Title IX, have attempted to address the issue inequalities in education. Since the creation of Title IX, females have made very little progress in “blue-collar” technology and trades occupations. Male students continue to dominate in courses that lead to high-skill, high-wage jobs, while female students fill the low-wage, low-skill tracks (National Coalition for Woman and Girls in Education, 2008). Changes have occurred in the composition of some fields, yet many vocations continue to resemble pre Title XI figures. In October 2005, the
National Women’s Law Center published *Tools of the Trade*, a report examining CTE enrollment patterns in twelve geographically diverse states. This report revealed that girls make up almost 90% of the students enrolled in classes leading to traditionally female occupations and only 15% of those taking classes in traditionally male fields. Conversely, female students make up 98% of the students enrolled in cosmetology, 87% of childcare students, and 86% of those in health-related courses. Correspondingly, females are largely absent from traditionally male courses, comprising only 4% of heating, A/C and refrigeration students, 5% of welding students, 6% of electrician and plumber/pipefitter students, and 9% of automotive students.

**Barriers**

In relation to nontraditional education, what are the barriers female students encounter? Those outside the educational institution are peer pressure, parental pressure, lack of role models in the media, and a lack of information about consequences and benefits of career decisions (Bagilhole, 2002; Gordon, 2008; Lufkin, 2009). The collective structures within which women make decisions are largely shaped by men, with men’s interests as paramount (Bagilhole, 2002). This emphasizes that males are usually the administrators, instructors, and designers of CTE programs; therefore, they may not have women’s concerns in mind when creating and implementing programs.

Image and perception problems have plagued the CTE. These programs have been perceived to provide poor quality education for the worst students (Gaunt & Palmer, 2005) and have been marketed as an alternative to those who were not bound for college or a university, as well as those with low grades or incomplete high school educations. CTE is also an option for high performing students. Image is an issue for women in nontraditional vocation. Students deal with concerns of femininity, propriety, or questioned sexuality. Women in nontraditional fields are often subjected to harassment and ridicule. Female students and workers in male dominated fields often attempt to minimize their visibility, particularly their sexual attributes, in an effort to avoid harassment (Whitlock, 2000).

There are numerous barriers once a woman does choose to pursue an education in a nontraditional CTE program. These barriers can include (a) sex bias, (b) inadequate career counseling, (c) inequitable curriculum design, (d) lack of mentorship, and (e) marginal job placement assistance. It is the responsibility of CTE instructors and administrators to ensure the equity of education for all students. It is also in the best interest of the institution to be aware of the effects these barriers have on their enrollment and subsequent success as an institution.

**Sex Bias**

Sex bias in CTE takes on several forms. According to Gordon (2008), some of the problems associated with sex equity are sex stereotyping, sex-role spillover, pack mentality, and somebody else’s problem. Each is a different method of sex bias. Sex role stereotyping is an issue that permeates educational settings. Sex bias does not only occur in CTE, but it is more pronounced in the arena of sex-segregated industries. Ideas of sex roles limit the opportunities of both men and women, but are most restrictive to women. Individuals who assume nontraditional roles often face discrimination and encounter obstacles to achieving success and satisfaction in their roles (Perrone, 2009). Gender role socialization facilitates the division of labor in the home, often leaving the woman with the majority of the family obligations. Many women have domestic responsibilities that largely preclude them from following employment patterns permitted to men (Bagilhole, 2002). Often women do not have the same freedom of working odd shift hours, overtime, or relocating for work due to familial obligations.
Inadequate Career Counseling

An individual’s gender is principal in determining how one selects jobs but also how jobs select the individual (Woodfield, 2007). Before the 1970s, the CTE system in the United States intentionally segregated students by gender. Educational institutions routinely denied female students admission into classes deemed “improper” for them. Vocational high schools and technical colleges providing training in areas such as aviation and maritime trades were reserved exclusively for male students (NCWGE, 2008). Often nontraditional jobs are not presented to women as an option; therefore, career choice is not a choice of all options, but the select few presented as gender appropriate. When appropriate, career counselors should help individuals construct family-friendly careers and pursue flexible work options, not centered on traditional gender stereotypes, as well as advocate for social change in education and workplace policies that would support all people (Perrone, 2009).

Inequitable Curriculum Design

Instructors (male and female) must be aware of their role in the classroom, socially conscious, and sensitive to the perceptions of those around them. A student’s ability to thrive and be successful in a classroom environment is affected by the instructional materials provided to the students, such as books, videos, and curricula. Instructors and administrators must consider that most school materials are gender biased. Textbooks, specifically older materials, often use the pronoun “he,” predominantly use pictures of males, and use male specific gender related labor titles (i.e., serviceman, fireman). Males and females are generally treated differently by teachers. Research has shown that even when male and female teachers hold liberal, non-sexist attitudes, their actual behavior indicates that they have sexist practices and do treat students different by gender (Haefeli, 2008).

Lack of Mentorship

One factor that has been identified as a way of encouraging female students to participate in nontraditional fields is the presence of role models. A student’s choice to participate in a nontraditional CTE program can be reinforced by having a role model. Role modeling is a passive form of providing an example, while mentorship is a more active form of guidance. Mentorship has been shown to have a significant influence on women’s retention and progression in nontraditional areas of study (Bagilhole, 2002). A key component in many CTE training programs is on-the-job experience. This experience of obtaining occupational competence is often achieved in the form of an apprenticeship. Apprentices who complete all phases of the prescribed training earn a certificate of completion. This is a crucial component of CTE because it allows the student to demonstrate skills and build competency. Sex bias often creates a challenge for women trying to secure apprentice positions. Once in the positions women may find it more difficult to develop a mentoring relationship. Bagilhole (2002) quotes a female construction engineer stating, “It’s very hard to get in with the good old boys network when you are not old and you are not a boy.”

Marginal Job Placement Assistance

CTE programs are designed to make students ready for work. A major concern of women in nontraditional programs is whether they will be able to find employment. Informal recruitment processes, or word of mouth, is one of the major manners that gender discrimination can exclude well trained women from obtaining employment (Bagilhole, 2002). Employers often indicate that consumers or clients would be uncomfortable with nontraditional workers, when they themselves are also uncomfortable due to their own sex-bias (Gordon, 2008). CTE
educators and administrators must take an active role in encouraging potential employers to hire nontraditional students.

**Barrier Reduction**

Instructors and the training institution play an integral role in the process of women being successful in nontraditional vocations; therefore, the institution should serve as the front running agency for change. Young people who have chosen a nontraditional career path often cite a teacher who provided them with the encouragement they needed to be successful in the field (Lufkin, 2008). Instructors are primed to serve as role models in training programs. Administrative agencies and educational institutions all have an important role to play in achieving gender equity, along with students, parents and teachers (National Coalition for Women and Girls in Education, 2008). Instructors need training and support which is interconnected with the institutions standards and equality initiatives (Haefeli, 2008). Schools should incorporate gender awareness into professional development for faculty and administrators to address the subconscious ways that they may treat women and men differently. Individual teachers, especially female instructors in nontraditional vocations who have personal relationships with students, can attempt to dispel pessimistic attitudes and the negative images of women participating in nontraditional vocations (Whitlock, 2000).

Peer support is also a vital dimension of the institutional structure that can promote success. A helpful strategy for promoting learning is the use of peers as mentors. Finding ways to consistently nurture these positive relationships between students should be a focus of the administrators and instructors of CTE education programs. Student support groups should be created on campuses so that student in nontraditional CTE classes have an arena to voice concerns and develop camaraderie.

Changes must be enacted to broaden the range of nontraditional opportunities for women in CTE. Gordon (2008) reports that in 1997, the U.S. Agency for International Development identified six major interventions to address gender issues in CTE training, including awareness raising and promotional/advocacy campaigns, career information services, and parental involvement. Institutions must become more aggressive about informing families on nontraditional careers so that they may guide their young women into these beneficial career paths. Educators must take measures to make certain that neither sex discrimination nor bias affect students’ attitudes toward, access to, enrollment in, or completion of nontraditional CTE programs that may lead to higher paying jobs (Gordon, 2008).

Lufkin (2009) provides the following practical strategies: (a) use parallel terminology in describing both genders, (b) intervene when male students show disrespect for female students, (c) use small groups to foster cooperative rather than competitive learning, and (d) examine your teaching behavior and be aware of your actions. The instructors must also be aware of the environments they create. Continued emphasis should be placed upon equity within the educational community in order to sensitize individuals to subtle gender role stereotyping embedded in the school systems. The ability to have a true choice in education and future would have benefits for women, men, families, and the economic structure. It is essential to keep in mind that the most fundamentally important choice that we can make is the choice to value and respect the decisions of women and men, even if they are outside the norm or nontraditional for their gender (Perrone, 2009).

**Conclusion**

The social and political climate can present significant limitations; the willingness of career and technical educators to be innovative in their recruitment and retention activities can
make a difference in the lives of many. If a more equitable culture is to be developed, a conscious effort must be made by educators to liberate people from many same sex stereotypes that dictate our choices in society. The goal is to have both sexes become self-determining people with favorable economic options, who are able to choose their future vocations after considering all available possibilities. The viability of many families is dependent upon a woman’s ability to secure work in higher-paying occupations. The pathway to numerous high-quality occupations is CTE. These training programs have the potential to reduce some of the financial challenges many women face and provide a better economic foundation for society. In addition to economics, the societal implications for more women participating in nontraditional occupations are far reaching. The elimination of sex bias in CTE and the labor based workplace essentially would render dialogues such as this void, as terms such as traditional and nontraditional would become obsolete.

References
The Effects of the Word of Wisdom Meditation Technique on the Development of Executive Function Skills in Early Childhood Education

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Abstract: This theory-based paper examines the definition of Executive Functioning (EF) skills, their importance in the early childhood classroom and how to aid in their natural development. The Word of Wisdom meditation technique is considered as a viable alternative to increase the natural development of EF skills in early childhood.

Max, 5, has three best friends in his class; Dylan, Sam and Lucas; all age 5. The four boys have the best of times, as well as the worst of times in each other’s company. Sitting during circle time, Max and Dylan engage in a heated discussion, which ends with someone getting pinched. Consequently, the teacher is naturally interrupted from the day’s lesson to address the boys. This is not the first time there has been an interaction of this degree between the four boys. The teacher has repeatedly worked with the boys throughout the year to help communicate their feelings to each other by “using their words.” Moreover, she has worked with them on gauging when it might or might not be an appropriate time to sit next to your friend, even when they really want to. The boys’ teacher often wonders when they can think to themselves, before they sit down, “This is not the time for me to sit next to this friend. We just can’t control ourselves around each other!” Nicolas, age 5, is a brilliant child. He has achieved reading fluency at an early age, understands all concepts taught to him, is inquisitive and curious, and is the ideal student—except he can never get anything done! His is constantly distracted by his surroundings, the need to sharpen his pencil, go to the bathroom, read a book, talk to his friends, begin another task, and the list continues!

