

A Comparative Study of Introvert and Extrovert Learning Styles in Arabic Debate Learning

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ABSTRACT

Arabic debate learning requires active participation and critical thinking; however, students with different personality types exhibit varying learning style preferences that may affect their engagement and performance in debate activities. Inadequate alignment between instructional strategies and students' learning styles can limit participation and reduce the effectiveness of debate-based learning. Despite the increasing use of debate in Arabic language education, empirical research examining the relationship between personality type and learning style preferences in Arabic debate contexts remains scarce. Therefore, this study aims to analyze differences in learning styles between introverted and extroverted students at Raudhatul Lughah al-'Arabiyyah, Ma'had Annuqayah al-Islami, Sumenep, to provide pedagogical insights for more adaptive and inclusive Arabic debate instruction. A quantitative approach with a comparative design was employed, involving 35 female students as the sample. Data were collected using the MBTI questionnaire to determine personality types and the VARK questionnaire to identify learning style preferences. They were analyzed using descriptive statistics and the Chi-Square test. The results indicated that extroverted students tended to prefer auditory learning, while introverted students favored visual and reading/writing learning styles; however, the Chi-Square test showed no significant difference ($\chi^2 = 6.389$; $p = 0.094$), meaning that the learning style scores of both personality types were relatively similar, despite certain tendencies corresponding to personality traits. Pedagogically, these findings suggest that Arabic teachers and musyrifah should implement multimodal learning strategies integrating both auditory and visual elements to enhance active participation, critical thinking, speaking fluency, and students' confidence in using Arabic.

Keywords: Debate, Learning Style, Personality

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INTRODUCTION

Introverts are often perceived as strange because they tend to avoid social interaction, are sometimes considered to have a lower social status, lack cooperation, and exhibit minimal academic participation (Saputri et al., 2024). In contrast, extroverts are often perceived as more intelligent due to their active nature and ease of interaction (Al Ayyubi et al., 2025). However, both have their own learning styles and advantages: introverts prefer a calm environment and tend to explore topics in detail until they achieve personal satisfaction, while extroverts are more active in group discussions and respond more quickly to social stimuli (Hakim, 2019). Therefore, no single learning style is superior to the other, as each possesses unique strengths and weaknesses (Kencana et al., 2024).

In the context of Arabic language learning, debate-based learning can be understood more comprehensively through the integration of personality theories proposed by Carl Jung and Hans Eysenck (Nur Fakwikiningsih, 2020), and the learning style theory introduced by Neil Fleming through the VARK model (Visual, Auditory, Reading/Writing, Kinesthetic) (Widharyanto, 2017). According to Carl Jung, human personality is divided into two main orientations: introversion and extraversion. Introverted individuals tend to focus on their inner world, are reflective, and prefer activities that allow for deep thinking and careful planning. In contrast, extroverted individuals are more outward-oriented, gain energy from social interaction, and tend to learn more effectively through activities that involve communication and active participation (Reppie et al., 2025). This view was later expanded by Eysenck, who emphasized that the distinction between introverts and extroverts is not only social but also biological, relating to the level of activation in the central nervous system. Extroverts require higher external stimulation, whereas introverts are more sensitive to stimuli and feel more comfortable in calm and quiet environments (Ruch et al., 2021).

Meanwhile, Neil Fleming explained that each individual has different preferences in receiving and processing information through four main learning styles in the VARK model, namely visual, auditory, reading/writing, and kinesthetic (Jumrah et al., 2022). The visual learning style emphasizes the use of images, diagrams, or visual representations; the auditory style relies on listening and discussion; the reading/writing style focuses on texts and written materials; while the kinesthetic style emphasizes learning through direct experience, practice, and physical activity (Supit et al., 2023).

These two theories complement each other in explaining the variations in how students absorb and express knowledge, especially in Arabic debate learning. Students with extroverted personalities and auditory or kinesthetic learning styles tend to develop better in debate activities because they gain energy from social interaction, discussion, and activities involving verbal expression and movement. Conversely, students with introverted personalities and visual or reading/writing learning styles may demonstrate strengths in the preparation stage, such as systematically constructing arguments, researching reading materials, and designing structured delivery strategies. Thus, Arabic debate serves as an effective platform to balance these two characteristics, as it not only requires active participation that aligns with extroverted tendencies but also provides space for

reflection and planning that suit introverted characteristics (Nofriansyah et al., 2022). The integration between personality theory and learning style theory indicates that the effectiveness of debate as a method of Arabic language learning largely depends on how well the activity accommodates various personality types and students' learning preferences (Aisha Fadl Al-kaabi, 2016).

