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Investigating The Preferences of The Learning Style in Third Language Learning at A Public University

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Abstract

Students learned in many different styles. Identifying the learning style of the student is crucial for enhancing the effectiveness of both learning and teaching processes. Kolb's learning styles model and experiential learning theory are today acknowledged by academics and teachers and others, as fundamental concepts towards human learning behavior, and towards helping students to learn. This quantitative research is done to explore the learning style of a third language. The instrument used a survey adapted from (Honey and Mumford, 2002; Kolb's Learning Style, 1984). The study was completed by 420 respondents who were learning third language courses in Arabic, Mandarin, and Japanese. A quantitative survey consisting of 4 sections with items on the demographic profile and 40 items via Google Form using 5-Likert scales were used as the instruments. The findings revealed that the most preferred learning style among learners is Reflector, followed by Theorist, Pragmatist, and Activist. However, the variances in preferences lack significance for Theorists and Pragmatists. The results also revealed that third language learners' learning style preferences are not related to gender, except for the Activist learning style, and are also not related to learners' fields of study. Hence, educators, facilitators, universities, and policymakers need to grasp the importance of learning styles, as they play a crucial role in determining success in acquiring a third language. Additionally, educators should prioritize guiding students based on their learning styles rather than rigidly adhering to pedagogical approaches that instructors perceive as superior. Further research is recommended to explore the correlation between learning styles and performance in language learning.

Keywords: Learning Style, Third Language, Activist, Reflector, Theorist, Pragmatist

Introduction

Background of Study

Students acquire knowledge through various learning styles. The term "learning style" encompasses the combination of cognitive, affective, and psychological factors that indicate how an individual engages with and reacts to the learning environment (Keefe, 1979). Identifying a student's learning style is crucial to enhancing the effectiveness of the learning and teaching processes. In 1984, David Kolb unveiled his learning styles model after years of refinement, marking a significant milestone. This framework led to the emergence of concepts like Kolb's Experiential Learning Theory (ELT) and the Kolb Learning Styles Inventory (LSI). Within his seminal work, "Experiential Learning: Experience as The Source of Learning and Development," published in the same year, Kolb pays tribute to the pioneers of experiential learning from the early 1900s. Today, Kolb's learning styles model and experiential learning theory are widely acknowledged by educators and scholars as influential works, offering essential concepts to comprehend and elucidate human learning behavior, assisting students in their learning journey. Currently, learners express preferences for various stimuli that support learning, encompassing written texts, readings, debates, videos, drawings, diagrams, or hands-on tasks with a clear purpose (Dantas & Cunha, 2020).

This study investigates students' learning styles and their relevance to third-language learning. The study is grounded in the theoretical frameworks of Honey and Mumford's learning style theory (1986) and Kolb's experiential learning theory (1984). Various studies have explored learning styles, including the well-known Learning Styles Model, Kolb's Learning Styles Inventory (LSI) (1984, 1985), and Honey and Mumford's Learning Styles Questionnaire (LSQ) (1992). Notably, Kolb's LSI was found to have low validity with managers, prompting Honey and Mumford to develop a set of LSQ to guide instructors in delivering training to adult learners (Pharham, 2022).

Study Objectives

The purpose of this study is to identify students' preferences for learning styles in third-language acquisition within higher education. Additionally, analysing students' references to learning styles can enable researchers to identify preferences for third-language learning among students. Furthermore, it facilitates the identification of correlations between gender, field of study, and learning styles.

The objectives of this study are as follows:

1. Identify the learning styles and preferences of third-language learners at a public university
2. Identify the third-language learners' learning style preferences related to gender
3. Identify the third-language learners' learning style preferences related to the student's field of study

Statement of Problem

Learning styles have demonstrated a strong correlation with the learning process among individuals. According to Kolb and Kolb (2005), learning encompasses a series of human activities, including sensation, reflex, thinking, and doing. In their research Kolb & Kolb (2019, 2005), they identified four key learning abilities: 1. reflective observation, 2. concrete experiences, 3. active experimentation, and 4. abstract conceptualization. This suggests that an individual's inclination toward any of these four learning abilities shapes their unique learning style. According to Kolb's findings, an ideal learner is someone who adeptly employs

various styles depending on the circumstances, recognizing that each learning style has both strengths and weaknesses.
According to Gardner (1983), learners possess not a singular intelligence but a range of intelligences. MacKarecher (2004) emphasizes the need for language teachers to consider learners' diverse intelligences and learner types, and to design plans and activities that cater to all types of learners. Researchers have explored the connections between learning styles, multiple intelligences, and their roles in second and foreign language acquisition. Numerous studies have delved into the influence of individual learning styles on foreign language learning.
Sener and Cokcalıskan (2018) conducted a study on multiple intelligences and learning styles in a Turkish secondary school. Their findings revealed that students exhibited almost all types of learning styles, with a prevalence of tactile and auditory preferences. The three intelligence groups identified were Naturalistic, Visual, and Kinesthetic intelligences. Furthermore, the analysis showed a significant difference between males and females, with most intelligence types and learning styles displaying a moderate positive correlation.
Considering the diversity of students in higher education, who come from various academic backgrounds, faculties, and genders, it is essential to recognize multiple intelligences (Gardner, 1983). The primary challenge lies in developing student-centered content and teaching foreign languages that are not only engaging but also tailored to the specific needs of the students.
Neo and Ng (2021) found that students who were learning Spanish at a university in Malaysia preferred kinaesthetic and auditory learning styles. They also found that Spanish learners who improved were those who could suit the teacher's teaching styles and also those who used different strategies to learn (Neo & Ng, 2021). Pharham (2022) did research on The Learning Style of Online Postsecondary Adult Learners and its Relationship to Their Academic Success. Pharham (2022) found that learning style did not have a significant relationship with the variable academic success as measured by GPA of online postsecondary adult learners. Pharham (2022) also recommended that future researchers use a qualitative methodology to explore adult learners' perceptions of learning styles.
Numerous studies have indicated the effect of learning styles on different variables and thereby tend to affect the learning process. However, there have been very few quantitative studies regarding students learning foreign languages in Malaysia. Hence, it would be meaningful to research to understand the most preferred learning styles by university students in Malaysia. This study is done to investigate the learning style in third language learning.

