An exploratory study of student motivations for taking online courses and learning outcomes

Sarath A. Nonis
Arkansas State University

Grant H. Fenner
Arkansas State University

ABSTRACT

An investigation of students taking online classes exposed crucial student perceptions important to their selecting online/web-assisted courses. An exploratory factor analysis provided three factors of "convenience," "enjoyment & independence," and "no other option available" as motivations for students taking online/web-assisted courses. Positive correlations were identified linking the personal student variables of motivation and self-efficacy with the two motivations for students taking online/web-assisted courses of convenience and enjoyment & independence. However, negative relationships were revealed between the personal student variables of motivation and self-efficacy and the motivation for students taking online/web-assisted courses when no option existed. Similar results were identified between student outcomes such as learning and learning experience satisfaction and the three motivations for taking online/web-assisted courses. Study implications are also discussed.

Keywords: Online pedagogy, motivation, self-efficacy, learning outcomes, and learning satisfaction

INTRODUCTION

Online/web-assisted courses, as a delivery medium is an evolving pedagogy offering educators an opportunity to extend their reach to existing and expanded student audiences. As early as 2002, 81% of all higher education institutions in the U.S. provided at least one course online (Conhaim, 2003) and by 2006 close to 20% of all college students had completed at least one of their classes online (Allen & Seaman, 2006). Despite higher student drop rates for online/web-assisted courses compared to traditional face-to-face courses (Aron, 1999; Diaz, 2002; Frankola, 2001), increased demand by students for online courses and improvements in technology have made this an economical and practical way to increase student enrollment. But, increasing student enrollment should only be one part of an overarching strategy of complimenting traditional face-to-face teaching with online/web-assisted course curriculums. The learning experience encountered by the student ultimately determines student satisfaction and their ability to learn. For institutions using online delivery systems, it is important for their students to perceive that they receive added value for their money. If not, the brand reputation the university has worked long and hard to develop may be put needlessly at risk.

Most studies conducted to date show no significant difference in learning as it relates to subject matter in online classroom environments compared to traditional classroom environments (cf. Cooper, 2001; Drago, Peltier, & Sorensen 2002; Johnson et al., 2000; Weber & Lennon, 2007). However, when it comes to learning experience satisfaction of students, most studies to date have reported online/web-assisted courses to score lower when compared to traditional face-to-face courses (McFarland & Hamilton, 2006; Nonis, Hunt, & Hudson, 2008). Theory and empirical research offers insights as to how the individual differences of students may influence their online/web-assisted course experiences. For example, self-learners or students who learn on their own are likely to perceive online learning to be as valuable, if not more valuable than face-to-face contact with an instructor (Priluck, 2004). Also, self-efficacy, motivation, and level of maturity of students such as age have been linked to learning outcomes in online delivery mediums (cf. Iverson, Colky & Cyboran, 2005; Jenkins & Downs, 2003; Terry, 2007; Chen & Lou, 2002).

This study seeks to expand our understanding of student learning and learning experience satisfaction by exploring the relationships between these outcomes of interest and the different motives students hold for taking online/web-assisted courses. For instance, the authors investigate the degree to which a relationship exists between student motivation or drive and academic self-efficacy with the decision a student makes to register for an online/web-assisted class. Knowledge of the different factors influencing students for taking online/web-assisted courses will help institutions of higher education to serve these students by improving their ability to tailor the online course to better serve student needs. Additionally, if relationships are revealed linking student motivations and educational outcomes such as learning and student learning satisfaction, important information will be available enabling institutions and faculty to increase both student learning and student learning satisfaction while simultaneously expanding student enrollment.

In summary, the three specific research objectives of this study are as follows: (1) determine the different reasons or motives for students to take online/web-assisted courses, (2) investigate relationships these different motives for taking online/web-assisted courses have with personal variables achievement striving (used as a surrogate for drive or motivations) and self-efficacy, and (3) examine the relationships these different motives for taking online/web-assisted

courses have with key student outcomes learning and learning experience satisfaction. Due to the exploratory nature of this research study no hypotheses will be tested.

