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SAN JOSE STATE UNIVERSITY SCHOOL OF NURSING

MASTER'S PROGRAM PROJECT OPTION (PLAN B) PROJECT SIGNATURE FORM

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SEMESTER ENROLLED Summer 2009		
TITLE OF PROJECT Perceptions Among Stud	ents in Online	
Health Related Courses - A Pilot Study		
NAME OF JOURNAL <u>Journal of Nursing Educa</u>	ation_	
The project and manuscript have been successfully completed and meet the standards of the School of Nursing at San Jose State University. The project demonstrates the application of professional knowledge, clinical expertise, and scholarly thinking. An abstract of the project and two copies of the manuscript are attached.		
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Kathy Sullivan
Dr. Irene Gonzales
Deborah Nelson

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Given the proliferation of online courses in university education, continuous evaluation is imperative to ensure quality. This study utilized a quantitative descriptive design using a questionnaire to explore the perceived adequacy and acceptance of distance learning in undergraduate health related courses. Questions were designed to elicit students' reactions to teaching methods, course content, and how the format influenced their learning.

Overall, acceptance of online courses is high. Most of the students were willing to take another online course in the future. Respondents felt that online courses offer more flexibility, encourage both independent and critical thinking skills, and that the course materials reinforce the learning process. Students also felt that educators were able to adequately explain concepts, provide sufficient assistance, and that the instruction was both current and at the appropriate level.

Both students and faculty will benefit from the study by helping to facilitate the improved quality of online courses.

Perceptions Among Students in Online Health Related Courses - A Pilot Study

A Paper Presented to

The Faculty of the School of Nursing

San Jose State University

In Fulfillment of the
Requirements for the Course
NURS 297

By
Kathy Sullivan
August 4, 2009

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Overall, acceptance of online courses is high. Most of the students were willing to take another online course in the future. Respondents felt that online courses offer more flexibility, encourage both independent and critical thinking skills, and that the course materials reinforce the learning process. Students also felt that educators were able to adequately explain concepts, provide sufficient assistance, and that the instruction was both current and at the appropriate level.

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Background

The nursing profession is facing a dire shortage which is expected to escalate as society ages and the demand for quality health care increases. By 2014 it is estimated that over 1.2 million new and replacement nurses will be needed (AACN, 2007). According to the American Association of Colleges of Nursing, the United States must graduate approximately 90% more nurses from U.S. nursing programs to meet the projected growth in demand for RN services (AACN, 2007).

In an effort to address the need to train increasingly more nurses, there has been a recent trend toward the use of online nursing instruction to meet students' needs concerning convenience and easy access to information. This web-based instruction in baccalaureate and graduate nursing education is expanding in colleges and universities across the country (Teeley, 2007; Wills & Stommel, 2002; Woo & Kimmick, 2000). The number of traditional college-age students has decreased while nontraditional part-time students who work and have family obligations have become the norm for most programs (Diekelmann & Schulte, 2000; Seiler & Billings, 2004; Sit et al, 2000;). These online courses provide students more flexibility with self-paced learning as their schedules permit, reduce or eliminate travel time, as well as provide added opportunities for reviewing course materials (Billings, 2000; Leasure et al, 2000).

Numerous research studies suggest there is no significant difference between learning outcomes of online and traditional nursing courses (Bachman & Panzarin, 1998; Billings & Bachmeier, 1994; Leasure et al, 2000; Rosenblund et al, 1999; Woo & Kimmick, 2000). However, continued evaluation of all aspects of online courses, from

student learning to effectiveness of the course, instructor, and overall program, is essential (Palloff & Pratt, 1999).

A combination of active participation, social interaction, and collaboration needs to take place if effective online learning is to occur (Alexander & Boud, 2001). A major challenge in adopting the online learning model is to enhance human interaction in order to facilitate peer support, develop communicative dialogue, and encourage socialization (Sit et al, 2005). The nursing literature (Boyle & Wamback 2001; Thiele, 2003; Thurmond, 2003) supports interaction as a core element of an effective online environment and found a direct correlation to improved student learning. Online environments must encourage participation while effectively promoting an interactive learning experience.

