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**DEMOGRAPHIC FACTORS INFLUENCING ART
STUDENTS' TENDENCIES TOWARD THE PEERAGOGY
LEARNING APPROACH IN HIGHER EDUCATION**

Yang Yang¹, Yee Mei Heong^{2*}

¹Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia

 aloofyy06@gmail.com

 <https://orcid.org/0009-0000-4419-6365>

²Faculty of Technical and Vocational Education, Universiti Tun Hussein Onn Malaysia

 mhyee@uthm.edu.my

 <https://orcid.org/0000-0003-1534-9742>

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Abstract:

This study explores the preferences of art students toward the pedagogy learning approach in the context of higher education. Peeragogy, a collaborative learning approach centered on peer interaction and digital resource utilization, has been recognized as an effective pedagogical approach for fostering 21st-century skills such as creativity, critical thinking, communication, and collaboration. Despite its potential, challenges in its implementation in China's higher art education persist, including ingrained authoritative teacher-student relationships, lack of self-directed learning among students, and traditional evaluation methods prioritizing individual performance over teamwork. This study analyzes art students' preferences for peeragogy learning approaches based on demographic factors, such as gender and socioeconomic status (SES). By identifying trends and differences in these preferences, the research seeks to enhance the inclusivity and diversity of art education, promoting the effective integration of peeragogy into the art classroom. The findings will provide practical guidance for educators and policymakers, supporting the development of collaborative skills and fostering a positive, inclusive learning environment for art students.

Keyword:

Art Education, Peeragogy, Student-Centered Learning, Socioeconomic Status (SES), 21st-Century Skills



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Introduction

Adolescents who have experienced art learning possess characteristics of creative talent. They can create socially valuable original works based on specific objectives, are adept at addressing challenges across social, economic, cultural, educational, and technological domains, and contribute to sustainable social development while advancing personal growth (Weicht et al., 2020). Learning art not only enhances students' aesthetic appreciation but also promotes the development of their thinking and creativity, enabling them to experience the joy of creation and self-fulfillment (Jin & Ye, 2022).

Art education emphasizes cultivating students' innovative abilities, encouraging them to explore new forms of expression and develop original works (Jiang & Sun, 2024). It also enables students to convey their creativity and ideas to audiences through personal or collaborative works of art, fostering collaboration and interpersonal communication skills (Jia, 2023). These abilities emphasized in art education align with the 21st-century "4C" skills: critical thinking, communication, collaboration, and creativity (Li et al., 2022).

How to guide adolescents in mastering "21st-century learning skills" to help them adapt to life and contribute to their communities and society has become a hot topic and research focus in international education (Qian, 2020). Developing 21st-century skills such as critical thinking, creativity, and teamwork is essential in modern education (SlaLana, 2016). Against this backdrop, art education must continuously explore development directions aligned with contemporary advancements to play a vital role in nurturing 21st-century artistic talents. Appropriate learning methods should be applied in art education to meet the learning needs of the 21st century.

Peeragogy is a collaborative learning model centered on peer interaction, utilizing digital resources to facilitate knowledge sharing and exchange. This approach promotes collaborative learning among students, encouraging mutual support and motivation, thereby equipping them with 21st-century knowledge, skills, and abilities (Chan et al., 2019; Antipuesto & Tan, 2020). Peeragogy has been studied and identified as suitable for art education. In higher art education, students often need to engage in collaborative learning or establish close interrelations (Gesbert et al., 2022). Peeragogy helps students develop awareness of cooperation and mutual support during artistic creation by fostering relationships, building trust, and respecting one another, thereby creating a positive and inclusive learning environment (Jamaludin & Ledger, 2020). In the art field, students can co-create, evaluate, and discuss art projects. By sharing, they gain exposure to different artistic styles and approaches from their group members, which deepens their understanding of artistic creation and theoretical knowledge while developing their skills and styles (Zheng & Li, 2021; Mulholland, 2019). Simultaneously, it enhances students' collaborative abilities and social skills (Barak & Yuan, 2021).

