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Survey of 11th and 12th grade students who have completed online courses

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Editor's note: The student perspective is an important factor in successful introduction and growth of quality distance learning programs. There are many reasons for adoption of distance learning programs, but at the end of the day they must fulfill the educational objectives and students must be satisfied. This is more than market research. It provides a pool of data to show where the system can be improved for the benefit of learners and educational providers.

Survey of 11th and 12th grade students who have completed online courses

**M.O. Thirunarayanan and Argelio Estrada
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Abstract

A survey was conducted to determine eleventh and twelfth grade students' experiences in and thoughts about online courses that they completed. Ninety-one eleventh and two hundred and thirty-one twelfth grade students participated in the study. The study participants were enrolled in a charter middle/high school in a diverse metropolitan city in the US. The survey contained items that were designed to determine study participants' likings and preferences for taking online versus face-to-face courses, their thoughts about academic misconduct in online courses, and thoughts about communication and interaction with online teachers / facilitators. The study participants were also asked whether it was easier to pass in online or face-to-face courses and also the course delivery format in which they learn more. Findings indicate that study participants think it is easier to cheat in online courses and that they like and prefer to take courses face-to-face. Study participants also reported that online course teachers / facilitators communicated and interacted with them and were available to help them when they needed help. A majority of the study participants think it is easier to pass an online course and that they learn more in a face-to-face course.

Need for and purpose of the study

Online education is becoming more common at the K-12 level. The rapid growth of virtual education in the US at the K-12 level has been acknowledged by some authors (Barth, Hull, and St. Andrie, 2012; and Watson, 2007). According to Glass and Welner (2011): "Virtual or online schooling is a growing phenomenon" and "In just a decade, such virtual education has grown from a novelty to a movement."

Some authors think that there is insufficient research regarding K-12 virtual schools (Barbour, 2010; Barbour, 2014; and Molnar, 2013). However, because online K-12 education is a growing phenomenon, some research has been conducted in different areas related to virtual education. Cavanaugh et al. (2009), who conducted a review of the literature in this area noted:

Our analysis of the open access literature indicated that a majority of that literature focused on statewide and consortium/multi-district virtual schools, the roles of teachers and administrators, the promise of virtual schooling and its initial rationale for implementation, administrative challenges, the technology utilized, and interaction with students.

A conclusion that can be drawn from the above statement is that while research has been conducted regarding various aspects of K-12 online or virtual education, not much research has been conducted regarding K-12 students' thoughts about, and experiences in online courses. Such a conclusion is confirmed by Rice (2006) who stated: "a paucity of research exists when examining high school students enrolled in virtual schools, and the research base is smaller still when the population of students is furthered narrowed to the elementary grades."

The purpose of this study is to determine eleventh and twelfth grade students' experiences in and their opinions about online courses.

The study

Students who were enrolled in the eleventh and twelfth grades in a middle / high charter academy or school in a large and diverse city in the southeastern part of the United States participated in the study. The researchers obtained Institutional Review Board (IRB) approval from a university and permission from the administrator of an academy to survey students in the eleventh and twelfth-grades. Students in the eleventh and twelfth grades were targeted for the study because they were more likely to have completed an online course than students in lower grades. Following IRB requirements, only students below the age of 18 years who signed assent forms and whose parents signed consent forms were allowed to participate in the study. Students who were 18 years of age or older were allowed to participate in the study if they signed consent forms.

A survey was designed to elicit students' responses to questions about their experiences in and thoughts about online courses. The questions and items in the survey were related to the following topical areas:

- Students liking and preferences for taking courses
- Academic misconduct in online and face-to-face courses
- The Rigor of online courses
- Communication with teachers in online courses
- Interaction in online versus face-to-face courses
- Do students think they learn more in online or face-to-face courses?

No questions were asked in the survey regarding the race or ethnicity of the students because more than ninety percent of the people in the city where the school is located are of Hispanic heritage. Ninety-one eleventh-graders and two hundred and thirty-one twelfth graders completed a thirty-item survey. Fifty-four (59.3%) of the eleventh graders who participated in the study were females while thirty-seven (40.7%) were males. One hundred and thirty-nine (60.2%) of the twelfth grade participants were females and ninety-two (39.8%) were males.