Findings (Leasure et al, 2000; Salyers, 2007; Wills & Stommel, 2002) show that more than half of survey respondents preferred online teaching, mainly because of the enhanced level of interactivity between students and between students and educators in online courses. Students must actively interact and engage other students and the educator online to complete assignments. They found that locating help was much easier in online classes because the educator and other students are available online virtually around the clock (Hyde & Murray, 2005). This virtual contact with the educator and other students may not be viewed positively by all students, as Halstead and Coudret (2000) reported in their study in which nursing students rated decreased physical contact with faculty and peers as a disadvantage of online learning. Another research study found that interactions with faculty were satisfying because the faculty members were easily

accessible, but students considered the content of communication sterile and non-expressive (Diekelmann & Schulte, 2000).

Asynchronous discussions enabled by web-based learning tools and offered through online bulletin boards are a crucial part of the online environment to foster this necessary interaction and communication. Research shows that these discussion platforms improve quality and utilize high levels of analysis and critical thinking skills (Fearing & Riley, 2005; Hyde & Murray, 2005). Moreover, these communication forums provide an opportunity for peers to connect, share information, and collaborate on coursework. In contrast with the traditional classroom, where individual students can hide and not reveal their weaknesses, in the web-based environment students' work, including the discussion of course content, is available for scrutiny (Magnussen, 2006).

A body of literature has shown the communication between students and with the educator to be a crucial piece in online class satisfaction (Buckley, 2003; Fearing & Riley, 2005; Sit et al, 2005). Studies indicated that the most important perceived course factors included the active learning strategies, ongoing communication, timely and constructive feedback, and flexibility of the asynchronous format (Fearing & Riley, 2005; Halstead & Coudret, 2000; Kenny, 2002; Leasure et al, 2000).

Research Problem

In an effort to address the need to train increasingly more nurses, there has been a recent trend toward the use of online nursing instruction to meet students' needs concerning convenience and easy access to information. As the use of web-based courses in nursing continues to increase, nursing educators are concerned with assuring the quality of the educational experiences and outcomes of their online programs. The

Alliance for Nursing Accreditation (2003) states that distance delivered programs must meet the same accreditation criteria and academic standards as traditional on-site programs, and stress the need to develop methods for continuous quality improvement (Pyron et al, 2003).

The purpose of this study is to explore the perceived adequacy and acceptance of distance learning in the undergraduate health related courses using a self-administered online questionnaire. Students' perceptions of the effectiveness of their ability to learn in these online courses will also be assessed. The hypothesis is that on-line coursework is as effective as traditional classroom teaching for the courses studied.

The terms used throughout this research study will be defined as follows: online course/web-based course is a distance delivered format using the World Wide Web where students learn remotely and do not have face-to-face meetings after the initial one-time orientation; WebCT is an online virtual learning environment system which allows instructors to manage their course tools such as discussion boards, mail systems and live chat, documents and web pages.

Because of the recent proliferation of online courses in nursing education, it is important to assess whether the students feel that they are getting a valuable educational experience with these online classes. Answering the research questions will assist in the development of effective learning and teaching strategies. The information gathered will then be used to attract more students, keep current students satisfied, and provide for the development and expansion of quality online education programs.

Conceptual Framework

The increased use of online learning technology in education is often seen as a result of the general shift toward adult learning theories in which the educator is viewed not as a distributor of content, but as a facilitator of learning and an assessor of learning outcomes (Ruiz et al, 2006). Web based technologies in education use adult learning theories that view instructors in the role of facilitator or resource rather than a lecturer or grader.

