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Student Perceptions of Online Courses for School Administrators

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Online courses are the fastest growing student enrollment at the university level during the last decade. Between the time period 2003-2009, the number of students who had taken online courses doubled to 3.9 million which outpaced the growth in traditional college settings by a 12% margin (Mashable/Tech,2010). However, this online programming movement still remains in its early stages of development. Thus, faculty members and designers of online education need to know more about online courses. Momin (2003) stated that this growth, in online education, has been accompanied by increased questions about the effectiveness of online courses. More research needs to be conducted regarding how student experiences differ in online course environments and how outcomes are developed and measured. Specifically, faculty members and administrators need to understand how students perceive online education and courses because these perceptions and attitudes can be a direct link to student motivation and learning. Koochang and Durante (2003) further suggest that elements of e-learning and student motivation are critical.

This study examines the perceived viewpoints and effectiveness of online courses with EDAD graduate students during the last year. The results provide future considerations and recommendations regarding the design and instruction of university online courses. Gaining knowledge about the process and outcomes of online education, especially as compared to traditional face-to-face environments, will help educators and researchers make more informed decisions about future online course development and implementation (Momin, 2003)

Literature Review

Online programs and courses in the schools are some of the most dominant forces to come on the educational scene in the last two decades. Since the inception of online education just over a decade ago, the number of students participating in these courses has dramatically increased. At the university level, administrators direct the design of online courses, faculty members develop these types of courses, and students request these courses. Even though there is a strong movement for online education, it is still relatively new and foreign to many university administrators and faculty members.

Research concerning online courses has somewhat lagged behind this rapidly increasing educational movement. As Schardt and Garrison (2008) stated that there is little literature evaluating how well professionals learn in this online environment, and specifically when compared to the traditional face-to-face classroom. A good amount of the research in online education has not concentrated on learning and academic performance.

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Several studies identified the issues found in online courses or reviewed the shortcomings of teaching online. Berg (1998) focused on the obstacles such as policy statements, as well as a list of the advantages and disadvantages of online education. Furthermore, D'orsie and Day (2006) offered a list of ten suggestions to teach a course online. Also, several books have been written that provide information on facilitating online learning. (Collison, Elbaum, Haavind, & Tinker, 2000).

Menchaca (2008) examined the importance of the use of multiple technologies to appeal to different learning styles and facilitate online learning. In addition, McCroy, Putman, and Jansen (2008) looked at teaching and learning in online courses with a focus on discussion and the impact of online dialogue. Tuckman (2005) studied the motivation patterns of online students, while Waltonen – Moore, Stuart, Newton, Oswalk, and Varonis (2006) discussed the development of collaborative online learning environments. Other research studies seem to be based on Holmberg's (2007) thinking that personal relationships promote student motivation and online learning.

Over the past decade, a few researchers have started to examine online courses and their effectiveness. Some research has concluded that online students learned as well as, or better than, face-to-face students (Kretovics, 2003). The purpose of Kretovics' study was to test learning outcomes, and how well online learners mastered the theories in comparison to the face-to-face classroom students. Kretovics (2003) summarized that the online environment fosters independent learning. He believed that online students are not directly guided by professors in a face-to-face classroom to pick up some of their biases, thus the students have a tendency to form their own observations and conclusions in applying theories.

Several medical and health-related studies of online students vs. face-to-face classroom students have reported no significant differences in learning achievement (Buckley, 2003; Leasure, Davis, and Thievon, 2000; Olmsted, 2002). Other studies (Herman and Banister, 2007; Phye, 1997; Neuhauser, 2002) not in the medical/health fields, also, shared no significant differences in learning outcomes, test scores, participation, and/or final grades. In a more recent study Derwin (2008) showed that there were no significant differences between face-to-face and online learners for the California Critical Thinking Skills Test score gains or the grades on the final assignments. Results are consistent with previous "no significant differences" studies. The research adds to the literature by specifically addressing outcomes in critical thinking.

In one study, Anstine and Skidmore (2005) revealed statistically significant lower examination scores of MBA students taking statistics classes online. But, the investigation showed online learner outcomes fared the same as face-to-face learner outcomes. In Johnson, Aragon, Shaik, and Palma-Rivas (2000) study, a comparison of graduate online students with students in a face-to-face class environment, revealed that face-to-face students had slightly more positive perceptions about the class instructor and overall course quality. Although there was no difference between the two course formats in learning outcomes. Some research articles that focused on online learning had limited sample sizes or examined subject areas not related to education. For example, Schutte's (1997) study included 37 undergraduate students that were randomly assigned to the online class or the in-class group. He compared the two groups in terms of learning

through the use of exams. Both groups took the exams in class. His results revealed that the online group scored 20% higher than the traditional group. McCollum's (1997) review of Schutte's work further supported these findings.