How do children develop the ability to make a decision that might be best for them, even though it might not be what they want to do at that immediate moment? When does the ability to resist an urge to say or do something at an inappropriate time develop? At what point would a child like Max develop the ability to say to himself, “I need to move away from Dylan, because he is distracting me.” Or better yet, “I don’t think I should sit next to Dylan during circle time because I am not able to control myself around him and his actions, I become distracted and the teacher gets upset because she is interrupted.” When will Nicolas develop the ability to regulate his own actions in order to complete his work, regardless of the other surrounding interests and distractions? When will he be able to work to his full potential? Max’s ability to manage his urges and Nicolas’ ability to self regulate are part of the executive functioning skills that are established in the brain at birth and continue developing into adolescence.

Recent research has shown that the benefits in development of executive function skills in early childhood can promote school readiness and academic success (Blair, 2003; Dawson & Guare, 2010; Meltzer, 2010). One way which has not widely been researched, yet a valuable method, is that of meditation. The purpose of this paper is to demonstrate the importance and need to conduct further research in order to evaluate whether meditation could be a viable alternative method to implement in the preschool classroom. The meditation technique of Word of Wisdom (WoW) will be discussed in this paper as a method to aid in the successful development of executive function skills during early childhood. To date, there have been fewer...
than five studies conducted using the WoW meditation technique. The literature reviewed below demonstrates a theoretical link between the current research on the development of executive function skills and the WoW meditation technique. There is a gap, and research is currently lacking, to prove that certain methods of intervention can be used to increase executive function skills. This paper attempts to suggest a method of intervention for further research that is relatively easy to promote and can be used for developing executive functioning skills to benefit the early childhood population.

Method

The theoretical link discussed in this literature review originated from the author’s teaching experience in a preschool classroom. The vignettes used above are examples taken directly from informal classroom observations. The author recommended the WoW meditation technique as an intervention for one of the students mentioned in the vignette. This recommendation spurred the author to conduct a literature review to ascertain if there was a theoretical link between the development of EF skills and the method of meditation as an intervention. The author began first by conducting informal interviews of teachers and administrators who implemented the WoW technique in their classrooms. From the interviews, the author identified that the feedback given was identifying an aid in development of EF skills. Searches were conducted using keywords such as, executive function skills, self-regulation skills, development of, children’s meditation techniques and Transcendental Meditation. These searches produced questions such as: How do EF skills contribute to school success and academic achievement? How do self-regulation skills contribute to fostering school ready behavior in the classroom? How can meditation, as an intervention method, be presented as a research based pedagogical method without the spiritual and religious connotations the word might arouse? How can the WoW technique be integrated into the curriculum to serve the early childhood population? As a result of the searches conducted the author was able to demonstrate a theoretical link between the development of EF skills and children’s meditation as an intervention technique as well as discuss how to integrate meditation into the early childhood classroom.

What is Executive Functioning (EF)?

What are executive function (EF) skills and what role do they play in a student’s academic career and academic success? EF skills are best described as the ability to get something done. These brain-based skills enable us to decide on what activities we need to complete and which ones we should save for later (Dawson & Guare, 2010). EF skills assist in regulating behavior by monitoring thoughts, regulating emotions, as well as focusing and keeping attention on the task at hand regardless of other surrounding tasks. EF skills also refer to the ability to draw on prior knowledge and to shift attention effectively (Brown, 2008). EF skills are critical to enduring successful early academic outcomes. A child might have a great deal of potential, but if he lacks the ability to direct himself to start and see a task through to its completion, his potential can not be reached. EF controls are important because they bridge the gap between the potential and the academic demands children face (Meltzer, 2010). All teachers can relate to how frustrating it becomes when the potential of children do not match their academic performance.

EF skills have been noted as important for many years. However, until recently, studies of EF processes have been limited to research conducted by neurologists and neuropsychologists (Meltzer, 2010). Currently, the domain of education has been interested in the benefits of EF skill development in children as current research has indicated that EF skills are a crucial
component of early development and long term academic success for students of all ages (Meltzer, 2010). In addition, the development of EF skills has been looked upon as a way to assist student achievement towards greater academic success given the increased pressures placed upon students in today’s classrooms (Meltzer, 2010).

Specifically, recent research has indicated that in early childhood classrooms, self-regulation skills are critical to successful school readiness, which in turn leads to long term academic success in the subsequent grades (Blair, 2008). Self-regulation lies under the umbrella of EF skills and refers to the balance of emotional regulation in order to achieve higher cognitive processes (Blair, 2008). Effective self-regulation skills assist children in controlling their impulses and emotions, which leads to achieving a cognitive control over behavior, such as the ability to follow rules (Blair, 2008). Children who can self-regulate can control their behavior; which enables them a higher chance of academic successes (Carlton, 1999). Behavior difficulties, such as inability to follow directions, controlling attention, being sensitive to others’ feelings and communication, have been cited as primary causes of expulsion rates and academic school failure (Blair, 2008). Early childhood programs that develop self-regulation and EF skills within children, and teachers who promote their use in the classroom can be effective in enhancing school readiness and future academic success (Blair, 2008). We see examples of EF skills being taught applied in the early childhood classroom with the recently publicized success of Tools of the Mind, an early childhood curriculum based upon the ideas of Lev Vygotsky. The curriculum is designed to foster children’s EF skills (Institute of Education Sciences, 2008). Another example is in the Montessori Method, where children are taught at an early age to develop an inner discipline in order to regulate themselves (Ervin, 2010). See Table 1 as Dawson and Guare (2010) have defined the EF skills in a coherent, credible way as it relates to the child in the classroom.

**EF Skills are Brain-based**

What is the development process of EF skills and where does it take place? The number of changes in a child’s brain from infancy to adolescence is significant (Dawson & Guare, 2010). EF skills are dormant in the brain when born. The acquisition of EF skills is similar to acquisition of language; given no trauma to the brain, the EF skills unfold in a similar manner to that of acquiring the full use of language (Dawson & Guare, 2010). The base for the development of EF skills is located in the frontal lobe of the brain (Dawson & Guare, 2010). The senses are the child’s routes to the brain (Epstein, 2001). We can see this occurrence as it is in these first few years that the sensory and motor areas of the brain are most matured (Travis & Brown, in press). Sensory experiences, such as a 1.5 year old learning by accidentally putting his hand on a candle flame that it hurts and that he should not touch the flame, is an integral part of EF skill development. The child develops the impulse control after the sensory experience has occurred to not touch the flame. Before the experience occurs, it is the parent’s responsibility to lend their EF skills of impulse control, such as “no!” to the child, because the child has yet to acquire this control.

The changes and growth that occur in the brain during early childhood parallel the development of the child’s ability to act, think and feel, which are components of EF skills (Dawson & Guare, 2010). A strong link also exists between brain maturation and Piaget’s cognitive stages of development (Epstein, 2001; Travis & Brown, in press). Biological changes occurring in the brain during maturation are similar to the biological bases on which the Piagetian stages are based (Epstein, 2001). The brain undergoes both rapid and slow growth spurts that are characterized by an increase of connections made during a child’s life. These
growth spurts characterize significant changes in children’s learning capacities (Epstein, 2001). Travis and Brown (in review) correlated an easy to read table associating brain maturation with Piaget’s cognitive stages. The table can be extended to include EF skills. (See Table 2).

**How can Teachers Assist in the Development of EF Skills?**

It is clear that EF skills are a crucial component of early development and long-term academic success. The ability for a child to develop the skills to plan, organize, prioritize, shift thinking, use working memory, control temper, start a task and see it to completion are just a few, among many, skills crucial to success in school. The skills are developed during the early childhood years and built upon as the child grows. It is clear that if a child exhibits weak EF skills in the early childhood years, it will lead to difficulty with productivity in the elementary, middle and upper school years (Meltzer, 2010). Additionally, a weakness in EF, called Executive Dysfunction (EDF), is a common trait among children diagnosed with ADD and ADHD. Clearly the skills mentioned above are lacking in a child diagnosed with ADD and/or ADHD. It is increasingly important to identify the challenges some children might have in developing their EF skills at an early age, so that an intervention can be applied to assist these children to develop strong skills necessary for the academic tasks that face them in their future (National Institute for Early Education Research, 2006).

Experts on EF are now detailing pedagogical plans to implement in the classroom to effectively assist children in developing their skills (National Institute for Early Education Research, 2006). For example preschool programs such as Tools of the Mind, the Montessori Method as well as teacher training programs work to train teachers to effectively develop EF skills in early childhood. An underlying theme in assisting children in developing their EF skills is to bring an awareness to children of how they learn, essentially schooling them on metacognition. It is important to look at other possibilities that could assist in the child’s natural development of EF skills. Since the development of EF skills is a natural process that occurs during the child’s development, it would make sense to find an approach that aided in the natural process of development, such as meditation.

**Word of Wisdom (Wow) Meditation Technique**

Fisher (2006) defines meditation as being mindful, receptive and reflective. There are many different meditation techniques, the one addressed in this paper is the Word of Wisdom (WoW). WoW is a meditation technique for children between the ages of 4-10. At age 10, children can learn the Transcendental Meditation (TM) technique. TM is a well researched and widely used meditation technique based on the ancient Vedic traditions of enlightenment from India (Yogi, 1969). The knowledge of TM has been passed down by Vedic masters generation after generation over thousands of years. Approximately 50 years ago, Maharishi Mahesh Yogi introduced TM to the Western world. TM practice involves a mantra (Vedic terminology for sound). However, unlike most meditations, the mantra holds no meaning to the mediator (Yogi, 1969). During the meditation, the mediator allows his/ her mind to move from active focused levels of thinking to silent thoughts (Travis, 2010). Unlike other meditations, the TM technique is not a process of concentration, but a process of effortless transcending using the mantra as a vehicle to transcend (Travis, 2009). While practicing the technique, the meditator’s mind transcends from the conscious mind to deeper levels of consciousness (Yogi, 1969). TM is practiced twice a day, 15-20 minutes each sitting.

Over 300 research projects have been published verifying the positive effects of TM, including but not limited to decreasing of effects of stress and an increased intelligence (Travis, 2009). In addition, only positive side effects have been found with using this technique. In a
2009 randomly assigned study of 18 ADHD students aged 11-14, TM was found to be a viable alternative to medicinal treatment for children with ADHD, having a positive effect on task performance and increased brain functioning (Travis, 2010).