METHODOLOGY AND FINDINGS

Data for the study was collected from 109 undergraduate students pursuing a business degree in a medium size AACSB accredited university located in the mid-south. The business school has been providing distance education for more than a decade and started offering online courses in 2003, even though the primary mode of delivery remains face-to-face. The survey was available to university students enrolled in almost all the online courses offered during the semester and approximately 80% of those courses were either 3rd or 4th year level. Participation was voluntary and no attempt was made to identify the respondent.

The sample consisted of 34% males and 66% females. On average, respondents had taken 7 online or web-assisted courses and their average age was 28 years. All survey items used in this study can be found in appendix A. The 11-items that measured the motivations for using an online/web-assisted delivery medium came from a study conducted by Meuter et al., (2003) that focused on reasons for selecting encounters that use self-service technologies (i.e., online banking, automated hotel checkout, automated investment transactions and the like) as opposed to a personal encounter such as the face-to-face interaction with a teller. An exploratory factor analysis using a Varimax rotation of the 11-items provided 3 unique motivation dimensions with eigen values found in Table 1 (Appendix).

The 3 factors also explained 78.9% of the total variation. These dimensions for taking online courses were labeled "convenience," "enjoyment & independence," and "no other option available." The mean and standard deviation for each item that measured the 3 dimensions are provided in Table 2 (Appendix). The 4-items measuring "convenience" produced an alpha reliability $a = 0.90$, and the 6-items measuring the dimension "enjoyment & independence" produced an alpha reliability $a = 0.91$. A single item measure "no other option available" was additionally revealed.

Learning experience satisfaction was measured using one item that asked students to provide their level of agreement based on a 1 (strongly disagree) to 10 (strongly agree) for the statement "overall I am very satisfied with the learning experience in this course." Similar one-item scales have been used to successfully measure overall satisfaction with courses in other studies (McFarland & Hamilton, 2006). Learning was measured using 3-items used by Peltier, Schibrowsky, and Drago (2007) to capture perception of quality of learning. While academic self-efficacy was measured using a scale developed by Chemers, Hu, and Garcia (2001). Lastly, achievement striving as a surrogate for drive or motivation was measured using the 6-item scale developed by Spence, Helmreich, and Pred, 1987. All these scales have been used extensively and have demonstrated acceptable psychometric properties. In this study, all multi-item scales produced acceptable reliability coefficients (learning $a = 0.96$, academic self-efficacy $a = 0.91$, and achievement-striving $a = 0.81$) as per Nunnally (1978).

Correlation coefficients illustrating the relationships between student motivations for taking online/web-assisted courses and learning, learning experience satisfaction, academic self-efficacy, and achievement striving are provided in Table 3 (Appendix). As can be seen, the two motivations for taking online/web-assisted courses "convenience" and "enjoyment and independence" revealed positive relationships that were significant at the $p < 0.05$ level for both student outcomes of learning experience satisfaction and learning as well as with the personal

variables of drive or motivation and academic self-efficacy. However, the dimension "no other option available" showed negative relationships with both student outcomes and the personal variables. Also, only the relationship between the personal variable achievement striving and no other option available was statistically significant at the $p < 0.05$ level.

In summary, the factor analysis in Table 1 and the means and standard deviations provided in Table 2 offer important insights into the first research objective concerning the different reasons for students taking online/web-assisted courses. The second and third research objectives relating to the relationships these motives have with student outcomes such as learning and learning experience satisfaction and the personal variables academic self-efficacy and achievement striving were investigated using Pearson's Correlation Coefficient found in Table 3.

DISCUSSION

Results from factor analysis show three basic motives for students taking online/web-assisted courses. Based on the means shown in Table 2, it is encouraging to see most students taking online/web-assisted courses attributed convenience as well as the enjoyment and independence that these courses offer as important reasons for their decision for taking these courses. Note that "no other option available' was the least important reason for taking online/web-assisted courses (mean = 4.04). This would suggest that both convenience and enjoyment with taking online courses are trigger points influencing online course selection.

