Original Article

Learning Approaches of Nursing Students of Rizal Technological University Using the revised Two-Factor Study Questionnaire

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ABSTRACT

Research has shown that academic success in student is related to how students approach the learning of educational materials. A student who aimed at making the material meaningful by associating it with previous experience and learning is generally associated with higher quality outcomes. However, approaches to learning had not been explored in other areas of the education system especially if it correlates with the success or failure of a student taking the licensure examination. This study aimed to determine the learning approaches of the nursing students of Rizal Technological University whether they adapt a surface or deep approach to learning. It also explored the difference of the learning approaches among the year level; the difference between the deep and surface scores of the students and the relationship of the senior students' approach to learning, in respect to the passing or failing in the 2009 nursing licensure exam. The Revised Two Factor Study Process Questionnaire (R-SPQ-2F; Biggs, Kember & Leung, 2001) was utilized to measure surface and deep approach of 92 students from the College of Nursing with 23 students representing their year level. Results showed that the senior students' ranks first in the deep approach while sophomore students' ranks first in the surface approach. The students were more inclined to a deep approach in learning as they reach their senior year and similarly, having a deep approach to learning is not an assurance that a student will make to the licensure exam. Implications for learning and teaching were also discussed.
Keywords: deep approach, surface approach, approaches to learning, RSPQ-2F.

INTRODUCTİON

Understanding how students learn is very important especially in the Higher Education. The concept of approach to learning is a "key concept in teaching and learning" according to Ramsden (1992). Knowing the learning approach of the nursing students would help the students, teachers and administrators identify areas or strategy that is not facilitative of learning and gear the students to adopt a more meaningful learning.

The learning approach can be described as what students usually do while learning and studying (Entwistle & McCue, 2004). The deep approach can be characterized by trying to understand the authors' intention and seeking self-fulfillment from the material and the use of a more meaningful strategy like relating facts to conclusion and integrating formal knowledge with personal experience. The surface approach involves reproducing material being studies, fulfilling course requirement and avoiding failure with the least personal effort and involvement it also includes memorizing facts and accurately reproducing them.

With this in mind, the researchers would like to determine the nursing students' approach to learning and for the senior students to explore if their learning approach is related to the result of their licensure examination.

Statement of the Problem

The study aimed to determine the approach to learning of first year to fourth year nursing students of Rizal Technological University using the Revised Two- Factor Study Process Questionnaire (R-SPQ-2F). Specifically, this study sought answer to the following problems.

1. What is the students' approach to learning according to the following scales by year level?

The study approaches and subscales are:

1.   Deep Approach

Deep Motive
Deep Strategy
2.   Surface Approach
Surface Motive
Surface Strategy
2. What is the difference between the study approaches and its subscales and the students' year level based on the following?
A.   Deep Approach
B.   Deep Strategy
C.   Deep Motive
D.   Surface Approach
E.   Surface Strategy
F.   Surface Motive
3. What is the difference between the deep and surface scale scores of the nursing students on the following scales?
          3.1 Deep Motive vs. Surface Motive
          3.2 Deep Strategy vs. Surface Strategy
          3.3 Deep Approach vs. Surface Approach

4. What is the relationship between the licensure exam results and the deep and surface subscales scores?
Theoretical Framework
This study is premised on the theory that students adopting the use of a deep learning approach is, in general, associated with higher quality learning outcomes and a surface approach with lower quality learning outcomes. (Gijbels, D., Van de Watering, G., Dochy, F., Van de Bossche, 2005)
There are two main influences in the student's development of a certain learning approach, personal and the teaching context. On the personal side, some factors in the students' background or personality seem to be associated with a Surface Approach (Biggs, 1989) and others with a Deep Approach. (Biggs, 1987) On the teaching side, time pressures, examination stress, and using test items that emphasize low level cognitive outcomes encourage a surface approach. On the other hand, learner activity, student-student interaction, and interactive teaching, particularly problem-based teaching encourages a deep approach. (Biggs and Telfer, 1987).
Using the R-SPQ-2F, the researchers would like to explore if the nursing students are geared toward a deep or surface approach or both.
The interaction between a student and the course structure, curriculum content and the methods of teaching and assessment shape whether a student will gravitate toward a surface or deep approach. (Peng and Bettens, 2002)

