Journal of Applied Linguistics (ALTICS)
https://www.e-journal.unper.ac.id/index.php/ALTICS

ISSN 2721-995X (Printed)
ISSN 2721-0316 (Online)
Vol 7, No 1 (2025), pp.24-33

Gender and Learning Styles: A Correlational Study of Preferences Among English Education Students in Universities

Ananda Sri Wahyuni, Hani, Nunung Nurjanah, Nastiar Maulida Utami, Lystiana Nurhayat Hakim
Universitas Perjuangan Tasikmalaya
anandasrwhyn@gmail.com

Abstract

Understanding learning style preferences is essential for educators and institutions in designing strategies for instruction and improving student learning results. The purpose of this study is to find out whether there is a relationship between gender and learning style preferences among English Education students using a quantitative approach and a correlational study design. A VARK model-based online questionnaire was used to collect data from 50 students recruited by snowball sampling. Descriptive analysis showed that there was highly dominant learning style among the students. The t-test showed no significant difference in male and female learning style preferences. Pearson correlation research showed no significant association between gender and learning style preference. However, a strong and significant correlation was found between the four learning styles. The questionnaire's reliability was high, with Cronbach's Alpha values ranging from 0.868 to 0.946. This study concludes that gender has no significant influence on the learning style preferences of English Education students, indicating the importance of using a variety of teaching approaches to accommodate students' various learning preferences.

Keywords: Learning style, VARK, correlation, gender, English education

INTRODUCTION

In education, understanding how students learn and process information is crucial for developing effective teaching strategies. Learning style theory, which analyzes individuals' preferences for receiving and processing information, has long been a topic of educational research (Jumrah et al, 2022).

Language teachers must constantly recognize, appreciate, and emphasize the diversity of the learners' differences in a class with a range of learning styles (Arifin and colleagues, 2015; Jumrah et al., 2022). In general, learning English requires a variety of skills. Language contains four skills, which are: Listening, Speaking, Reading, and Writing (LSRW) is divided into two categories: speaking and writing as productive abilities, and listening and reading as receptive skills

(Husain, 2015; Nurhaliza and Valentina, 2022).Understanding students' learning styles is critical to helping educators select suitable methodology, including teaching strategies (Spencer-Waterman, 2014; Della and Faurina, 2023), enabling effective knowledge transmission (Cardino & Ortega-Dela Cruz, 2020; Della and Faurina, 2023). It enables personalized instruction that addresses individual requirements, resulting in better learning results and student engagement (Almasri, 2022; Della and Faurina,
2023).

Learning style refers to how quickly and effectively an individual learns. Every learner learns in a different way. They have their own method of gathering information from the outside. Some students learn best by looking, some by hearing and listening, and yet others by feeling and moving (Faridah, 2014; Bustiyanti; 2017). Some students may be unaware with their learning method or the proper terminology for their learning strategy. Some students may have diverse backgrounds, courses, genders, ages, experiences, and interests. Individual variances in cognitive, sensory, and emotional processing can influence how students approach learning (Grand Canyon University, 2020; Natasha et al., 2024).

Neil Fleming's 'VARK' questionnaire, introduced in 1998, is a useful tool for identifying students' learning styles (Murphy et al., 2004; Janno et al., 2015). The abbreviation VARK refers to the four sensory modalities used to perceive information. The letters V, A, R, and K represent visual, auditory, read/write, and kinesthetic preferences, respectively. Visual learners prefer to learn through flow charts and images. Aural learners may enjoy hearing others and themselves speak. Kinesthetic learners learn best through multi-sensory experiences. Visual learners like diagrams and symbolic devices like graphs, flow charts, hierarchies, models, and arrows to visualize printed material. Aural learners prefer to listen instead of taking notes. Read/Write students prefer written words and text. Kinesthetic learners learn through hands-on activities and practice (Fleming, 2010; Janno et al., 2015).

Gender, both male and female, can impact learning method choices. The gender difference influences learning strategies. Gender is an unavoidable fact, and variations are represented in a variety of social settings. When the learning methods preferences of male and female students were compared, it was observed that female students favored learning methods other than those of male students (Alkooheji & Al-Hattami, 2018; Natasha et al., 2024).

