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Self-Directed Learning Readiness of Baccalaureate of Science in Nursing (BSN) Students

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The project and the manuscript have been successfully completed and meet the standards of the School of Nursing 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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Key Words: *Self-directed learner, Adult learner, Life-long learner*

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Background

Teachers and students appear to experience some difficulty in articulating a precise definition of self-directed learning (SDL). For example, teachers may see SDL as a way of facilitating adult learning, while students see it is a dereliction of duty by their teachers (Hewitt-Taylor, 2001: 502). For the purpose of this paper SDL is defined as, "A process in which learners are responsible for planning, implementing, and evaluating their own learning and are expected to work independently or with others, in order to achieve pre-set learning goals (Williamson, 2007, pg. 67). Many students that enroll in nursing school have their own way of learning; their education is built with strong fundamentals and assumptions. Most instructors assume that the learner brings to the educational setting a rich foundation of knowledge and that they are ready to learn with the use of motivation from internal incentives. The teacher and student work closely together to create a study plan, and evaluate the student's learning needs, creating objectives and a methodology to assist them in their learning.

A typical nursing curriculum is built around policies and regulations set forth by the University, Board of Registered Nursing (BRN), and program essentials and outcomes from accrediting bodies (Commission on Collegiate Nursing Education, 2009). Self directed learning (SDL) is a unique skill that not all students possess; the curricula should be built in favor of enhancing self directed learning. As future nurses, lifelong learning requires self directed learning. This study will identify the SDL readiness level of enrolled students in a BSN program, and provide insight for faculty to more effectively meet student learning needs.

Research Questions:

1. Do demographic differences affect self directed learning readiness?

2. Are students entering the nursing program ready for self-directed learning teaching strategies?

3. Which level of students, sophomores, juniors, or seniors, are the most self directed as learners?

Hypothesis:

As adult learners, the majority of students in the final semester of the BSN program are most ready for self directed learning.

Theoretical framework: Adult Learning Theory

This study is conceptually based on Malcom Knowles theory of adult learning or andragogy. According to Hiemstra and Sisco (1990), andragogy is a system of ideas, concepts, and approaches to adult learning. Knowles discusses how the original model of pedagogy was used to teach children and adults. As adults mature they become increasingly independent and responsible for their own actions (Knowles, 1984), and are often motivated to learn by a sincere desire to solve immediate problems in their lives. Additionally, they have an increasing need to be self-directing (Heimstra & Sisco, 1990). Heimstra & Sisco (1990) note the andragogical model as conceived by Knowles is predicated on four basic assumptions about learners, all of which have some relationship to our notions about a learner's ability, need, and desire to take responsibility for learning:

1. Their self-concept moves from dependency to independence or self-directedness.
2. They accumulate a reservoir of experiences that can be used as a basis on which to build learning.
3. Their readiness to learn becomes increasingly associated with the developmental tasks of social roles.
4. Their time and curricular perspectives change from postponed to immediacy of application and from subject-centeredness to performance-centeredness (Knowles, 1980, pp. 44-45).

In his seminal work, published in 1967, Malcom Knowles studied how an adult learns. He was able to make the connection between self-directed learning and adult learning. "Knowles (1983) considers that the adult self is reached when individuals can take responsibility for their own lives, becoming autonomous, independent and self directed" (Hewitt-Taylor, 2001, pg. 497). This theory can be aptly applied to an examination of student nurses and their readiness for self-directed learning. Specifically, this study evaluates the association of adult learning and being self-directed. Knowles' assessment of adult learning is in line with the students' future careers as nurses. As adult learners, self-direction is crucial, especially in the nursing career, where independence is imperative in making immediate decisions. Knowles (1975) suggests that the main purpose of education is to develop independent skills of inquiry, to learn to exploit every educational experience, both in formal education settings and in everyday life (Levett-Jones, 2005, pg. 365). Adult learners like to have control of their learning, relating their learning to life experiences helps them understand it better. As found by Knowles, self-directed learning is a major part of adult learning. It allows one to direct ones life path in a way that is self fulfilling. Adult learners enjoy lifelong learning. It is defined as education resulting from integration of formal, non-formal, and informal education so as to create the ability for continuous lifelong development of quality of life. Learning is therefore part of life which takes place at all times and in all places (National Education Act, 1999).