The WoW technique is based on the same ancient principles as TM; however, there are differences in its practice and design. WoW is practiced twice a day, once in the morning and once in the afternoon. The child is assigned a mantra and is taught how to silently mouth the mantra. This is done for about five minutes during each session and is practiced while the child’s eyes are open. The child can be working on a simple task, activity or walking about. The younger the child, the more simple the task, for example walking, and the older the child, the more complex the task can be (See Image 1 and 2). The technique is appropriate for children as the encouragement of movement during the practice of the technique is in accordance with children’s developmental needs to move (Dixon, 2003). WoW and TM are taught through standard courses of instruction available around the world by certified TM teachers. WoW consists of an initial presentation, personal instruction involving the assignment of the mantra and how to use the mantra and follow up meetings; the entire process spans a few hours during three to four days (Dixon, 2003).

**WoW as a Tool to Aid in the Development of EF**

What is the theoretical link between the development of EF skills and the WoW meditation technique? The WoW technique allows for the child to experience quiet conscious thoughts. Through the practice of WoW, the child is aided in developing from within by bringing awareness to one’s self (Dixon, 2003). For example, the effects strengthen the child’s mind by stabilizing their thinking process and having a calming and balancing influence on the mind and body (Alexander, 2003; Dixon, 2003). Essentially, the daily practice of WoW optimizes the natural growth process of children and their development (Alexander, 2003). The development of EF is a natural process that unfolds in the child’s brain and has proven to be aided by teaching and bringing a cognitive awareness to children on how they learn. An approach that develops mental awareness within the child might be an effective tool to aid in the development of EF skills. Warner (2003) summarizes a study conducted in 1985, which examined the role of awareness in cognition and the impact on training for mental awareness in children. Mental awareness for the study, among others, was defined as working memory and attention capacities (EF skills). Two groups of children ages 5-11, were observed (n= 126); the first group participated in either the TM or the WoW technique (n=60) and the second group remained as the control. A series of measures were implemented based on Piaget’s conservation tasks to assess the mental capacity of working memory and attention within the children. The results found showed that the children who practiced either the TM or the WoW technique experienced an enhanced cognitive development of these mental capacities and an increased mental awareness (Warner, 2003). This study proves that WoW has a positive relation to children’s cognitive development.

**How can WoW be Implemented in Schools and the Preschool Classroom?**

How can meditation be incorporated into the curriculum to serve the early childhood population? The TM program for students over age 10 has been implemented in hundreds of schools around the world. In India, TM has been incorporated in public schools serving over 100,000 students in 16 states. The David Lynch Foundation currently provides funds to support the TM technique to be taught in 14 public schools in the United States; in these 14 schools, the faculty have also learned the TM technique (Albers, 2010). In New Zealand, they have implemented a Stress Free Schools program where the children are taught TM. TM is
incorporated into the curriculum briefly in the morning and the afternoon. The alternative at all of the schools offering TM is a Quiet Time program. The Quiet Time is available for students who do not wish to learn the TM technique. While the TM students are practicing their meditation in class, the Quiet Time students are sitting quietly. The teachers incorporate the method into the classroom time easily as it is simply 10 minutes in the morning and 10 minutes in the afternoon. Teachers have noticed marked improvements in children’s behavior; they are more settled, with fewer behavior issues, the entire atmosphere of the school has changed with improved student achievement, and schools with high levels of violence have witnessed a significant decrease.

By contrast, however, few schools have implemented the WoW technique. In Fairfield, Iowa, the Maharishi School of the Age of Enlightenment implements the WoW technique for children ages 4-5 until age 10, when they learn the TM technique. The children are taught when they are of the age where “they can keep a secret” as the mantra assigned to them must be kept a secret. The price for learning WoW is included in the tuition cost at the school. All of the teachers employed at the school are TM practitioners; therefore, they understand the value of the WoW technique. The technique is easy to implement as it is done in a walking format at the school (See Image 2). The teachers facilitate the process where children walk around the halls of the school and the campus for five minutes in the morning and five minutes in the afternoon before dismissal doing their WoW technique. The teachers generally observe a shift in the children once they have learned the technique and usually comment that the child is more settled, more focused and has more refined memory retention (Bordow, 2010).

Concluding Thoughts

The purpose of this article is to demonstrate the need to research an alternative valuable method to implement in the preschool classroom to effectively assist young children in developing their EF skills. Other relaxing techniques that do not require as much training and are more cost efficient that might mirror the benefits of WoW could be breathing techniques, children’s yoga and children’s chanting. However, again little research has been done to prove the effectiveness of these techniques. We see the WoW technique successfully and easily incorporated into the curriculum at the Maharishi School of the Age of Enlightenment; could it be implemented in other early childhood programs?

It would be useful investigating further how WoW could successfully aid in the natural development of the young child’s EF skills. Specifically, can the WoW technique aid in the development of self regulation skills in the early childhood classroom and assist in promoting school readiness and academic success in children? Referring to Piaget’s cognitive stages of development, if the child practicing WoW would begin practicing during the pre-operational period (ages 2-7) and continue into the concrete operational period (ages 7-11), spanning the two developmental periods, would WoW help the transformation between the two periods?

Although there is a large amount of published research on TM, there is little published and conducted research on WoW. WoW could be proven to be an alternative tool and method to improving functioning in early childhood. In addition, if teachers were trained in this technique, they would not only value the importance of the WoW technique for their students, but also receive the marked benefits of the TM technique themselves; among a few benefits are decreased stress, increased calmness and increased effectiveness of teaching. Schools should consider investing in this technique and implementing it into their schools. Funding could be provided through grants from foundations such as the David Lynch Foundation, school fundraisers, private donations and tuition. Mahesh Mahesh Yogi (1963) states, “It is essential that one should be
well trained in the art of thinking. All the efficiency of any kind of action depends on the ability of the mind…” EF skills, being brain based, are a crucial component of early development and long term academic success by enabling productivity and efficiency of thoughts and actions (Meltzer, 2010).

Further research on WoW with younger children would be worth investigating to see if the technique could be a valuable aid in the development of a child’s EF skills, the development of a child’s awareness of their actions, development of self-regulation of emotions to manage behavior leading to enhanced cognitive processes and ultimately school readiness and academic success.

References
Bordow, L. (2010,22-October). Director Preschool/Lower School Maharishi School of the Age of Enlightenment. (E. Willis, Interviewer)
Table 1: EF Skill and its definition correlated with examples of children’s behavior in the classroom.

<table>
<thead>
<tr>
<th>EF Skill</th>
<th>Definition</th>
<th>Characteristics in classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response Inhibition</strong></td>
<td>The child’s ability to think before acting, resist urges to allow time to evaluate before acting on a situation.</td>
<td>Annabelle accidentally gets pushed in the line, she pushes back forcefully saying, “don’t push me!” If she had waited before she reacted she would have seen that she was accidentally pushed because the other child was trying to move out of the way to make room for the teacher to pass through the middle of the line.</td>
</tr>
<tr>
<td><strong>Emotional Control</strong></td>
<td>The child’s ability to manage and self regulate emotions.</td>
<td>Leo is playing on the playground kicking a ball. He kicks the ball to a group of boys sitting on the slide. The boys, not seeing where the ball came from pick up the ball and begin to play with it. Leo runs over and screams and cries at the boys.</td>
</tr>
<tr>
<td><strong>Sustained Attention</strong></td>
<td>The ability for the child to stay on task, regardless of surrounding distractions.</td>
<td>A child is interrupted during his work when the two children sitting next to him begin to talk about the Wii game. He stops to doing his work to fully join the conversation.</td>
</tr>
</tbody>
</table>
Task Initiation | The ability for the child to begin a task without procrastination.
---|---
Every day the first thing Juliana is supposed to do in the morning is to write the date on her calendar. However, every morning she does everything else, says hello to her friends, goes to the bathroom, sharpens her pencil and her friend’s pencils…

Flexibility | The ability for the child to face “bumps in the road” and overcome those bumps.
---|---
A child begins to do his arithmetic exercises and gets to a sum greater than 9. He is stumped as to what to do next. He must draw from his working memory his prior knowledge on the subject.

Goal Direction | The ability for the child to follow through an initial goal already set to its completion, again, regardless of surrounding distractions.
---|---
A child is asked to help the teacher and collect the lunchboxes to put them at the dismissal line. During his task he notices a lizard in the garden. He then sets off trying to catch the lizard, leaving half of the lunchboxes at the lunch table and the other half at the dismissal line.

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Piaget’s cognitive stages</th>
<th>Brain maturation characteristics (Travis &amp; Brown, in review)</th>
<th>Example of EF Skill (Dawson &amp; Guare, 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>Sensory-motor</td>
<td>Myelination of sensory and motor areas.</td>
<td>EF skills are dormant at birth. (Which is why parents lend their EF skills to their children). As the child learns through sensory experience the skills unfold. For example the toddler developing impulses control (Response Inhibition) after sensing the pain from touching the flame.</td>
</tr>
<tr>
<td>2-7</td>
<td>Pre-operational</td>
<td>Maximum</td>
<td>The internalization of speech (Emotional</td>
</tr>
</tbody>
</table>
number of connections made. Control) is an example of a skill developed at this age. The child first learns a language nonverbally and holds the information in their head that acts as a framework on which the young child makes decisions and controls their behavior. As the child learns how to verbalize their language they are no longer as reliant on the adult, they become more autonomous. They can now use their own words to communicate. With increased communication comes basic self-control over the use of language to accomplish needs.

| 7-11 | Concrete Operations | Pruning begins around age 10 | This initial self-control of language soon facilitates the development of more complex EF skills such problem-solving strategies, self-monitoring and self-instruction. |

*Image 1: Example of a girl age 7 practicing WoW technique while conducting a simple task, drawing. She has been practicing for a few years.*

“I like my WoW because I like to color and I get to relax and get time to myself. Since I started I feel much more relaxed before a test or something, it isn’t scary to me anymore.”

*Image 2: A group of children practicing the WoW technique at the Maharishi School of the Age of Enlightenment.*
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Justification

Online education is on the rise. Over 2.35 million college students were enrolled in at least one online course in 2004 (Allen & Seaman, 2005), 3.2 million in 2006 (Pope, 2006), and the numbers continue to grow. More and more schools are beginning to offer entire degree programs online. While research has been mixed, there is empirical support suggesting that quality online learning provides students with an equal or better education. However, online learning with poor design, implementation, and instruction can compromise students’ educational experience. Thus, it is crucial that colleges and universities provide high quality online learning programs (Kim & Bonk, 2006).

