

## **An Exploration of Learning Style Preferences Based on Gender of Indonesian Nursing Academy Students**

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**Abstract:** *This article deals with the learning style preferences based on gender of Indonesian nursing academy students. This research is involving 50 students. The research instrument includes Felder and Silverman's Index of Learning Style (ILS) Questionnaire which reveals the preferred learning style of learners. The result reveals that males prefer to have visual/ verbal learning style than another learning style and females prefer to have activist/ reflector learning style than another learning style. The finding provides information about learning style preferences based on gender so that teacher would be able to provide good proportion of teaching/ learning process. Therefore, learning styles help individual understand the materials better.*

**Keywords:** *Learning style, Nursing academy, Gender*

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Date of Submission: 01-09-2018

Date of acceptance: 17-09-2018

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### **I. Introduction**

Learning styles have become special issues in language learning and teaching for centuries. They have been analyzed by teachers, experts and linguists. Learning style refers to the view that different people learn information in different ways (Pashler, Daniel, Rohrer, Bjork, 2009: p. 104). Learning styles define people's characteristics and their ways of processing information, feeling, and behaving toward learning situations (Yasmin, Akbar, China, Yan, 2016). Within the classroom, as educators, we notice some individuals learn in many different ways due to their interests and styles. They adopt certain ways to obtain and acquire the knowledge. The way they absorb the materials gives impact to the outcome of learning process. It also influences the process in gaining the information. Felder and Solomon (1991) stated that everybody takes in the information and processes that information in different ways. They implement it by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing steadily and in fits and start and so on. Learning style also refers to the way an individual receives and understands the information. Every individual brings different ways of using learning styles. Some learners do it by discussing, another group of learners prefers to do explaining while speaking, some learners absorb the information by acting, and meanwhile another learner uses visualizing.

In addition to create good outcomes, this article views that learning styles plays important roles during the learning process. First, learning styles enable learners to understand the materials. Second, the difference of characters within the classroom should be understood by the teachers. Last, teachers should be able to conduct materials which are relevant to various students' learning styles during the learning process. This article, therefore, finds out the learning styles preferences based on gender of Indonesian nursing academy using a learning style questionnaire designed by Felder and Silverman called Index of Learning Style (ILS) Questionnaire. The result of the study uncovers the learning style preferences of nursing academy students so that educators can provide materials which are suitable with learners' learning styles to boost their academic performance.

Every individual is likely to absorb the content of the materials in several different ways. Some individuals implement it by discussing, explaining, sensing and visualizing. Teaching approaches that address a variety of learning style are more considered to be effective than those that emphasize fewer or perhaps only one style (Rosati, p. 2932). The researcher then, analyzes the learning style preferences based on gender; male and female. The classifications of learning style according to Felder-Solomon (1991) are as follows: active-reflective learners tend to retain and understand information best by doing something active such as discussion and explanation to others. While, reflective learners tend to think about it quietly and need more time to analyze the information, and sensing-intuitive learners seem to enjoy facts and focus on sensing the information such as video, audio and touch. Intuitive learners often prefer to discover possibilities and relationship; visual-verbal learners remember best what they see like pictures, diagrams, flow charts, films and demonstrations. Verbal learners get more out of words in written and spoken explanation and sequential-global learners tend to gain

understanding in linear steps, with each step following logically from previous ones. Global learners tend to learn in large jumps, absorbing material almost randomly without seeing the connection and then suddenly getting it.

Many studies were conducted to find learning style preferences of the learners. The researchers get the results by assuming that male and female have the same attention on learning styles. Heejeon Suh (2016: p. 305) found out active learners showed high preference in four learning strategies such as knowledge activation, elaboration, divergent thinking and knowledge sharing than reflective learners. The study involves 196 university students who took a cyber lecture class of management in C University in Gyeonggi-do, Korea. Similarly, Tee, Junos, Kuppusamy, Yee, Mohamad, Othman, Che Ruz, Hanapi (2015: p. 71) found out learning styles among the second years students for Business Management and Hospitality programs in descending orders are visual (90%), active (71.1%), sequential (71.7%) and sensing (55%). Meanwhile, Vaseghi, Barjesteh, Shakib (2013: p. 83) found out majority of the students preferred kinesthetic and tactile as their strong major learning style. The study covers 75 students of Marefat high school in Kuala Lumpur, Malaysia.