In China's higher art education, peeragogy learning approach have significant potential as innovative teaching methods, they face challenges in practice. First, the authoritative relationship between teachers and students is deeply ingrained in Chinese higher art education, and the traditional teacher-centered teaching model remains dominant (Yao, 2023). Some students are accustomed to relying on teacher guidance, lacking self-directed learning and organizational skills. The traditional teaching approach fails to stimulate students' motivation for learning (Yu, 2018). This could lead to peer learning becoming superficial, with varying levels of student participation, ultimately affecting learning outcomes (Yao et al., 2022).

China's existing examination and evaluation methods generally focus more on individual outcomes rather than the process or results of teamwork (Heng, 2018), which may cause students to undervalue the importance of peer learning. Students often prioritize improving their individual performance and skills over achieving common goals through collaboration (Deng, 2022). Some art students focus more on personal creative expression (Jia, 2023), sharing their opinions less frequently, which can hinder consensus-building among peers. When disagreements arise, students may struggle to maintain an inclusive and open attitude (Deng & He, 2022).

Some art students lack a strong sense of collaboration and display a competitive mindset, showing limited enthusiasm and openness toward peer learning methods (Gu & Lu, 2023). Their primary focus on individual learning during their foundational education leaves them unprepared to develop collaborative skills in university (Zhao & Bai, 2022). Moreover, teachers often do not provide sufficient guidance for peer learning, leaving students unable to strike a balance between collaboration and independence (Ma & Guo, 2023).

Peeragogy requires teachers to play an active role in activity design, guidance, and feedback. However, some educators may lack relevant pedagogical knowledge and training experience, making it challenging for them to effectively implement and teach peeragogy learning methods (Deng, 2022). Certain art educators are insufficiently familiar with the latest teaching theories and their applications (Yang & Yuan, 2021). Many have not recognized peer learning as a scientifically grounded teaching method with a robust theoretical foundation (Qu et al., 2023). Thus, teaching methods and content in art education still require significant improvement and practice.

This study aims to identify art students' preferences for peeragogy learning approaches. By analyzing these trends, it seeks to enhance the diversity and inclusivity of art education and promote the efficient application of peeragogy in art classrooms. It is hoped that the study's findings will provide practical guidance for educators and policymakers to better implement peeragogy, improve students' learning experiences, and cultivate artistic talents with collaborative spirit and teamwork skills.

The objectives of this study are:

- (1) To identify the tendencies of art students towards the peeragogy learning approach based on demographic factors.
- (2) To analyze gender-based differences in the peeragogy learning approach among art students.
- (3) To analyze socioeconomic status (SES)-based differences in the peeragogy learning approach among art students.

Literature Review

Art education plays a vital role in cultivating creativity, critical thinking, and collaborative skills among students, which are essential components of 21st-century competencies (Vazquez-Marín et al., 2022). In the context of higher art education, the focus has shifted from mere technical proficiency to fostering students' ability to think independently and creatively (Samaniego et al., 2024). However, traditional teacher-centered pedagogical practices and examination-oriented evaluation systems in China often limit students' autonomy and collaborative learning opportunities (Yao, 2023).

Peeragogy, a learning approach emphasizing peer collaboration, mutual support, and knowledge sharing, provides an effective alternative to conventional instructional models (Barak & Yuan, 2021). It encourages students to take ownership of their learning, promotes interaction and dialogue, and enhances self-directed learning skills. Studies have shown that peeragogy can significantly enhance higher-order thinking skills (HOTS), including analysis, evaluation, and creation, cognitive processes vital for artistic expression and problem-solving (Yang & Heong, 2024).

In art education, peeragogy fosters collaboration and creativity through co-creation, critique, and shared reflection among students (Gesbert et al., 2022). By engaging in peer interactions, students gain exposure to diverse artistic perspectives and styles, deepening their conceptual understanding and artistic sensitivity (Jamaludin & Ledger, 2020). Nonetheless, the implementation of peeragogy in China's higher art education remains challenged by hierarchical teacher-student relationships, insufficient self-directed learning abilities, and the predominance of individual performance assessment (Yu, 2018).