METHODOLOGY
Instrument
The researcher used the Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) developed by Biggs and Kember (2001). It consisted of twenty items using a rating scale of one to five; ten items measured deep learning and ten items measured surface learning. (Biggs and Kember, 2001 as cited by Knowles and Kirkman). Within each of these two factors it is possible to distinguish strategy and motive subscales. Each of the subscales consisted of five items. The final version of the questionnaire therefore has two main scales, Deep Approach (DA) and Surface Approach, (SA) with four subscales, Deep Motive (DM), Deep Strategy (DS), Surface Motive (SM), and Surface Strategy (SS). (Kember, Charlesworth, Davies, McKay, Stott, 2001).
The range on each category of approach to learning is from 10 to 50, ten questions with five being the high score on each question. Within each approach, there are sub-categories of Motive and Strategy, each with five questions. The range in scores for these is from 5 to 25.
According to Slater (2003), the study process questionnaire is a valid and useful tool for nurse teachers to gain knowledge about student nurses' approaches to learning. The Cronbach's alpha for internal consistency of the twenty items was 0.78. The internal consistency of the two scales Surface Approach and Deep Approach each having ten items was 0.77 and 0.66 respectively.
Respondents and Study Context
The sampling used for this study was convenience sampling. Nursing students who were present and available on the first day of the second semester of the school year 2008-2009 were administered with

the R-SPQ-2F. From the total population of 503 students enrolled, 92 students from first year to fourth year were included in the study. There were 23 students per year level who participated in the study.

RESULTS AND DISCUSSIONS

Table 1- Mean Scores and Standard Deviation of First Year to Fourth Year Students on Deep and Surface Approach and its Subscale

Year Level	Deep Approach (DA)		Deep Motive (DM)		Deep Strategy (DS)		Surface Approach (SA)		Surface Motive (SM)		Surface Strategy (SS)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Freshmen	34.13	6.0	17.91	3.6	16.22	3.2	26.48	5.7	11.78	3.2	14.70	3.8
Sophomores	34.48	7.2	18.52	4.2	15.96	3.6	27.13	5.5	12.48	2.7	14.65	3.7
Juniors	33.30	5.9	17.35	3.4	15.96	3.1	27.09	5.5	12.13	4.0	14.96	3.1
Seniors	34.70	4.9	17.78	2.9	16.91	2.9	25.35	5.5	10.87	2.9	14.48	3.5

Table 1 shows the mean scores for deep and surface approach and their subscales. The deep approach scores for freshmen, sophomores, juniors and seniors is higher than the surface approach for freshmen to seniors respectively. This implies that the nursing students have a deep approach to learning and is interested in the topic discussed in class. This could be attributed to the student's desire to enroll in nursing because they are internally motivated to learn and be competent in their field.

Table 2- Mean differences between year levels on approaches to study

Scale	Source of Variation	Sum of Squares	df	Mean Square	F	F crit	Interpretation
Deep Approach	Between Groups (Year Level)	25.78	3	8.594	0.23	2.71	not significant
	Within Groups	3256.09	88	37.001			
	Total	3281.87	91				
Deep Strategy	Between Groups (Year Level)	14.09	3	4.696	0.46	2.71	not significant
	Within Groups	905.65	88	10.292			
	Total	919.74	91				
Deep Motive	Between Groups (Year Level)	16.22	3	5.406	0.42	2.71	not significant
	Within Groups	1130.70	88	12.849			
	Total	1146.91	91				
Surface Approach	Between Groups (Year Level)	47.60	3	15.866	0.51	2.71	not significant
	Within Groups	2715.39	88	30.857			
	Total	2762.99	91				
Surface Strategy	Between Groups (Year Level)	2.70	3	0.899	0.073	2.71	not significant
	Within Groups	1084.78	88	12.327			
	Total	1087.48	91				
Surface Motive	Between Groups (Year Level)	32.99	3	10.996	1.04	2.71	not significant
	Within Groups	928.87	88	10.555			
	Total	961.86	91				

Table 2 shows the ANOVA result for the comparison of the approach and its subscales per year level. The null hypothesis is accepted at 0.05 significance level which states that "Neither one of the four groups in deep and surface approach scores and their subscales are equal". This implies that year level does not affect the deep and surface approach scores and their subscales. The homogeneity of the scores can be attributed to the sampling technique used which is the convenience sampling.