Specifically, this investigation is done to identify the following questions
1. What are the learning styles and preferences of third-language learners at a public university?
2. To what extent are the third-language learners' learning style preferences related to gender?
3. To what extent are the third-language learners' learning style preferences based on students' field of study?

Literature Review
In the past 40 years, many different ways of learning have become more well-known. This has made people realize that students learn in many different ways. This underscores the

understanding that a single teaching approach may not be effective for every student, or even for the majority of students. Several prominent learning style models, including those offered by Kolb, Gregorc, Honey and Mumford, Fleming, Dunn and Dunn, and others, are widely acknowledged as significant learning style instruments.

Dunn (2009) asserts that learning styles involve a blend of biological and experientially influenced characteristics that impact concentration on both an individual and collective level. This concept extends beyond preferences for perceiving and processing information across diverse modalities and styles. Learning style is defined by how each learner initiates concentration, processes, absorbs, and retains new and challenging information, as highlighted by Dunn & Dunn (1992; 1993). The interplay of these elements varies for each individual, underscoring the importance of identifying what engages a student's concentration, how to sustain it, and how to align it with their natural processing style to enhance long-term memory and retention.

In Gregorc Learning/Teaching Style Model Gregorc & Ward (1977); Gregorc (1979, 1985, 1997), Gregorc finds that individuals exhibit natural predispositions for learning along four bipolar, continuous mind qualities that serve as mediators in their interactions with and responses to their environments.

Another learning styles model is the VARK Model Fleming (2001), an extension of the earlier neuro-linguistic model (Eicher, 1987) and focused on sensory preferences. The acronym VARK represents Visual (V), Aural (A), Read/Write (R), and Kinesthetic (K). According to Fleming (2001), learning style is defined as "an individual’s characteristics and preferred ways of gathering, organizing, and thinking about information." VARK falls under the instructional preference category as it addresses perceptual modes.

Usnsal (2018) has researched to explore learning styles in French language teaching, specifically focusing on identifying the predominant learning style or styles among French learners. The results indicate a preference for the visual learning style, followed by kinaesthetic and auditory styles, with minimal inclination towards multiple learning styles.

Ahanbor & Sadighi (2014) investigated whether a combination of learning styles and multiple intelligences would enhance the students’ learning. A statistically significant relationship between learning styles and multiple intelligences was determined. Similarly, in the Iranian context, Panahandeh et al (2015) conducted a study to identify the relationship between EFL learners’ multiple intelligences and their learning styles. They also focused on the most and the least dominant learning styles and investigated the differences between genders. As a result, only a significant difference was found between genders.

Biabani & Izadpanah investigated the relationship between Kolb’s learning styles and learning slang among Iranian EFL students with a gender-based focus, the study showed a non-significant correlation either between gender and slang learning or between gender and learning styles (Biabani & Izadpanah, 2019).

Honey And Mumford Learning Styles

Peter Honey and Alan Mumford published The Honey and Mumford Learning Style in 1986. Honey and Mumford’s learning styles model identifies four different styles below that people use to learn something new including language learning:

1. Activist
2. Theorist
3. Pragmatist
4. Reflector

According to Honey & Mumford's theory, individuals who favour learning through trial and error or practical kinesthetic activities are identified as having an Activist learning style. Activist learners typically employ brainstorming techniques to generate solutions (Honey & Mumford, 1992). Those with a Theorist learning style seek logically well-founded theories, frameworks, or models to analyze and synthesize information (Honey & Mumford, 1992). Pragmatist learners, on the other hand, thrive on the systematic application of theories and techniques in real-world contexts, exhibiting enthusiasm for such approaches (Honey & Mumford, 1992). Reflectors are learners who prefer to contemplate and examine their engagement processes to achieve results (Honey & Mumford, 1992). Consequently, it becomes evident that learners differ not only in their learning experiences but also in their preferred learning styles.

The Honey and Mumford Learning Style Questionnaire (LSQ) is an 80-item self-report questionnaire utilized to assess a student's activist, reflector, theorist, and pragmatist learning styles (Honey & Mumford, 1986). This questionnaire, developed by Honey and Mumford in 1986, stands as one of several tools measuring individual learning styles (Swailes & Senior, 1999). In this study, the modified version of the learning style questionnaire (LSQ) by Honey and Mumford was employed to gauge the variable of learning style. Each research question in this study is linked to Honey and Mumford's (1986) learning style theory, making each of the four learning styles a variable for all research inquiries.

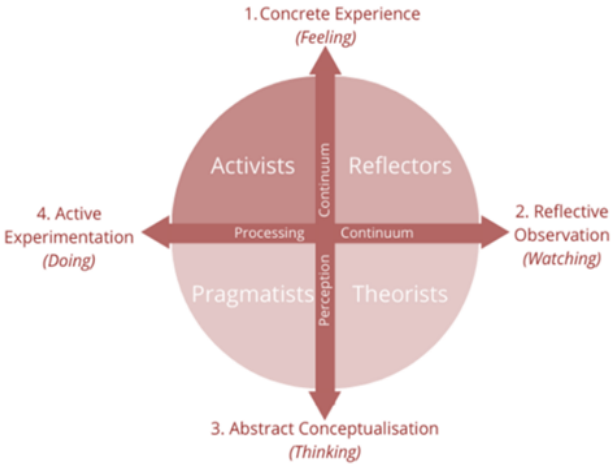


Figure 1- Model of Learning Style (Sources: Honey and Mumford, 1986)

Kolb's Learning Styles

This study is based on Kolb's Learning Styles Model (1984) and Honey and Mumford's Learning Style questionnaire (1986). Kolb stated learning is a process that comes from concrete experience to reflective observation, from abstract conceptualizing to active practice (Kolb, 1984).

As per Kolb and Kolb (2005), the learning process encompasses various human activities, such as sensation, reflex, thinking, and doing. Kolb's model proposes four primary learning abilities: reflective observation, concrete experiences, active experimentation, and abstract conceptualization. A person's learning style is contingent on their inclination toward utilizing any of these four elements, with Kolb asserting that each learning style has both strengths and weaknesses.

Figure 2 below shows the four learning styles which are divergent, convergent, assimilative and accommodative. Kolb believes the perfect learner is someone who uses different styles in different situations appropriately (Kolb & Kolb, 2005).