Recent research highlights the importance of considering demographic variables such as gender and socioeconomic status (SES) in understanding students' attitudes and preferences toward collaborative learning (Hollister, et al., 2020). These factors may influence students' learning motivation, communication styles, and openness to peer interaction. Thus, examining demographic influences on peeragogy implementation is crucial for designing inclusive and equitable art education strategies that promote creativity, cooperation, and critical thinking across diverse student groups.

Method

This study employs a survey research method. The study population are 40 music department students from a university in Dali Prefecture, Yunnan Province. These students were chosen because third-year students generally have accumulated a certain level of professional knowledge and skills, possess relatively mature learning abilities, and are about to enter critical stages of their academic journey, such as graduation projects or internships. The study sample was selected using a random sampling method, ultimately identifying 35 students as the research sample. This study utilizes a questionnaire survey, and all collected information remains anonymous. All methods were conducted in accordance with the relevant guidelines and regulations of the Declaration of Helsinki.

A peeragogy survey questionnaire was used as the research tool. This questionnaire was adapted from the "Paradigm Approach Survey in TVET Learning" developed by Mohamad et al. (2022). The questionnaire consists of two sections: Section A and Section B. Section A asks

respondents to provide information related to their gender, age, and total family income level. Section B is designed based on the five learning approaches of peeragogy: student-centered, self-learning, agreement, sharing, and goal-orientated.

It includes questions to measure students' peeragogy learning approach. The questionnaire is divided into five sections according to these five approaches, totaling 56 items. The questionnaire uses a 4-point Likert scale, with response options of 1 (Strongly Disagree), 2 (Disagree), 3 (Agree), and 4 (Strongly Agree). The participants in this study voluntarily agreed to complete the questionnaire.

The content validity of the questionnaire was verified by three lecturers from the Faculty of Technical and Vocational Education (FPTV), who are experts in pedagogy and peeragogy. The reliability of the analytical variables was assessed using Cronbach's Alpha. The Alpha value for the peeragogy items was 0.89. A Cronbach's Alpha value between 0.80 and 1.0 indicates high reliability and validity (Bond et al., 2020). Therefore, the items in the questionnaire are suitable for use.

All collected data were analyzed using SPSS version 26. Descriptive statistical methods were employed to determine the percentage and frequency of each tendency pattern based on demographic factors. Inferential statistical methods were used to analyze differences in peeragogy based on student gender and socioeconomic status (SES). The results of the 4-point Likert scale questionnaire were categorized into binary nominal data (agree and disagree). Based on the type of dependent variable data, this study used the non-parametric Mann-Whitney U test to analyze mean differences in the five peeragogy learning methods based on gender, and the Kruskal-Wallis H test to analyze mean differences in the five peeragogy methods based on SES.

Results

Tendency of Peeragogy Learning Approach Among Art Students Based on Demographics

Table 1 illustrates the peeragogy learning approach tendency among art students. Research shows that the majority of students (97.1%) tend to adopt the peeragogy learning approaches of "agreement" and "goal oriented." Following that, "student-centered," "self-learning," and "sharing" are also commonly used (Table 2).

Table 1: Tendency of Peeragogy Learning Approach Among ART Students

Peeragogy Learning Approach	Agree		Disagree	
	f	%	f	%
Student-centered	33	94.3	2	5.7
Self-learning	32	91.4	3	8.6
Agreement	34	97.1	1	2.9
Sharing	31	88.6	4	11.4
Goal-oriented	34	97.1	1	2.9

Table 2: Descending Order Pattern of Peeragogy Learning Approach Tendencies Among ART Students

Peeragogy Learning Approach	%	Descending Order
Agreement	97.1	↓
Goal-oriented	97.1	
Student-centered	94.3	
Self-learning	91.4	
Sharing	88.6	