At the eleventh grade level, 52 (57.1%) of the students had completed one online course, twenty-eight (30.8%) had completed two online courses and eight (8.8%) had completed three online courses. At the twelfth grade level, one hundred and seventy-one (74%) had completed one online course, forty-eight (20.2%) had completed two online courses and eight (3.5%) had completed 3 online courses. Only very small numbers and percentages of students at both grade levels had completed four, five and more than five courses.

Study findings

Students' likings and preferences for taking courses

An overwhelming majority of students at both grade levels indicated that they not only like, but also prefer to take class face-to-face. Nearly identical percentages of eleventh [n=80 (87.9%)] and twelfth grade [n=202 (87.4%)] students indicated that they *like* taking courses face-to-face. The percentages of students who responded that they *prefer* to take classes face-to-face were exactly the same at the eleventh [n=78 (85.7%)] and twelfth [n= 198 (85.7%)] grade levels. Figures 1 and 2 provide a side-by-side comparison of the percentages of students in the eleventh and twelfth grades who indicated that they like to take courses face-to-face or online.

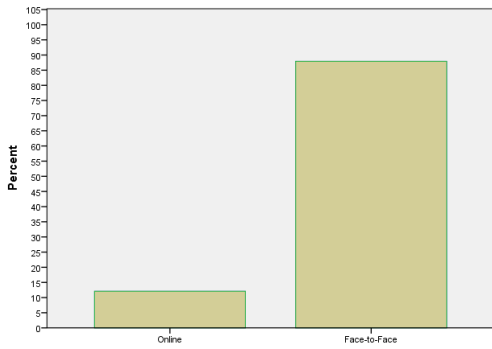


Figure 1. Percentages of 11th grade students who like taking courses online or face-to-face.

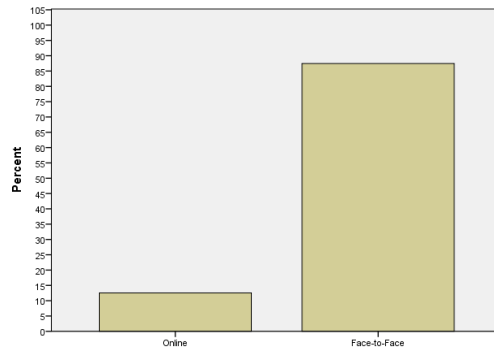


Figure 2. Percentages of 12th grade students who like taking classes online or face-to-face

A question that comes to mind is why do some states in the US require students to take at least one course online prior to graduation when students do not seem to like taking courses online?

In response to the survey item *I wish I could take all my courses online*, a greater percentage of 11th grade students [n=82 (90.1%)] disagreed or strongly disagreed than did students in the twelfth grade [n=190 (82.3%)]. Figures 3 and 4 display comparative data for students at the two grade levels.

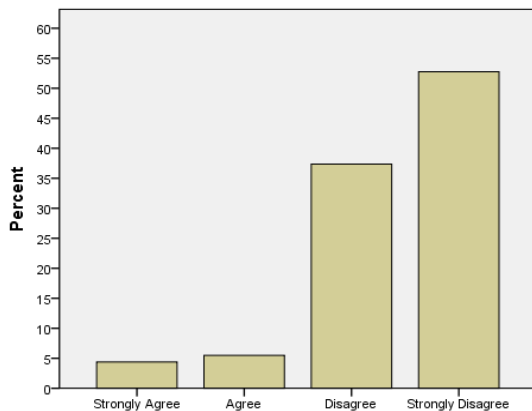


Figure 3. Percentages of 11th grade students who agreed or disagreed with the statement "I wish I could take all my courses online".