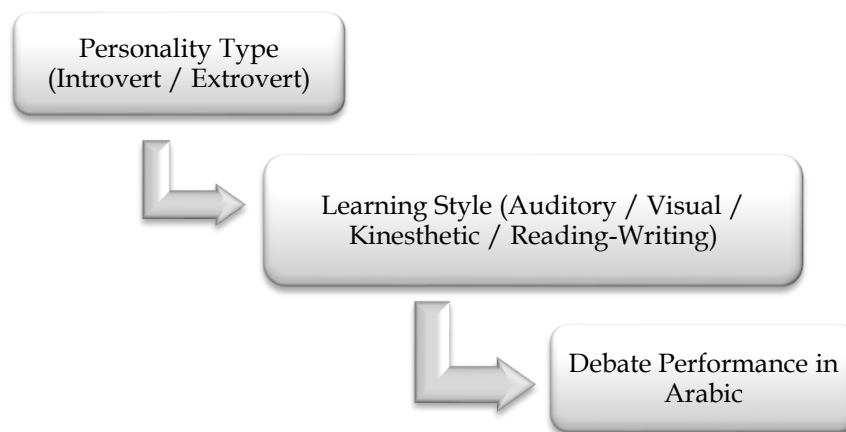


Figure 1. Conceptual diagram of the variables

This diagram illustrates the relationships among the variables in the study. Students' personality types (introvert vs. extrovert) are believed to influence their learning styles (VARK: auditory, visual, kinesthetic, reading/writing), which in turn affect their performance in Arabic debates. The arrows indicate the direction of influence, from personality type to learning style, and then to debate performance, showing that personality affects the way students learn, and learning style plays a role in the effectiveness of their debate performance.

Muhammad Hendarta's research examined the relationship between personality types and students' learning styles. Personality is considered to influence one's comfort and adaptability in the learning process; therefore, understanding learning styles is important to support academic success. Using a descriptive-analytic method with a cross-sectional design involving 135 students, this study analyzed differences in learning styles between introverted and extroverted types through the Kolmogorov-Smirnov test. The results showed that the most dominant learning style was auditory (33.3%), with the majority of respondents having introverted personalities (84.4%). The significance value of $p = 0.907$ indicated no significant difference between personality types and learning styles. These findings suggest that personality does not necessarily determine learning style, but they open opportunities for further research in more specific learning contexts, such as language learning and speaking skills through Arabic debate activities (Muhammad Hendarta, 2021).

Recent studies have further explored the relationship between personality types and learning performance in various educational contexts. Ulwiyah and Djuhan examined the interaction between extroverted and introverted students during classroom learning at SMP Negeri 2 Ponorogo from a social psychology perspective. Their findings indicated that extroverted students were more active during discussion-based learning, while introverted students tended to engage

better in reflective and independent activities. Nevertheless, both personality types were able to achieve effective learning outcomes when the instructional approach matched their preferences (Widya Zulfa Ulwiyah & Muhammad Widda Djuhan, 2021). Similarly, Fadilah, Baharuddin, and Amrullah (2023) investigated the correlation between extroverted-introverted personality traits and students' reading skill mastery in Arabic learning through online platforms at SMPIT Al-Fityan School Gowa. The study found that both personality groups demonstrated good levels of comprehension, with extroverts achieving slightly higher results. However, there was no significant correlation between personality type and reading skill mastery, suggesting that both introverts and extroverts can perform well in Arabic learning when supported by an appropriate and engaging learning environment (Fadillah et al., 2022). These findings reinforce the importance of designing learning activities such as Arabic debates that accommodate both reflective and interactive learners.