The results indicate that the application of peeragogy among art students can enhance their learning performance, particularly in the areas of "agreement" and "goal-orientated," where students show strong agreement. This suggests that they actively participate in learning and are eager to collaborate. The "agreement" learning approach not only allows students to explore and solve problems together, which helps cultivate essential skills like collaboration and communication, but it also deepens their understanding of knowledge and develops higher-order thinking skills (Basil Cahusac & Lynette Pretorius, 2024). Meanwhile, by setting and achieving shared learning goals, students learn to cooperate, appreciate differences, and overcome challenges together. Their sense of teamwork and responsibility is strengthened, leading to a richer learning experience that boosts motivation and improves learning outcomes (Bhargav et al., 2024). Table 3 illustrates the different peer learning tendencies between male and female students.

Table 3: Tendency Of Peeragogy Learning Approach Based on Students'gender

Peeragogy Learning Approach	Male				Female			
	Agree		Disagree		Agree		Disagree	
	F	%	F	%	F	%	F	%
Student-centered	13	92.9	1	7.1	20	95.2	1	4.8
Self-learning	13	92.9	1	7.1	19	90.5	2	9.5
Agreement	13	92.9	1	7.1	21	100.0	0	0
Sharing	13	92.9	1	7.1	18	85.7	3	14.3
Goal-oriented	14	100.0	0	0	20	95.2	1	4.8

Male students show high support rates for each learning approach, with the highest being "goal-oriented" (100%), followed by "student-centered," "self-learning," "agreement," and "sharing," all at 92.9%. Female students also demonstrate high support rates for each learning approach, with the highest being "agreement" (100%), followed by "student-centered" and "goal-oriented" (both at 95.2%), "self-learning" (90.5%), and finally "sharing" (85.7%), which is the lowest support rate among female students for any peeragogy learning method (Table 4).

Table 4: Descending Order Pattern of Peeragogy Learning Approach Tendencies Based on Students' Gender

Peeragogy learning approach	Male	Peeragogy learning approach	Female	Descending Order ↓
	% (Agree)		% (Agree)	
Goal-oriented	100	Agreement	100	
Student-centered	92.9	Student centered	95.2	
Self-learning	92.9	Goal	95.2	
Agreement	92.9	Self learning	90.5	
Sharing	92.9	Sharing	85.7	

Overall, the peeragogy learning approach is widely accepted and recognized by art students. This is because both male and female students need to interact with peers during the learning process (Pan et al., 2024). Peer interaction among boys and girls contributes to learning progress (Chadha, 2019). Additionally, feedback from peer interactions has a positive impact on learning outcomes (Valero Haro et al., 2023; Bellhäuser et al., 2022).

Table 5 shows the preferences of students from different family income levels toward the peeragogy learning approach. This reflects that income background has a certain influence on the acceptance of learning methods.

Table 5: Tendency of Peeragogy Learning Approach Based on SES

Total family income (per month)	Peeragogy learning approach																			
	Student-centered				Self-learning				Agreement				Sharing				Goal-oriented			
	Agree		Disagree		Agree		Disagree		Agree		Disagree		Agree		Disagree		Agree		Disagree	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
RMB4001-5000	2	100.0	0	0	1	50.0	1	50.0	1	50.0	1	50.0	0	0	2	100.0	2	100.0	0	0
RMB5001-6000	3	100.0	0	0	3	100.0	0	0	3	100.0	0	0	3	100.0	0	0	3	100.0	0	0
RMB6001-7000	9	100.0	0	0	8	88.9	1	11.1	9	100.0	0	0	8	88.9	1	11.1	9	100.0	0	0
RMB7001-8000S	11	91.7	1	8.3	11	91.7	1	8.3	12	100.0	0	0	11	91.7	1	8.3	11	91.7	1	8.3
Exceeding RMB8000	8	88.9	1	11.1	9	100.0	0	0	9	100.0	0	0	9	100.0	0	0	9	100.0	0	0