There may be a debate on who is considered an adult learner, "Some tend to think of the word "adult" in terms of age. But according to Rogers, no single age can define an adult even within one society, let alone on a comparative basis, because legal and social liabilities come into play at different ages (1996). He argues that a more satisfactory approach may be to identify some of those characteristics inherent within the concept of adulthood" (Irani et al., 2003).

Literature review

Studies were limited and those identified were completed with non-nursing students and

occurred outside the United States. Extensive research has been conducted on defining self-

directed learning (SDL) in students, (Hewitt-Taylor, 2001; Lunyk-Child, Crooks, et. al, 2001;

Williams, 2001; Patterson, Crooks, et. al, 2002, Murad & Varkey (2008), & O'Shea, 2003).

Researchers have looked at different aspects of self directed learning. For example, the

difference in definitions of self-directed learning and teaching strategies have been explored to

identify indicators that can assist students to be self- directed learners, and recommendations

were made about strategies to better prepare students for SDL. O'Shea (2003) completed a

comprehensive literature review of articles associated with SDL. The literature revealed that

SDL has been researched since 1970. However, teachers and students may have different

perspectives of SDL. O'Shea sites a study (Garrison, 1992) which contends that self direction

should be seen as a collaborative process between teacher and learner. It is therefore necessary

to identify how students and teachers define self-directed learning (1992) (O'Shea, 2003: 65).

Lunyk-Child, Crooks, Ellis, et. al (2001) exclusively studied faculty and student

perceptions of SDL in a four year undergraduate nursing program. They found three themes

(1) commitment to SDL requires students and faculty to understand the value of empowering

learners to take increased responsibility for decisions related to learning; (2) students engaged in

self-directed learning undergo a transformation that begins with negative feelings (i.e. confusion,

frustration, and dissatisfaction) and ends with confidence and skills for lifelong learning; and

(3) faculty development is important to ensure high levels of competency in facilitating self-

directed learning (2001:116). Similarly, Hewitt-Taylor (2001) conducted a qualitative study

interviewing teachers and students in a pediatric intensive care unit (PICU) in the United

Kingdom. The study revealed that teachers and students do not have the same understanding of the nature and purpose of SDL (2001:499). The researcher found that teachers associated SDL with adult learning, as identified by Knowles, whereas few students made this link (pg. 501).

Williams (2001) looked at a different method known as problem-based leaning (PBL) as a strategy that helped enhance student learning and lead them in the direction of SDL. The use of problem-based leaning (PBL) as an instructional methodology in undergraduate nursing curricula has been identified as one way to facilitate the development of nursing students' abilities to become self-directed in learning (pg. 85). Although recommendations are made to support instructors directing students as SDL, Levett-Jones (2001), found that nursing students prefer teacher centered approaches to learning. She also sites evidence of a growing disaffection, particularly in nursing faculty members, with the blanket application of SDL into curricula (2001:364). It is continuously found in the research that most nursing curricula lack a SDL approach. It is very crucial that students comprehend that SDL, in a constantly changing environment, is an essential vehicle for enabling nursing students to develop independent learning skills and sense of accountability , responsibility and assertiveness...essential attributes throughout a nursing career (Levett-Jones, 2001:365).

Patterson, Crooks, et. al, (2002), reviewed six competencies that are required for students to engage in self directed learning. They note students must be exposed to self-directed learning competencies to obtain the knowledge, skills, and attributes unique to their personal and professional growth. The six competencies are: self-assessment of learning gaps; evaluation of self and others; reflection; information management; critical thinking; and critical appraisal (pg. 25). These competencies can change throughout the education experience and are essential for

SDL. The outcomes for learners who embrace SDL are many, both as learners and professionals (pg.31).