The theoretical framework employed in this research study is based on the adult learning theory of Andragogy proposed by Malcolm Knowles in 1950. Undergraduate nursing students fall into the category of adult learners who have higher expectations for the learning process and expect to be more actively involved in learning (Davenport, 1985).

Knowles developed the theory of Andragogy specifically for adult learning and emphasized that adults are self-directed and expect to take responsibility for decisions (Fisher & Podeschi, 1989). Adult learning programs such as online courses must accommodate this fundamental aspect. Knowles outlined four crucial assumptions about the characteristics of adult learners that are different from the assumptions about child learners: adults need to know why they need to learn something, adults need to learn experientially, adults approach learning as problem-solving, and adults learn best when the topic is of immediate value (Davenport, 1985). Instruction for adults needs to focus more on the process and less on the content being taught.

Academic autonomy occurs when students learn how to regulate and direct their own behaviors so they can control and manage the outcomes of their performance in

online instruction (Fisher & Podeschi, 1989). Active learning approaches, in which the student is fully engaged in discovery learning, result in greater retention than more passive approaches. Experiential learning and an active engagement in the learning process are as important in the online environment as they have been in the traditional classroom (Magnussen, 2006).

Methodology

Participants in this research study were a convenience sample of 46 (N = 46) baccalaureate students between the ages of 20 and 55 and enrolled in one of the 37 health related online courses during the Spring 2009 semester at a local urban state university. A questionnaire was sent to the course instructors with a request to email the questionnaire to students enrolled in the selected classes. Anonymity was guaranteed to the professor and to the students.

A quantitative descriptive design using survey techniques was utilized. Data was obtained using the Mount Royal College's FAST (Free Assessment Summary Tool) evaluation tool specifically designed for the online learning environment. The Mount Royal College's FAST (Free Assessment Summary Tool) evaluation tool was developed by Dr. Bruce Ravelli, a sociology instructor at Mount Royal College, Calgary Alberta, Canada, and is contractually obligated to remain both free and available to any educators who use the software to survey the learning process until October 2011. All survey items were selected from the FAST database, which have been tested for validity and reliability. The questionnaire is composed of 24 survey items. The first six questions obtained demographic information about the student. The remaining questions were designed to elicit the students' reactions to internet teaching methods, the effect of

working alone versus a classroom setting, the ability to adequately cover appropriate course content in a distance learning environment, and the degree to which this format influenced their learning processes. The students were asked to respond to each of the questions by indicating whether they "Strongly Agree, Agree, Disagree or Strongly Disagree". An opportunity for comments was also provided.

Analysis of this non-parametric data was done using a Chi-Square Test (X2). Independent variables are the four answer choices presented to each survey respondent. If every response were equally probable, one fourth of the responses would appear in each category. The X2 test was used to determine if the differences in responses could be attributed to chance. A significant X2 value shows that the opinions are indeed significantly different that those expected by chance alone.

Results

The students' ages were equally divided between those who were 30 years or younger and those over 30 years of age. The younger group was clustered around 22-25 years and the older group 41-50 years. Most of the students were white (74%), with the remainder divided between Hispanic (11%) and Asian Pacific Islander (13%). Most of the students (87%) had enrolled in an on-line class before. Only thirteen percent (13%) were taking an on-line class for the first time. One half of the students were currently working part time; the remainder was evenly divided between full-time employment and unemployed work status. Gender was not considered as only one male responded to the survey. Forty-six (N = 46) undergraduate students responded to the survey.