However, gender is strongly connected with preferred learning modalities, particularly sensory learning methods. However, some pupils prefer only one aspect of learning methods,

whereas others struggle to employ multiple ones. Students are placed into two categories: multimodal and single approaches. Students in the multimodal methods category studied using multiple methods, whereas students in the single methods category only used one. He also grouped children into four learning modes: visual, kinesthetic, auditory, and read/write (Hamidon, 2015; Natasha et al, 2024). Male students selected a multimodal combination learning technique, but female students preferred unimodal learning. Female students preferred visual, auditory, read-write, or kinesthetic information presentation, while male students did not prefer read-write as a learning method. This could be attributed to males' carefree nature, while females are more hardworking and conscientious (Barman et al., 2014; Natasha et al., 2024).

Several research have been conducted on student learning styles. The research findings presented in Chapter IV on the language learning strategies of first grade students at SMP Negeri 3 Bontomarannu are based on Jumrah et al's (2022) findings. VARK model students' learning styles include visual, auditory, reading/writing, and kinesthetic, with 11 students (42.30 percent) utilizing a visual learning style. The researcher discovered that visual learning was the most prevalent language learning approach, adopted by 11 students (42.30 percent of the total). The language learning approaches that students employ have an impact on their performance in the first grade at SMP Negeri 3 Bontomarannu. Students' achievements are influenced by their learning patterns. Their results revealed that the majority of the youngsters received good scores, with a few exceptions.

Regarding the research undertaken by Nurhaliza & Valentina (2022), the results demonstrated that students improved after learning with flashcard media. It was discovered that students' average pre-test score was 34.9, post-test cycle I was 54.2, and post-test cycle II was 72.5. This demonstrates that students' vocabulary knowledge has improved as a result of employing flashcards material based on their learning style. Furthermore, it is possible to conclude that flashcards tailored to VARK students' learning styles have a favorable impact on the usage of learning media at Teluk Keramat Junior High School to promote vocabulary acquisition.

Educators can create instructional approaches that cater to diverse preferences by identifying the dominant learning methods within a student group, resulting in a more inclusive and engaging learning environment. This study contributes to the ongoing discussion on personalized education by seeking to bridge the gap between teaching approaches and individual learning

methods, thereby improving educational outcomes for students. The VARK approach divides students into four key learning methods: visual, audio, reading/writing, and kinesthetic. Understanding these preferences can have a significant impact on instructional design and educational outcomes. It highlights the relationship between learning methods and student engagement. When instructional approaches align with students' preferred learning mode, they are more likely to participate in the learning experience. Recognizing and responding to different learning techniques in the classroom leads to a more inclusive and productive learning environment.

Based on the results of the aforementioned studies, this research then tries to explore whether gender affects the reference learning style of English language education students. The research questions posed for this study are as follows: 1.) Is there a significant relationship between gender and learning style preferences among English Education students? and 2.) Do male and female students differ significantly in their preferences for Visual, Auditory, Read/Write, and Kinesthetic learning styles?

METHOD

The research uses quantitative approach and adopted correlational types of investigation. Quantitative research is an approach to testing objective theories that involves examining the connection between variables or comparing groups. These variables, in turn, can be measured, usually with instruments, allowing numbered data to be evaluated using statistical processes. (John W. Creswell, 2023). Correlational research gathers data from individuals on two or more variables and then attempts to determine if the variables are related (correlated). Correlation refers to the amount to which two variables vary directly (positive correlation) or inversely (negative correlation) (Donald Ary, 2010).

Participants consisted of English Education students from several universities. The sample size consisted of 50 students, with 35 females and 15 males. The sampling method used was snowball sampling, to ensure a diverse and representative sample. Participants were recruited through online networking.

Data was collected using a questionnaire distributed online. The questionnaire was designed to capture demographic information (including gender) and to assess participants' learning style

preferences using the VARK model, which includes Visual, Auditory, Read/Write, and Kinesthetic styles. The questionnaire consisted of 20 items, with 5 items for each learning style category.

The VARK questionnaire, a well-established tool for assessing learning styles, was used in this study. This questionnaire includes questions that help determine the participant's preferred mode of information processing and learning. Each item is designed to indicate a preference for one of the four learning styles: Visual, Auditory, Read/Write, and Kinesthetic. Reliability of the questionnaire was confirmed through Cronbach's Alpha, with values ranging from 0.868 to 0.946 for the different learning style categories, indicating strong internal consistency.