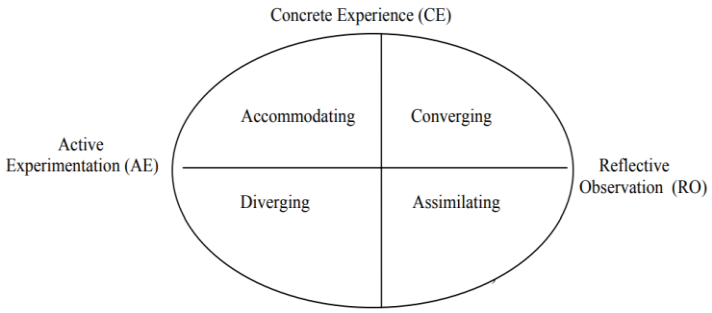


Figure 2- Learning Styles based on Kolb's Model

Past Studies on Learning Style

Students have preferences about how they want to learn. Romanelli et al (2009) stated that understanding different learning styles can be beneficial for both teachers and students. Many studies have been done to investigate students' learning styles from different perspectives. Lee and Sidhu (2013) conducted a study on the learning style preferences of 104 mechanical engineering students at Universiti Tenaga Nasional (UNITEN), Malaysia. The Honey and Mumford Learning Styles Questionnaire (LSQ) was distributed to the students as the instrument to assess the students' preferred learning styles. The findings of the study showed that the predominant learning style among engineering students is activist, followed by theorist and reflector, and the least preferred style is pragmatist. The study suggested that it is important for engineering educators to be aware of the student's preferred learning styles in the efforts to facilitate students learning potential. Nevertheless, using the similar learning styles questionnaire, Aziz et al (2013) studied the preferred learning styles of 240 University of Malaya undergraduate pharmacy students in Malaysia, the results indicated that the reflector learning style was most prevalent among students, followed by theorist, pragmatist, and activist learning styles. The study recommended that a range of teaching methodologies and learning exercises be provided in pharmacy education to accommodate learners with different learning styles.

Yousef (2018) investigated the learning style preferences of undergraduate students and looked at whether the demographics of the students affected any notable variations in any of the four characteristics of learning styles at the American University of Ras Al Khaimah (AURAK) in the United Arab Emirates (UAE) culture. 152 individuals completed the Honey and Mumford learning styles survey. Analysing the data involved using descriptive statistics and the independent samples t-test, Mann-Whitney test, and Kurskal-Wallis test. The results of the study illustrated that undergraduate students at AURAK have preferences for the reflector, followed by pragmatist, theorist and activist learning styles. The study revealed that there were no significant differences between male and female students. However, the only significant differences seen in the four learning styles are between Emirati and non-Emirati students and between married and single students in the theorist learning style. The results of the study about the significant differences between Emirati and non-Emiri students are consistent with the findings of Bhatnagar and Sinha (2018), who discovered significant

variations in the learning styles of Indian and German business students. According to the findings, Indian students prefer the learning styles of reflecting, analysing, and theorising, while German students are more concerned with the actual application of theory, which is followed by reflection and analysis. These results corroborate earlier research showing that cultural differences exist in preferred learning styles (Budeva et al., 2015).

Furthermore, Alonso-Martín et al (2021) investigated to describe the predominant learning styles among 636 university students from the social sciences of 3 public universities in Andalusia, 190 of whom were male and 446 females. The data was collected using the Honey–Alonso Learning Styles Questionnaire. SPSS 15 was used for data analysis in the study. ANOVAs, chi-square tests, and Pearson correlation analyzes were applied to examine the correlations between gender, year of study, degree course, and institution. The results showed that the reflector style was the most popular choice, while the theorist, pragmatist, and activist styles ranked second and third, respectively. This result is in line with findings from Aziz et al (2013), even though the respondents were pharmacy students. Alonso-Martín et al (2021) also found that no significant differences were discovered when examining the sample by gender, either as a whole or about degree course, year of study, and institution. This result generally matches the findings of earlier studies that associate learning styles with gender (Gilchrist, 2021; Oravcova, 2009). However, Chan and Mak (2010) discovered that there are gender-based variations in learning styles, specifically female students at the Macao Tourist Institute had a greater preference for reflector conduct in comparison to male students. Additionally, Alonso-Martín et al. discovered significant differences between preferred learning styles in terms of degree subjects. The results of this study are consistent with those of Liu and Shi (2015), who explored the preferred learning styles of 1701 Chinese college students about gender and discipline disparities and discovered that there were notable variations in learning styles between students in different disciplines.

Past Studies on Learning Styles Concerning Language Learning

Researchers who study language acquisition have been captivated by how a learner's learning style might influence their approach to language acquisition. Cele-Murcia (2001) stated that a factor influencing how students pick up a second or foreign language is their language learning style. Research on learning styles and their correlations with age groups, genders, academic areas, and academic accomplishment are generally studies related to the subject of learning styles. Sopian et al (2013) carried out a study on the learning styles of Arabic language students. The study focused on two diploma programmes at the Universiti Teknologi Mara (UiTM), Malacca Campus, namely Business Studies, and Hospitality and Tourism Studies. A total of 175 students participated in this survey, which consists of 111 female students, and 64 male students from the Hospitality and Tourism programme students (n=95) and Business Studies students (n=80). The survey is based on the questionnaire proposed by Honey and Mumford. SPSS 20 was used to analyse the data, and the t-test of two independent samples was used to do inferential statistics. The findings demonstrated that the relationship between learning style and academic course was not statistically significant. In addition, there was no statistically significant difference between the two genders and learning styles. This finding is similar to the study by (Gholami and Bagheri, 2013).

Likewise, Ugural et al (2018) conducted a study to better understand the learning preferences of students from the architecture and civil engineering departments who are receiving their education in English as a foreign language. An empirical survey of 170 undergraduate architecture (N = 91) and civil engineering (N = 79) students at Istanbul Technical University

was conducted using Honey and Mumford's Learning Style Questionnaire (LSQ). Based on statistical analyses of the questionnaire data, students majoring in architecture most preferred the reflector learning style, which was followed by activist and theorist styles (no difference between styles), and the pragmatist style. The students studying civil engineering showed the greatest preference for the reflector style, with no difference between the theorist and pragmatist styles, and the least preferred style was the activist style. The results showed that the most preferred learning style was the reflector, regardless of the respondents' major. There was one significant difference in students' learning styles between the two student groups; students in the civil engineering group reported the use of Pragmatist more often than those in the architecture group. In addition, gender difference was found only in the pragmatist style and male students preferred the pragmatist style significantly than female students. The results confirmed different characteristics of students from different disciplines.