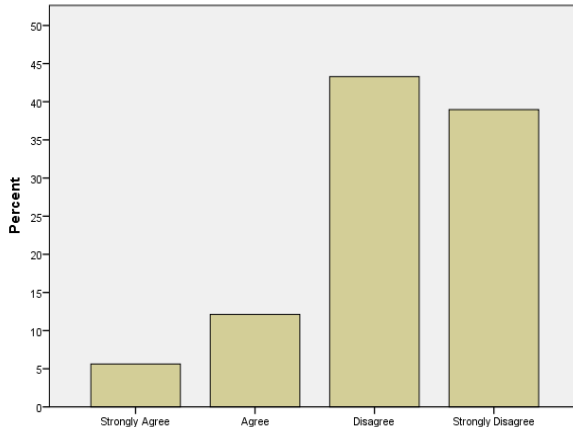


Figure 4. Percentages of 12th grade students who agreed or disagreed with the statement "I wish I could take all my courses online".

Students in both grades differed somewhat in their responses to the survey item *I hate online courses*. At the eleventh grade level, forty-six (50.5%) of the students strongly agreed or agreed with the statement. At the twelfth grade level, a smaller percentage [n=99 (42.9%)] of students either strongly agreed or agreed with the statement.

Academic misconduct in online courses

A study by Grijalva, Nowell, and Kerkvliet (2006) based on a study of a single online course concluded that academic dishonesty in online courses is really not that different from similar misconduct in face-to-face classrooms. The research findings in this area is inconclusive. Some researchers (Stuber-McEwen, Wiseley, and Hoggatt, 2009; and Watson and Sottile, 2010) have found that cheating behavior is higher in face-to-face classrooms based courses while others (Harmon, Lambrinos, and Buffolino, 2008) have identified more cheating risk of cheating in online courses. However, as online technologies continue to evolve, more opportunities may become available for students in online courses to cheat. For example, Moten et al (2013) have

suggest that there are many more ways to cheat in online courses when compared to similar behavior in face-to-face courses. When asked to choose in response to the survey item *I think it is easier to cheat in . . .*, overwhelming percentages of both eleventh [$n=86$ (94.5%)] and twelfth grade [$n= 217$ (93.9%)] students selected online coursework. This shows that students at both eleventh and twelfth grade levels (see Figures 5 and 6) think that it is easier to cheat in online courses. Similar findings have been reported by Kennedy et al (2000) and King, Guyette, and Piotrowski (2009).

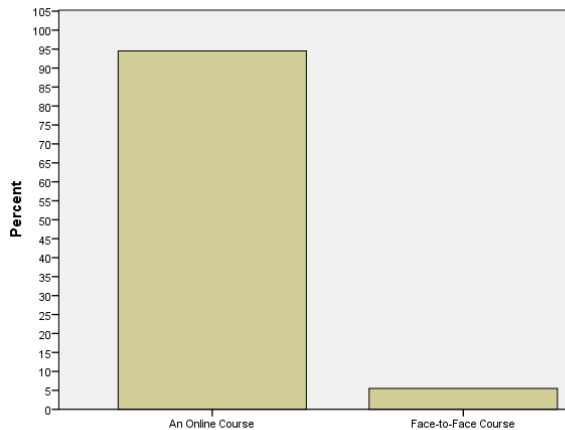


Figure 5. Eleventh grade students' responses to the statement "I think easier to cheat in".

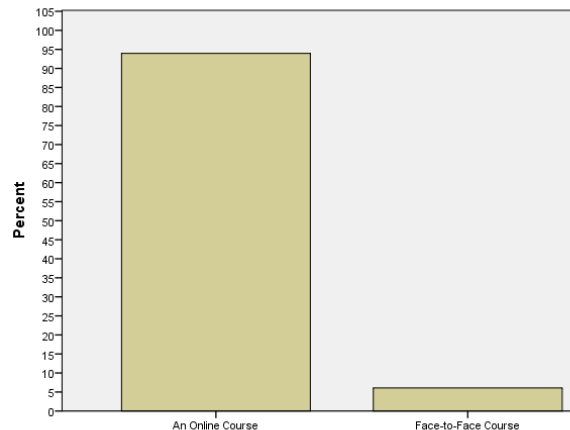


Figure 6. Twelfth grade students' responses to the statement "I think easier to cheat in".