Internet vs. Classroom Setting

, 	Table 1
The course flexibility assists	s me in meeting requirements.
Strongly Agree	46%
Agree	50%
Disagree	2%
Strongly Disagree	2%
	Table 2
•	Table 2 ionship with my instructor even withou
I am able to develop a relate face-to-face meetings. Strongly Agree	
face-to-face meetings.	ionship with my instructor even withou
face-to-face meetings. Strongly Agree	ionship with my instructor even withou
face-to-face meetings. Strongly Agree Agree	ionship with my instructor even withou ; 15% 50%

Table 3 Opportunities for assistance are available (e.g. office hours, telephone, email or website.	
Strongly Agree	43%
Agree	48%
Disagree	9%
Strongly Disagree	0%
Not Applicable	0%

Table 4 Even without face-to-face interactions, my instructor is able to explain concepts to assist my understanding.		
Strongly Agree 28%		
Agree	54%	
Disagree	11%	
Strongly Disagree	4%	
Not Applicable	2%	

One difference between scheduled classes and distance learning is that students can participate at their convenience. Nearly everyone (96%) agreed that the internet course offered more flexibility than a traditional classroom setting (X2=246.4, p<.005).

However, nearly a third of the students (31%) felt that without face to face contact they were unable to develop a personal relationship with their educator (X2=19.1, p<.005). Still, ninety-five percent (95%) agreed that there was ample opportunity to get assistance from the instructor via office hours, telephone, email or the website. Most of the students (82%) agreed that they the educator was able to explain concepts to assist understanding. Ten percent (15%) disagreed. The others (5%) had some face-to-face interaction with the educator (X2=27.6, p<.005).

Organization of Material/Teaching Methods

Table 5 The interactive teaching/learning activities are well organized		
Strongly Agree 35%		
Agree	37%	
Disagree 15%		
Strongly Disagree 9%		
N/A	4%	

Table 6 The course material was presented in a logical sequence		
Strongly Agree	37%	
Agree	52%	
Disagree	7%	
Strongly Disagree	4%	

Eighty-five percent (85%) thought that the course work was presented in a logical sequence, but fewer felt that the teaching/learning activities were well organized (72%) (not a significant difference). When PowerPoint presentation software was used as a tool, eighty-five percent (85%) agreed that it was helpful.

Format Affects Learning Methods

Students agreed that the online course format encourages independent thinking and critical thinking about issues related to the content (Strongly Agree 29%; Agree 67%). They agreed even more strongly that students are encouraged to become personally involved in the learning process (Strongly Agree 48%; Agree 47%).

Course Content

There was a general consensus that the on-line course encouraged development of the skills needed for their education, that the instruction was at the appropriate level and current and that the course materials reinforced the learning process. At least 85% of the students concurred with these statements.

Acceptance of Method

Table 7 Overall, how would you rate this course?		
Very Good	48%	
Good	9%	
Fair	14%	
Poor	5%	

Table 8 I would take another course that used	
Strongly Agree	48%
Agree	30%
Disagree	13%
Strongly Disagree	7%
N/A	0%

Although most of the students were positive about their experiences, there were a few students who were unhappy with the online class and would not take another on-line class. To determine what factors might be associated with a poor evaluation, the data was analyzed further with respect to the employment status of the students, the student's ethnicity, and age of the student.

Work Status

	Full Time	Part Time	Unemployed	Total
Strongly				
Agree	6	2	14	22
Agree	3	6	4	13
Disagree	1	1	4	6
Strongly				
Disagree	1	2	0	3
	11	11	22	44

Those who said that they would not take the course again were evenly divided between not employed, part-time employment and full time employment. Work status does not appear to affect whether a student is willing to take an online course again.

Adjusting for Race:

I would take	another course that use	ed this technology	
	White	Hispanic	Asian/Pacific Islander
Strongly			
Agree	16	4	2
Agree	10		4
Disagree	5	1	0
Strongly			
Disagree	1		1
-	32	5	7

There was no difference by race in this sample as to willingness to repeat the online class experience. Each of the three racial groups had over 80% willing to repeat the experience. Caucasian students were likely to take another online course (81%). Eighty percent (80%) of the Hispanic students want to take another online course. Eighty six percent (86%) of the Asian-Pacific students would take another online course.