Although several recent studies have examined the relationship between personality and language learning strategies (Citra & Zainil, 2021), none have specifically investigated the differences in learning styles between introverted and extroverted learners within the context of Arabic debate learning. Therefore, this study aims to fill that gap by identifying and describing the differences in learning styles between these two personality types in Arabic debate learning at Rodatul-Lughah al-'Arabiyyah (RLA) Ma'had Annuqayah, as an effort to contribute to the development of Arabic language education studies. Based on this research objective, the study is guided by the hypothesis that there is a difference in learning styles between introverted and extroverted students in Arabic debate learning. This hypothesis is formulated to examine whether personality type is associated with distinct preferences in learning styles within the specific context of Arabic debate activities.

The phenomenon underlying this research lies in the different responses shown by introverted and extroverted students when participating in Arabic debate learning. Based on preliminary observations, introverted students tend to experience fear, difficulty adapting, and a lack of self-confidence when speaking in public. Interestingly, debate activities at RLA Ma'had Annuqayah continue to run effectively and have produced remarkable achievements from both introverted and extroverted students, such as First Place in the Arabic Debate Competition at the Islamic University of Indonesia (UII), Overall Champion at the Sukarabic Fest Asia 2018, and Overall Champion in the Southeast Asian Arabic Debate Competition.

This institution was deliberately selected as the research site because it represents a unique learning environment in which students with contrasting personality types are equally engaged and successful in Arabic debate activities. The sustained implementation of debate-based learning and its proven competitive achievements make RLA Ma'had Annuqayah a relevant and appropriate setting for examining differences in learning styles between introverted and extroverted students. Therefore, this condition raises a scientific question regarding how personality types influence students' learning processes and styles in Arabic debate learning. Accordingly, this study aims to analyze the

differences in learning styles between introverted and extroverted students in Arabic debate learning at RLA Ma'had Annuqayah, with the expectation that the findings will strengthen theoretical understanding and provide practical insights for educators in designing more adaptive debate learning strategies.

METHOD

This study employed a quantitative approach with a comparative design to analyze the differences between personality types (introvert and extrovert) and students' learning styles in Arabic debate learning (Sugiyono, 2023). Data were collected using the Myers-Briggs Type Indicator (MBTI) questionnaire to identify students' personality types and the VARK questionnaire to measure learning style preferences. The use of MBTI in educational research has been discussed in more recent studies as a personality classification framework in learning contexts (Shafi et al., 2021), while the VARK instrument has continued to be applied to assess learning style preferences in educational settings (Nur et al., 2023).

To ensure the reliability of the instruments, the results of the MBTI and VARK questionnaires were re-tested using the Cronbach's Alpha reliability test. The obtained reliability value was above 0.70, indicating that the instruments had good internal consistency (Samsu, 2017).



Figure 2. Research Steps Diagram

The research procedure was carried out in three stages: (1) the preparation stage, which included instrument development and research permission, (2) the implementation stage, involving the distribution of the MBTI and VARK questionnaires to all respondents, and (3) the data analysis stage, using statistical software to examine differences between the studied variables. Data analysis employed descriptive statistics (frequency, percentage, mean, and standard deviation) and inferential analysis through the Chi-Square test (χ^2), calculated using the formula:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where O is the observed frequency and E is the expected frequency. This test was chosen because it is suitable for analyzing differences between categorical (nominal) variables, such as personality type and learning style (Ogburn, 2012). The study was conducted at Roḍatul-Lughah al-'Arabiyyah, Annuqayah Islamic Institute, Sumenep, Madura, using a total sampling technique that involved all 35 students who had participated in Arabic debate learning for at least one semester. Since the sample size was relatively small, the results of the Chi-Square test should be interpreted with caution; therefore, descriptive analysis served as the main focus of this research. Nevertheless, this study provides an overview of the

differences in personality types and learning styles among students within the context of Arabic debate learning.

RESULTS AND DISCUSSION

RESULTS

The research data were collected from July to September 2025. The sample of this study consisted of thirty-five female students from Raudhatul Lughah al-'Arabiyyah, representing four levels: muftadi'ah (beginner), mutawassitah (intermediate), muftakirah (advanced), and mutaqqaddimah (proficient).

This study aims to identify the learning styles of introverted and extroverted students in Arabic debate learning at *Raudhatul Lughah al-'Arabiyyah Ma'had Annuqayah al-Islami* Sumenep. To analyze this phenomenon more comprehensively, the researcher examined several key aspects related to personality types and learning styles, as well as how these aspects are reflected in the context of Arabic debate learning. The following section presents a detailed explanation of the findings for each of these aspects.

