The Learning Style, Class Participation, Learning Motivation, and Learning Strategies of Health College Students

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Abstract

The present study was conducted to classify learning styles, and to find out the relationship among class participation, learning motivation, and learning strategies of university students in public health. Data collection was carried out on 272 university students in three universities. The learning styles of the subjects were 90 divergers (33.1%) followed by 73 assimilators (26.8%), 55 convergers (20.2%), and 54 accommodators (19.9%). Subjects' class participation showed positive correlation with learning motivation (r=.53, p<.001) and learning strategies (r=.52, p<.001), and learning motivation and learning strategies showed a positive correlation (r=.63, p<.001). Instructors should prepare strategies such as support through communication, management of the curriculum, and development of learning motivation and strategy programs.

Keywords: Learning, Strategies, Motivation, Participation, Public health students

1. Introduction

For the university education in contemporary society where knowledge and information transfer is fast, fostering self-learning ability rather than simply delivering knowledge will be helpful for improving job performance and self-development [1]. Especially for university students in nursing and health science, because they have to constantly learn new information in a situation where the newest medical knowledge and technology are rapidly developing, they should pay attention to effective learning methods.

The learning style has been used as an indicator showing how the learner recognizes new information and reacts to the learning environment [2]. The empirical learning model of Kolb [3] interprets the reality according to the four learning modes of Concrete experience (CE), Reflective observation (RO), Abstractive conceptualization (AC), and Active experimentation (AE), and most people acquire all four learning modes by the adulthood and use them in clockwise direction under various situations. The learning styles are classified into diverger, assimilator, converger, and accommodator.

The level of class participation becomes the factor that affects the learning outcome, and it requires solving problems through self-regulation, especially for university students, and a strategic effort to achieve it. Therefore, it is necessary to understand learner's learning type

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and the level of learning motivation and learning strategies for students' active participation and development of the area of learning [4].

Meanwhile, the instructor needs to find out the learning style of the learner because the instructor has to induce learner's interest in learning by stimulating learner's interest and curiosity by presenting the learner with various learning methods and conditions. Accordingly, the present study was conducted to classify learning styles, and to find out the relationship among class participation, learning motivation, and learning strategies of university students in public health.

2. Materials and methods

2.1. Study design

The present study is a descriptive survey study conducted to classify learning styles, and to find out the relationship among class participation, learning motivation, and learning strategies of university students in public health.

2.2. Data collection

The participants were 272 students majoring in nursing and healthcare management recruited from three universities in G Metropolitan City. The data collection period was from October 1 to December 31, 2015.

2.3. Measures

2.3.1. Learning style

The measuring instrument for learning style was the Learning Style Inventory by Kolb [5]. The instrument is composed of 12 fill-in-the-blank sentences that evaluate the learning method and the coping method with situations and thoughts encountered in daily living on adult learners who are 18 years or older.

2.3.2. Class participation

To measure the level of active and voluntary participation in class related activities of learners from the behavioral, emotional and cognitive perspective, a sixteen-item measuring instrument developed by Cha et al [6] was used.

2.3.3. Learning motivation and learning strategies

To measure the learning motivation and learning strategies of a cyber college students, a total of 81 items of A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich, Smith, Garcia, & Mckeachie [7] were used.

2.4. Data analysis

Data analysis was conducted with SPSS for Windows, version 18.0 (IBM Corporation, Armonk, NY, USA). First, the actual numbers and percentages were obtained for the learning style of the subjects. Second, averages and standard deviations were obtained for the subjects' class participation, learning motivation, and learning strategies. Third, correlations among the variables by learning style were analyzed.

3. Results

3.1. General characteristics

From general characteristics of the subjects, the average age was 20.50 ± 1.47 years. Of the sample, 21 (22.1%) were freshmen, 144 (52.9%) were sophomores while 88 (32.4) were juniors, and 19 (7.0%) were seniors. 202 (74.3%) were female while 70 (25.7%) were male. Results showed that 164 (60.3%) students was department of health management, and 108 (39.7%) students was department of Nursing.