In another study, Schardt, Garrison, and Kochi (2002), compared students' knowledge retention six months after the end of the course (the course was taught in two separate formats- one online format and one face-to-face format). The online students answered 80% of the test questions correctly, while the face-to-face classroom students only answered 40% of the test questions correctly. The authors attributed the differences in knowledge retention to three factors: additional practice and attention with test questions, additional time for learning, and increased student motivation and involvement with the online learning processes.

Students' perceptions of the two different course formats, online and face-to-face, when surveyed have also shown mixed results. Zhanga and Perris (2004) research concluded that students in a study by Ryan (2000) that compared student survey responses in a University of Oklahoma course produced no evidence of quality differences between direct instruction and online instruction classes. A survey in both course formats enrolled in a gerontology course in the University of Pittsburgh Dental Hygiene program agreed that either method of instruction chosen by students was effective and beneficial (Gallagher, Dobrosielski-Vergona, Wingard, and Williams, 2005).

An and Frick (2006) results indicated most students in their study preferred face-to-face discussion rather than online discussion, but preferred online work and learning activities over face-to-face activities. An analysis of students' responses showed key factors that predicted those students who preferred online for discussion. The rate of speed in the completion of classroom work and the convenience of online learning appeared to be most important to students in this study.

Momin (2003) wrote in her study of students' perceptions with online versus face-to-face courses that satisfaction related to perceptions of being able to achieve success. Some studies have reviewed student satisfaction with online programs (Debourgh, 1998; Enockson, 1997; Johanson, 1996; McCabe, 1997). For example, Enockson (1997) in a study assessing online education in a university setting, found that students were satisfied with online instruction because it provided flexibility and responsiveness to their learning requirements and expectations. Similarly, Johanson (1996), based on her study of an online classroom, concluded that students' satisfaction is positively impacted when (a) the technology is transparent and functions both reliably and conveniently, (b) the course is specifically designed to support learner-centered instructional strategies, (c) the instructor's role is that of a facilitator and coach, and (d) there is a reasonable level of flexibility.

Clearly there has been a wide variety of works and views on the issue of teaching and learning online. But a majority of the studies focused on the types of instructional methods used when teaching online. This focus is problematic due to the fact that some faculty members are suspicious of online courses and have significant reservations about the loss of face-to-face contact.

To address the limited research regarding students perceptions of online education, this study focused on student attitudes and viewpoints toward the online course format, learning outcomes, instructional tools, and needed changes.

Methodology

Participants in this study's survey were former students of online educational administration (EDAD) courses. A total of 89 students who had taken the EDAD courses within the last school year were emailed the survey instrument. These graduate level students were part of the Master of Education degree program or were seeking the principal's license. Thirty-nine students completed the survey.

The survey instrument was developed by the author of this paper and the instructor for these EDAD hybrid courses. The design and questions found in the survey were generated from discussions with EDAD faculty members and EDAD students currently enrolled in the principal preparation program. Through these discussions, topical areas that emerged to generate questions were the students' attitudes toward online courses, the learning results and outcomes, the most beneficial instructional tools and activities and most productive educational format.

This online survey consisted of three parts. The first part contained 13 forced-response questions concerning the online/hybrid course while the second part of the survey was 2 open-ended questions regarding thoughts and opinions pertaining to the course. Students were asked to provide thoughts and opinions in a narrative format to respond to these open-ended questions. The final part of the survey focused on questions asking demographical information (gender, position, job level, experience level) on the part of the respondents. The forced-response questions were set up on a five-point Likert scale, ranging from strongly agree-agree-neutral-disagree-and strongly disagree.

The survey was e-mailed to former EDAD students who had taken online courses within the last school year. Included with the survey was a cover letter explaining the reason for the survey. The respondents were assured of confidentiality of their responses. Survey results were submitted through Zoomrang.com. Zoomrang.com compiled and set up the students responses according to the survey questions. A total of 39 surveys were completed for a 44% return rate.