The positive correlations in Table 3 illustrate that as the level of achievement striving (used as a surrogate for drive or motivations) and self-efficacy goes up, that student beliefs that online/web-assisted classes are convenient, enjoyable, and provide them independence also go up. However, the negative correlations found in Table 3 also reveal an inverse relationship between achievement striving & self-efficacy with student perceptions of limited options. That is, when levels of achievement striving and self-efficacy drop, the student's perception that he/she has limited options in course selection increase. These results underscore the importance of student motivation and their confidence that they can take control of their learning in such a class environment when engaged in distance learning by way of online courses. Lack of motivation and self-efficacy appear related to the likelihood of students feeling helpless about selecting an appropriate delivery medium that suits them. Conversely, students with high levels of motivation and self-efficacy appear to not be influenced in this manner. It is additionally important to note that achievement striving and self-efficacy, unlike many personality characteristics are individual differences that can be positively influenced or developed by faculty or course design. For instance, it is important to communicate to students and to capitalize on course design that positively influences the core dimensions of a class such as the use of multiple skills found in online learning, the autonomy related to the opportunity for the student to make critical decisions relative to achieving their own learning objectives, and the importance of timely feedback to the student by the faculty members with respect to student performance at all times (Hackman & Oldham, 1972). Furthermore, a student's self-efficacy can be enhanced with institutions or faculty equipping students with the tools and skills (such as technological or self-management skills) that will contribute to their confidence that they possess what it takes to succeed in an online environment (Bandura, 1986).

Results in Table 3 also illustrate the positive relationships that the two motives of convenience and enjoyment & independence have with learning and learning experience

satisfaction in the online classroom. Clearly these two motivators for taking online/web-assisted courses positively influence student learning and satisfaction. However, the perception that there was no other option available showed negative relationships with learning and learning experience satisfaction even though they were not statistically significant. This result seems to suggest when students perceive that they have no choice other than to take an online/web assisted course, that their learning and learning experience satisfaction will be undermined.

IMPLICATIONS

These findings taken as a whole suggest important implications for institutions of higher education. First, it is important that students who register for online/web-assisted courses have high levels of motivation and self-efficacy. Both intrinsic motivation and the strength of the student's self-efficacy can be influenced by the development of a class curriculum that possesses skill variety, autonomy and feedback as well as equipping the students with the knowledge and skills to successfully navigate an online class in advance of enrolling in that class. In the absence of such preparations, students may be taking these online courses at their own risk with an increased probability of dropping these classes or performing at sub-par levels. This needs to be communicated in advance to both students during student advising and to faculty and administrators as they broaden their course curriculums to include online classes.

Second, higher education institutions should consider offering students a choice of both face-to-face and online/web-assisted courses. Clearly those who feel that they have no other choice do not do as well in terms of learning and report lower levels of satisfaction with learning experiences as compared to those students who feel they had a choice. Institutions of higher education that provide students with a choice of face-to-face as well as online/web-assisted courses should communicate to students that they have a choice and that they should be proactive in looking, requesting, and registering for those courses of their choice at the time of they register for classes. Some schools may offer face-to-face sections only during a specific time periods based on semester rotations. When this occurs, this should be openly communicated to students so that they understand that face-to-face versus online options exist for them in the following term.

Finally, some institutions of higher education target their non-traditional students with online/web-assisted courses since they are more likely to have families and daytime work responsibilities, making it more difficult to take classes between 8 a.m. and 5 p.m. during the traditional workweek. Although these students may have little option than to take online/web-assisted courses, our findings from this study question the wisdom of promoting or positioning online education as the only choice available for learning or receiving a college degree. Our research suggests that students wish to feel that they have a choice between face-to-face and online classes.