So what if large percentages of students think that it is easier to cheat in online courses? Do they actually know some who has cheated in online courses? Sixty-two (68.1%) eleventh graders and one hundred and thirty (56.3%) twelfth graders either strongly agreed or agreed in response to the survey item *I know at least one person who cheated on tests and exams in an online course*. These findings indicate that cheating appears to be prevalent in online courses at the high school level.

Fifty-three (58.2%) students in the eleventh grade strongly agreed or agreed with the survey item *It is easy to have someone else do the work for you in an online course*, and one hundred and fifty-five (67.1%) twelfth grade students responded to this item in a similar manner. However, only thirty-three (36.3%) eleventh grade and eighty-five (36.8%) twelfth grade students strongly agreed or agreed with the statement *I know at least one person who completed an online course for another person*.

The rigor of online courses

Which type of coursework do students think is more rigorous? According to responses from both eleventh [$n=66$ (72.5%)] and twelfth grade [$n=169$ (73.1%)] students either disagreed or strongly disagreed on the survey item that stated: *Online courses are more demanding than face-to-face courses*. These results are portrayed in Figure 7 and Figure 8.

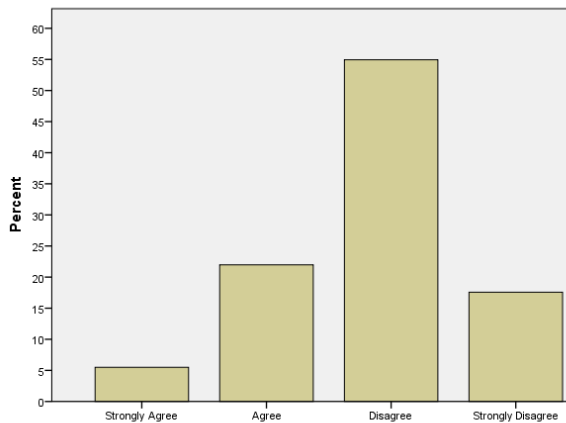


Figure 7. Eleventh grade students' responses to the survey item "Online courses are more demanding than face-to-face courses".

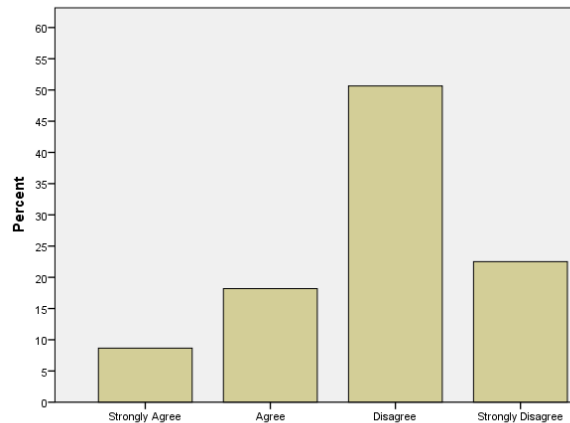


Figure 8. Twelfth grade students' responses to the survey item "Online courses are more demanding than face-to-face courses".

One of the survey items that participants responded to was: *Taking a course online was an easy way to pass a required course*. Seventy-five (82.4%) eleventh and one hundred and ninety seven (85.3%) twelfth grade students strongly agreed or agreed with the statement, as shown in Figures 9 and 10.

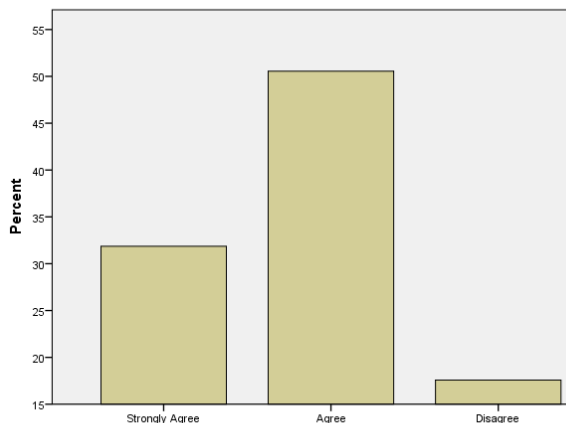


Figure 9. Eleventh grade students' responses to the survey item "Taking a course online was an easy way to pass a required course".