On the contrary, many teachers and students have little experience with online learning and are very apprehensive and thus, reluctant to gain exposure (Kearsley, 1998). Many believe that teaching online involves simply transferring all materials used in a face-to-face classroom onto a learning management system. However, creating a course in such a manner can have negative consequences for learning potential. Educators are often urged to teach an online course but not made aware of the inherent differences of online learning and ways to foster a positive learning environment. There is an apparent need to devote resources for proper technology and training and support for faculty who will teach online. Online educators need to get exposure to the possibilities that online learning has to offer and the technological advances at their fingertips. Thus, it is of great importance to study online learning programs in order to determine what works and what does not (Ebojoh & Xu, 2007). This area of research lacks clear, systematic testing of online learning at its best compared to the same subject taught face-to-face at its best. Therefore, this symposium will discuss past research comparing the effectiveness of online learning to face-to-face learning and propose a new model for conceptualizing and testing the efficacy of online learning. Quality online learning will be discussed and recommendations for developing a course will be presented. Finally, authors will showcase a few online courses currently being taught effectively.

Attendees should take away an enhanced appreciation for quality online learning. Additionally, they will be exposed to the central tenets of quality online learning and hear tips on how to enhance an online course. Finally, attendees will view several online courses and have the opportunity to ask questions.

Format of the Symposium

- 5 minute overview by the chair, two (2) speakers giving 10 minute talks, 5 minutes for discussion between talks, 5-10 minute online course showcase, and concluding with 15 minutes for summary and discussion.

Title of Each Presentation Followed and Authors

- Online Learning: What is it and what does research tell us?
  o Elizabeth Ferris, MEd; Florida International University; 11200 SW 8th St., Miami, FL 33199; eferris@fiu.edu
    ▪ Co-author: Laura Bruscantini; FIU (student); 14311 SW 38 Terrace, Miami, FL 33175

- Quality Online Learning
  o Dionne Stephens, Ph.D.; Florida International University; 11200 SW 8th St., Miami, FL 33199; Stephens@fiu.edu
    ▪ Co-author: Michael Baugh; 15905 SW 101st av., Miami 33157

- Course ShowCase and Explanation
  o Maria Vazquez, Ph.D. Florida International University; 11200 SW 8th St., Miami, FL 33199; dr.maria.vazquez@gmail.com
  o Melody Whiddon, Ph.D. Florida International University; 11200 SW 8th St., Miami, FL 33199; mwhiddon@fiu.edu
  o Dionne Stephens, Ph.D. Florida International University; 11200 SW 8th St., Miami, FL 33199; Stephens@fiu.edu

Summary of Each Presentation

Online Learning: What is it and What does Research Tell Us?

Online learning is defined as any type of learning and/or teaching that takes place via a computer network on the world wide web (Kearsley, 1998). Online learning may involve synchronous activities, which require student to log on to the internet at a certain time to connect with other students or instructors. Asynchronous learning, on the other hand, includes activities that can be completed at the students’ discretion (Ebojoh & Xu, 2007).

The experience or teacher and student—both teaching and learning—is vastly different from that of the traditional face-to-face classroom (Kearsley, 1998). While research has revealed mixed results, some data suggests that online education can be just as effective, or more effective than traditional, face-to-face learning for many subjects (Allen & Seaman, 2004). Goal of online learning is for it to be equivalent or better than face-to-face modes (Swan, 2003). Many studies have found “no significant difference” in the learning of students in an online versus face-to-face class (Arbaugh, 2000; Blackley & Curran-Smith1998; Fallah & Ubell, 2000; Freeman & Capper, 1999). Other studies have uncovered positive benefits of online learning (Dobrin, 1999; Maki, Maki, Patterson, & Whittaker, 2000; Shea, Frederickeon, Pickett, Pelz, & Swa, 2001). In this symposium, we will summarize past research and offer suggestions for the discrepancy in the
results. We will present a new model of testing the effectiveness of online learning and share some preliminary data we have collected.

**Quality Online Learning**

Many benefits of quality online learning have been empirically denoted. Because communication takes place predominately by writing (via discussion, chat, email), research shows that improved communication skills is a likely result of online learning (Kearsley, 1998). Also, online learning provides an egalitarian learning environment, where all students can speak their mind behind the safety and relative anonymity of a computer screen. More introverted or shy students often benefit from this feature and are able to contribute more than they do in face-to-face environments. Similarly, prejudices, stereotypes, physical characteristics, and disabilities can be kept to a minimum when teaching online, as students’ ethnicity, age, socioeconomic status, and other demographic factors are hidden. But what steps must an educator take to create a quality online learning environment?

Research has begun to suggest several strategies that facilitate quality online learning. The symposium would address them, and their importance, including the following. The most important factor, which is a contributor to increased learning, is student-student and instructor-student interaction. Synchronous live chats or asynchronous discussion forums provide the perfect venue for such interaction and often encourage students to process material in depth. Additionally, online educations should create a course with a consistent, familiar layout, clear navigation, and ample technological support. One unique advantage of online learning is that it is provides the opportunity to use a variety of presentation styles to meet the learning needs of various learners. A successful online instructor builds and maintains a community of learners by creating a relationship of trust, demonstrating effective facilitation skills, establishing consistent and reliable expectations, and supporting and encouraging independence and creativity. Additionally, an educator in a quality online course should encourage interaction and cooperation among students, encourages active learning, provides prompt feedback, communicates high expectations, and respects diverse talents and learning styles. These strategies will be broken down into specific techniques and additional strategies will be presented.
College of Education and GSN Research Conference Posters
Description of the Projects: **Natural Beginnings, PEACE, and QUEST**

**Project Natural Beginnings:** Personnel Preparation for Early Childhood Special Educators  
Principal Investigator: Dr. Diana Valle-Riestra  
Graduate Assistant: Sandra Olson  
Funding Period: 2009-2013

**Project Natural Beginnings.** Personnel Preparation for Early Childhood Special Educators, is an advanced Master’s degree program in Special Education with a specialization in Early Childhood Special Education (ECSE). This federally funded program prepares students (43 students over 4 years) to serve young children with disabilities, their families, and communities in natural, inclusive, and diverse environments. Graduates will be able to add on an Endorsement in Pre-K Disabilities in the State of Florida.

The principle objectives of **Project Natural Beginnings** include: (1) the recruitment, preparation, and retention of individuals at the graduate level (Master’s) with the interest and commitment to serve young children with disabilities and their families in natural, inclusive, and diverse environments and become highly-qualified and effective teachers, leaders, and change agents in the community and the field; (2) the implementation of a high-quality, interdisciplinary, and collaborative Master’s degree program in ECSE that will meet state requirements for an Endorsement in Pre-K Disabilities; (3) the initial and ongoing advising, financial, administrative, and mentoring support to all students enrolled in the program during their entire program of study; (4) the ongoing evaluation of the program leading to revisions and modifications in program development, functioning, implementation, and requirements; and (5) the successful completion and graduation of highly-qualified and effective teachers from the program capable of meeting the special educational needs of young children with disabilities and their families.

The foci of the program are acquiring advance knowledge and skills in early childhood special education, programming for young children with disabilities in natural, inclusive, and diverse environments, leadership and advocacy, applied research, and collaboration. Additionally, this program is collaborative in nature by partnering with Parent to Parent of Miami, Inc, Mailman Center for Child Development (MCCD), Early Steps Program, and the Pre-K Special Education Program at the local school district.

Incentives are provided to individuals who qualify and enroll in **Project Natural Beginnings** to ensure successful completion of the program and retention in the field. Incentives include: tuition support at 100% (36-credit program); professional student travel stipends to support their participation at a local, state, or national conference; and textbook reimbursement.

Project Consultants include Dr. Marie Tejero Hughes, Associate Professor in Special Education at the University of Illinois at Chicago, and Ms. Lileana Valdes de Moya, President of the Board of Trustee for Parent to Parent of Miami, Inc.

**Project PEACE:** Preparing Educators about Autism through Collaborative Efforts  
Co-PIs: Dr. Diana Valle-Riestra and Dr. Elizabeth Cramer
Graduate Assistant: Sandra Olson  
Funding Period: 2009-2013

Project PEACE (Preparing Educators about Autism through Collaborative Efforts) is an advanced Master’s of Science of Education (MS) degree program in special education that leads to an endorsement in the State of Florida in autism. The aim of the degree is to improve the education of students with ASD by providing coursework leading to an autism endorsement for special education (SE) teachers who teach students with ASD. The program recruits, educates, and retains special educators highly qualified to work and serve culturally and linguistically diverse (CLD) students with ASD.

The overarching goal of Project PEACE is to improve results and outcomes for students with ASD and their families using the following objectives: (1) to recruit 42 prospective SE teachers including those from typically underrepresented groups (e.g., CLD, individuals with disabilities); (2) to prepare 42 graduate students who are highly-qualified to teach CLD learners with ASD; (3) to ensure successful completion of a Master’s degree in SE with state endorsement in Autism and retention of graduates as experts and leaders in working and serving students with ASD and their families; (4) to evaluate the program, its components, coursework, and stakeholders, and use this information for program improvement purposes; and (5) to disseminate findings and information about the new program/coursework locally and nationally.

Coursework has been specifically designed to ensure graduate students understand the nature and needs of students with ASD; the assessment and intervention process used with students with ASD; behavior management and positive behavioral supports; and assistive and instructional technology, and alternate and augmentative systems. Additionally, this program is collaborative in nature by partnering with Parent to Parent of Miami, Inc. and the University of Miami Center for Autism and Related Disabilities (UM CARD).

Incentives are provided to individuals who qualify and enroll in Project PEACE to ensure successful completion of the program and retention in the field. Incentives include: tuition support at 100% (36-credit program) and mentoring support.

Project Consultants include Dr. Michael Alessandri, Executive Director of UM-NSU CARD, Clinical Professor of Psychology, and Co-Director of the Marino Autism Research Institute (MARI) at the University of Miami, and Ms. Lileana Valdes de Moya, President of the Board of Trustees for Parent to Parent of Miami, Inc.

Project QUEST (Qualified Urban Elementary Special-education Teachers)  
Principal Investigators: Dr. Patricia Barbetta and Dr. Elizabeth Cramer

Project QUEST was designed to improve the education of elementary special education students by providing coursework leading to certification for special education teachers who teach elementary students with disabilities. This project recruited and educated 3 cohorts of novice special educators to become highly qualified to teach culturally and linguistically diverse elementary special education students by providing a Master’s of Science of Education (MS) degree in Special Education and a certification in elementary education. This program included
intensive Summer Institutes in elementary content areas to prepare special education teachers to get certified in elementary education and advanced coursework in special education.