The data collected was analyzed using SPSS software. Descriptive statistics were calculated to summarize demographic data and the distribution of learning style preferences. T-test was used to compare the mean learning style preferences between genders. In addition, Pearson correlation analysis was conducted to assess the relationship between gender and learning style preferences.

FINDINGS AND DISCUSSION

Descriptive Statistics

Of the total 50 respondents, 15 are male (30%) and 35 are female (70%).

	N	Minimum	Maximum	Mean	Std. Deviation
Visual	50	11.00	24.00	18.32	4.27
Auditory	50	11.00	24.00	18.36	4.37
Read-Write	50	10.00	25.00	18.36	5.10
Kinesthetic	50	10.00	25.00	18.48	4.87
Valid N (listwise)	50				

Figure 1. Descriptive Statistics

The descriptive statistics for the 50 respondents' learning style preferences show a balanced distribution across multiple styles. The visual learning style has values ranging from 11 to 24, with an average (mean) score of 18.32 and a standard deviation of 4.27. This suggests that, on average, respondents had a moderate preference for visual learning, with significant variability in their scores. The auditory learning style has similar characteristics, with scores ranging from 11 to 24, an average of 18.36, and a standard deviation of 4.37. This indicates a somewhat higher

average preference for auditory learning over visual learning, however variability is equivalent. The read/write learning style has a broader range of scores, from 10 to 25, with an average score of 18.36 and the highest standard deviation of the types, 5.10. This suggests that individual preferences for read/write learning vary more, despite the fact that the average score is similar to auditory. Lastly, the kinesthetic learning style has a score range of 10 to 25, with the highest mean of 18.48 and the standard deviation of 4.87. This implies that, on average, respondents prefer kinesthetic learning above other approaches, while results vary greatly.

Overall, the data indicates that no single style of learning is overwhelmingly preferred, with average scores very comparable across all styles. However, the higher amount of variety in the read/write and kinesthetic styles suggests that individuals' choices within these categories are more varied. This balanced distribution implies that a variety of teaching approaches tailored to different learning styles would be advantageous in accommodating students' diverse preferences.

Reliability Analysis (Cronbach's Alpha)

Variable	Cronbach's Alpha	N of Items
Visual	0.875	5
Auditory	0.868	5
Read-Write	0.946	5
Kinesthetic	0.872	5

Figure 2. Cronbach's Alpha Value

The reliability analysis shows strong internal consistency for all four learning style scales. The Visual learning style has a Cronbach's Alpha of 0.875, Auditory is 0.868, Read-Write is 0.946, and Kinesthetic is 0.872, all with 5 items each. These high values indicate that the items reliably measure their respective constructs, confirming robust internal consistency across all scales.

Cronbach's Alpha	N of Items
0.972	20

Figure 3. Reliability Statistics

The reliability analysis reveals that all four learning style scores have high internal consistency. The Cronbach's Alpha for the Visual learning style is 0.875, Auditory is 0.868,

Read-Write is 0.946, and Kinesthetic is 0.872, all with five items. These high results show that the items accurately assess their respective constructs, confirming significant internal consistency across all scales.

Correlation Analysis

Correlation between Gender and Learning Style:

		Gender	Visual	Auditory	ReadWrite	Kinesthetic
Gender	Pearson Correlation	1	-.023	.024	.003	.065
	Sig. (2-tailed)		.876	.867	.981	.653
	N	50	50	50	50	50
Visual	Pearson Correlation	-.023	1	.883**	.953**	.893**
	Sig. (2-tailed)	.876		.000	.000	.000
	N	50	50	50	50	50
Auditory	Pearson Correlation	.024	.883**	1	.907**	.892**
	Sig. (2-tailed)	.867	.000		.000	.000
	N	50	50	50	50	50
ReadWrite	Pearson Correlation	.003	.953**	.907**	1	.918**
	Sig. (2-tailed)	.981	.000	.000		.000
	N	50	50	50	50	50
Kinesthetic	Pearson Correlation	.065	.893**	.892**	.918**	1
	Sig. (2-tailed)	.653	.000	.000	.000	
	N	50	50	50	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Figure 4. Correlations

The correlation study reveals that gender has no significant correlate with any of the learning style preferences, as indicated by the very low Pearson correlation coefficients and non- significant p-values (all > 0.05). However, there are strong and significant relationships among learning styles: visual, auditory, read-write, and kinesthetic. Pearson correlations range from 0.883 to 0.953 with p-values < 0.01. This indicates that students who score high in one learning style tend to score high in others.