LIMITATIONS

As is the case with cross-sectional research our study has limitations. First, a confirmatory factor analysis using a different sample should be employed to validate the three motivation dimensions for taking online/web assisted courses. Second, the sample for this study came from a single institution, making it difficult to generalize the findings of this study to a larger population of institutions of higher learning. Collecting data from samples of students

from multiple institutions will provide for greater generalizability of the findings from this study. Furthermore, the cross-sectional design of this study limits the ability to establish causality. Despite these limitations, this study offers a valuable glimpse of the relationships found among student motivations to take online classes and a variety of personal variables and important student outcomes which, in turn, can serve to guide pedagogical strategies for institutions of higher learning that promote or intend to promote distance learning.

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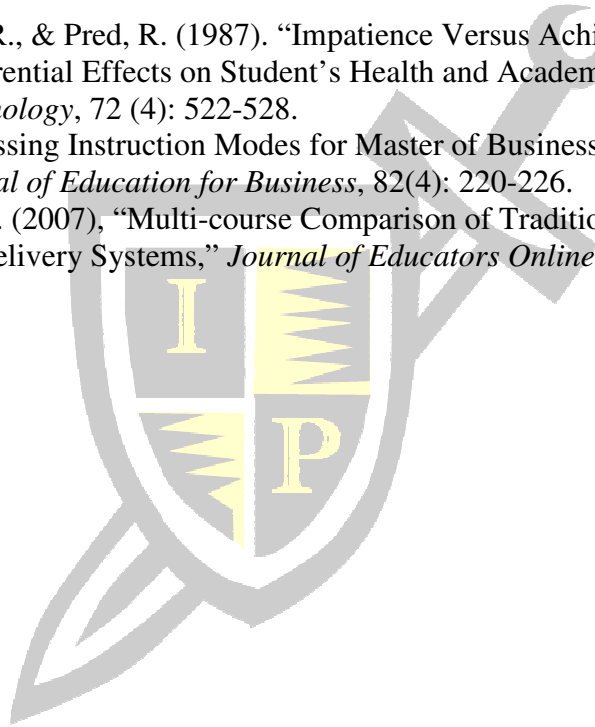
APPENDIX

Table 1 - Results from Exploratory Factor Analysis

| Variable	Factor 1	Factor 2	Factor 3	Mean	Alpha
Enjoyment & independence				4.96	0.91
Enjoyment of the novelty of the technology	.93				
Enjoyment from using technology	.92				
Provides feeling of independence	.87				
Privacy	.77				
Control over my learning	.70				
Cost savings	.47				
Convenience				6.09	0.90
Convenience		.92			
Ability to work around your schedule		.91			
Ability to work at your own pace		.84			
Ease of use		.70			
No other option available				4.04	__
No other option available			.93		
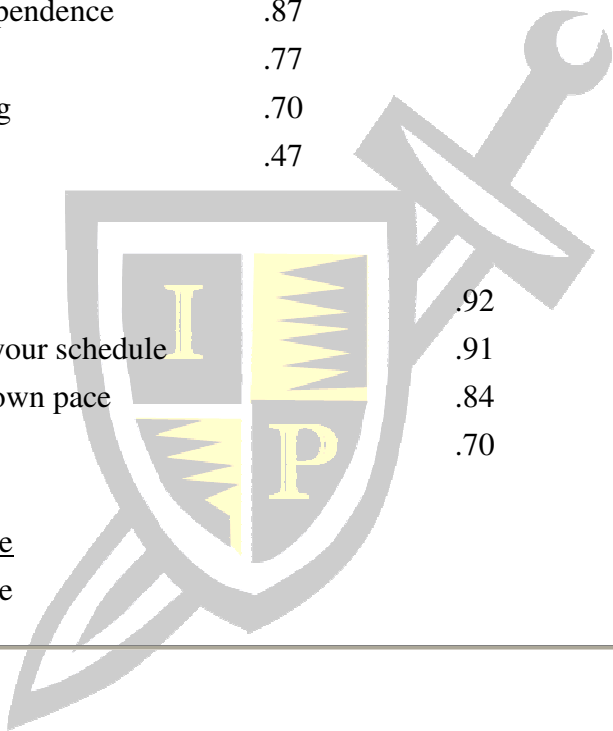
Table 2 - Reasons for Taking Online/Web-assisted Courses and Their Importance