Murad & Varkey (2008) examined self-directed learning in health professions education. They reviewed the literature and presented a framework based on Knowles' key components of self-directed learning. The study focused on health professions, specifically medical students. For many years, medical students have been taught to be SDL, but limited studies include nursing students. Murad & Vakey (2008), reconfirm the ongoing issue of defining self directed learning. They stated that only 8% of SDL articles published between 2000 and 2004 provide a clear working definition of SDL (2008:581). They discuss an important point of how SDL has been suggested as a promising methodology for lifelong learning in medicine. This can also relate to nursing. They conclude that future study is needed to examine standardized self-directed learning curricula and to determine the effectiveness of these components related to educational outcomes.

Lifelong learning is a major element of SDL. Armstrong, Johnston, Bridges, & Gessner (2003) surveyed forty-seven new graduates and ninety-nine graduate alumni using a descriptive/ exploratory survey research design to find the amount of time they spent reading. Reading is one of the key components in professional behavior in lifelong learning. SDL skills acquired in undergraduate nursing programs lead to lifelong learning as a professional. They note that a hallmark of professional behavior is the personal commitment to the ongoing acquisition of new knowledge. Nursing has stressed the importance of lifelong learning since the beginning of the profession (2003:19). In order to facilitate students to be SDL, nurse educators need to have a tool to be able to assess student self directed learning levels.

Williamson (2007) discusses a specific tool known as the self-rating scale of self-directed learning (SRSSDL). The 60-item SRSSDL is an instrument developed for measuring the level of self-directedness in one's learning process. Knowledge of learners' levels of self-directedness will benefit both learners and educators. First, students responding to the SRSSDL items will not only reveal their own levels of self directedness in learning, but will also have the opportunity to develop an insight into self-directed learning and a better understanding of the concept, which is crucial for developing self-directed, independent and lifelong learning. Second, teachers, having identified learners' levels of self-directedness and deficits in learning, will be better able to guide students from their positions of learning dependence to independence, considering each student's individual learning needs (pg. 68).

Smedley(2007), conducted a quantitative study using the self directed learning readiness scale to measure the self directed learning readiness of first year bachelor of science nursing students. Findings showed that beginning students did not possess SDL characteristics. There is the need for curriculum developers to include strategies in beginning level degree subjects to cultivate self-directed learning skills for nurses (2007: 373).

Kipp, Pimlott, & Satzinger (2007) give a different perspective of SDL in their quantitative/qualitative longitudinal study of universities preparing health professionals for the 21st century. The participants included students in health fields of medicine, nursing, nutrition, and pharmacy. The objectives were to determine a meaningful and sustainable approach to inter-professional team placements ...they found flexibility within the project and process is essential for self-directed learning of student teams (pg. 633). The next generation of health professionals will require both team performance skills--- and knowledge management skills (pg. 634). These required skills are hard to obtain if students are not SDL. In relation to self-directed learning of

BSN students, curriculum needs to be evaluated to help encourage early semesters to engage as self directed learners. The definition of SDL clearly needs to be understood between the teacher and the student and the meaning should be similar for the cultivation and eventual success of self directed learning.

<div align="center">Methodology</div>

Instrument /Tool

The data in this study was collected by using the Self-Directed Learning Readiness Scale (SDLRS). It is very widely used in education and nursing research to measure self-directed learning. It has been tested and used in other studies (Fischer, King, Tague, 2001; Smedley, 2007). The reliability and validity was specifically evaluated when Fischer, et. al, developed the tool. The questionnaire contains forty statements focused on how students view themselves in relation to self directed learning, including how they like to learn, what is challenging to them, how they deal with problems, and so on. The tool developers, Fisher, King, and Tague (2001), used a statistical method known as principal components to partition their 40 questions into three groups, self management, desire to learn, and self-control. Within each group, the answers tended to be somewhat similar or different, depending on how the question was phrased. The respondents were asked to rate their level of agreement with the statements on a five-point Likert scale, one standing for "Strongly Disagree" and five for "Strongly Agree".

Research Design

A quantitative descriptive study was done using Fischer, King, and Taque's questionnaire of self-directed readiness scale (SDRLS). It was administered to students enrolled in six individual classes from the beginning semester three through senior semester eight. Of the completed questionnaires, ten were randomly selected from each set in order to have equal

number for the classes. The responses were on a Likert scoring scale of one-"strongly disagree" through five-"strongly agree". Demographic information was provided by each respondent. All data was compared to find the similarities or differences between class levels.