The proposed project was based upon the intersecting guidelines of Individuals with Disabilities Education Improvement Act of 2004 (IDEA) and No Child Left Behind (NCLB) requiring that all teachers be “highly qualified,” have a solid content knowledge, and possess full state certification in the subject areas that they teach. To date, 34 of the 36 teachers accepted to Project QUEST in cohorts 1 and 2 have graduated. The 12 teachers accepted to the third and final cohort will graduate in Spring 2011 (with the exception of one student who was accepted a semester later and will graduate in Summer 2011). Thus far, 42 of the teachers in Project QUEST have become highly qualified in elementary education. The grant ends on September 30, 2011.

List of Student Posters

Paula Acuna  
*Helping Students Improve Their Reading Abilities Through Differentiated Instruction*

Carmen Arroyo  
*Improving Communications Skills in Students With Autism Spectrum Disorder*

Kelly J. Callan  
*Literature Circles: Effective Practices that Encourage Participation*

Kimberly A. Clifford  
*The Effects of Saturday School on Economically Dis advantaged Students*

Phyllis Colgan  
*The Home-School Connection: Increasing on Task Behaviors for Students With Autism Through the Use of Activity Schedules*

Rukiya Deetjen Ruiz  
*Inquiry Based Science Curriculums’ Effect on Minority and English Language Learner Science Learners*

Johnnie Farrington  
*In What Ways Can On-Site Professional Development Promote High Quality Family Child Care for Children Ages Six to Thirty-Six Months Keeping Your Eyes on Young Children’s Success (K.E.Y.S)*

Elaine M. Geno  
*In Which Ways Will Self-Monitoring Charts Increase The On-Task Behaviors of Students With Autism Spectrum Disorders?*

Martha L. Hernandez  
*The Impact of a Repeated Reading Intervention on the Reading Skills of Students With EBD*
Aimee M. Lara
The Effects of Family Literacy Practices on Reading Achievement

Ashley L. Latham
Social Language Intervention of Students With Language Impairment

Janet M. Leigh
Promoting Advocacy Through Writing for Third Grade Students With Disabilities

Gianinna Lombardi
The Effects of Cross-Age Peer Mentors to Improve the Self-Concepts of Students With Disabilities.

Maria A. Marti
Increasing Parental Involvement in Mathematics Amongst Elementary Aged Students

Pamela A. Marti
The Benefits of Explicit and Systematic Phonics Instruction

Teresita Martinez
Homework Help and Parental Collaboration of Students With Disabilities

Lymari Martinez
Promoting Social Integration Through Social Stories in Children With Autism Spectrum

Lakeshia Y. Mcfarland
In What Ways Will Different Methods and Strategies Impact Academic Achievement in Mathematics for Students With Disabilities at the Elementary Level?

Veronica Medrano
Comparing Computer Interventions With Traditional Teacher Interventions

Beatriz Miguel-de la Noval
The Impact on Children’s Education When Families are Involved and Communicate With Teachers

Ariadna L. Orue
Benefits of Word Study Approach on Struggling Readers

Paola Papili
The Impact of Community-Based Social Stories in the Improvement of Social Skills in Real-Life Settings for Students with Autism Spectrum Disorders

Roxanna Rodriguez
Building Fluency and Automaticity in Mathematics Through Drill and Practice
Katrina Rossi
*The Impact Extracurricular Participation Has on the Academic Performances of High School Students*

Monica Suarez
*M.A.D.E - Making a Difference Everyday*

Marie Trujillo
*Influence of Parent Involvement on Language Skills Improvement*

Tatiana Valencia
*Math Homework Approach That Support Students With Autism*

Jessica A. Vega
*Providing Social Outlet Opportunities in the Classroom to Decrease Off-Task Behavior*

Odalis Vergara
*Multisensory Learning in Mathematics*
Appendices

The 10th College of Education & GSN Research Conference 2011 Program

The 11th College of Education & GSN Research Conference 2012 Call for Papers

The 11th College of Education & GSN Research Conference 2012 Call for Symposia

The 11th College of Education & GSN Research Conference 2012 Call for Posters
Florida International University
The Tenth Annual College of Education and
Graduate Student Network
Research Conference
Saturday, April 23, 2011

The Cornerstones of the College of Education: Honoring Inquiry,
Promoting Mentoring, and Fostering Scholarship

The purpose of the Florida International University Annual College of Education and Graduate Student Network Research Conference (COERC) is to enhance the existing research culture. The conference provides a meaningful vehicle for the preparation, mentorship, and presentation of scholarly work by students, faculty, and alumni.
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<tr>
<th>Time</th>
<th>Event Description</th>
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<tr>
<td>8:00 – 8:30 a.m.</td>
<td>Registration &amp; Light Refreshments</td>
<td>GC Center Ballroom</td>
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<td>8:30 – 9:15 a.m.</td>
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**Welcome**

Tonette S. Rocco  
Chair, Conference Steering Committee

**Opening Keynote:**  
Making Engagement Personal

David Lawrence, Jr.

David Lawrence Jr. retired in 1999 as publisher of *The Miami Herald* to work in the area of early childhood development and readiness. He is president of The Early Childhood Initiative Foundation and “University Scholar for Early Childhood Development and Readiness” at the University of Florida. Gov. Charlie Crist named him to the Children’s Cabinet in 2007. In 2002 he led the campaign for The Children’s Trust, a dedicated source of early intervention and prevention funding for children in Miami-Dade – with an 85 percent reaffirmation from the voters in 2008. He is the “founding chair.” Named by Gov. Jeb Bush to the Florida Partnership for School Readiness, he chaired that oversight board twice. He serves on the board of the Foundation for Child Development in New York and the Executive Advisory Board for the Frank Porter Graham Child Development Institute of the University of North Carolina-Chapel Hill. In 2002-3 he chaired the Governor’s Blue Ribbon Panel on Child Protection. In 2002, he was a key figure in passing a statewide constitutional amendment to provide pre-K for all 4 year olds. He is a board member and former chair of the Early Learning Coalition of Miami-Dade and Monroe. The David Lawrence Jr. K-8 Public School opened in 2006 across from the north campus of Florida International University. A fully endowed chair in early childhood studies is established in his name at the University of Florida College of Education.

Before coming to Miami in 1989, he was publisher and executive editor of the Detroit Free Press. Previously he was editor of the Charlotte Observer, and earlier in reporting and editing positions at four newspapers. (During his tenure as Miami Herald publisher, the paper won five Pulitzer Prizes.) He is a graduate of the University of Florida and named "Outstanding Journalism Graduate" and subsequently from the Advanced Management program at the Harvard Business School. In 1988, he was honored with Knight-Ridder's top award, the John S. Knight Gold Medal. His 12 honorary doctorates include one from his alma mater, the University of Florida. His national honors include the Ida B. Wells Award “for exemplary leadership in providing minorities employment opportunities” and the National Association of Minority Media Executives award for “lifetime achievement in diversity.” His writing awards include the First Amendment Award from the Scripps Howard Foundation and the Inter American Press Association Commentary Award. He chaired the national Task Force on Minorities in the Newspaper Business, was the 1991-92 president of the American Society of Newspaper Editors and the 1995-96 president of the Inter American Press Association. He was inducted into the Florida Newspaper Hall of Fame in 2010. He has served the Miami Art Museum, United Way and the New World School of the Arts as chair, and is a life trustee of the University of Florida Foundation and a member of the national board of the Everglades Foundation. He was the local convening co-chair of the 1994 Summit of the Americas. And he co-founded a non-profit vocational-technical school in Port-au-Prince, Haiti. He chairs the University of Florida Regional Council.

He and Roberta, a master’s graduate in social work from Barry, live in Coral Gables and have 3 daughters, 2 sons and 5 grandchildren. His honors include: “Family of the Year” from Family Counseling Services and “Father of the Year” by the South Florida Father’s Day Council. Last year he was been honored with “Humanitarian of the Year” awards from both the American Red Cross and the Beacon Council as well as with the Henry M. Flagler Award for Visionary Leadership from the Greater Miami Chamber of Commerce. This year he and his wife Roberta were honored with Barry University’s Laudare Medal for Outstanding Service. Nationally, he has been honored with the American Public Health Association Award of Excellence, the Lewis Hine Award for Children and Youth and the “Children’s Champion” award from the National Black Child Development Institute.
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<td>9:20 – 10:20 a.m.</td>
<td>Symposium 1, Concurrent Sessions 1 &amp; 2, and Poster Session 1</td>
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### Symposium 1
**Online Learning: A New Generation of Learning**

**Chair:** Melody Whiddon, Florida International University  
**Discussants:** Elizabeth Ferris, Laura Bruscantini, Dionne Stephens, Michael Baugh, and Maria Vazquez, Florida International University

This symposium will discuss past research comparing the effectiveness of online learning to face-to-face learning and propose a new model for conceptualizing and testing the efficacy of online learning. Quality online learning will be discussed and recommendations for developing a course will be presented. Finally, authors will showcase a few online courses currently being taught effectively.

Attendees should take away an enhanced appreciation for quality online learning. Additionally, they will be exposed to the central tenets of quality online learning and hear tips on how to enhance an online course. Finally, attendees will view several online courses and have the opportunity to ask questions.

### Session 1
**Abilities and Access**

**Moderator:** Glenda Musoba

- **Teaching To Trouble: Critical Book Reviews as Pedagogy to Interrogate Education Praxis**  
  Ann Nevin, Arizona State University and Chapman University; and Stephanie Brown, Shawna Draxton, John Erratt, Joyce Esquer, Darla Hagge, Melanie Kamae, Joanne Murphy, Christy Neria, Alaine Ocampo, Trisha Nishimura, Kirstee Radley, Jennifer Shubin, and Lawrence Taniform, Chapman University

- **Class Placement and Academic and Behavioral Variables as Predictors of Graduation for Students with Disabilities**  
  Liana Gonzalez, Florida International University

### Session 2
**Education in China**

**Moderator:** Charmaine DeFrancesco

- **Challenges for College-Level Learners of Academic English Writing in China**  
  Xuan Jiang, Florida International University

- **Biopolitical Implications of the Surveillance, Spectacle, and Performance of AIDS Education in Rural China**  
  Eduardo Hernandez, Florida International University

### Poster Session 1

- **The Home-school Connection: Increasing on Task Behaviors for Students with Autism through the Use of Activity Schedules**  
  Phyllis Colgan