Results

Of the 39 EDAD students who responded to the survey, 59% were female and 41% were male. A majority of the respondents were teachers with an aggregate of 69% of the total sample population, while 26% were in educational administration, and 5% in other positions. The breakdown of educational levels for this sample population was 51% at the high school level, 8% at the middle school level, and 41% at the elementary level. Finally, the years in education were also fairly varied. The breakdown of years in education was 18% of respondents had 1-3 years of teaching experience, 51% of the respondents had 4-10 years of teaching experience, 18% of the respondents had 11-20 years, and 13% of the respondents had 20 plus years.

The purpose of the survey was to retrieve a variety of students' perceptions and opinions regarding their attitudes toward online courses, the learning results generated from the course, the instructional tools used in the online course, and what changes should be made in the course. Some of the questions asked for an opinion of the online course, other questions wanted students to compare online courses with face-to-face courses, and another set of questions desired some open-ended responses.

To understand the distribution of responses to the survey items, frequency tables were set up to organize and summarize data. Frequency distribution results in Table 1 show the variety of responses to the survey questions relate to students attitudes, feelings, and opinions of online courses.

Table 1: Attitudes Toward Online/Hybrid Course

Survey Item	n	SA	A	N	D	SD
1. I was apprehensive at first, with taking the online course	39	37%	21%	8%	38%	31%
2. At the conclusion of the course, I felt comfortable and positive about the online course	39	69%	23%	8%	0%	0%
10. I would take another online course in the future	39	69%	21%	5%	5%	0%
11. I would recommend an online course to a fellow student	38	68%	21%	5%	5%	0%

Note: SA=Strongly agree; A=Agree; N=Neutral; D=Disagree; SD=Strongly disagree

Table 1 reveals the students' feelings and attitudes were accepting of the online format before actually taking the course. These results were somewhat surprising with 69% of the respondents indicating they were not apprehensive in enrolling in the online/hybrid course. Only 24% agreed that they were apprehensive about the course. Even more surprising results were shown in survey item #2 regarding feeling comfortable and positive at the conclusion of the course. Ninety-two percent felt comfortable and positive. To gauge their feelings toward taking another online, 90% strongly agreed/agreed that they would take another online course, according to survey item #10. Furthermore, in survey item #11, 90% strongly agreed/agreed that they would recommend an online course to a fellow student.

Another set of survey items in table 2 showed the learning results coming out of the online courses.

The respondents' perceptions of the learning results generated from online courses are shown in table 2. In most every survey item in this table, a majority of the students indicated positive learning results. It was the perception of 85% of the students that they put in more time and effort, conducted more research, and did more analytical thinking in the online course. Only 3% thought they did not exert these learning outcomes with the online course.

Four questions asked students to compare learning results with online versus face-to-face courses. Survey item #4 was a general question related to learning outcomes with an

online course versus a face-to-face course. The results were: 51% of the respondents chose a “neutral” response, while 31% selected an affirmative response, and 18% noted that they had learned less in an online course than a face-to-face course.

Table 2: Learning Results

Survey Item	n	SA	A	N	D	SD
3. I felt I learned a considerable amount of knowledge and skills in this online course	39	49%	36%	13%	3%	0%
4. I learned more in the online course than in a traditional face-to-face course	39	8%	23%	51%	18%	0%
5. I put more time and energy into doing the work with the online course assignments than a face-to-face course	38	32%	26%	26%	13%	3%
6. I conducted more research for the assignments in the online course than in a face-to-face course	39	31%	41%	21%	5%	3%
7. I did more analytical thinking and work for the assignments in the online course than in the face-to-face course	39	23%	41%	26%	10%	0%

Note: SA= Strongly agree; A=Agree; N= Neutral; D=Disagree; SD=Strongly disagree

The next set of survey items (#5, #6, and #7) pertained to more specific learning results. In item #5, 58% thought they exerted more time and energy through the learning process in the online course, while 16% thought they exerted less time and energy. Twenty-six percent were neutral on this item. Item #6 asked the students if they conducted more research in the online course versus the face-to-face course. Seventy-two percent stated they conducted more research in the online classes. In contrast, 21% chose a “neutral” response, and 8% disagreed that they conducted more research.

Item #7 was another specific learning area, analytical thinking. The survey asked the respondents if there was “more analytical thinking and work” for the assignments in the online course than in comparable face-to-face course. The results were: 64% agreed that they did more analytical thinking and work; 26% provided neutral responses; and 10% disagreed.