Setting

Research was conducted at one metropolitan university in Northern California. For ease of data collection, surveys were administered in the Process/ Professional development classes for each of the six semester classes designated in the study.

Subjects and sampling

Participants consisted of sixty nursing students. All participants were 18 years and older, gender and ethnicity were taken into consideration. Permission was granted from the instructor to allow students time to take a survey in their class. The purpose, benefits, and the implications for the research were clearly explained to the students. Completion of the survey indicated Informed consent. Surveys were anonymous and ten completed surveys were randomly selected from each class. Within each semester (3-8) most students in the process/professional development class completed the survey. Beginning semester three (n= 65/72), semester four (n=22/25), semester five (n=22/27), semester six (n= 24/28), semester seven (n=18/25), and semester eight (n=27/28). Some students were either absent or late and therefore did not complete the survey. Randomly every other survey was selected from each class to equal ten surveys per class, with the exception of semester three, which had double the amount of students registered in the class. The large amount of surveys from semester three required the randomized procedure to be done twice, once to pull out the thirty surveys and again to get ten. A total of sixty participants (n=60) were used for the sample. Data were analyzed for each semester and compared.

Data Analysis

The purpose of this study was to analyze any effects of the demographic factors on the mean responses. Each of the 40 questions was analyzed separately. The demographic groups were each considered at two levels. [Gender (male and female), Age (23- and 24+)] additional demographics examined included Dependents (no and yes), and Degree (yes and no). The semester factor is treated as part of a linear regression model.

Table (1) lists the questions and demographic factors which were found to be statistically significant. The statistical tests were done by p-values based on t-tests combined across all semesters. Tests on semesters were based on linear regression.

Principle component: (1) Self-management (2) Desire for learning (3) Self- control were used to group the questions.

Findings

After careful review of the data, it was found there were ten questions from the SDRLS that resulted in a statistical difference. Question 24 was found to have statistical difference for two factors. The statistically significant questions of the survey are listed in table [1] in the appendix. We find that age is the key factor which exhibited the most questions which had statistically significant differences. These tend to occur most commonly for component two, questions involving the desire for self learning. Question 56, with the most significance is illustrated by a graph [Figure 1]. Semester level was the second factor with significant difference shown by a linear regression model for question 9 in Figure 2. The older students, and those in later semester classes tended to enjoy studying, had a strong need to learn, used assistance when needed, critically evaluated new ideas, and evaluated their own performances. They also set strict time frames and learn from their mistakes. All of which are

characteristics of SDL, "Knowles contends that adults need to control their learning, as well as feel that what they are learning has immediate utility, and is focused on issues that directly concern them. Adults need to test their learning as they go along, rather than receive background theory and general information. They need to anticipate how they will use their learning, and to expect performance improvement to result from their learning. Adult learning is greatest when it maximizes available resources. It requires a climate that is collaborative, respectful, mutual and informal, and it relies on information that is appropriate to what is known at a given time; i.e., it is developmentally paced" (Irani et. al, 2003).

Furthermore, findings illustrated that in the first component self management, the female students tend to prioritize their work and are more organized. In the third component, self-control, the later semesters are able to evaluate their own performances and have more control of their lives.

Limitations

The main limitation of the study was that data is representative of only one Bachelor of Science nursing program. The findings cannot be generalized because of the small sample total of 60 convenience participants and particularly for demographic groups. Results of the study may also be affected because in specific semesters students had advantages over other semesters, i.e. semester six had simulation labs and semester eight had RN to BSN students.

Future Studies

With revised curricula, self directed readiness of students entering nursing programs can be studied to determine if it has had any effect on improving their process of learning. Teaching strategies/methods can be studied to find which are most effective and impact students most in

self-directing learning. As mentioned in the literature review more studies can be done to evaluate new curricula and how it affects beginning student nurses in becoming SDL.