On the other hand, Feng, et al (2020) investigated the connections between Chinese students studying Spanish as a foreign language and their academic achievement in terms of learning styles and learning strategies. A modification of the Honey-Alonso Learning Styles Questionnaire (CHAEA) and an adaptation of the Strategy Inventory for Language Learning (SILL) questionnaire were used to identify learning styles and strategies, respectively. Among the 175 respondents in the sample were 145 female students and 30 male students between the ages of 19 and 21. The results showed that learning styles are evenly distributed among all Chinese students studying Spanish as a foreign language, with no dominating learning style. Active style was shown to have a strong negative link with reading, grammar, and general academic performance. Moreover, active learning style and metacognition techniques have an impact on Chinese language learners' academic success. These two strategies are beneficial for enhancing proficiency in foreign languages, particularly in reading and grammar. Thus, valuing and optimising the beneficial effects of strategies and considering learning style from a dialectical standpoint when learning a foreign language is crucial.

In addition to Honey-Alonso Learning Styles Questionnaire, Ahmadishokouh and Samadi (2021) used Ehrman and Leaver Learning Styles Questionnaire (E&L) to compare the learning styles of foreign language learners, namely Russian, English, French and Arabic. A sample of 100 Iranian students was involved in the study. The respondents were divided according to the language they were learning, and each language group comprised 25 students. The conclusions of the study showed that the four groups of language learners use different learning styles and that there are notable differences in the way that language learners of Arabic, French, English, and Russian use learning strategies. Language instructors and educational institutions may utilise this study to incorporate these variations in learning styles into their lesson plans, and course book authors and materials developers may apply it to incorporate these variations in learning styles into their language-learning materials.

Güngör et al. (016) used Kolb's learning style inventory to examine the learning styles of a group of Turkish students enrolled in English proficiency programmes at a state university and investigated the relationships between learning styles, gender, and competence. A total of 263 students participated in the study, 127 of the participants were female and 136 of the participants were male. SPSS 20.0 was used to analyse the data gathered for this investigation. The results showed that there were no gender-related statistically significant differences. The student's gender and learning styles were therefore unrelated. Additionally, diverging learners were the most prevalent learning style, followed by accommodating learners, assimilating, and converging. Nonetheless, a previous study (Gohar & Sadeghi, 2015)

used the same learning style questionnaire to examine 123 Iranian EFL learners' learning style preferences, the learners' dominant learning style preference was converging, followed by assimilating, accommodating and diverging. Even though both researchers looked into the preferred methods for learning English as a foreign language, the findings revealed notable variations.

Besides, Ünsal (2018) looks at the learning styles of French language learners who are studying the language as a foreign language to identify the most common learning types. The study used the learning patterns model developed by Dunn & Dunn. According to the results, the students preferred learning style was found to be visual, kinaesthetic and auditory learning styles came next, with relatively few choosing multiple learning methods. Additionally, Chen and Cheng

(2021) looked into the preferences of college students with various majors and the connection between majors and learning styles. 120 Taiwanese college students majoring in various fields and studying English as a foreign language took part. According to the results of the chi-square test and descriptive statistical analysis, students of all majors tended to favour the visual learning approach. Nonetheless, those majoring in business and information technology preferred auditory learning, while those majoring in design favoured tactile learning. There was no statistically significant difference between learning style preferences and educational background, even though learning background may be a major factor in the development of a student's learning style. Notably, preferences for learning styles can vary over time, throughout activities, and between situations. They can also be related to other characteristics.

Methodology

This quantitative research is done to explore the learning style in the learning of a third language. The instrument used a survey adapted from Honey and Mumford (2002) and Kolb's Learning Style (1984). 420 respondents who were learning Arabic language, Mandarin and Japanese language as a third language were chosen to answer the survey. The 420 respondents were also chosen from 3 fields of studies which are 1. Science and Technologies, 2. Social Sciences and Humanities, 3. Business and Management. The survey has 2 main sections. Regarding Table 1, section A has items on the demographic profile (3 items). Section B has statements about learning styles including 10 items on Activist, 10 items on Reflector, 10 items on Theorist and 10 items on Pragmatist learning styles.

Table 1
Distribution of Items in the Survey

Section	Component	Part	Sub-Component	Items	Total Items
A	DEMOGRAPHIC PROFILE	I	a) Field of Study b) Gender c) Age	1 1 1	3
B	LEARNING STYLE	I	Activist	10	40
		II	Reflector	10	
		III	Theorist	10	

		IV	Pragmatist	10	
				Total:	45

Method of Data Collection

For this study, 40 statements have been selected from 80 statements from Honey and Mumford's LSQ as the items to measure the learning styles. The selection process was done mostly by filtering the 80 items that were redundant or had overlapping meanings by selecting the statements that would encapsulate the meaning of certain others. Statements that were harder for participants to understand were also not included, as it would be counterproductive for students to select answers without full understanding. Statements that did not require a deep level of introspection were also prioritised, so that students could answer the questions quickly and truthfully, without having to second guess their answers by over-reflecting on their usual thought processes and actions. Respondents were asked to go with their first gut reaction instead of over-thinking their responses.

Method of Data Analysis

Data obtained from the questionnaire were analyzed using Statistical Package for Social Science (SPSS) version 28. Table 2 presents the reliability statistics for the instrument. SPSS analysis revealed a Cronbach alpha of .894 thus showing high internal reliability of the instrument used. Data is collected online via Google Forms. Data is then analysed using SPSS version 28. Analysed data is presented in the form of mean scores and ANOVA LSD p-value to answer the 3 research questions.

Table 2
Reliability Statistics for the Instrument

Reliability Statistics

Cronbach's Alpha	N of Item
.894	40

Table 3 presents the mean score analysis conducted using a 5-level mean scale interpretation adapted from Eeza et al. (2019). The interpretation of the 5 Likert Scale Mean Score is based on the adaptation from Nor Eeza, Tajul, and Jamil (2019).