Respondents' Age

The distribution of the respondents' ages involved in this study is classified into two categories, namely middle adolescence (15–17 years old) and late adolescence (18–24 years old), as shown in Table 1 below.

Table 1. Respondents' Age

		Frequency	Percent
Valid	Middle Adolescence (15-17)	7	20.0
	Late Adolescence (18-24)	28	80.0
	Total	35	100.0

The results in Table 1 show that the majority of respondents fall into the late adolescence category (18–24 years old), with 28 respondents (80.0%). Meanwhile, only 7 respondents (20.0%) belong to the middle adolescence category (15–17 years old). Therefore, it can be concluded that most of the sample members come from the late adolescence group, making the research findings more representative of the characteristics of this age group compared to those of middle adolescence.

Respondents' Education

The distribution of the respondents' educational levels in this study is classified into two categories, namely Madrasah Aliyah (MA) and university level, as shown in Table 2 below.

Table 2. Respondents' Education

		Frequency	Percent
Valid	Senior High School	15	42.9
	University	20	57.1
	Total	35	100.0

The results in Table 2 illustrate the frequency distribution of respondents based on their educational level. Out of a total of 35 respondents, 20 respondents (57.1%) belong to the higher education category, while 15 respondents (42.9%) are from the Islamic senior high school (MA) category. Therefore, it can be concluded

that the majority of respondents in this study are currently pursuing or have completed higher education.

Respondents' Class Level

The distribution of the respondents' class levels in this study is classified into four categories, namely *Mubtadi'ah* (Beginner), *Mutawassitah* (Intermediate), *Mubtakirah* (Advanced), and *Mutaqaddimah* (Proficient), as shown in Table 3 below.

Table 3. Respondents' Class Level

		Frequency	Percent
Valid	Beginner	9	25.7
	Intermediate	7	20.0
	Advanced	14	40.0
	Proficient	5	14.3
	Total	35	100.0

The results in Table 3 show the frequency distribution of respondents according to their class levels. Out of a total of 35 respondents, 14 respondents (40.0%) belong to the advanced (*mubtakirah*) class, 9 respondents (25.7%) to the beginner (*mubtadi'ah*) class, 7 respondents (20.0%) to the intermediate (*mutawassitah*) class, and 5 respondents (14.3%) to the proficient (*mutaqaddimah*) class. Therefore, it can be concluded that the majority of respondents in this study belong to the advanced (*mubtakirah*) class.

Respondents' Personality Types

The distribution of the respondents' personality types in this study is classified into two categories, namely introvert and extrovert, as shown in Table 4 below.

Table 4. Respondents' Personality Types

		Frequency	Percent
Valid	Introvert	14	40.0
	Extrovert	21	60.0
	Total	35	100.0

Based on Table 4 above, it can be seen that out of a total of thirty-five respondents, twenty-one respondents (60.0%) had extroverted personalities, while fourteen respondents (40.0%) had introverted personalities. Thus, it can be concluded that the majority of respondents in this study possessed extroverted personalities, indicating that the results of this research are more representative of this group's characteristics compared to those of the introverted respondents.

Respondents' Learning Styles

The distribution of the respondents' learning styles in this study is classified into four categories, namely visual, auditory, reading, and kinesthetic, as shown in Table 5 below.

Table 5. Respondents' Learning Styles

		Frequency	Percent
Valid	Visual	12	34.3
	Auditory	15	42.9
	Reading	5	14.3
	Kinesthetic	3	8.6
	Total	35	100.0

Based on Table 5 above, it can be seen that among the thirty-five respondents, the auditory learning style is the most dominant, with 15 respondents (42.9%). This indicates that most students understand learning material more effectively through listening activities such as teacher explanations, discussions, or oral argument delivery during debates. Furthermore, 12 respondents (34.3%) have a visual learning style, meaning they learn better through visual aids such as texts, images, or instructional videos. Meanwhile, 5 respondents (14.3%) show a preference for the reading and writing learning style, suggesting that they learn best through reading texts and rewriting information to reinforce understanding. Only 3 respondents (8.6%) prefer a kinesthetic learning style, which emphasizes learning through movement or hands-on experience.