3.2. Learning style

The learning styles of the subjects are shown in [Figure 1]. The learning styles of the entire subjects were in the order of 90 divergers (33.1%), 73 assimilators (26.8%), 55 convergers (20.2%), and 54 accommodators (19.9%), and divergers were prevalent in freshmen (42.9%), sophomores (36.8%), and juniors (28.4%) while assimilators were prevalent in seniors (36.8%).
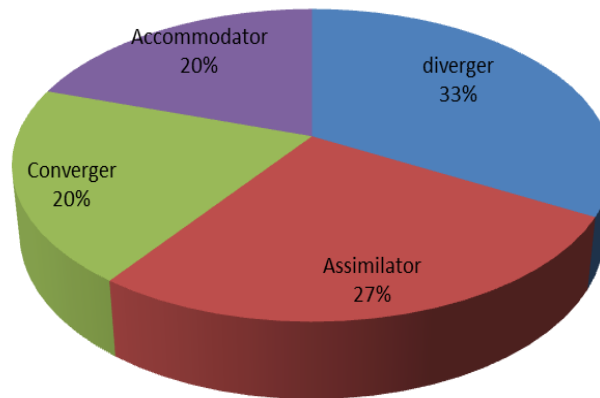

Figure 1. Learning style of subjects

3.3. Class participation, learning motivation, and learning strategies of the subjects

The subjects' level of participation was 2.96 ± 0.46, and the average scores for subareas were class preparation 2.40 ± 0.74, class activities 3.68 ± 0.73, expression 2.77 ± 0.84, class extension 2.40 ± 0.65, and class enthusiasm 3.52 ± 0.69. The subjects' average learning motivation score was 3.06 ± 0.50 out of five points, and the average points for subareas were value 2.93 ± 0.49, expectation 3.10 ± 0.52, and emotion 3.13 ± 0.60. The subjects' average learning strategies score was 3.33 ± 0.38 out of five points, and the average points for subareas were cognitive strategy 3.38 ± 0.40, metacognitive strategy 3.24 ± 0.49, resource management 3.37 ± 0.35.

3.4. The relationship among learning style, class participation, learning motivation, and learning strategies

The learning style showed statistically nonsignificant correlations with class participation, learning motivation, and learning strategies, and the class participation showed statistically significant positive correlations with learning motivation ($r=.53$, $p<.001$) and learning strategies ($r=.52$, $p<.001$). In addition, learning motivation and learning strategies showed a signifi-cant positive correlation ($r=.63$, $p<.001$).

4. Discussions

The present study was conducted to classify the learning styles, and to find out the relationship among class participation, learning motivation, and learning strategies of the university students in public health. Among the learning styles of the subjects, divergers were most prevalent with 90 students (33.1%) followed by 73 assimilators (26.8%), 55 convergers (20.2%), and 54 accommodators (19.9%). In the study of Suliman [8] on university nursing students, divergers were most prevalent with 39.8%, which is similar to the findings of the present study. In addition, in the studies of Ha [9] on university nursing students and Kim & Lim [10] on dental hygienics students, assimilators were the most prevalent with 33.8% and 38.2%, respectively, and in An & Kim's study [11] on clinical nurses it was found that the highest prevalence was accommodator (35.9%), followed by diverger (30.4%), converger (18.2%), and assimilator (15.5%), which shows higher proportion of diverger and assimila-tor similar to the findings of the present study. Divergers are sensitive to the emotion of others, listening carefully with open mind, and they are the type of people who prefer to learn through observa-tions with various points of view and they usually work in service industry dealing with people. Assimilators theorize well with various information, and they are the type of people who demonstrate their ability in giving explanations and usually work as researchers and professors [2]. Therefore, the reason that the subjects' learning styles were found to be divergers and assimilators may be due to the importance of understanding other person's problems, utilizing resources well, and having good inter-personal skills.

The average score of class participation of the subjects was 2.96±0.46 out of five points, which is above the mid-level, and specifically, the average score of class activities subarea was the highest (3.68±0.73) and the average score of class preparation was the lowest (2.40±0.74). It means that the class participation is not just participating during the class only but participation should also be made before and after the class. Accordingly, as a measure to increase students' class participation and its effect, interest in class should be induced by having them read what is going to be covered before the class.

The class participation showed significant positive correlations with learning motivation (r=.53, p<.001) and learning strategies (r=.52, p<.001). In addition, learning motivation and learning strategies showed a significant positive correlation (r=.63, p<.001). Therefore, because the level of class participation and effective learning strategies positively affect the learning achievement, the instructor should prepare strategies such as support through communication, management of the curriculum, and development of learning motivation and strategy programs so that students' self-efficacy and achievement motivation are encouraged and they can utilize active learning strategies.

5. Suggestions

The instructor should prepare strategies such as support through communication, management of the curriculum, and development of learning motivation and strategy programs so that the self-efficacy and achievement motivation of students are encouraged and they can utilize active learning strategies in the future. Furthermore, future studies will be needed to determine the relationship be-tween the variables used in the present study and learning achievement.

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