Table 3
Mean Score Analysis (Eza et al., 2019)

Mean score	Level
1.00 - 1.80	very low
1.81 - 2.60	low
2.61 - 3.40	Moderate
3.41 - 4.20	high
4.21 - 5	very high

Findings

Findings for Demographic Profile

Field of Study

Figure 3- Field of Study

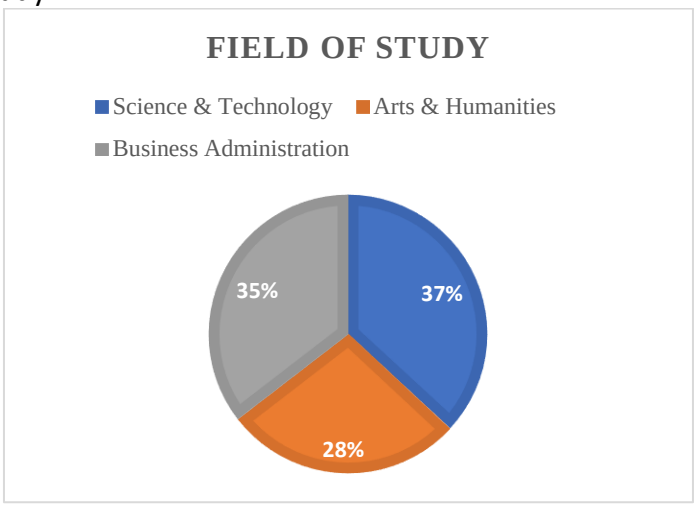
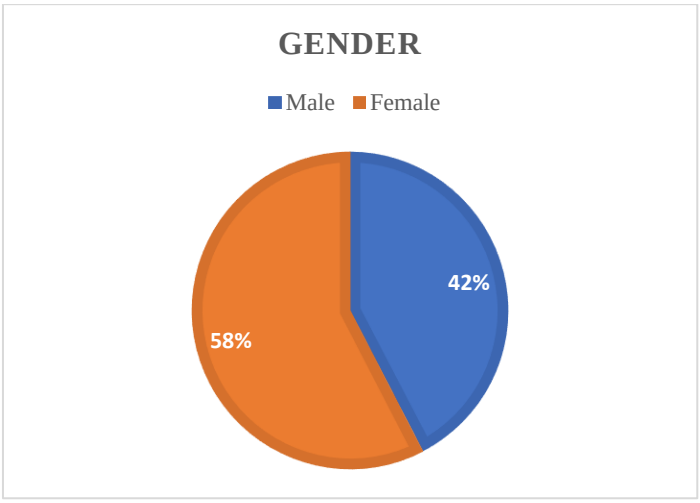


Figure 3 shows respondents who participated from three main disciplines. Their fields of study were mainly Business Administration (35%), followed by Science & Technology (37%) and Arts & Humanities (28%).

Gender

Figure 4- Gender



The above figure 4 indicates that there were slightly more females participating in the survey compared to females.

Interest in Learning a Third Language

Figure 5- Interest in Learning Third Languages

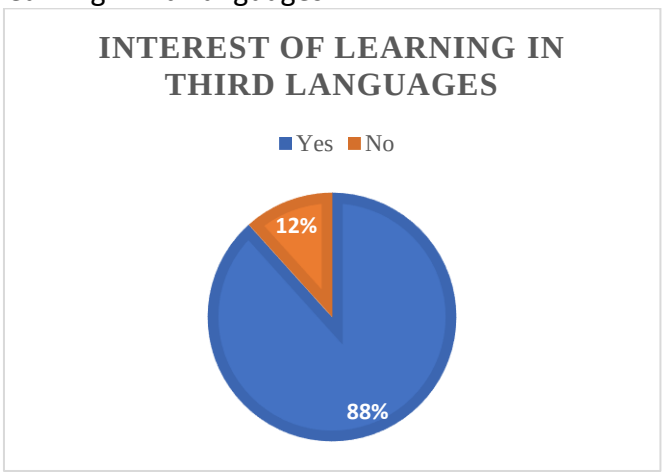


Figure 5 indicates that 88% of the learners like to learn third languages and 12% of them do not like to learn third languages.