Therefore, it can be concluded that the auditory learning style is the most dominant among the respondents, while the kinesthetic learning style is the least preferred. These findings suggest that, in the context of Arabic debate learning, activities involving auditory elements such as listening to arguments, paying attention to explanations, and engaging in discussions are more suitable for the majority of students.

Respondents' Learning Styles Based on Personality Types

The distribution of the respondents' learning styles based on personality types is classified into four learning style categories visual, auditory, reading, and kinesthetic and two personality types, namely introvert and extrovert, as shown in Table 6 below.

Table 6. Respondents' Learning Styles Based on Personality Types

			Learning Styles				Total
			Visual	Auditory	Reading	Kinesthetic	
Personality	Introvert	Count	6	3	4	1	14
		Percent	17.1%	8.6%	11.4%	2.9%	40.0%
	Extrovert	Count	6	12	1	2	21
		Percent	17.1%	34.3%	2.9%	5.7%	60.0%
Total		Count	12	15	5	3	35
		Percent	34.3%	42.9%	14.3%	8.6%	100.0%

Based on Table 6, the distribution of respondents' learning styles according to personality types shows some interesting patterns. Among the introverted students (n = 14, 40.0%), the visual learning style is the most common, with 6 students (17.1%), followed by reading/writing (4 students, 11.4%), audio (3 students, 8.6%), and kinesthetic (1 student, 2.9%). This indicates that introverted

students tend to prefer learning through observation and reading/writing activities, which aligns with their inclination for reflection and independent study.

The results of this study indicate that introverted students tend to have a strong preference for visual and reading/writing learning styles. This pattern can be explained through Ni Made Sulastris's theory of personality identification based on Carl Jung's theory, which classifies personalities into introvert and extrovert types. Introverted individuals typically gain energy from their internal world, are reflective, and feel comfortable working independently. In the learning context, introverted students process information reflectively through observation and note-taking, prefer individual learning, favor quiet environments, analyze material in depth, and engage more in writing than in direct discussions.

Meanwhile, Among extroverted students ($n = 21$, 60.0%), the auditory learning style is the most dominant (12 students, 34.3%), followed by visual (6 students, 17.1%), kinesthetic (2 students, 5.7%), and reading/writing (1 student, 2.9%). Extroverted students tend to learn more effectively through listening, discussion, explaining material to others, and interactive activities such as presentations and role-playing.

Overall, the table shows that auditory and visual learning styles are the most preferred among all respondents, while reading/writing and kinesthetic styles are less dominant. These findings highlight that personality type may influence learning style preferences, with introverts favoring more reflective approaches and extroverts favoring interactive, auditory methods, particularly relevant in the context of Arabic debate learning.

Chi-Square Test of Difference

The Chi-Square test of difference was used to determine whether there were significant differences between the respondents' personality types and learning styles. The results of the Chi-Square test are presented in Table 7 below.

Table 7. Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.389 ^a	3	.094
Likelihood Ratio	6.640	3	.084
Linear-by-Linear Association	.022	1	.881
N of Valid Cases	35		

Based on the results of the chi-square test, the Pearson chi-square value was 6.389 with a degree of freedom of 3 and a significance level of 0.094 ($p > 0.05$). These findings indicate that there is no statistically significant difference between personality type (introvert and extrovert) and the learning styles used by students in Arabic debate learning at Raudhatul Lughah al Arabiyyah, Ma'had Annuqayah Islamic Institute, Sumenep. Therefore, this study does not provide sufficient empirical evidence to support the influence of personality type on students' learning styles in the investigated context.

This conclusion is supported by the Likelihood Ratio value of 6.640 ($p = 0.084$) and the Linear by Linear Association value of 0.022 ($p = 0.881$), both of which indicate a weak and statistically insignificant relationship between the two variables. Although descriptive differences were observed in students' learning

style tendencies, these differences did not reach statistical significance according to the chi-square test results.