There was a set of survey items centered around the use of various instructional items (tools, format, and activities) in the online course. Table 3 outlined the instructional tools. Survey items #8 and #9 dealt with the Narrative/Analysis/Research (NAR) rubric which is an assessment tool to evaluate an online assignment.

Table 3: Instructional Tools

Survey Item	n	SA	A	N	D	SD
8. The Narrative/Analysis/Research (NAR) rubric helped to provide direction in completing the assignments	39	28%	59%	8%	3%	3%
9. The assessment feedback received on each assignment through the NAR rubric was beneficial	39	28%	49%	13%	5%	0%

Note: Sa= Strongly agree; A=Agree; N=Neutral; D=Disagree; SD= Strongly disagree

Item #8 asked the respondents if the NAR rubric provided direction in completing the online assignments. An overwhelming majority of students (87%) marked that this assessment tool did provide direction in completing the assignments. Furthermore, 82 % of the respondents indicated that the assessment feedback through the NAP rubric was beneficial.

When the respondents were asked about which instructional format, Table 4, they preferred, 79% marked a “hybrid” response (mainly online course with 2 or 3 face-to-face classes). Thirteen percent wanted purely a face-to-face course format and 8 % desired a purely online course.

Table 4: Instructional Format

Survey Item	Hybrid	All Face-to-face	Purely Online
12. I would prefer the following course format:	79%	13%	8%

With survey item #13, Table 5, the students thought the NAR rubric was one of the most meaningful and helpful tools used in the online/hybrid course; it was the second most helpful tool listed among the survey instructional tools. Only case study assignment was listed above the NAR rubric as the most helpful.

Table 5: Instructional Activities

Survey Item	Case Study	N/A/R Rubric	Discussion Board	Videos	E-Portfolio	Power Point	Other
13. What were the most meaningful and helpful learning activities in the online:	74%	49%	41%	21%	21%	18%	5%

In the open-ended responses (survey item #14 and #15), participants expressed what they liked least about the online/hybrid courses and what changes they would make in these courses. The most commonly reported response in #14 was the limited amount of face-to-face networking and communications between students and between students and the instructor. One participant stated, “I am old school, I like having interaction and

networking with others. I enjoy hearing other peoples' reactions to items in a discussion format." While another student wrote, "I think you do miss out of some of the face-to-face communication pieces, such as quest speakers and networking with colleagues."

The second open-ended question, item #15, sought to identify the changes that could be made with the online course. The most frequent response was to build in more interaction with other students through activities, such as wimba and discussion boards.

Discussion

During the last decade, online courses have increased dramatically at the university level. Even though there has been this tremendous growth, studies are just starting to gauge how effective these types of courses are in meeting the students' needs, interests, and learning outcomes.

To retrieve and seek information on how students' perceive the effectiveness of online education, this study's survey was conducted with EDAD students who had taken the online courses. In analyzing these students' perceptions of the online courses, the results from the survey generally showed positive attitudes, viewpoints, and feedback, especially when comparing the online courses to the face-to-face courses. First, the students' attitudes toward taking online courses were quite positive. Whether enrolled in the course initially and/or finishing up the course, the students surveyed felt comfortable and positive about the course. The surprising results of these attitudes and feelings were how many students were not apprehensive at the beginning of the course. Only 24% felt apprehensive at the start of the course. Any apprehensive feelings toward online education seem to be changing because more and more students are taking these types of courses and, in turn, the universities are offering a more extensive slate of online courses. Online education is no longer one of those new and unfamiliar instructional formats for today's generation of students. These results suggest that today's students who have more experiences with online education will feel better about these courses and perceive them in a more positive perspective. The greater the amount of experiences that students have with online education, the higher the levels of users' satisfaction in learning with online courses and technology (Gerfen, Karahanna, & Staub, 2003; Martins & Kellermanns, 2004; Stoel & Lee, 2003; Wober & Gretzel, 2000).

Second, positive attitudes could be shown in survey items #10 and #11. These two questions' results generated the "true test" of respondents' positive attitudes regarding the online courses when students willingly recommend such a course to a fellow student and/or friend. By an overwhelming percentage of 90% for survey item #10 and 89% for survey item #11, students would take or recommend another online course. These high percentage results indicated a real positive attitude towards this type of course and how it meets their educational needs, interests, and desires.

Some of the most intriguing results of the survey are brought out when comparing online courses with face-to-face courses. Four survey questions, items #4, #5, #6, and #7, asked respondents to contrast the two instructional formats. A large majority of respondents indicated they did more research work and analytical thinking in the online course than in the traditional, face-to-face course.