Specifically, students with a monthly income in the range of RMB 4001–5000, 5001–6000, and 6001–7000 have the same two most supported approaches, namely "student-centered" and "goal-oriented," both with a support rate of 100%. For students with a monthly income in the range of RMB 4001–5000, the next supported approaches are "self-learning"(50%) and "agreement"(50%),while the lowest is "sharing" (0%).For students with a monthly income in the range of RMB 5001–6000, the next three approaches—"self-learning," "agreement," and "sharing"—all have a support rate of 100%.For students with a monthly income in the range of

RMB 6001–7000, the next supported approach is "agreement"(100%), followed by "self-learning" (88.9%)and "sharing" (88.9%).

For students with a monthly income in the range of RMB 7001–8000, the highest-supported approach is "agreement" (100%), followed by the four approaches—"student-centered," "goal-oriented," "self-learning," and "sharing"—each with a support rate of 91.7%.For students with a monthly income exceeding RMB 8000, the support rate for "goal-oriented," "self-learning," "agreement," and "sharing" is 100%, while the support rate for "student-centered" is 88.9%.

Table 6: Descending Order Pattern of Peeragogy Learning Approach Tendencies

RMB4001-5000		RMB5001-6000		RMB6001-7000		RMB7001-8000		Exceeding RMB8000		Descending Order
Peeragogy learning approach	%	Peeragogy learning approach	%	Peeragogy learning approach	%	Peeragogy learning approach	%	Peeragogy learning approach	%	
Student centered	100.0	Student centered	100.0	Student centered	100.0	Agreement	100.0	Goal-oriented	100.0	↓
Goal-oriented	100.0	Goal-oriented	100.0	Goal-oriented	100.0	Student-centered	91.7	Self-learning	100.0	
Self-learning	50.0	Self-learning	100.0	Agreement	100.0	Goal-oriented	91.7	Agreement	100.0	
Agreement	50.0	Agreement	100.0	Self-learning	88.9	Self-learning	91.7	Sharing	100.0	
Sharing	0	Sharing	100.0	Sharing	88.9	Sharing	91.7	Student-centered	88.9	

Overall, students across all income levels demonstrate a high degree of recognition for various learning approaches within the peeragogy, particularly in "student-centered," "agreement," and "goal-oriented." This indicates that these approaches play a significant role in promoting active participation and collaborative learning among students. However, in the "sharing" approach, students with lower socioeconomic status (SES) show a lower preference for collaboration and interaction.

This may be because these students are more likely to experience lower self-esteem and have limited peer interactions, leading them to prefer individual-focused learning methods (Li et al., 2021). In contrast, students from higher SES backgrounds typically benefit from stronger family academic support, such as parental tutoring and extracurricular lessons (Qi & Ang, 2024). These students often exhibit higher academic confidence and self-efficacy, believing that they can contribute effectively in peeragogy learning settings (Li et al., 2021). This gives them greater confidence and motivation in peer learning contexts.

Difference in Peeragogy Learning Approach Based on Gender

The Mann-Whitney U test indicate that there are not significantly difference in peeragogy learning approach between male and female students. Except for the "goal-oriented" approach (Table 7).

Table 7: Mann-Whitney U Test for Differences in Peeragogy Learning Approach Based on Gender

Peeragogy learning approach	Male		Female		Mann-Whitney U	P
	N	Mean Rank	N	Mean rank		
Student-centered	14	19.25	21	17.17	129.500	.561
Self-learning	14	17.75	21	18.17	150.500	.907
Agreement	14	18.75	21	17.50	136.500	.727
Sharing	14	19.50	21	17.00	126.000	.495
Goal-oriented	14	22.96	21	14.69	77.500	*.018

*Significant differences at $p < .05$

The study shows that the approach male students excel at the most is the "goal-oriented" (Mean Rank = 22.96), with the Mann-Whitney U test showing statistical significance ($p = 0.018$). This result indicates that gender influences the "goal-oriented" approach in peeragogy learning. Male students may place greater emphasis on achieving specific objectives through peer collaboration (Zhao & Yang, 2021).