T-Tests

Independet Samples T-Test:

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Total_Visual	0	15	18.4667	4.70360	1.21446
	1	35	18.2571	4.14688	.70095
Total_Auditory	0	15	18.2000	5.19890	1.34235
	1	35	18.4286	4.04595	.68389
Total_ReadWrite	0	15	18.3333	5.40723	1.39614
	1	35	18.3714	5.04734	.85316
Total_Kinesthetic	0	15	18.0000	5.07093	1.30931
	1	35	18.6857	4.84933	.81969

Figure 5. Group Statistics

Females (N=35) have a mean score of 18.2571 with a standard deviation of 4.14688 in the visual learning style, whereas males (N=15) have a mean score of 18.4667 with a standard deviation of 4.70360. This indicates that males have a slightly higher visual learning preference than females. Females have a mean auditory learning style score of 18.4286 with a standard deviation of 4.04595, whereas males have a mean score of 18.2000 with a standard deviation of 5.19890. This indicates that females favor auditory learning slightly more than males do. The read-write learning approach has almost similar mean scores: 18.3714 for females and 18.3333 for males. The standard deviations for males and females are 5.40723 and 5.04734, respectively, indicating a small gender difference. Females have a mean kinesthetic learning style score of 18.6857 with a standard deviation of 4.84933, whereas males have a mean score of 18.0000 with a standard deviation of 5.07093. This suggests that women like kinesthetic learning slightly more than men. Overall, there are few changes in learning style preferences between men and women, implying that gender has little influence on these preferences.

CONCLUSION

The study's findings indicate a balanced distribution of learning style preferences among the 50 respondents, with no single style being overwhelmingly preferred. Visual, auditory, read/write, and kinesthetic learning styles all have similar average scores, suggesting a moderate overall preference across these styles. The variability in scores is highest for read/write and

kinesthetic styles, indicating more diverse individual preferences in these areas.

The reliability analysis confirms strong internal consistency for all learning style scales, with Cronbach's Alpha values ranging from 0.868 to 0.946, ensuring that the measurement items are robust and reliable.

Correlation analysis shows no significant relationship between gender and learning style preferences, as indicated by very low Pearson correlation coefficients and non-significant p-values. However, there are strong and significant correlations among the learning styles themselves, indicating that students who prefer one learning style are likely to prefer others as well.

Gender differences in learning style preferences are minimal. Females show slightly higher preferences for visual, auditory, and kinesthetic learning styles, while males show a slightly higher preference for the read/write learning style. However, these differences are small and statistically insignificant, suggesting that gender has a minor effect on learning style preferences.

In summary, there is no significant relationship between gender and students preferred learning styles. The very low Pearson correlations and insignificant p-values (all >0.05) show that gender has no significant influence on learning style preferences. While there were substantial and significant relationships between the various learning styles, this shows that students' preferences are constant throughout various learning types. The small difference in mean scores between males and females for each learning style indicates that gender has minimal impact on learning style preferences.

REFERENCES

Bustiyanti, D. (2017). Investigating Types of Students' Learning Style.

Della Wilza Noviska, F. A. (2023). Students' Learning Styles (VARK) in Learning English. *Didaktika Jurnal Kependidikan,* Vol. 17, No. 1.

Donald Ary, L. C. (2010). *Introduction to Research in Education.* Canada: Wadsworth Cengage Learning.

Janno Sinaga, R. S. (2015). The VARK Learning Style of Nursing and Midwifery Students. *Jurnal INJEC,* Vol. 2, No. 2, 158-161.

John W. Creswell, J. D. (2023). *Research Design Qualitative, Quantitative and Mixed Methods Approaches.* California: SAGE Publications, Inc.

Jumrah, P. M. (2022). Students Learning Style by Using Neil Fleming's VARK Moden and
Inventory. *Journal of Language Testing and Assessment*, Vol. 2, pp. 79-86.

Natasha Dzulkalnine, N. A. (2024). The Preferences of Student's Learning Method Based on
Course, Gender, and Age: Visual, Audio, Reading & Kinesthetic (VARK). Vol. 16, No.
2, pp. 1-11.

Nurhaliza, V. D. (2022). Improving Eight Graders' Vocabulary Mastery Through Students' Learning Style VARK Based Flashcards. *Journal of English Language Teaching and Applied Linguistics*, Vol. 4, No. 1.