Conclusion

Although, there is no one way to help students become self-directed learners, this study presents data that may assist in identifying levels of students that are considered most ready for self-directed learning. The results of this study indicated that not only are older students ready for self-directed learning, but it also indicated that as students progress in the nursing program, they become increasingly ready for self-directed learning. As students progress they are more independent, confident and competent therefore are most ready for teaching strategies that encourage SDL. The results of this study are consistent with Knowles' theory of adult learning. He defines adult learning as a need to control their learning, as well as feeling that what they are learning has immediate utility. They need to anticipate how they will use their learning, and to expect performance improvement to result from their learning. It requires a climate that is collaborative, respectful, mutual and informal, and it relies on information that is appropriate to what is known at a given time; i.e., it is developmentally paced (Irani et. al, 2003: 166).

This declares that the teaching strategies such as simulation labs used by the faculty currently are effective and appropriate in the later semesters when students are most ready for self-directed learning. The data found that the early semester students who were younger were not ready for self-directed learning; therefore, they may need traditional direct teacher-centered teaching. This can be due to the issues of anxiety levels discussed in Smedley's (2007) study. However, the older students which are shown to be ready for SDL in the earlier semester may do better if SDL teaching strategies were used in some cases. With future revisions of the curricula the faculty can incorporate the most beneficial teaching strategies into the earlier semester

courses to assist needs to be taken into careful consideration. Armstrong, Johnston, Bridges, & Gessner (2003), concluded the promotion of further self-directed learning activities, since nurses are to be lifelong learners. This is especially important for baccalaureate and masters prepared nurses as many take on further leadership roles within their facilities after graduation (pg. 24). Lifelong learning can be achieved with early preparation of self-directed learning. The readiness of BSN students can only be challenged by strong, well-established foundations of nursing programs.

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Appendix I

SELF-DIRECTED LEARNING READINESS SCALE (for Nurses)
(Fisher, Tague, King, 2000)

Table 1. Significant Results (in Order of Significance)

Question	Prin. Comp.	Factor	Higher Mean
56	2	Age	Older
54	2	Age	Younger
3	1	Gender	Female
34	2	Age	Older
24	2	Age	Older
65	1	Gender	Male
9	1	Semester	Later
24	2	Degree	Yes
91	3	Semester	Earlier
77	3	Age	Older
29	2	Semester	Later

Questions with significant difference (In order of significance)

56. I have a need to learn
54. I do not enjoy studying
3. I prioritise my work
34. When presented with a problem I cannot resolve,
    I will ask for assistance
24. I critically evaluate new ideas
65. I am disorganized
9. I set strict time frames
91. I am not in control of my life
77. I evaluate my own performance
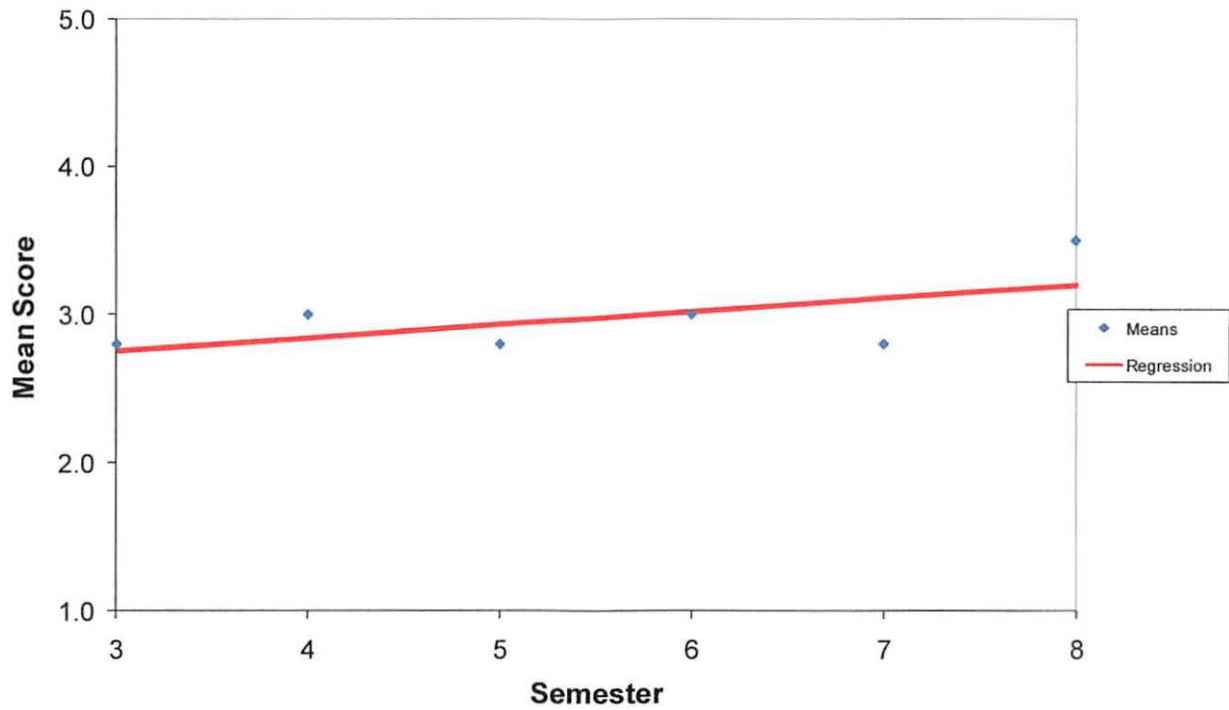29. I learn from my mistakes