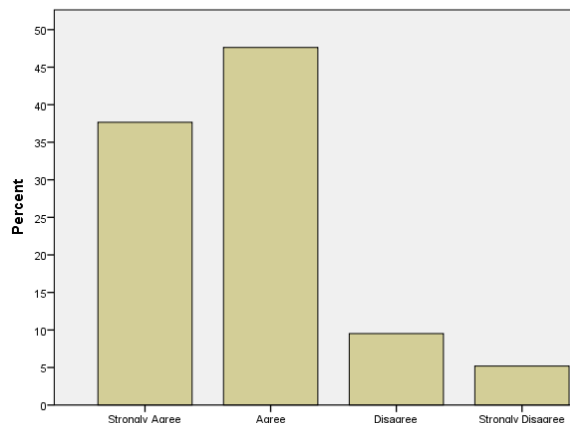


Figure 10. Twelfth grade students' responses to the survey item "Taking a course online was an easy way to pass a required course".

Another survey item regarding the rigor of coursework stated: *I did not have to put much effort to pass the online course(s) that I took*. Greater percentages of eleventh [n=52 (57.1%)] and twelfth grade students [n=126 (54.5%)] either strongly agreed or disagreed with the statement (see Figure 11 and Figure 12).

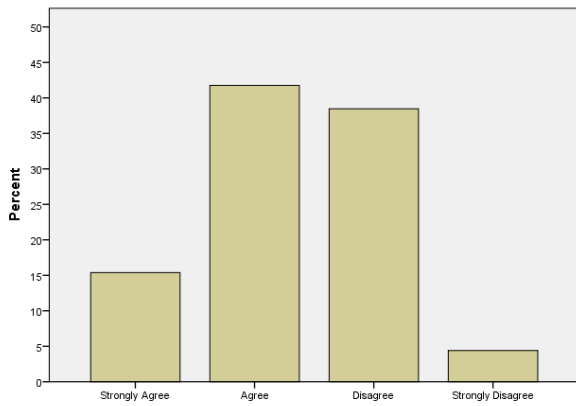


Figure 11. Eleventh grade students' responses to the survey item "I did not have to put much effort to pass online course"

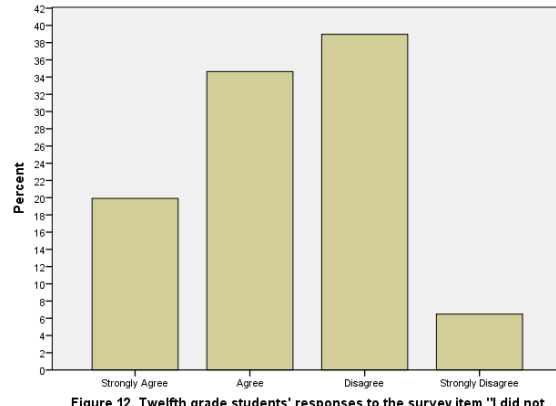


Figure 12. Twelfth grade students' responses to the survey item "I did not have to put much effort to pass online course"

Is it easier to pass an online or face-to-face course? On the survey item that asked respondents to choose between face-to-face and online course formats, fifty-six (61.5%) eleventh grade and one hundred and seventy-one (74%) twelfth grade students indicated that it is easier to pass an online course (see Figure 13 and Figure 14).