Considering that every learner has preference in learning style, the educators need to make sure that the learning style gives positive impact in learning process. In the previous studies, all the researchers conducted the study without considering the gender. Those studies generally placed at universities in addition to find out the learner preferences in learning styles. Based on those facts, conducting a research in nursing academy is rarely implemented by researchers. Learning style preferences based on gender remains to be explored, therefore this research is intended to investigate the students learning style preferences based on gender; male and female at nursing academy in Indonesia.

The purpose of this study is to explore the most preferred learning style based on the gender, male and female at Bunda Delima nursing academy, Bandar Lampung, Indonesia. The researcher hopes that the finding of this research will contribute positive impact to teachers and learners. Hopefully, this research will be beneficial and give contribution in: identifying the learning style preferences based on gender; male and female, identifying the learning style preferences in Indonesian nursing academy, sharing information to educators in providing appropriate learning activities to learners. This study is intended to find out the answer of following research questions: What is the most preferred learning style chosen by male students at Bunda Delima nursing academy, Bandar Lampung, Indonesia? and what is the most preferred learning style chosen by female students at Bunda Delima nursing academy, Bandar Lampung, Indonesia?

## **II. Method**

### **2.1 Research Design**

This research was quantitative research which used data taken from the Felder and Silverman's Index of Learning Style (ILS) Questionnaire which is based on four classifications of learning style; sensing-intuitive, visual-verbal, active-reflective and sequential-global. The samples were chosen purposely based on the English class proficiency for nursing. The Felder and Silverman's Index of Learning Style (ILS) Questionnaire was distributed to all learners in addition to find out their learning style preferences. The answers of the questionnaire were transferred into scoring sheet made by Felder and Silverman then calculated to find out the mean statistically based on male and female preferences.

### **2.2 Participants**

This research is largely placed at Bunda Delima nursing academy, Bandar Lampung Indonesia which conducts English as one of the subjects. The total of the respondents is 50 students (25 males and 25 females). They are between 19-21 years old and at fourth semester. They have already learned English since they were in the first semester and have an English class for 150 minutes for each session once a week.

### **2.3 Instrument**

Felder and Silverman's Index of Learning Style (ILS) Questionnaire which is based on four classifications of learning style; sensing-intuitive, visual-verbal, active-reflective and sequential-global is distributed to each students. This questionnaire is designed to find out what learners learning preferences are. It was originally designed by Felder and Silverman at North Carolina State University, USA. Before they answer the questionnaire, the researcher explains in detail about the aim of giving the questionnaire and step in answering the questionnaire. Felder and Silverman's Index of Learning Style (ILS) Questionnaire consist of 44 questions with options A or B as the answer. The learners are supposed to complete the questionnaire by choosing A or B to indicate their answers to every question. They may only choose one answer for each question and they must answer all questions. If option A or B seems to apply to them, they should choose the one that applied frequently. In answering Felder and Silverman's Index of Learning Style (ILS) Questionnaire, the students are asked to indicate their names and genders.

2.4 Data Analysis

The data obtained with questionnaire were calculated using learning style questionnaire scoring sheet made by Felder and Silverman. Every question has 1 point which should be placed on appropriate column. First, researcher should find every learner learning style preference by analyzing the answer of the questionnaire. Second, the researcher sums up all results from all learners' preferences and divide them based on gender.

III. Result and Discussion

Statistical results are obtained by analyzing Felder and Silverman's Index of Learning Style (ILS) Questionnaire which based on four classifications of learning style; sensing-intuitive, visual-verbal, active-reflective and sequential-global, using descriptive statistic, mean comparison and learning style questionnaire scoring sheet made by Felder and Silverman. After researcher shared the questionnaire, then researcher analyzed the result by using learning style scoring sheet to compare the mean and to get the result.

Table 1: Classification for each question

Learning Styles	Questions
Activist/ Reflector	1, 5, 9, 13, 17, 17, 21, 25, 29, 33, 37, 41.
Sensing/ Intuitive	2, 6, 10, 14, 18, 22, 26, 30, 34, 38, 42.
Visual/ Verbal	3, 7, 11, 15, 19, 23, 27, 31, 35, 39, 43.
Sequencial/ Global	4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44.