Appendix II

Figure 1. Question 56: Age
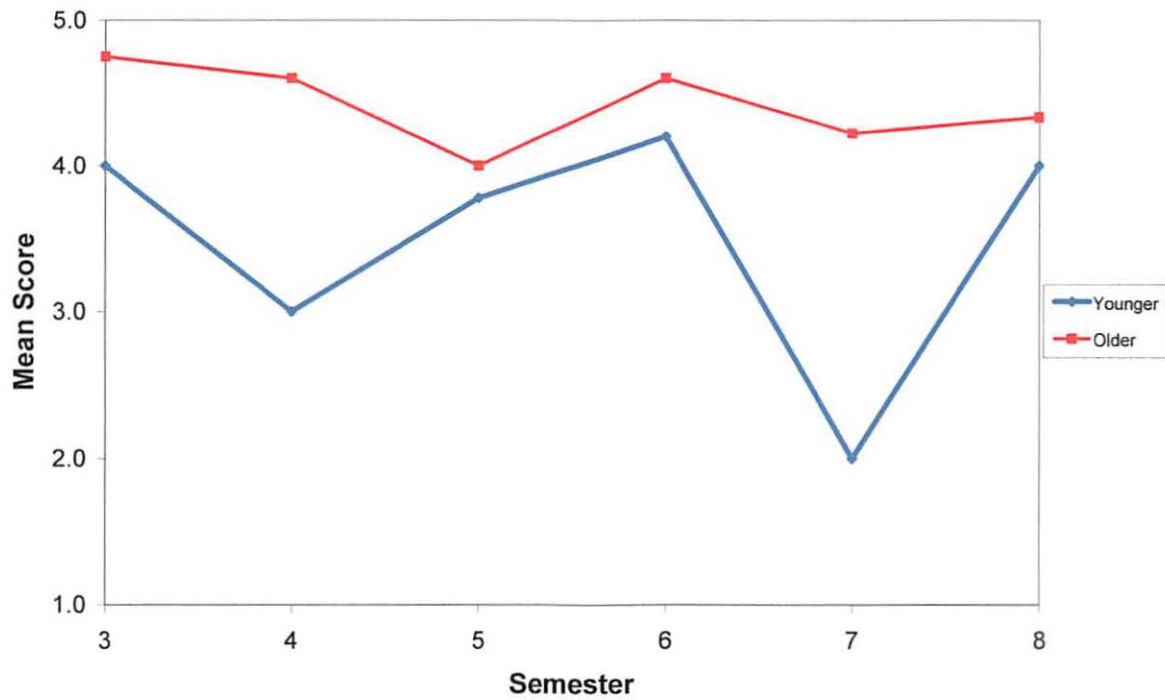
*** The dip for semester 7 is the variability of demographics sample size. Out of the ten students for semester 7, 9 were considered older.

Appendix III

Figure 2. Question 9: Semester

**Increase in trend- Linear Regression Model, showing progression of SDL readiness