- **Homework Help and Parental Collaboration of Students with Disabilities**  
  Teresita Martinez
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<th>Session 3</th>
<th>Issues in Physics</th>
<th>Moderator: Al Porro</th>
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<td>Transforming Participation: A Case Study of an Introductory Physics Student in a Modeling Instruction Class</td>
<td>Renee Michelle Goertzen, Eric Brewe, and Laird Kramer, Florida International University</td>
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<th>Session 4</th>
<th>Literature and Learning</th>
<th>Moderator: Teresa Lucas</th>
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<td>Discourse Analysis of Frank McCourt’s Teacher Man Through a Feminist Educational Lens</td>
<td>Eduardo Hernandez, Florida International University</td>
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<td>Theoretical Foundations of a Study Examining Adolescent Literature and Rape Myth Acceptance</td>
<td>Victor Malo-Juvera, Florida International University</td>
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<th>Session 5</th>
<th>Learning Environments</th>
<th>Moderator: Deborah Hasson</th>
<th>GC SE</th>
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<td>An Analysis of a Small Favela-Based Youth Organization</td>
<td>Bryn Hafemeister, Florida International University</td>
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<td>Classroom Reform With CMPLE: A Cogenerative Mediation Process for Learning Environments</td>
<td>Natan Samuels and Eric Brewe, Florida International University</td>
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<th>Poster Session 2</th>
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<td>The Impact of Community-based Social Stories in the Improvement of Social skills in Real-life settings for Students with Autism Spectrum Disorders</td>
<td>Paola Papili</td>
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<td>Improving Communications Skills in Students with Autism Spectrum Disorder</td>
<td>Carmen Arroyo</td>
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Inquiry based Science Curriculums' Effect on Minority and English Language Science Learners
Rukiya Deetjen Ruiz

The Effects of Saturday School on Economically Disadvantaged Students
Kimberly A. Clifford

In Which Ways will Self-monitoring Charts increase the On-task Behaviors of Students with Autism Spectrum Disorders?
Elaine M. Geno

Promoting Social Integration through Social Stories in Children with Autism Spectrum
Lymari Martinez

11:30 – 1:15 p.m.
Lunch is served buffet style. Quickly and quietly get your lunch at the back of the room, find a seat, and prepare for a delightful keynote address.
GC Center Ballroom

Lunch Keynote:
Engagement of Communities and Schools: A Two Way Street

A panel discussion with
President Mark Rosenberg, Dean Delia Garcia, and Superintendent Alberto Carvalho

Mark B. Rosenberg is the fifth president of Florida International University, one of the 25 largest universities in the nation. A political scientist specializing in Latin America, Dr. Rosenberg is the first FIU faculty member to ascend to the university’s presidency; he has more than 30 years of higher education experience. Under his leadership as president, FIU has increased enrollment to almost 44,000 students and now boasts Sun Belt Baseball and Football Championships, as well as a Football Bowl Championship. From 2005 to 2008, Dr. Rosenberg served as chancellor for the Board of Governors of the State University System of Florida. As chancellor, Dr. Rosenberg led the system’s strategic development and financial planning and policy initiatives, working closely with Gov. Charlie Crist and the legislature to secure support for SUS priorities. The SUS currently enrolls more than 300,000 students, employs more than 12,000 faculty and operates a $9.3 billion budget.

Prior to becoming chancellor, Dr. Rosenberg was integrally involved in the expansion and development of FIU into a major public research university. As Provost and Executive Vice President for Academic Affairs from 1998 to 2005, Dr. Rosenberg spearheaded the establishment of a law school in 2002 and a medical school in 2006. Under his leadership, FIU increased enrollment, implemented major campus construction projects, and was invited to join the select national honor society Phi Beta Kappa. Dr. Rosenberg was also instrumental in moving FIU into the top tier of Carnegie Foundation research universities.

Dr. Rosenberg's academic career began at FIU in 1976 as an assistant professor of political science. In 1979, he founded the FIU Latin American and Caribbean Center, which today is one of the nation's premier federally supported research and teaching centers focusing on the region. Dr. Rosenberg subsequently served as the Founding Dean of the College of Urban and Public Affairs and Vice Provost for International Studies. He has also been a Visiting Distinguished Research Professor at The Peabody College of Vanderbilt University, and a Visiting Professor at the Instituto Tecnologico de Monterrey (ITESM) in Mexico.

Dr. Rosenberg earned a B.A. in 1971 from Miami University of Ohio and a Ph.D. in Political Science with a graduate certificate in Latin American and Caribbean Studies from the University of Pittsburgh in 1976. He has written or co-edited seven books and numerous scholarly articles in leading journals. His latest book, The United States and Central America: Geopolitical Realities and Regional Fragility (2007), is a Harvard University project co-authored with Luis Guillermo Solis of Costa Rica. Governmental and media organizations have frequently sought Dr. Rosenberg's expertise on Latin America. He is a member of the Council on Foreign Relations, has testified before Congress numerous times, and has served as a consultant to the Department of State and the U.S. Agency for International Development.
Dr. Delia C. Garcia is Dean and Associate Professor of the College of Education at Florida International University. Prior to her appointment, she served as Interim Dean, as well as Chairperson of the Departments of Educational Leadership and Policy Studies and Leadership and Professional Studies.

Dr. Garcia has been the recipient of federal, state and foundation grants totaling more than $12 million, focusing on urban teacher education and family literacy efforts. Her teacher education projects have generated tuition scholarships for more than 250 teachers in the Miami-Dade County Public Schools (MDCPS) providing a means for the completion of a graduate degree in urban education. Through her work with family literacy programs, a model of family education for linguistically and culturally diverse populations has been created. The FLASH program aims to increase the participation of linguistically and culturally diverse families in the educational process of their children by improving their English/literacy skills, enhancing their abilities to work with their children in instructional activities, and assisting them navigate the educational system in the United States. The program was recognized by the U.S. Department of Education as an Academic Excellence project and its model has been replicated nationwide. The program has served the needs of over 35 local schools in the area of parent involvement, reaching over 3,000 families in the wider South Florida community. Dr. Garcia has been a leader in the area of community engagement for the past 30 years, forging university-school partnerships that address community needs and that focus on problem-solving.

Recently, Dr. Garcia was awarded a U.S. Department of Education, Office of Post-Secondary Education Title V grant, in the amount of $2.8 million. The five-year grant will support FIU, as a Hispanic-serving institution, to expand its capacity to serve Hispanic-Americans obtain greater access to graduate educational opportunities. Through this program, the College of Education is able to offer tuition scholarships to teachers and administrators from the Miami-Dade County Public Schools (MDCPS) in the pursuit of master’s and doctoral degrees as well as enhance student support services and mentoring opportunities for all graduate students in the College.

Dr. Garcia has published in the areas of family involvement, teacher and parent efficacy, and urban teacher preparation. She has also developed curriculum guides for teacher education in the areas of home school relations, adult literacy, and English as a Second Language (ESL). She has exercised leadership roles in professional organizations in her field, including receiving gubernatorial appointments to Florida’s State Advisory Committee in the area of family literacy, serving as President of the Bilingual Association of Florida (BAF) for over five years, and chairing state and district advisory committees that focused on issues of narrowing the achievement gap in our schools, and the preparation of adult educators in the state. She possesses a Doctor of Education degree in Administration and Supervision from Florida International University and a Bachelor and Master of Education degrees in Curriculum and Instruction from the University of Miami.

Alberto M. Carvalho is Superintendent of Miami-Dade County Public Schools (M-DCPS), the nation’s fourth largest school system, serving a diverse student body of over 400,000 in PreK-Adult. M-DCPS has an annual budget of almost $4.3 billion; 53,000 employees; and over 47.5 million square feet of facilities. A nationally recognized expert on education reform and finance, as well as an outspoken advocate for high quality education for all students, Mr. Carvalho became Superintendent in September 2008.

Under Mr. Carvalho’s leadership, M-DCPS’ business operations were restructured, resulting in an increase in financial reserves of over 2000 percent, despite the national economic downturn. Insisting on transparency in the budgeting process, he restored public trust and community support for Miami-Dade’s public schools. By bringing a renewed focus to the classroom, student performance has improved significantly. In 2010, the District posted its highest high school graduation rate ever and through a data-driven approach to school performance improvement, decreased the number of “F” high schools in Miami-Dade from 13 to one. In addition, a majority of schools earned a grade designation of “A.” M-DCPS students consistently have outperformed their national peers on the 2009 Reading, Mathematics and Science NAEP, a measure considered to be the gold standard of performance accountability.

A leader in innovation, Mr. Carvalho is spearheading the transformation of education, pushing for the migration from textbooks to digital content and is developing cutting edge educational environments to meet the demands of today’s learners. He has been selected to lead statewide committees charged with charting the future of public education in Florida. He successfully chaired the Governor’s Race to the Top (RTTT) Working Group which led to Florida’s successful bid for RTTT funding resulting in $700 million for Florida’s schools. He was also tapped as chair of Florida’s Task Force on Educational Excellence which has been charged with crafting the framework for the reform efforts driven by Race to the Top.
Most recently, Mr. Carvalho was recognized by the Greater Miami Chamber of Commerce as the 2010 “Visionary Leader of the Year” award and by eSchool News as one of the Top 10 Tech-Savvy Superintendents in the U.S. in 2011. Under his leadership, Miami-Dade County Public Schools has been selected as one of four finalists in the nation for the prestigious Broad Prize for Urban Education. He is the President-Elect of the Association of Latino Administrators and Superintendents (ALAS). A versatile leader, Mr. Carvalho is the only superintendent in the nation who is the self appointed principal of two award-winning schools – the Primary Learning Center and the iPrep Academy - and teaches Physics in selected high schools across the district. He has been featured on CNN, NBC, The New York Times, District Administration Magazine, The Christian Science Monitor, and Nightly Business Report.