This additional research and analytical work in the online format, also generated the need for more time and energy on the part of the student to complete the assignments as illustrated in survey item #5 with 58% of the students responding in agreement that they put in more time and energy into the work with the online course (versus the face-to-face course).

The results in survey item #12 concerning the preferred course format clearly showed that students would prefer hybrid courses which meet 2 or 3 times face-to-face. The “purely online” and “all face-to-face” formats were definitely in the minority choices at 8% and 13% respectively.’ This research indicated that students still see some advantages and opportunities to meeting face-to-face a few times during a course’s term, rather than all online. In the hybrid courses, the two or three face-to-face classes can clarify issues and questions, breakdown the more complex content, and allow for interpersonal contacts and work on some assignments.

Research from the survey showed that the Narrative/Analysis/Research (NAR) rubric and the case study assignments were the two most meaningful learning activities in the online courses. The NAR rubric is an assessment tool for the online assignments, and provides the direction for students in completing the written assignment. Because of the realistic content found in a case study assignment, the case studies were perceived as the most meaningful learning activity.

As revealed in the open-ended responses for survey items #14 and #15, students generally perceived the online courses as positive and beneficial to their learning. However, some comments were made related to what students liked least about the online course that being the limited interpersonal contact and communications among students and/or students and instructor. This issue has been confirmed by other research. Smart and Cappel (2006) expressed that though there is great potential for heightened interaction within the online course format, their survey’s participants did not experience increased student or student -to-instructor communications.

Many of this study’s students over the years have been involved in the face-to-face teaching and learning processes, and did not want to completely give up the interpersonal relations developed with face-to-face classes. As one respondent wrote, “I am old school, I like having interaction and networking with others. I enjoy learning from other people through a discussion format. It makes me ponder issues in different lights other than one-sided”. Or, as another student stated, “some of the most important things I learned came up in conversation”.

Regarding the open-ended question (#15), “What change would you make with the online/hybrid course, the responses were less telling.” Generally, the students seemed satisfied with the online courses. The few changes suggested were: more opportunities to use wimba, additional online videos, and more time devoted to discussion boards.

In the open-ended questions, the suggested need for change and improvement was fairly limited. These results suggested that students generally want the online courses and like the current design and setup.

Conclusions

As universities continue to develop more online education, a more extensive and deeper awareness of student needs and perceptions of online courses may reveal key factors in future student recruitment, enrollment, and retention. This study's results provided insights regarding the students' perceptions of online courses and learning needs, and, in turn, generated an increasing need to modify courses for online education. Overall, the results indicated that online courses are perceived as effective teaching and learning formats. Similar studies have suggested that online education can be as, or more, effective when compared with traditional, face-to-face classroom formats (Smart & Cappel, 2006; - Momin, 2003; Kirtman, 2009; Derwin, 2008; Johnson, Aragon, Shaik, and Palma-Rivas, 1999).

A conclusion that may be drawn from the results is that students have a positive attitude and feeling for online courses. A large majority of students desire online courses and adapt comfortably to the teaching and learning activities and assignments embedded in them. University administrators and faculty members cannot ignore the growing desire for this type of course. They must understand that current and future generations of students will want online education; they must seek out and study what students are thinking and saying about online courses. Most higher education institutions' future student enrollments may be predicated upon whether they keep with these online course desires and demands. An overwhelming number of the survey respondents (90%) stated they would take another online course and would recommend an online course to a fellow student.

The research in this study centered around student perceptions of work load, research activities, and analytical thinking in an online course. In addition, some of the survey items compared online courses and face-to-face courses. A significant number of respondents agreed that time and energy spent on course/assignment work in the online course were greater than in the face-to-face course format. A conclusion may be drawn that the larger number of assignments required many times in an online course causes a student to perceive that there is an increased work load. Moreover, students perceived more research work and analytical thinking being exerted to complete the course/assignment work in online courses. Consequently, this study concluded that students perceived the work load, research efforts, and analytical thinking were greater in online courses when compared to face-to-face courses.