		Table 9		
How would you r	ate the class?			
	White	Hispanic	Asian/Pacific Islander	Total
Excellent	9	1	1	11
Very Good	10	1	1	12
Good	3	2	2	7
Fair	7	0	2	9
Poor	3	1	1	5
Total	32	5	7	44

The data shows that there were no significant differences in rating the online classes by race.

Table 10 I would take another course that used this technology

Age	30 and under	Over 30
Strongly Agree	10	12
Agree	11	4
Disagree	2	4
Strongly Disagree	0	3
Total	23	23

Overall, empirical data for the results was skewed towards the Agree/Strongly

Agree end of the survey. Acceptance of on-line courses is high. Although not every
individual was equally enthusiastic, eighty five percent (85%) of the students were
willing to take another on-line course. In this study, ethnicity, age, or work status did not
significantly affect whether a student was willing to take another on-line course.

However, all of the students who indicated that they would *not* take another online course
were over 50 years of age.

Student Responses to Open-ended Questions

Students' comments are revealing and suggest areas for possible future study.

These comments suggest that the response to the online course was related to the educator's ability to organize the material and work with the technology rather than the content of the course. Because anonymity was guaranteed, there was no way to correlate responses with a particular course or educator. However, it does suggest and possibly confirm that there may be special skills involved when teaching an online course.

"This course and instructor have been my best online experiences. In the past I have not been as lucky. Most of the time the courses were unorganized and it was impossible to communicate with the instructor."

"The instructor was not technically capable of providing the assistance I needed. The material was not organized."

"I would only take an online course if I knew the instructor is organized. I have taken other online courses prior to this one and the organization the instructors used for the classes were confusing and it was difficult to find assignments."

Other students commented on their reactions to the course material and online learning modalities. These responses included increased workload due to extra reading and writing required by online courses, omission of live discussions, as well as increased anxiety levels.

"The personal involvement required is far more than I have experienced in regular classes. Overall, this forces me to try to better articulate my views... There seems to be a higher level of anxiety for students in my online class because of how much actual reading and writing is necessary over a short amount of time."

"I felt it eliminated one important modality for learning—hearing the information from the professor. I had to rely on either reading it myself or talking with classmates about it online and watching videos, but was missing that critical element of hearing the professor talk about it. That helps me learn."

Conclusion

Overall, acceptance of on-line courses is high. Most of the students were willing to take another online course in the future. Respondents felt that the internet course offered more flexibility than a traditional classroom setting. Although some students felt that they were unable to develop a personal relationship with their instructor, almost all agreed that there was ample opportunity to get assistance from the educator, and that the educator was able to explain concepts to assist their understanding. There was a general consensus that the on-line course encouraged development of the skills needed for their education, that the instruction was both current and at the appropriate level, and that the course materials reinforced the learning process. Almost all of the respondents felt that that the online course format encouraged them to become personally involved in the learning process and encouraged both independent and critical thinking skills.

Student responses to open-ended questions suggest possible areas for further study to improve online education. Students identified the educator's organization and technical skills as qualities vital to successful online instruction. Some other responses included students' increased workload due to extra reading and writing required by online courses and increased anxiety levels. These responses suggest a need to further study online education.

This study is limited in the extent to which conclusions can be generalized to the population from which the sample is selected as it does not employ random sampling and includes a relatively small sample size. Because subjects are not drawn by chance from a larger identified pool, the generalizability or external validity of the findings is limited. The self-selection of the sample limits this study; many of the students who might be

extreme examples were likely not to take part in the study or may drop out of the online courses early. The issues inherent to self-reporting pose a limitation of this study. The satisfaction level reported by students may vary considerably throughout the course. The students' rating and perception of their satisfaction at the point that the questionnaires are administered may not be representative of their experiences throughout the course.

The findings of this study are too small to find statistically significant differences and are intended as a pilot study to suggest further research. Students and faculty will benefit from the study by helping to facilitate improvements in order to ensure quality online education.

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