**1:20 – 2:20 p.m.**
**Concurrent Sessions 6, 7 & 8**
**and Poster Session 3**

**Session 6**
**Reading and Learning**
Moderator: Charles Bleiker

**Secondary Teachers’ Knowledge, Beliefs, and Self-Efficacy to Teach Reading in the Content Areas: Voices Following Professional Development**
Joyce Fine, Florida International University; Vicky Zygouris-Coe, University of Central Florida; Gwyn Senokossoff, Florida International University; and Zhihui Fang, University of Florida

*Do Syllable Count and Word Frequency Differ Significantly in Easy and Difficult Reading Comprehension Items?*
Kyle Perkins, Florida International University

**Session 7**
**Mathematics Achievement**
Moderator: Marc Weinstein

*Improving Student Mathematics Achievement through Self Regulation and Goal Setting*
Edilma Medina, Florida International University

*Mathematics: Going Beyond the Academic Discipline*
Jennifer Hoyte, Florida International University

*Analyzing Elementary Preservice Teachers’ Development of Content and Pedagogical Content Knowledge in Mathematics through Microteaching Lesson Study*
Roxanne Molina, Maria L. Fernandez, and Leslie Nisbet, Florida International University

**Session 8**
**Adult Education**
Moderator: Thomas G. Reio, Jr.

*Adult Learners and the Work of Amnesty International*
Eduardo Hernandez, Florida International University

*A Geocentric Organizational Culture of a Global Corporation: A Phenomenological Exploration of Employees’ Experiences*
Maria S. Plakhotnik, Florida International University

**Poster Session 3**
**GC Lobby**

*Helping Students Improve their Reading Abilities through Differentiated Instruction*
Paula Acuna
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<td>Session 9</td>
<td>Issues in Criminal Justice</td>
<td>Hilary Landorf</td>
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<td>Influencing Factors on Suicide in Correctional Settings</td>
<td>Ana Maria Lobos, Florida International University</td>
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<td>Social Learning Theory and Prison Work Release Programs</td>
<td>Vivian Astray-Caneda, Markell Fanning, &amp; Malika Busbee, Florida International University</td>
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<td>Session 10</td>
<td>Women and Support</td>
<td>Teresa Lucas</td>
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<td>Emotions and Learning in Support Groups of Female Breast Cancer Patients</td>
<td>Patricia Delgado, Florida International University</td>
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<td>Women in Nontraditional Career and Technical Education</td>
<td>Chaundra L. Whitehead, Florida International University</td>
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<td>Session 11</td>
<td>Science and Technology</td>
<td>Linda Bliss</td>
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<td>Conflict and Consonance: Implementing an Evidence-Based Middle School Science Curriculum</td>
<td>Cheryl McLaughlin and Rose Pringle, University of Florida</td>
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<td>Scottsdale Community College Provides their Students Open Access with End-to-End Virtualization</td>
<td>Angel Rodriguez, University of Florida, and Dustin Fennell, Capella University</td>
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<td>The Effects of Cross-age Peer Mentors to Improve the Self-concepts of Students with Disabilities</td>
<td>Gianinna Lombardi</td>
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<td>Session 12</td>
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<td>Moderator: Eva Frank</td>
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<td>Understanding Grade Point Average Perspective in the Ninth Grade as Part of an Overall College Plan</td>
<td>Eduardo Hernandez, Florida International University</td>
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<td>Bondage and Discipline, Dominance and Submission, and Sadism and Masochism (BDSM) Identity Development</td>
<td>Carolyn Meeker, Florida International University</td>
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<td>Moderator: Patsy Self</td>
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<td>Hidden Communication Deficits in Children with Autism and Early Behavioral Interventions</td>
<td>Yalda Amir Kiaei and Martha Pelaez, Florida International University</td>
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<td>The Effects of the Word of Wisdom Meditation Technique on the Development of Executive Function Skills in Early Childhood Education</td>
<td>Elizabeth Willis, Florida International University</td>
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<td>The Battle for National History Standards</td>
<td>Annika L. R. Labadie, Florida International University</td>
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<td>Global Learning and the Human Capability Approach: Florida International University Case Study</td>
<td>Hilary Landorf and Fernanda Pineda, Florida International University</td>
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<td>Session 15</td>
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<td>Occupational Stress: Towards an Integrated Model</td>
<td>Laura C. Batista-Taran and Thomas G. Reio, Jr., Florida International University</td>
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<td>Caring for the Caregiver: Emotional Challenges of Pediatric Palliative Care Nurses</td>
<td>Monica Restrepo and Shanna Pilgrim, Florida International University</td>
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<td>Roxanna Rodriguez</td>
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<td>Multisensory Learning in Mathematics</td>
<td>Odalis Vergara</td>
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<td>Math Homework Approach that Supports Students with Autism</td>
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<td>M.A.D.E -Making a Difference Everyday</td>
<td>Monica Suarez</td>
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<td>In What Ways will Different Methods and Strategies Impact Academic Achievement in Mathematics for Students with Disabilities at the Elementary Level?</td>
<td>Lakeshia Y. Mcfarland</td>
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**Award Presentations**

4:30 – 5:00 p.m.  
**Lorraine R. Gay Award for Excellence in Research/Scholarship**  
Adriana McEachern  
Award for Best Graduate Student Paper  

**Barnes & Noble Award**  
Adriana McEachern  
Award for Best Faculty-Student Paper  

**GSN Award: Best Student Conference Paper 2011**  
sponsored by  
College of Education-Graduate Student Network (COE-GSN)  
Chaundra L. Whitehead, President, Graduate Student Network  

**Closing**  
Tonette S. Rocco,  
Chair, Conference Steering Committee
A Special Thanks to Our Sponsors and Door Prize Donors

Barnes & Noble
The FIU Bookstore, operated by Barnes & Noble Booksellers, has been servicing the FIU campuses for over twenty years. We sell all required and recommended textbooks for your classes both new and, used copies when available. For additional information, please visit our webpage at: http://fiu.bncollege.com.

Delta Iota Chapter of Chi Sigma Iota International
Promoting Excellence in the Profession of Counseling. For additional information, please visit our webpage at: http://www.csi-net.org/

SAGE Publications
SAGE Publications is an independent international publisher of journals, books, and electronic media. Known for our commitment to quality and innovation, we are a world leader in our chosen scholarly, educational, and professional markets. www.sagepub.com

CLAVE Grant
Creating Latino Access to a Valuable Education (CLAVE). The recently awarded project involves 85 Hispanic students in the completion of graduate degrees in Urban Education and Higher Education. The project has been conceptualized based on the identified professional development needs of teachers and administrators in the district and our local student population in Miami Dade County Public Schools. http://education.fiu.edu/research_and_grants.html

Panther Catering
Panther Catering provides FIU and surrounding communities with complete, professional catering services. From an informal coffee break for a small gathering to an elaborate reception for hundreds, we deliver the finest service and highest quality food at each event. For more information, please visit: www.pantherdining.com

Santi Salon
Santi Salon is a hair, nail, and waxing salon located in the Graham Center at the FIU South Campus. For more information, please visit: http://www.wavesspafiu.com/santisalon/

Miami Dolphins
http://www.miamidolphins.com/

Office of the Dean, FIU College of Education

Dr. Adriana McEachern
Dr. Marilyn Montgomery
Dr. Tonette Rocco
Dr. Patricia Barbetta
Dr. Delia Garcia
CONGRATULATIONS ON THE 10TH COERC
Adriana G. McEachern, Ph.D., N.C.C., C.R.C., L.M.H.C.
Founder and Faculty Advisor
DELTA IOTA CHAPTER
mcearcher@fiu.edu

Chi Sigma Iota, the international honor society for professional counselors, counselor educators, and students promotes scholarship, research, professionalism, leadership and excellence in counseling, and recognizes high attainment in the pursuit of academic and clinical excellence in the profession of counseling.
Call for Papers 2011 for the 11th Annual College of Education and Graduate Student Network Research Conference at Florida International University
Saturday April 28, 2012
The Cornerstones of the College of Education: Honoring Inquiry, Promoting Mentoring, and Fostering Scholarship

Conference Mission: The purpose of the Florida International University Annual College of Education and Graduate Student Network Research Conference (COERC) is to enhance the existing research culture. The conference provides a meaningful vehicle for the preparation, mentorship, and presentation of scholarly work by students, faculty, and alumni.

Stewards of the Discipline, Reflective Inquirers, Mindful Educators:
Decades of educational research indicate that the practice of educating our nation’s citizens cannot be judged from a single vantage point. Individuals come to the educational enterprise with different needs and goals often addressed through educational research that weaves a tapestry between knowledge, theory, practice and possessing the habits of minds for showing curiosity and passion about learning through inquiry. We recognize the diverse applications of educational research and the behavioral, psychological, and cultural viewpoints that exist at local, national, and international levels. Conference participants are encouraged to consider the richness of the diverse content areas in education (school and non school based) serving children and adult students.

The Lorraine R. Gay Award for Outstanding Research: The award will be presented to the best paper authored by an individual student or group of students.

Barnes & Noble Best Faculty-Student Paper Award: The award will be presented to the best paper authored by a faculty-student(s) team.

The College of Education Graduate Student Network Award: The award will be presented to the best paper by an individual student or group of students who are GSN members.

Who Should Submit: All current and former FIU College of Education students and faculty are encouraged to submit manuscripts.

Manuscripts are welcomed from practitioners, students, and faculty from other institutions, universities, centers, institutes, and schools. Manuscripts may be submitted by single or multiple authors. Students are encouraged to submit manuscripts based on theses/dissertations or other scholarly work. Faculty and students are encouraged to submit work performed independently or in collaboration with colleagues.

Conference Mission:

Manuscript Categories:

Reports on Research: Reports on research (qualitative, quantitative, or mixed methods studies) including thesis and dissertations with their implications for practice and research.

Methods and Issues in Research:
Controversial and critical questions vital to research and practice, such as in research methods, ethics, the use of research in practice, practice-generated needs for research, and processes by which researchers determine the areas in which to conduct research. A description of the issue or summary of the points at issue should be presented.

Theory, Model Development, and Literature Reviews: Insights on theory, an existing model or presentation of a new model, or a review of the literature that provides a new perspective on the existing work. Other in-depth exploration of issues related to teaching and learning throughout the lifespan in formal education settings and beyond may be included. Papers should provide implications for future research and practice.

Perspectives in Practice: Questions and concerns regarding practitioners’ work in various settings. This may include, but is not limited to, practice in education and training programs in schools, corporate and community organizations, leisure activities for children and adults, or other extra-curricular activities. Papers may address problems and/or solutions in areas of practice such as curriculum design, strategy selection, teaching and learning, or program implementation. They may also address how practitioners view research related to their concerns.

Evaluation Studies or Action Research:
Reports on studies involving needs assessment, priority setting, goal analysis, evaluation or other forms of applied research. Reflections on proposal development, grant work, and reports on progress of the grant at meaningful stages are encouraged.

Conference Timeline
Manuscript Submission Deadline – Monday December 19, 2011
Authors Notified of Submission Status – Wednesday, February 8, 2012
Authors Send Revised Manuscripts to the Proceedings Sub-Committee – Monday, March 5, 2012
Camera-Ready Manuscripts - Monday, March 26, 2012

Submission Instructions:
All submissions must be formatted as MS word documents and sent as email attachments to the COERC Steering Committee Chair, Dr. Tonette S. Rocco, at: roccot@fiu.edu by December 19, 2011. The title of the subject line of the email message should be the name of the conference and the last name of the first author (e.g., “COERC 2012. Jones”). Upon receipt of the manuscript, the Committee Chair will send an e-mail acknowledgement. Each manuscript submission must contain two documents: the cover page and the manuscript.

Please submit the 2 email file attachments as follows:
1. **Cover Page** – Name this file attachment with your last name and the word “Cover” (e.g., Jones.Cover.doc).