In addition, the analysis revealed that five cells, representing 62.5 percent of the total, had expected counts of less than 5, with the lowest expected value being 1.20. This suggests that some data had low expected frequencies, and therefore the chi-square test results should be interpreted with caution. While introverted students tended to prefer visual and reading or writing learning styles and extroverted students tended to favor auditory learning styles, these tendencies were not statistically significant. Consequently, future studies are recommended to involve larger sample sizes and ensure that statistical assumptions are adequately met to obtain more robust and generalizable findings.

DISCUSSION

The findings of this study provide valuable insights into the relationship between personality types and learning styles among female students engaged in Arabic debate learning at *Raudhatul Lughah al-'Arabiyyah* Ma'had Annuqayah al-Islami Sumenep. Although the results of the Chi-Square test indicate no statistically significant difference between the two variables, the descriptive analysis reveals meaningful patterns that reflect psychological and pedagogical tendencies within the learning process.

Personality Types and Learning Style Tendencies in Arabic Debate Learning

The findings of this study indicate that personality types play a role in shaping students' learning style tendencies, even though the difference is not statistically significant. Based on the descriptive analysis, students with extroverted personality types are greater in number and tend to prefer auditory learning styles, while introverted students show a stronger preference for visual and reading/writing learning styles. This pattern aligns with Carl Jung's personality theory as cited by Ni Made Sulastrri, which explains that extroverted individuals gain energy through interaction and communication, whereas introverted individuals gain energy through reflection and solitude (Ni Made Sulastrri, 2025).

In the context of Arabic debate learning, these differences are reflected in how students interact with the material and learning activities. Extroverted students find it easier to understand the material through activities involving discussion, debate, and verbal explanation elements that are naturally embedded in debate learning. Conversely, introverted students feel more comfortable processing information through observation, note-taking, and reflection, which enables them to internalize and organize ideas before expressing them. These findings are consistent with previous studies showing that personality influences the way individuals engage in learning activities. Extroverted students generally perform better in interactive, communicative, and spontaneous learning environments, whereas introverted students tend to excel in structured and reflective learning contexts (Ateş, A., 2008).

Furthermore, the results show that the auditory learning style is the most dominant among respondents. This dominance aligns with the communicative nature of debate activities, which require active listening, critical responding, and

verbal expression all of which involve auditory processes. This finding reinforces Fleming's VARK model, which states that auditory learners comprehend information more effectively through listening and speaking activities. In the context of Arabic debate learning, the auditory learning style is particularly relevant, as students must listen attentively to opponents' arguments, construct logical rebuttals, and articulate responses fluently (Jumrah et al., 2022).

However, the relatively high percentage of visual learners also indicates that many students rely on visual stimuli such as written arguments, debate scripts, and visual cues from peers or instructors (Syafaei, 2025). This combination of auditory and visual preferences suggests that effective Arabic debate instruction should integrate both listening activities and visual support (Ida Miftakhul Jannah, 2022). The use of debate flow charts, written notes, and debate video recordings can enhance students' comprehension and retention for both extroverted and introverted learners.

Therefore, it can be concluded that although there is no statistically significant difference between personality types and learning styles, the observed tendencies suggest that personality characteristics still influence students' learning preferences. This highlights the importance of implementing flexible and multimodal learning approaches that accommodate the needs of both personality types in Arabic debate learning.

Interpretation of Chi-Square Test Results

The results of the Chi-Square test indicate that there is no statistically significant difference between personality types and students' learning styles in Arabic debate learning ($\chi^2 = 6.389$, $df = 3$, $p = 0.094$). Since the significance value is greater than the established alpha level (0.05), it can be concluded that differences in personality types, whether introverted or extroverted, do not result in meaningful differences in students' learning styles. The Likelihood Ratio value (6.640, $p = 0.084$) and Linear-by-Linear Association (0.022, $p = 0.881$) also confirm that the difference between the two variables is weak and not statistically significant.

These findings suggest that variations in students' learning styles are more strongly influenced by contextual and pedagogical factors, such as teaching methods, the nature of academic activities, and the demands of debate-based learning, rather than by differences in personality type itself (Rahmawati, 2025). Felder and Silverman explained that learning style is not a fixed trait determined by personality but rather shaped by the learning environment and instructional strategies (Widaningrum & Chie, 2015). This explains why no significant differences were found between the two personality types, as debate-based learning requires similar cognitive and visual strategies in analyzing arguments and organizing ideas systematically.