Findings For Learning Style Among Learners: Activist

Figure 6-Activist Learning Style

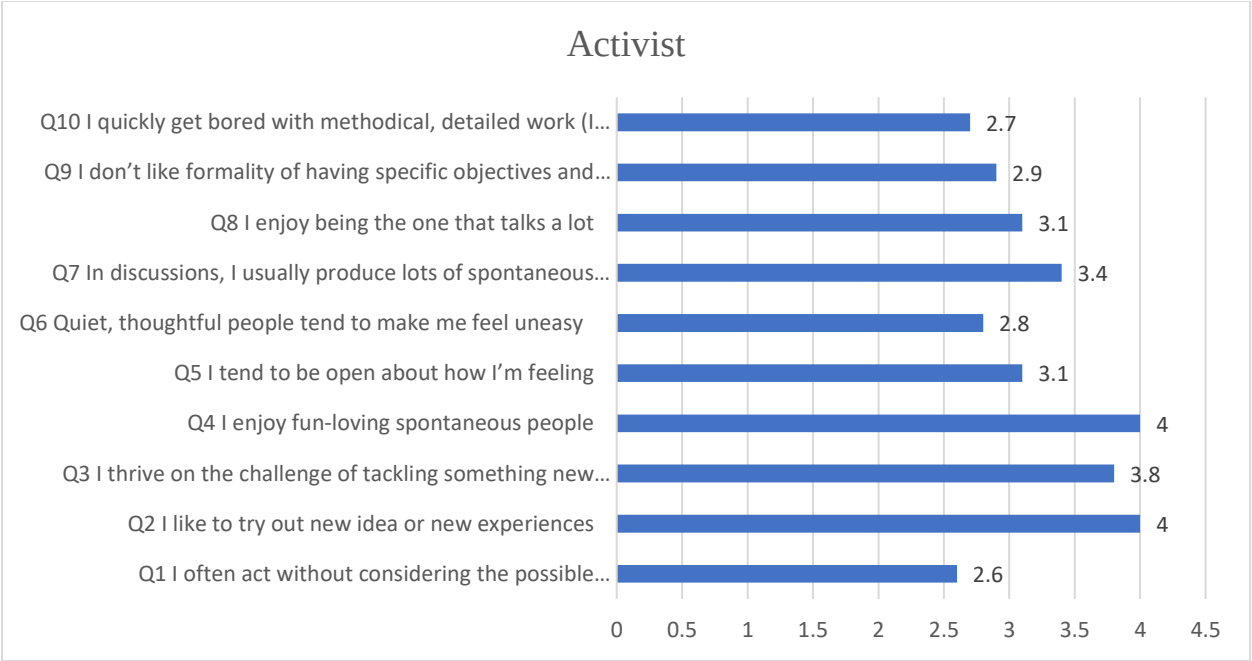


Figure 6 illustrates the learning style preferences among students, particularly of the Activist learning style. Items Q2 and Q4 indicate a high level of favorability (M=4.0), indicating that activist students embrace challenges and engage fully and impartially in new experiences. Activist students prefer an outgoing and cheerful personality and are willing to communicate with others and express their opinions openly. However, item Q3 (mean score = 3.8) demonstrates students' interest in new things. However, items Q9 (M=2.9) 'don't like formality' and Q10 (M=2.7) 'I am bored with step-by-step work,' show that students do not outright reject a structured, disciplined, and systematic approach to learning. The item with

the lowest score, Q1 (M=2.6) 'I often act without considering the possible consequences,' indicates that while students are open-minded, they may not be risk-takers. According to Q4 and Q6, although students appreciate 'fun-loving, spontaneous people,' they also feel comfortable interacting with 'quiet, thoughtful people.

Findings For Learning Style Among Learners: Reflector

Figure 7-Reflector Learning Style

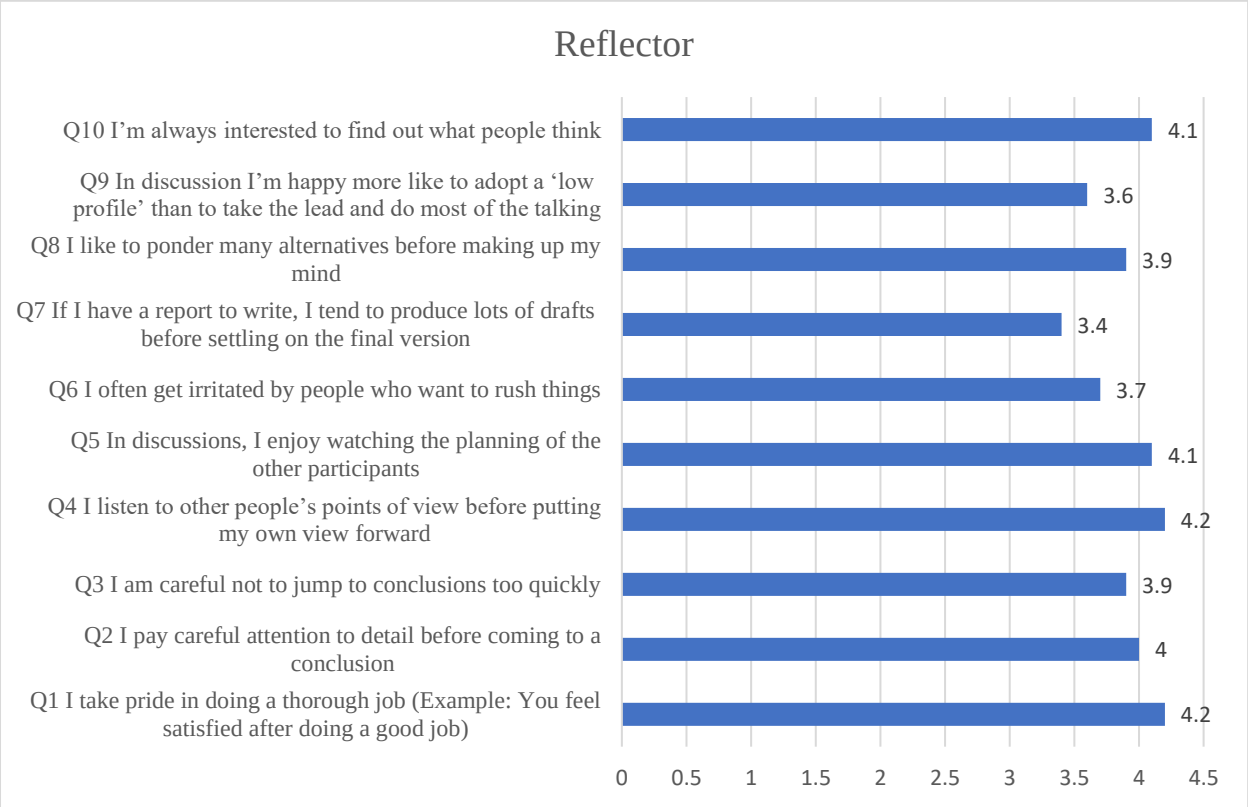


Figure 7 conveys the learning style preferences of Reflector learning style students. As presented in items Q1 'I take pride in doing a thorough job' and item Q4 'I listen to other people's points of view before putting my own view forward' exhibit the highest level of concurrence with a mean score of 4.2. Both item Q5 and item Q10 emerge as the second most popular choices, each having a mean score of 4.1. The results indicate that Reflectors students demonstrate an inclination to step back and contemplate experiences, examining them from diverse perspectives. They adeptly accumulate data, drawing from both firsthand experiences and external sources, showcasing a preference for thorough analysis. Before reaching any definitive conclusions, they engage in a thorough examination and consider the subject from every potential angle. The lowest score in this round is assigned to Q7 (M=3.4), suggesting that students do not typically engage in multiple drafts before composing a report.