The questionnaire consists of 44 questions which have been calculated into specific question for each learning style as we can see on table 1. The score of the questionnaire can be found after we transfer the result into the scoring sheet. Researcher places one point in the appropriate space in the column for each question. If the student chooses A on question 1, so one point should be placed on column A of question 1 and if that student chooses B on question 2, so one point should be placed on column B of question 2. After the researcher transfers the entire questionnaire into the scoring sheet, researcher adds up the columns and writes the total indicated spaces. Felder and Silverman gave notes for the scoring sheet as follows: if the score scale is 1 - 3, it means that that learner has mild preference for one or the other dimension but that learner is essentially well balanced on every learning style, if the score scale is 5 - 7, it means that that learner has a moderate preference for one dimension of the scale and will learn easier in environment which favors that dimension, if the score scale is 9 - 11, it means that that learner has strong preference for one dimension of the scale. The learner has real difficulty in learning using another dimension,

Table 2: Males' Result of Scoring sheet and Mean

Learn. Style	Activist/ Reflector	Sensing/ Intuitive	Visual/ Verbal	Sequencial/ Global
Total	28/21	26/18	63/44	57/38
Mean	1.12/0.84	1.04/0.72	2.52/1.76	2.28/1.52
Male Pref.	First	Second	Third	Fourth
Result	Visual/Verbal	Sequencial/Global	Activist/Reflector	Sensing/Intuitive

Table 2 signifies that the total score of activist/ reflector learning style is 28 for A and 21 for B, total score of sensing/ intuitive learning style is 26 for A and 18 for B, total score of visual/ verbal learning style is 63 for A and 44 for B and total score of sequencial/ global learning style is 57 for A and 38 for B. Seen from the mean on table 2 for male preference on learning style, it is found that males tend to prefer visual/ verbal learning style than another learning style.

Table 3: Females' Result of Scoring sheet and Mean

Learn. Style	Activist/ Reflector	Sensing/ Intuitive	Visual/ Verbal	Sequencial/ Global
Total	70/49	65/ 42	52/39	22/30
Mean	2.80/1.96	2.60/1.68	2.08/1.56	0.88/1.20
Fem. Pref.	First	Second	Third	Fourth
Result	Activist/Reflector	Sensing/Intuitive	Visual/Verbal	Sequencial/Global

Table 3 signifies that the total score of activist/ reflector learning style is 70 for A and 49 for B, total score of sensing/ intuitive learning style is 65 for A and 42 for B, total score of visual/ verbal learning style is 62 for A and 39 for B and total score of sequencial/ global learning style is 22 for A and 30 for B. Seen from the

mean on table 2 for Female preference on learning style, it is found that females tend to prefer activist/ reflector learning style than another learning style.

**Table 4: Comparison of Mean**

Learning Style	Mean of Male	Mean of Female
Activist	1.12	2.80
Reflector	0.84	1.96
Sensing	1.04	2.60
Intuitive	0.72	1.68
Visual	2.52	2.08
Verbal	1.76	1.56
Sequencial	2.28	0.88
Global	1.52	1.20

Table 4 shows the mean of male and female after it has been calculated using scoring sheet made by Felder and Silverman. It identifies that males are proved to have visual/ verbal learning style than another learning style and females prefer to have activist/ reflector learning style than another learning style. Second preference of learning style for male heads to Sequencial/ Global and followed by Activist/ Reflector and Sensing/ Intuitive placed at the last preference. Regarding to female preferences, Sensing/ Intutive placed as the second preferences and followed by Visual/ Verbal and Sequencial/ Global gets the last preferences.

#### IV. Conclusion

The finding of this study revealed several conclusions which are very useful in the context of teaching and learning. Analyzing some information on learners' learning style can help educators identify what dimension should be provided by the educators within the classroom. Educators should introduce types of learning style to the learners so that they will understand what style they naturally have. Overall, the students should be encouraged to analyze their own learning styles preferences in this case to facilitate their learning. It is also recommended to share that gender influences the preferences in learning style.

The purpose of this study is to find out the learning style preferences based on gender at Indonesia nursing academy students. After finding the preferences, educator should provide materials which are suitable and relevant to their learning style especially based on gender. This research is also aimed to find out about the different possibility on learning style between male and female. Then, it is found that males prefer to have visual/ verbal learning style than another learning style and females prefer to have activist/ reflector learning style than another learning style. It is concluded that between male and female, they have different preferences in learning style especially in Indonesian nursing academy students. Finding the learning style preferences would help teachers in creating materials which are match with students in addition to provide good proportion in learning process and provide effective way for learners and efficient teaching steps for teachers.

#### Acknowledgements

Researcher would like to thank God because researcher is able to finish this study and all students of nursing academy who have participated in this research. Researcher is also grateful to all colleagues who shared feedback to make this research to be better. The last but not least, researcher would like to say thank all friends, wife and daughter.

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Delta Rahwanda “An Exploration of Learning Style Preferences Based on Gender of Indonesian Nursing Academy Students.” *IOSR Journal of Research & Method in Education (IOSR-JRME)* , vol. 8, no. 5, 2018, pp. 40-44.