The results of this study are also consistent with previous research that employed the Visual Auditory Kinesthetic (VAK) learning style questionnaire and the Jung Typology Indicator (JTI), both of which found no significant differences between personality types and learning styles ($p > 0.05$). This can be explained by the tendency of students to adapt their learning styles to the learning context and teaching methods rather than relying solely on their personality type (Nur Laila

Mawaddah, 2023). Therefore, it can be concluded that differences between personality type and learning style are statistically insignificant, as they are influenced by multiple internal and external factors such as motivation, learning environment, teaching methods, and interaction with instructors.

Pedagogical Implications

In the context of Arabic debate learning, the findings of this study indicate that both introverted and extroverted students tend to employ auditory and visual learning styles simultaneously (Nurhikmah, 2024). This provides important implications for Arabic language teachers and *musyrifah* to design balanced and multimodal teaching strategies that accommodate the diverse learning needs of all personality types.

An effective instructional approach should integrate auditory activities such as listening to arguments, engaging in oral practice, and participating in group discussions with visual elements, including argumentative texts, concept maps, or structured outlines of debate organization displayed on the board (Tamphu et al., 2024). This combination not only allows extroverted students to channel their communicative energy effectively but also helps introverted students process information through observation and note-taking before expressing their ideas publicly.

Theoretically, this study reinforces the understanding that personality type and learning style are related but not deterministically linked. Practically, the findings offer concrete guidance for Arabic language educators to develop debate learning models that balance auditory and visual stimulation, thereby enhancing students' speaking abilities, critical thinking skills, and confidence in using Arabic effectively.

The implementation of such multimodal learning strategies aligns with Fleming's recommendation that effective instruction should consider the diversity of learning styles within the classroom rather than focusing solely on one dominant type (Fleming & Charles Bonwell, 2019). Accordingly, Arabic language teachers can create an inclusive, participatory, and reflective learning environment where all students regardless of personality type can actively engage and contribute to the debate learning process.

Although the findings of this study provide an overview of the learning style tendencies of introverted and extroverted students in Arabic debate learning, several limitations need to be acknowledged. This study was conducted with a relatively small sample size and involved only one institution; therefore, the results cannot be widely generalized. In addition, several data categories had low frequencies, which means that the chi-square test results should be interpreted with caution. The use of questionnaire-based instruments also carries the potential for respondent subjectivity bias, especially in determining personality types and learning style preferences.

This study also did not take into account other factors that may influence the outcomes, such as learning motivation, level of Arabic proficiency, debating experience, or the competence of the *musyrifah* in guiding debate activities. These factors may affect how students respond to debate activities, both during the preparation stage and during their performance.

In light of these limitations, future research may involve a larger sample size and multiple institutions to obtain more representative findings. A mixed-method approach also has the potential to provide deeper insights, particularly through direct observations and interviews that can illustrate the learning process more comprehensively. Furthermore, future studies may examine the role of other variables such as speaking anxiety, self-confidence, or learning motivation as mediating factors between personality and learning styles in the context of Arabic debate. The development of a multimodal debate learning model may also become a promising direction for future research to evaluate its effectiveness for students with different personality types.

CONCLUSION

This study examines the relationship between personality types and learning styles among female students in Arabic debate learning at Raudhatul Lughah al-'Arabiyyah Ma'had Annuqayah al-Islami Sumenep. The Chi-Square analysis shows no statistically significant association between personality types and learning styles. However, descriptive analysis indicates notable tendencies: extroverted students more frequently prefer auditory learning styles, while introverted students tend to favor visual and reading/writing styles. The findings demonstrate that students' learning styles in Arabic debate activities are shaped more by instructional context than by personality type alone. The nature of debate learning, which emphasizes listening, observing, and responding, encourages both introverted and extroverted students to employ similar auditory and visual strategies. This suggests that learners are able to adapt their learning approaches to meet the demands of debate-based instruction. Overall, the results highlight that Arabic debate learning fosters adaptive learning behaviors across different personality types, with auditory and visual modalities emerging as dominant strategies. These findings contribute empirical evidence that learning styles in debate contexts are flexible and influenced by learning activities rather than fixed personality characteristics.

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