   Cover page should include the following information:
   * All author(s) identification/contact information and institutional affiliation (COE Department or other institution) on the Cover Page.
   * Manuscript Category (see Manuscript Categories list and guidelines)
   * Three (3) Key Words that are not in the Title to characterize the focus of the manuscript
   * Authorship category: student(s)-only, student(s)-faculty, or faculty-only manuscript.
   * The Warrant Statement.

2. **Blind Copy of the Manuscript** - Name this file attachment with your last name and the word “Blind” (e.g., Jones.Blind.doc).

   The manuscript should include the following information:
   * Manuscript title in **14 pt. Bold letters**.
   * Provide an abstract of 25-50 words maximum.
   * The manuscript should be six (8) single spaced pages, including references with one inch margins on all sides;
   * Extra two pages maximum may be added after the References for tables, figures, and/or pictures.
   * APA 6th edition guidelines must be adhered to for format, organization, headings, reference citations, grammar, and other issues.

**Research with Human Subjects:** Please be mindful that the FIU Division of Sponsored Research requires completion of the National Institutes of Health Human Subjects Online Training Module (http://cme.nci.nih.gov) and Institutional Review Board (IRB) approval before the collection of any data involving human subjects. For further information contact one of the COE IRB representative, Dr. Leonard Bliss at blissl@fiu.edu or 305.348.1903.

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**Review and Selection Process**

The Review and Selection Committee will screen manuscripts for adherence to Submission Instructions and American Psychological Association (APA) 6th (ed.) guidelines. Manuscripts that have not followed these basic instructions will be returned to author(s) for corrections and possible re-submission within two weeks of receipt. All submissions will undergo a double blind review by the Review and Selection Committee, who will review each manuscript for content, clarity, and organization. Manuscripts may be accepted, accepted with revisions, or rejected.

**Wednesday, February 8, 2012**

**Notification of Submission Status**

Authors will receive a letter with notification of submission status and feedback from reviewers. Authors are expected to either make revisions or address the reason the revision was not made in a cover letter within one month of receipt.

**Monday, March 5, 2012**

**Submission of the Revised Manuscripts to the Proceedings Sub-Committee**

Authors must re-submit the revised 6-page single spaced manuscript along with the cover letter that describes what changes were made to Proceedings sub-committee via email. The proceedings editors will edit every manuscript, making necessary formatting and editing changes. The edited manuscripts will then be returned to the authors. Authors are expected to return camera-ready manuscripts within one month.

**Monday, March 26, 2012**

**Submission of Camera-Ready Manuscripts to the Proceedings Sub-Committee**

Please assist us in our efforts to produce high quality proceedings by following instructions, addressing editors/reviewers suggestions for improvement, meeting deadlines, and adhering to APA 6th edition guidelines.

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**Manuscript Discussion Sessions:** One to two manuscripts may be presented during the 50-minute sessions organized around common themes. Each session will be in a separate room with up to three concurrent sessions scheduled. The presenter of each manuscript will be allotted 10 to 15 minutes to present the key points from the manuscript. Interactive presentations are encouraged. MS PowerPoint, overheads, or handouts are encouraged but not required.

For questions on submission instructions contact Dr. Tonette S. Rocco roccot@fiu.edu or 305.348.6151 or any member of the 11th Annual COE Research Committee.

**Note:** All moderators, presenters, and their family and friends are expected to register for the COE Research Conference.

**Suggested Areas to Address in Manuscripts:**

- Theoretical framework review of the literature that sheds light on the practitioner concern, research question, evaluation purpose, or research issue.
- Clear statement of the research concern/question/purpose/issue to be addressed.
- Research design
  - Rationale for method (qualitative/quantitative/mixed)
  - Research question(s)/Hypothesis
- Data collection and analysis
  - Results of the study and reflections for potential changes in practice/policy/research
- Relationship of findings to existing theory
- Implications and recommendations for a specific field in education (school or non school based)
The 11th Annual College of Education and GSN Research Conference
Saturday April 28, 2012, 8:00 a. m. to 5:00 p. m.
Call for Papers 2012

Sample Cover Page

Brief Manuscript Title

Title typed double space in Uppercase and Lowercase Letters and Centered between the Right and Left Margins

First author's name
Author's Email and Phone number
College of Education, Department of XXXXX
(List in order of contribution)
Second author's name, Third author's name, etc.

"I (we) warrant that if this manuscript is accepted, I (we) will address all concerns of the COERC Reviewers and Proceedings Editors and submit a final (revised) MS Word six page (single-spaced typed) manuscript for publication in the Conference Proceedings. I (we) understand that if this final manuscript is not received in its final form on or before Monday, March 26, 2012, this manuscript will not be included as part of the Proceedings."

Author Preparing Warrant Statement:

Manuscript Category:
Reports on Research □
Evaluation Studies □
Methods and Issues in Research □

Authorship category:
Student(s)-only □
Student(s)-faculty □
Faculty-only manuscript □

Key Words: (List three words not in the Title that characterize the focus of the Manuscript)

Manuscript Submission Checklist

Electronic files
□ Cover page, blind copy labeled correctly (e.g. author.cover.doc)
□ MS Word is used
□ Margins are 1 inch on all sides
□ Length of text (including references) is six single spaced pages; an extra two pages maximum may be added for tables, figures, and/or pictures.

□ Times New Roman 12pt type font used
□ Pages are numbered in the footer of the lower right hand corner of each page
□ Spelling and Grammar are checked
□ Submission Instructions are followed

Cover Page
□ Manuscript Title is provided
□ All authors’ names, First author’s email, phone number, and affiliation
□ Manuscript Category (from Manuscript Category List)
□ Three Key Words not in Title characterizing the focus of the Manuscript
□ Warrant Statement

Blind Copy
□ No author identification is present
□ Manuscript Title is included in 14 pt. Bold, centered at the top of the page
□ APA (6th ed.) Guidelines followed throughout
□ A theoretical framework for the project is provided
□ A clear research question or purpose is stated
□ Clearly written using concise language and few pronouns
□ Headings are meaningful and provide clear guide to organization
□ The scholarly work is relevant to the COE audience
□ Method description provides details on what, how, and why for all elements in the research design description
□ Manuscript Category is evident in the presentation
□ APA format is followed for references cited in text and listed in References
□ All references listed appear as citations
□ Tables and Figures provided after References; an extra two pages for figures, tables, and/or pictures may be added.

Sample Blind Manuscript

Title of Manuscript, Centered, in 14 point Bold, with All Important Words Capitalized

Abstract: 25-50 words in block form

Indent and Text starts here, single-spaced. Text and References should be six pages maximum in 12 pt. Times New Roman font; an extra two pages may be added after the References for tables, figures, and/or pictures.

In footer, put the page number

For more information about the conference, please, visit http://coeweb.fiu.edu/research_conference/
COERC 2012 Symposia: Call for Proposals

The COERC 2012 Steering Committee encourages the presentation of symposia on timely topics. Symposia can be valuable for promoting scientific interchange and developing new concepts in a way that crystallizes thinking in particular areas. This particular format also helps investigators and practitioners keep abreast of developments in fields that may not be intimately related to their own major research and professional interests. The COERC 2012 Steering Committee is responsible for selecting symposia to be included in the conference.

Proposals for symposia should include:

1. Title of the symposium.
2. Name, institutional affiliation, mailing address, and e-mail of the chairperson.
3. Justification of need for the symposium in the particular field (maximum 1000 words).
   3.1. Justification should include the timeliness of the topic and anticipated outcomes for those in attendance.
4. Format of the symposium.
   4.1. Each symposium is scheduled for 60 minutes.
   4.2. The expected format for a symposium consists of a 5 minute overview by the chair, two (2) speakers giving 10-15 minute talks, 5 minutes for discussion between talks, and concluding with 10-20 minutes for summary and discussion.
   4.3. The Steering Committee encourages the inclusion of a component of translational research in each symposium.
5. Title of each presentation followed by the name of the first author, his/her institutional affiliation, mailing address, country and e-mail, and the name(s) of the co-author(s), their institutional affiliation, and mailing address.
6. Summary of each presentation given by faculty (maximum 500 words). Presentations based on papers authored by individual students or groups of students must adhere to the submission instructions for individual manuscripts to allow consideration for the Lorraine R. Gay Award for Outstanding Research. The Review and Selection Committee may request that student papers be revised. Symposia may be rejected if student presentations are not revised and returned according to the deadlines set by the Review and Selection Committee.

Proposals should be submitted via email to Dr. Tonette S. Rocco at roccot@fiu.edu by January 10, 2012. Authors will receive feedback by February 8, 2012. The 11th Annual College of Education and Graduate Student Network Research Conference will be held on Saturday, April 28, 2012. For more information about the Annual College of Education and GSN Research Conference, please, visit http://coeweb.fiu.edu/research_conference/
The 11th Annual College of Education and Graduate Student Network Research Conference, Saturday April 28, 2012

COERC 2012 Poster Presentations: Call for Proposals

The COERC 2012 Steering Committee encourages the presentation of posters on timely topics.

Poster presentations can be valuable for promoting and developing new concepts in a way that crystallizes thinking in particular areas. This particular format also helps investigators and practitioners keep abreast of developments in fields that may not be intimately related to their own major research and professional interests. Posters offer the opportunity to present data and have substantive discussions with interested colleagues. The audience circulates among the posters, stopping to discuss papers of particular interest to them. Authors present their papers using a visual medium with key excerpts from the papers displayed on a 4' high x 8' wide free-standing bulletin board. Poster presentations should incorporate illustrative materials such as tables, graphs, photographs, and large-print text, and materials should be clearly readable from a distance of three feet (primary text font should be 20 points or larger, and headings font at least 30 points). Posters should display data, policy analysis, or theoretical work in a visually appealing poster format to encourage interactive communication. The COERC 2012 Steering Committee is responsible for selecting posters to be included in the conference.

Proposals for poster presentations should include:
1. Poster title
2. Title of each presenter followed by the name of the first author, his/her institutional affiliation, mailing address, country and e-mail, and the name(s) of the co-author(s), their institutional affiliation, and mailing address.
3. Abstract describing the poster (50 words maximum)
4. Supporting summary (500 words maximum, plain-text format)

Poster presentations may be rejected if student presentation submissions are not revised and returned according to the deadlines set by the Review and Selection Committee.

Proposals should be submitted via email to Dr. Tonette S. Rocco at roccot@fiu.edu by January 10, 2012. Authors will receive feedback by February 8, 2012.

The 11th Annual College of Education and Graduate Student Network Research Conference will be held on Saturday, April TBA 2012. For more information about the Annual College of Education and GSN Research Conference, please, visit http://coeweb.fiu.edu/research_conference/