This research was not just about assessing the difference between online versus face-to-face courses; rather, this study was more about student perceptions on how online courses can provide the best technological-related practices, instructional tools, course formats, and assignment assessments. Online course designers need to continue to modify the instruction and assessment of these courses, in order to enhance student attitudes and overall learning efforts. This study's results showed that students still want some face-to-face contact with the instructor and other students by 79% desiring the hybrid course format (an online course with a few face-to-face classes). In contrast, only 8% of the students wanted purely online courses. Thus, the hybrid course format seemed to provide the desired advantages when compared with purely online or face-to-face formats. Future

research in this area needs to be conducted in order to detect the underlying reasons for students preferring the online course format.

Two special elements which benefit learning in the 21st Century seem to be found in the online courses. They are the students' desire for this type of course format and the students additional energy, time, research, and analytical thinking levels being expended in online education, rather than the traditional face-to-face education. Online courses need to be developed by instructors that involve students in 21st Century teaching and learning. Smart and Cappel (2006) state, "specifically engaging students actively in learning, providing real-world contexts for learning, and promoting critical thinking and deep learning."

While the results of this study seemed compelling and straightforward, it must be noted that the results are limited by a small sample size and the fact that students were from only one discipline...Educational Administration. More research is needed across the disciplines to conclude if these results apply to other student populations. Also, researchers need to use additional survey items to focus on students underlying reasons for certain perceptions pertaining to online education.

References

- An, Y.-J. & Frick, T (2006) Student Perceptions of Asynchronous computer-mediated communication in Face-to-Face Courses. *Journal of Computer-Mediated Communications*, 11(2), article 5.
- Anstine, J., & Skidmore, M (2005). A small sample study of traditional and online courses with sample selection adjustment. *Journal of Economic Education*, 36(2), 107-127
- Berg, Z. (1998). Barriers to online teaching in post-secondary institutions: Can policy changes fix it? *Online Journal of Distance Learning Administration*, 2 (1), 1-22.
- Buckley, K. M. (2003). Evaluation of classroom-based, web-enhanced, and web-based distance learning nutrition courses for undergraduate nursing. *Journal of Nursing Education*, 42(8), 367-370.
- Collison, G., Elbaum, B., Haavind, S., & Tinker, R (2000). Facilitating online learning: Effective strategies for moderators. Madison, W: Atwood.
- Debourgh, G. A., (1998). Learner and instructional predictors of student satisfaction in a graduate nursing program taught via interactive video conferencing and world wide web/internet. Unpublished doctoral dissertation, University of San Francisco.
- Derwin, E. (2008). Critical Thinking in Online vs. Face-to-Face Higher Education. Retrieved October 6, 2010 from www.mprcenter.org, 1-10.
- D'Orsie, S., & Day, K. (2006). Ten tips for teaching a web course. *Tech Directions*, 65 (7), 18-20.
- D'Orsie, S. & Day, K. (2006). Ten tips for teaching a web course. *Tech Directions*, 65 (7), 18-20
- Enockson, J. (1997). An assessment of an emerging technological delivery for distance education. Unpublished doctoral dissertation, Northern Arizona University.
- Gallagher, J. E., Dobrosielski-Vergona, K. A., Wingard, R. G., & Williams, T.M. (2005).