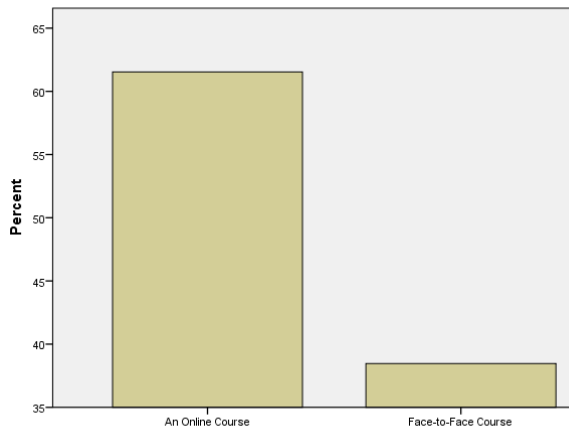


Figure 13. Eleventh grade students' responses to the survey item "I think it is easier to pass"

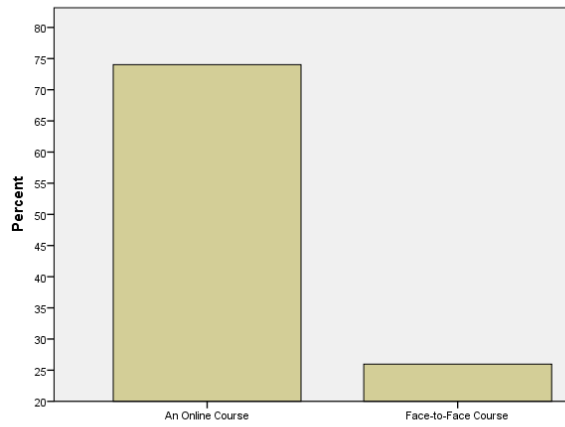


Figure 14. Twelfth grade students' responses to the survey item "I think it is easier to pass"

There was also a statistically significant difference between eleventh and twelfth grade students who indicated that was easier to pass an online course. The Person Chi-Square value of 4.895 was significant at the .027 level.

An item on the survey was about proctoring: *The exams and tests in the online course(s) that I took were proctored*. Forty-four eleventh grade (48.4%) and one hundred and thirty-five (58.4%) twelfth grade students chose *never* as their response. These findings suggest that there may be a need for proctoring exams and test in online courses at the high school level.

Communication with teachers in online courses

Seventy-eight (85.7%) eleventh grade and one hundred and eighty-four (79.7%) twelfth grade students indicated that they were able to communicate with an online teacher or facilitator either every day or at least once a week. The survey item that they were responding to was: *In the online course(s) that I completed I was able to communicate with a teacher / facilitator*.

Did the online teacher or facilitator communicate with the students? Sixty-four eleventh grade (74.7%) and one hundred and seventy-eight (77.1%) twelfth grade students indicated that such communication took place either every day or once a week in response to the survey item: *My online course teachers / facilitator communicated with me.*

A surprising finding is that seventy-four (81.3%) of the eleventh grade and one hundred and ninety-three (83.5%) twelfth grade students indicated that two way video was never used to facilitate communication between students and their online teachers or facilitators.

Both groups of eleventh [n=81 (89%)] and twelfth grade [n=201 (87%)] students indicated that a teacher or facilitator was available every day or once a week to help them when they needed help in connection with the online courses in which they were enrolled.

Sixty-three (69.2%) eleventh grade and one hundred and seventy (73.6%) twelfth grade students chose either *always* or *sometimes* in response to the following survey item: *If I did not submit my online course assignments in a timely manner, a teacher / facilitator contacted me immediately.*

Interaction in online versus face-to-face courses

When asked to choose between online and face-to-face courses on the survey item *I think there is less interaction with the teacher / facilitator in . . .*, eighty-seven eleventh (95.6%) and two hundred and fifteen (93.1%) twelfth grade students selected online courses. A survey item about interaction with other students was: *I think there is more interaction with other students in . . .*. Eighty-nine (97.8%) eleventh and two hundred and nineteen (94.8%) twelfth grade students chose face-to-face courses.

Do students think they learn more in online or face-to-face courses?

Did the study participants think they learn more in face-to-face or online courses? Eighty-six (94.5%) eleventh grade and two hundred and two (87.4%) twelfth grade students responded to the survey item *I learn more in . . .* by selecting face-to-face as their choice. This finding concurs with the findings of earlier research. Means et al (2010) found that K-12 students who completed online courses did not learn as much as students at the undergraduate and higher levels. This is not surprising since students have been known to experience difficulties in online environments (Barbour et al, 2012).