Table 3- Differences between deep and surface approach and their subscales for all year level

Scales	Computed Value	Df	Tabular Value	Interpretation
Deep Vs Surface Motives				
Freshmen	6.16	22	2.07	significant
Sophomores	5.27	22	2.07	significant
Juniors	4.33	22	2.07	significant
Seniors	8.46	22	2.07	significant
Deep Vs Surface Strategies				
Freshmen	1.69	22	2.07	not significant
Sophomores	1.86	22	2.07	not significant
Juniors	1.91	22	2.07	not significant
Seniors	3.10	22	2.07	Significant
Deep Vs Surface Approach				
Freshmen	5.75	22	2.07	Significant
Sophomores	4.77	22	2.07	Significant
Juniors	4.50	22	2.07	Significant
Seniors	7.63	22	2.07	Significant

p>0.05

Table 3 shows that there is a significant difference between the Deep Motive vs. Surface Motive of freshmen to senior students. This implies that the students work hard because they find their topic interesting and gives them a feeling of deep personal satisfaction. This can be attributed with the students' personal desire to pursue nursing as their career because of the internal motivation or satisfaction they get from studying the course and also an external motivation to succeed in this career because this course also offers great amount of money abroad.

In the Deep vs. Surface Strategies, the freshmen to junior students' alternatively uses the deep and surface strategy in learning, they may try to study topics until they understand them but they may or only study topics which they think will be in the exam.

With reference to the deep motive vs. surface motive scores of freshmen to junior students, results suggest that the nursing students are deeply motivated to learn but employ both the deep and surface strategy in their approach to learning. According to Kember (1996) as cited by Fourie (2003), "Memorization is ordinarily associated with surface learning as a strategy to recall information for assessment purposes that may play a part in both approaches". The role of the teacher is very critical in this area.

The senior student's adopted a deep strategy in learning. This implies that the senior students are inclined to spend extra time trying to obtain information about new topics and they do extra work like looking at the suggested readings so they can understand the topic better. The senior students work hard, do extra work and test themselves until they completely understand the topic.

Overall, the nursing students are deeply motivated to learn, and relate the different aspects of the information with one another, but they also relate them to their previous learning and their personal experiences. (Tang, 1994)

According to Laird, Shoup & Kuh, (2005) "…on average seniors 'frequently' (often or very often) engage in deep approaches to learning".

Table 4. Correlation between the licensure exam result and subscale scores

Subscale	Computed Value	Interpretation
Deep Motive	-0.262	Weak
Deep Strategy	-0.062	Weak
Surface Motive	-0.14	Weak
Surface Strategy	-0.26	Weak

Table 4 shows that the point biserial results of -0.262 for deep motive, -0.062 for deep strategy, -0.14 for surface motive and -0.26 for surface strategy have a weak negative correlation coefficient. This results shows a low correlation for all subscales, this suggests that the passing or failing of the students in the licensure exam has a weak relationship with their learning approach of deep motive, deep strategy, surface motive or surface strategy.

CONCLUSION

The freshmen to senior nursing students' learning approach, strategy and motive were dominantly deep approach. They show an intrinsic interest in the topic and achieve satisfaction through deep understanding of the topic.

The sophomore students got the highest surface approach and high surface motive in comparison with the other year level. The junior students got the highest surface strategy score and the lowest mean in deep motive.

The result of the comparison per year level of the deep and surface approaches and their subscales shows no significance which could be attributed to the sampling technique used in the study which is convenience sampling. The sample is also homogenous.

The nursing students generally are adapting a deep motive while there is no difference in the scores of the freshmen to junior in the deep vs. surface strategy. The freshmen to junior students' both uses the deep and surface strategy like memorization or they may spend extra time trying to obtain information on a topic but only those given in the class. This could be because of the assessment technique that emphasizes a quantitative based learning or the method of teaching applied by the teacher.

The senior students utilize the deep strategy in learning. A weak negative correlation exists between the licensure exam results and the subscales scores of the learning approach.

RECOMMENDATION

On the basis of the foregoing findings of the study, it is highly recommended that the deep approach to learning should be promoted by teachers and since the nursing students' approach is the deep one, it should be maintained, monitored and established.

It is recommended that a randomized sampling technique be used to be able to generalize the result to the population.

A different method of administering the R-SPQ-2F is by asking students to rate the learning approach for a particular subject to specifically measure that area or method of instruction which highly influences the learning approach of the students.

The method of teaching should promote a deep approach to learning by utilizing experience-based learning or problem-solving learning and less on memorization or quantitative learning.

The R-SPQ-2F can be administered on the first and last day of every semester to gauge the students' learning approach and see if they tend towards a deep or surface approach.

The R-SPQ-2F can be administered to all student of RTU to establish norms among the colleges.

A Filipino version of the test can be made to fit low-achievement tertiary students.

Variables affecting the passing or failing the licensure examination can be explored for further researches like test anxiety, enrolling in a review center, sleep deprivation, memorization, etc.

Results of the study can be utilized by the guidance counselor to identify areas of students that need improvement and provide programs to encourage students to apply a deep approach to learning.

The method of teaching can also be utilized as variable and correlate it with the result of the R-SPQ-2F.

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