- Web-based vs. traditional classroom instruction in gerontology: A pilot study. *Journal of Dental Hygiene*, 79 (3), 1-11.
- Gerfen, D., Karahanna, E. & Straub, D. W. (2003). Inexperience and experience with online stores: The importance of TAM and trust. *IEEE Transactions on Engineering Management*, 50 (3), 307-321.
- Herman, T. & Banister, S (2007). Face-to-Face versus Online Coursework: A Comparison of Costs and Learning Outcomes: Contemporary Issues in technology and Teacher Education, 7 (4), 318-326.
- Holmberg, B. (2007). A theory of teaching-learning conversation. In M.G. Moore (Ed.), *Handbook of distance education* p.69-76.
- Johanson, (1996) T. L. The virtual community of an online classroom: Participant's interactions in a community college writing class by computer mediated communication. Unpublished doctoral dissertation from Oregon State University.
- Johnson, S., Oragon, S. Shaik, N., & Palma-Rivas, N. (2000). Comparative Analysis of Online vs. Face-to-Face Instruction. Retrieved October 10, 2010 from Educational Resources Information Center, 2-7.
- Kirtman, L. (2009). Online versus In-Class Courses: An Examination of Differences in Learning Outcomes. C Gap Press
- Koohang, A. & Durante, A. (2003). Learners' perception toward the web-based distance learning activities/assignments portion of an undergraduate hybrid instructional model. *Journal of Informational Technology Education*, 2(2003), 105-113 <http://jite.org/documents/vol2/v2>.
- Kretovics, M. (2003). The Role of Student Affairs in Distance Education: Cyber Services or Virtual Communities. Retrieved October 22, 2010 from Online Journal of Distance Learning Administration, Vol. VI (3) <http://www.westga.edu/distance/ojdl/tall>.
- Leasure, A. R., Davis, L., & Thievon, S. L. (2000). Comparison of student outcomes and preferences in a traditional vs. world wide web-based baccalaureate nursing research course. *Journal of Nursing Education*, 39(4), 149-154.
- Martins, L. L. & Kellermanns, F.W. (2004). A model of business school students' acceptance of a web-based course management system. *Academy of Management Learning & Education*, 3(1), 7-39.
- Mashable/Tech. (2010). The Case for the Virtual Classroom. Retrieved December 31, 2010, from <http://mashable.com/2010/virtual-classroom>
- McCabe, M. (1997). Online classroom: Case studies of computer conferencing in higher education. Unpublished doctoral dissertation, Columbia University Teachers College.
- McCollum, K. (1997). A professor divides his class in two to test value of online instruction. *Chronicle of Higher Education*, 43(24), 23.
- McCrorry, R., Putman, R., & Jansen, A. (2008). Interaction in online courses for teacher education: Subject matter and pedagogy. *Journal of Technology and Teacher Education*, 16(2), 155-180.
- Menchaca, M. (2008). Learner and instructor identified success factors in distance education. *Distance Education*, 29(3), 231-252.
- Momin, S. (2003). Assessing and Comparing Outcomes in Face-to-Face and Online Teaching. Michigan State University Press, 7-16

- Neuhauser, C. (2002). Learning style and effectiveness of online and face-to-face instruction. *The American Journal of Distance Education*, 16(2), 99-113.
- Olmsted, J. L. (2002). Longitudinal analysis of student performance in a dental hygiene distance education program. *Journal of Dental Education*, 66(9), 1012-1020.
- Phye, G. D. (1997). Learning and remembering: The basis for personal knowledge construction. *Handbook of academic learning: Construction of knowledge*. San Diego, CA: The Academic Press, 22-40.
- Ryan, R. C. (2000). Student assessment comparison of lecture and online construction equipment and methods classes. *T.H.E. Journal*, 27(6), 78-83.
- Schardt, C. & Garrison, J. (2008). Continuing education and knowledge retention: A comparison of online and face-to-face deliveries. *Journal of the Medical Library Association*, 90(2008), 2-10
- Schardt, C. M., Garrison, J., & Kochi, J. K. (2002) distance education or classroom instruction for continuing education: who retains more knowledge? *Journal of the Medical Library Association*, 90(5), 455-457.
- Schutte, J. (1997). Virtual teaching in higher education: The new intellectual super highway or just another traffic jam? Retrieved August 20, 2007 from <http://ddi.cs.uni-potsdam.de/HyFISCH/Teleteaching/Virtual Teaching Schutte.htm>.
- Smart, K. & Cappel, J. (2006). Students' Perceptions of Online Learning: A Comparative Study. *Journal of Information Technology Education*, 5, 201-216.
- Smith, G., Ferguson, S. & Caris, A. (2001) Teaching College Courses Online vs. Face-to-Face. *T•H•E Journal*, 30 (4), 337-364.
- Stoel, L. & Lee, K. H. (2003). Modeling the effect of experience on student acceptance of Web-based courseware. *Internet Research*, 13(5), 364-374
- Thomas, C. (2010). The Differences Between Online and Traditional Classroom Educators. Retrieved October 5, 2010 from www.education-portal.com
- Tuckman, B. W. (2005). The effect of motivational scaffolding on procrastinators' distance learning outcomes. *Computers and Education*. 49(2), 414-442.
- Waltonen-Moore, S., Stuart, D. Newton, E., Oswalk, R., & Varonis, E., (2006). From virtual strangers to a cohesive online learning community: The evolution of online group development in a professional development course. *Journal of Technology and Teacher Education*, 14 (2), 287-311.
- Wober, K. & Gretzel, U (2000). Tourism managers' adoption of marketing decision support systems. *Journal of Travel Research*, 39 (2), 172-182.
- Zhang, W., & Perris, K. (2004). Researching the efficacy of online learning: A collaborative effort amongst scholars in Asian open universities. *Open Learning*, 19(3), 247-264.