Variable	Importance (1=very unimportant, 7=very important)	
	Mean	S.D.
Ability to work around my schedule	6.30	1.21
Convenience	6.26	1.28
Ability to work at my own pace	6.00	1.43
Ease of use	5.79	1.52
Control over my learning	5.35	1.84
Cost savings (travel, child care, missing work etc.)	5.21	2.10
Provides feeling of independence	5.20	1.94
Privacy	4.96	2.15
Enjoyment from using technology	4.75	2.13
Enjoyment of the novelty of the technology	4.59	2.15
No other option being available	4.04	2.55

Table 3 - Motivations for Taking Online/Web-assisted Courses and Their Relationships with Student and Learning Outcomes

Outcome	Convenience	Enjoyment & Independence	No other Option
Drive (motivation)	0.40^{1}	0.22^{1}	-0.30^{1}
Self-efficacy	0.43^{1}	0.30^{1}	-0.16
Satisfaction	0.25^{1}	0.23^{1}	-0.09
Learning experience satisfaction	0.25^{1}	0.21^{1}	-0.10

[1] Relationship is significant at the $p < 0.05$ level.

[a] <u>Motivations for taking online/web-assisted courses</u> (adapted from Meuter et al., 2003)

When deciding to take this course online, how important were the following to you personally?

Convenience
Ability to work at your own pace
Ability to work around your schedule
Ease of use
Privacy
Enjoyment from using technology
Enjoyment of the novelty of technology
Provides feeling of independence
Control over my learning
Cost savings (i.e., travel, child care, missing work etc.)
No other option was available other than to take the course online

[a] *Items varied between 1 and 7 where 1="a very unimportant factor in my decision" to 7="a very important factor in my decision"*

<u>Achievement Striving (Spence, Helmreich, and Pred, 1987)</u>

Nowadays……….
How much does college work stir you to action?
	Much less than others			Much more than others
1	2	3	4	5

[1]Do you consider yourself to be?
	Very hard driving			Relaxed and easy going
1	2	3	4	5

How would your best friend or others who know you rate your general level of activity?
	Too slow			Very active
1	2	3	4	5

[1]How seriously do you take your college work?
	Much more than most			Much less than most
1	2	3	4	5

[1]How often do you set deadlines for yourself?
	Very often			Almost never
1	2	3	4	5

[1]Compared with other students, the amount of effort put forth on college work is?
	Much more			Much less
1	2	3	4	5

[1] *These items were reverse coded*

[a]<u>Quality of Learning (Peltier, Schibrowsky, and Drago, 2007)</u>

I learned a lot in this class
I enjoyed taking this course
I am likely to recommend this course to friends and colleagues
[a] *items varied between 1 and 5 where 1 = "strongly disagree" to 5 = "strongly agree"*

Academic Self-Efficacy (Chemers, Hu, and Garcia (2001)

I know how to schedule my time to accomplish tasks	[*never*] 1 2 3 4 5 6 7 [*very often*]
I know how to take notes	[*never*] 1 2 3 4 5 6 7 [*very often*]
Iknow how to study to perform well on tests	[*never*] 1 2 3 4 5 6 7 [*very often*]
I am good at researching and writing papers	[*never*] 1 2 3 4 5 6 7 [*very often*]
I am a very good student	[*never*] 1 2 3 4 5 6 7 [*very often*]
I usually do very well in school and at academic tasks	[*never*] 1 2 3 4 5 6 7 [*very often*]
I find my university academic work interesting & absorbing	[*never*] 1 2 3 4 5 6 7 [*very often*]
I am very capable of succeeding at this university	[*never*] 1 2 3 4 5 6 7 [*very often*]