Findings For Learning Style Among Learners: Theorist

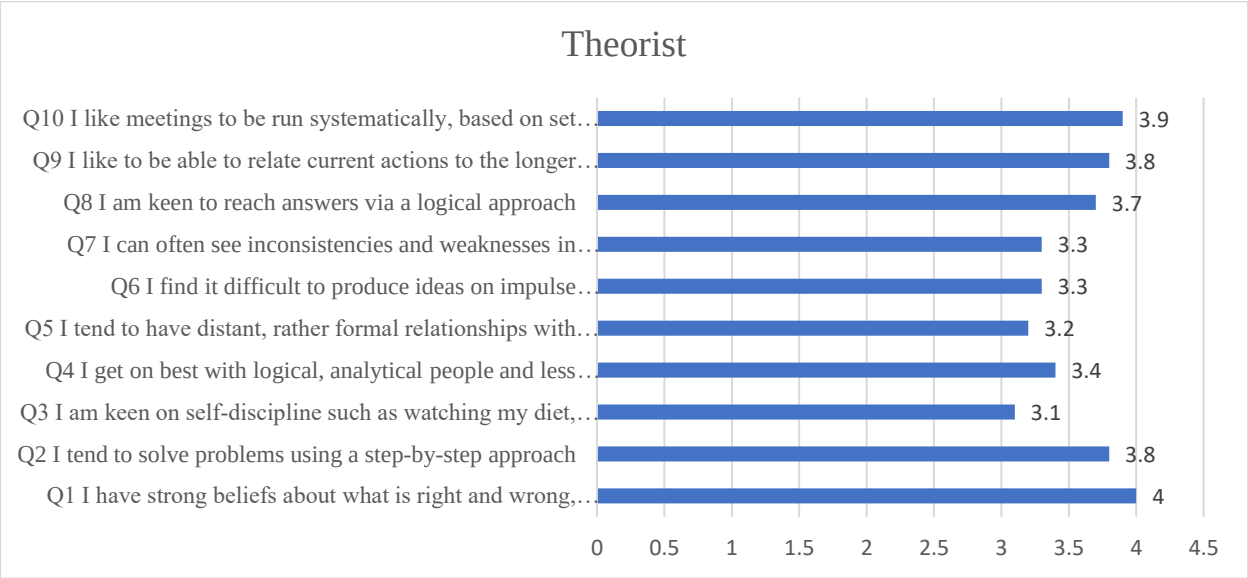


Figure 8-Theorist Learning Style

Figure 8 displays students' primary learning style preference, specifically the Theorist, with a high favorability level (M=4.0), as indicated by item Q1, reflecting strong convictions about morality and ethics. Theorist students construct theories within moral frameworks, yet they engage in critical analysis and dialogue with diverse viewpoints. Conversely, item Q10 (M = 3.9) shows a preference for systematically running meetings with structured agendas, aligning with the preference for organized learning methods. Following this, items Q9 and Q2 (M=3.8) indicate that students are typically able to relate current actions to the longer picture and tend to solve problems using a step-by-step approach. However, the lowest scoring item, Q5 (M=3.1), suggests a lack of strong agreement with disciplined behaviors like diet and exercise, possibly due to perceived difficulty or societal pressures. This disparity highlights a preference for adaptability over strict routines, influenced by social and cultural norms and personal obstacles. The low mean value implies a lack of motivation among respondents to embrace disciplined behaviors, possibly finding structured schedules overly restrictive. Social and cultural expectations regarding lifestyle and body image may further shape these perceptions. Personal obstacles, such as time constraints or lack of motivation, could also hinder adherence to disciplined behaviors among respondents.

Findings For Learning Style Among Learners: Pragmatist

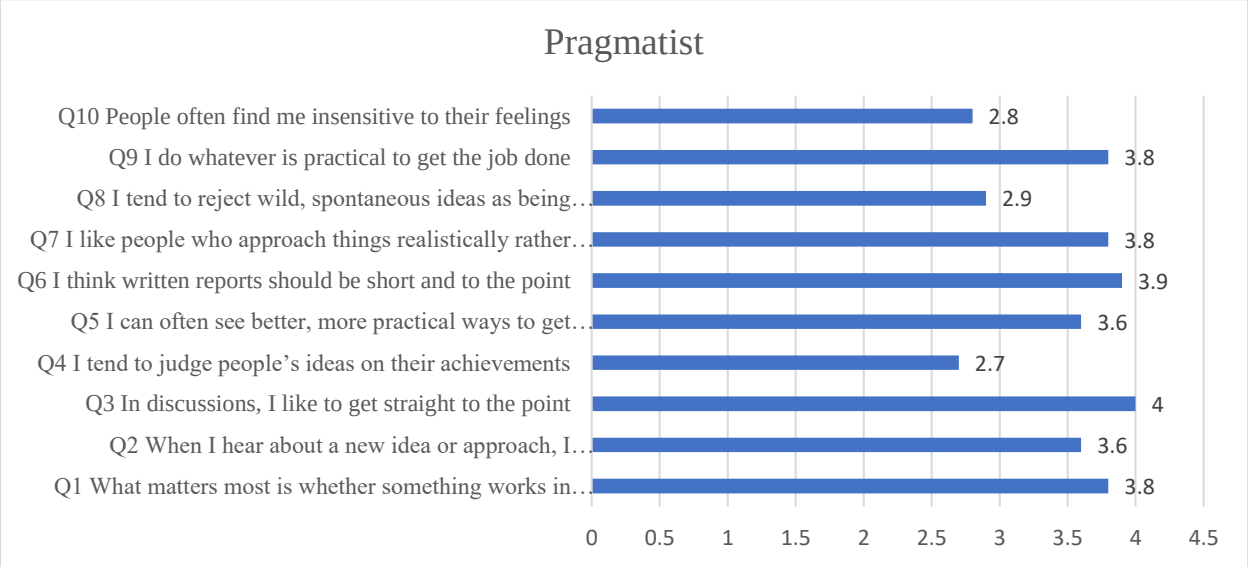


Figure 9-Pragmatist Learning Style

Figure 9 highlights the subsequent preference in learning style, specifically the Pragmatist, focusing on concise communication. Learners largely agreed with statement Q3 (M=4.0), indicating a preference for direct discussions. This preference extends to written reports, as shown by item Q6 (M=3.9), emphasizing clarity and brevity. Such tendencies align with a pragmatic approach, valuing efficiency and key information delivery. Understanding these inclinations is crucial for tailoring communication strategies and report formats to meet audience expectations, particularly in professional and intercultural settings. Moreover, items Q1, Q7, and Q9 scored an average score of (M=3.8), suggesting a moderate agreement regarding the importance of practicality in acquiring a third language. Following the analysis, it appears that both items Q2 and Q5 demonstrate the same mean score of (M=3.6). This suggests that students, upon encountering a new idea or approach, tend to promptly engage in practical application and are adept at discerning more effective methods for accomplishing tasks. This finding highlights the proactive behavior of students in turning theoretical ideas into real actions, showing a tendency towards practical problem-solving abilities. Conversely, item Q8 received the lowest score (M=2.7), revealing a reluctance towards spontaneous and perceived impractical ideas. These insights offer valuable perspectives for effective communication and report customization in diverse contexts.