Discussion of findings

The findings of the study show that the eleventh and twelfth grade students who participated in this study overwhelmingly prefer and also like taking face-to-face courses. These findings suggest that online education may not be appropriate for all high school students. As Wood (2005) pointed out: “An online class requires discipline and motivation. Some students simply aren’t up to it, even if they excel in a traditional classroom setting” (p. 37). Barbour and Reeves (2009) also noted: “the only students typically successful in online learning environments are those who have independent orientations towards learning, highly motivated by intrinsic sources, and have strong time management, literacy, and technology skills. These characteristics are typically associated with adult learners” (p. 402). Students at the K-12 level could be encouraged to take mini-courses online before they decide if such courses are suitable for them. Only students who find out that they like online courses and have also demonstrated that they can do well in such courses should be allowed to enroll in online courses to earn credits that are required for graduation. Policy makers should take such information into account before mandating that all high school students should complete a certain number of courses online in order to satisfy requirements for graduating from high school.

High schools who participated in this study also consider face-to-face courses as being more demanding than online courses. They also think that it is easier to pass online courses. Responses

from participating students also indicated that they did not put much effort to pass online courses. The data collected for this study appears to suggest that students do not consider online courses to be as rigorous as face-to-face courses. This is something policy makers need to address.

The potential for academic misconduct is certainly there in online coursework. Large proportions of study participants indicated that they knew someone who had either cheated in online courses. The data also shows that students in both eleventh and twelfth grades thought that it was easier to cheat in online courses as opposed to face-to-face courses. Study participants also indicated that they thought it is easy to get someone else to complete online coursework. Policies should be put in place to ensure that all online courses are proctored. Such proctoring will not only go a long way to minimize or even eliminate concerns about academic misconduct, but also help improve the rigor of online courses.

Based on responses provided by students, it appears that students who were enrolled in online courses and their facilitators / teachers communicated with each other on a frequent basis. Such interaction with faculty has been found to be important (Arbaugh and Benbunan-Fich, 2007; and Swan, 2003)) in online learning environments. However, the data does show there was a lack of two-way video-based communication between students and the facilitator or teacher. This could be because the technology to communicate using two-way video did not exist. If this is the case, policymakers can remedy this situation by recommending that funding be provided for upgrading the communications technologies that are used in online courses. As Martin (2005) noted that videoconferencing: “can provide, in a cost-effective, time-effective, and inclusive way, enriching and enjoyable distance learning experiences to people of all ages and abilities regardless of where they live” (p. 404).

Responses from study participants also indicated that online teachers or facilitators were there to help students when the students needed such help. The data collected for this study shows that teachers or facilitators of online courses are indeed communicating and interacting with and helping students with coursework.

When asked whether there was more interaction with teachers and other students in face-to-face or online courses, overwhelming percentages of students chose face-to-face courses. This is probably because students in high school spend more time together with each other and with their teachers in face-to-face classrooms.

Do students learn more in face-to-face or online courses? According to responses provided by students, they reportedly learn more in face-to-face courses than in online courses. This again brings up the question whether online courses are appropriate for students of all ages.

Suggestions for future research

Similar studies should be conducted using a larger and more diverse sample of participants. The participants in this study were predominantly of Hispanic heritage. Similar studies involving participants from other racial ethnic as well as socio-economic groups should be conducted to determine their experiences and performances in and preferences for online courses. Studies could also be conducted to determine if high school students' thoughts about online courses change after they complete more online courses.

Conclusion

As noted earlier in this paper, not much research has been conducted regarding the experiences and thoughts of high school students who have completed at least one online course. This study provides preliminary findings in this important area. The importance of the findings of this study stems from the fact that quite a few states have developed policies for online education without any information about what the beneficiaries of such policies, the students, think about taking

courses online. Policy makers will now have some data to guide the development of policies related to online learning.

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The authors hereby declare that there are no conflicts of interests.

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