Instructional Gaming and Engagement in a Third Grade ESE Classroom

Abstract (50): This action research will investigate instructional games as a strategy to increase third grade students’ engagement and motivation. A researcher-created behavior checklist and survey will document students’ behavior and attitudes during baseline, intervention, and post intervention. Analysis will investigate changes in engagement, motivation, and grades due to the gaming intervention.

Statement of the problem (200): Presently, many public schools are struggling to engage students in the learning process. Now, more than ever, students must succeed in school so that they can continue their education at an institute of higher education or in career training. While success can be measured many ways, it is most often measured by performance on standardized achievement tests. The third grade participants in the present study are all “at risk” students, and so they are less likely to receive a favorable score on the final state test. Also observed in this classroom of 13 ESE students and seven general education students was a large amount of disengagement during direct instruction periods. For example, during reading and mathematics periods, students typically worked directly out of their workbooks while the teacher lectured. During this time, students are easily distracted and uninterested in completing tasks. Disengagement within this context also spurred decreased academic achievement. Currently, students, are on average, performing on a first grade level.

Purpose and/or Research Question (50): The purpose of this study is to investigate the impact of instructional gaming on student engagement within a third grade ESE classroom. The research hypothesis predicts that instructional gaming will increase engagement in this group.

Literature Review (250): The field of education struggles to engage student’s interest in their school work (e.g., Allery, 2004). Research on instructional gaming shows a positive impact on students’ motivation (Hogle, 1996; Rotter, 2004), socialization (Glendon & Ulrich, 2005), involvement in the learning process (Franklin, Peat, & Lewis, 2003), problem-solving skills (Dorn, 1989), cultural acceptance (Lau Whelan, 2005); and attitudes toward learning (Druckman, 1995). Gaming has been defined as an activity that is carried out within a cooperative setting with the intent of achieving established objectives in order for students to apply concepts and ideas within a real-world context (Burden & Byrd, 2007). Theories that have been discussed in regard to gaming include experiential learning (Kolb, 1984) and brain development (Healy, 1990). The present study will investigate the relationship between instructional gaming and engagement in a third grade special education classroom. Games will be developed by the researcher in collaboration with the cooperating teacher, mathematics coach, and other faculty members prior to the intervention and will be based upon previous research in the students’ individual differences in learning and development. It is hypothesized that students’ engagement will improve on exercises that include gaming.

Research Methodology (200): Prior to the implementing the intervention, the researcher will collect baseline data on student behavior and engagement using a researcher-created checklist and survey for two weeks. Behaviors to be recorded include level of engagement while sitting in seat, engagement in classroom/group discussions, following directions, collaboration with peers,
overall attitude, and any other relevant behaviors that were observed. Each student will complete the attitude survey during the period prior to intervention, during the intervention, and after the intervention period has ended. After analyzing data from the diagnostic pre-assessment, the intervention will begin. During the intervention, instructional games developed by the researcher in collaboration with the cooperating teacher, mathematics coach, and other faculty members will be implemented while student behaviors and attitudes are recorded using the behavior checklist and survey. After two weeks of daily interventions students will return to the traditional teaching styles used within the classroom. Two weeks later the teacher will use the behavior checklist and survey to assess any lasting effects of the intervention on students’ behavior and attitudes during traditional methods of instruction. Baseline, intervention, and post-intervention data will then be analyzed using analysis of variance (ANOVA), interpreted, and reported in both graph and narrative form.

Findings/Results (200): It is hypothesized that implementing instructional gaming in an educational setting will result in increased levels of engagement in ESE and general education students, who are identified as being at-risk. This increased engagement should be observable in students during and after the intervention. As engagement levels increase, it is predicted that students’ grades will increase also. The study was submitted to the Institutional Review Board with a request for exemption in December 2014. Data will be gathered from January to April, 2015. Analysis, interpretation, and write up of the findings will be completed by May 2015.

Implications for the Field (100): If successful, teachers can utilize instructional gaming as a tool within their classroom to increase student engagement and indirectly increase students’ grades and test scores. While test scores are a simple, somewhat effective way to measure students’ success, there are many other. As students become more engaged and their grades improve, their self-confidence and self-efficacy will increase as well. As a result, it is predicted that students will become more willing to participate, less afraid of failure, and overall more comfortable in the classroom setting. This feeling of safety and success can then help students succeed in subsequent grades, even college and their careers.

References