The Correlation Between Gender and Learning Styles

Table 4

Statistically Significant Confidence Level (ANOVA LSD p-value)

Learning Style	Gender
Activist	0.001
Reflector	0.665
Theorist	0.180
Pragmatist	0.076

According to Fisher's Least Significant Difference (LSD) method employed in ANOVA, the customary level of statistical significance is typically set at 0.05. If the p-value exceeds the

critical value (p=0.05), then the observed differences among groups are considered statistically significant. As per Table 4, there is no discernible difference between gender and each learning style. The only group displaying a statistically significant result is the Activist learning style (p=0.001).

The Correlation Between Fields of Study and Learning Styles
Table 5
Statistically Significant Confidence Level (ANOVA LSD p-value)

Learning Style	Field of Study
Activist	0.594
Reflector	0.568
Theorist	0.159
Pragmatist	0.745

Table 5 illustrates no discernible difference between fields of study and learning styles, as indicated by this research.

Conclusion

Gardner (1983) suggested that learners possess not merely a single type of intelligence, but rather a range of intelligences. Expanding on this concept, MacKarecher (2004) also emphasizes the significance of language instructors considering the diverse intelligences and learner types among their students, and creating lesson plans and activities that cater to all learner profiles.

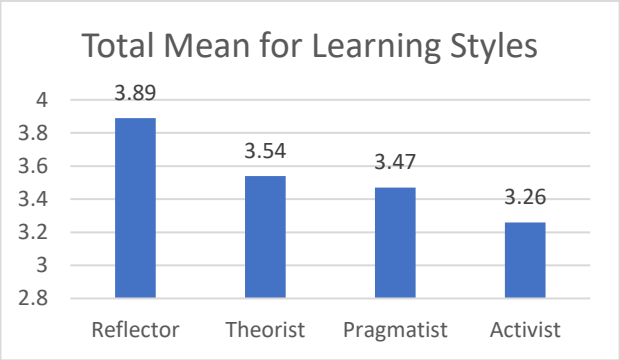


Figure 10-Total Mean for Learning Styles

Figure 10 indicates the total means for the four learning styles in the learning of third languages. The highest preference for learning style is Reflector (3.89), followed by Theorist (3.54) and Pragmatist (3.47), while the lowest preference is Activist (3.26).
This finding aligns with the results of Aziz et al (2013); Alonso-Martín et al (2021), who studied the preferred learning styles among university students in Malaysia and Spain. Their studies showed that the Reflector style was the most popular choice, while the Theorist, Pragmatist, and Activist styles ranked second and third, respectively. Interestingly, the results of this study are also in concordance with those of Ugural et al (2018), who investigated the learning style preferences of undergraduate students, including civil engineering students. Their study demonstrated a significant preference for the Reflector style, with no difference between the Theorist and Pragmatist styles. Conversely, the Activist style was the least preferred. Additionally, these findings are consistent with Yousef's (2018) research, which also

highlighted the Reflector style as the most favoured among undergraduate students, while the Activist style ranked the lowest.

According to Honey & Mumford's theory, Reflector learners are those who like to reflect on and study how they engage to reach results (Honey & Mumford, 1992). The data demonstrated that most of the learners take pride in doing a thorough job, they are the learners who would listen to other people's points of view before putting their view forward, and they are also interested in finding out what people think especially during discussion.

As per Honey & Mumford's theory, individuals who lean towards learning through trial and error or hands-on kinesthetic activities are categorized as possessing an Activist learning style. Results indicated that learners prefer learning less through trial and error or hands-on activities.

Based on the findings of this study, gender does not significantly influence the preference for each learning style, except for the Activist style, which exhibited a statistically significant difference. Numerous studies have also indicated the absence of statistically significant gender-related differences in learning styles (Biabani & Izadpanah, 2019; Yousef, 2018; Alonso-Martín et al., 2021; Gilchrist, 2021; Oravcova, 2009; Sopian et al., 2013; Gholami and Bagheri, 2013; Güngör et al., 2016). Thus, once again, this study reaffirms that there is no statistically significant difference between genders in terms of learning styles.

Although Ugural et al (2018) found a significant difference in students' learning styles between the two groups, students in the civil engineering group reported using the Pragmatist style more often than those in the architecture group, this study's findings demonstrate that the relationship between learners' learning style and their field of study was not statistically significant. This finding aligns with those of previous studies by (Gholami and Bagheri, 2013; Sopian et al., 2013).

According to the findings, although the Reflector is the most preferred learning style among learners, Gardner (1983) proposed that learners do not possess just one type of intelligence but rather a variety. Building upon this idea, MacKarecher (2004) emphasizes the importance for language instructors to consider the diverse intelligences and learner types of their students while crafting lesson plans and activities that accommodate all learner profiles.

Learners highly prefer the four learning styles for acquiring foreign languages: Reflector, Theorist, Pragmatist, and Activist. However, the differences in preferences are not significant for Theorist and Pragmatist. Results also revealed that third language learners' learning style preferences are not related to gender, except for the Activist style, and are also not related to learners' fields of study.

Pedagogical Implications

This study provides visions for foreign language instructors who are teaching in higher institutions to understand their students' learning styles in learning a foreign language. Thus, instructors, resource persons and universities as well as policymakers must understand the learning styles which is a significant factor that determines success in learning a foreign language. Furthermore, educators should prioritize guiding students according to their learning styles rather than simply adhering to the pedagogy that instructors believe is superior.

Suggestions for Future Research

The study reveals that learners highly prefer the four learning styles for acquiring foreign languages: Reflector, Theorist, Pragmatist, and Activist. Further research is needed to explore to what extent learning styles relate to learners' performance in language learning.

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