This finding may be associated with role expectations and cultural influences. In some cultural contexts, males may be assigned greater achievement-related role expectations (Wei et al., 2021). Conversely, females who display overly independent or assertive behaviors may face negative evaluations (Bosak et al., 2018). These factors could lead to males placing greater focus on result-oriented learning.

Additionally, males are often encouraged during socialization to focus on competition, task completion, and goal achievement. As a result, they are more inclined to set specific goals in learning environments. Male students also tend to exhibit a stronger sense of team identity and work collaboratively to achieve these goals (Gomez-Ruiz & Sánchez-Expósito, 2020). In contrast, females may place greater emphasis on emotional support and relationship building during the learning process.

Compared to male students, female students are most proficient in using the method of self-learning (mean rank = 18.17). Social stereotypes may influence female students' preferences for peeragogy learning approach. Traditional societal expectations of female roles in China often emphasize traits such as docility and introversion (Tong, 2005). As a result, females may tend to choose self-learning to avoid being overly active in group discussions or engaging in conflicts with others, thus conforming to these stereotypes (Fu et al., 2018). They may prefer independent learning environments rather than performing or competing within a team (Wu, 2017). Self-learning offers a more comfortable learning environment. (Jin & Ye, 2022)

Educational expectations may also influence females' learning methods. Research indicates that parental involvement in education, parental educational expectations, as well as teacher encouragement and peer expectations at the school level all have a positive impact on educational expectations for both genders (Huang & Wu, 2016; Wu, 2018). However, the extent of these influences differs, with studies showing that these factors have a stronger positive effect on boys. In other words, the confidence and self-expectations that girls derive from these influences are lower than those of boys (Zhao & Yang, 2021). This may lead to lower self-efficacy in academic abilities among girls, which could motivate them to lean more toward self-learning to build confidence (Jin & Hu, 2018).

This may also reflect gender differences in learning motivation, with males demonstrating a stronger performance goal orientation than females. According to Balanoff et al. (2022), intrinsic motivation varies by gender. For instance, females exhibit higher intrinsic motivation, often driven by a desire for personal growth and a sense of accomplishment through learning. In contrast, male students are more likely to be motivated by external goals (performance-oriented), such as obtaining rewards, recognition, or competitive success (Fouladchang et al., 2009). As a result, they may show greater engagement in goal-oriented learning tasks.

Difference in Peeragogy Learning Approach Based on SES

The Kruskal-Wallis H analysis revealed no significant difference in peeragogy learning approach among art students from different SES groups (Table 8).

Table 8: Kreskal-Wallis H Test for Differences in Peeragogy Learning Approach Based on SES

Peeragogy learning approach	RMB4001-5000		RMB5001-6000		RMB6001-7000		RMB7001-8000		Exceeding RMB8000		Kreskal-Wallis H	P
	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank	N	Mean Rank		
Student-centered	2	4.00	3	21.83	9	21.28	12	19.08	9	14.22	4.685	.321
Self-learning	2	3.00	3	20.33	9	21.06	12	15.08	9	21.39	7.534	.110
Agreement	2	4.25	3	23.50	9	17.78	12	18.42	9	18.89	4.876	.300
Sharing	2	3.00	3	24.00	9	15.67	12	21.21	9	17.39	7.304	.121
Goal-oriented	2	10.00	3	16.83	9	20.56	12	17.71	9	18.00	1.910	.752

*Significant differences at $p < .05$

Although certain trends were observed in the mean ranks—for example, students with an income level of RMB 5001-6000 demonstrated relatively higher mean ranks across multiple dimensions, while those in the RMB 4001-5000 income group had lower mean ranks—these

differences were not significant enough to suggest that SES has a notable influence on peeragogy learning approaches.

Peeragogy learning is characterized by a student-centered approach that leverages the exchange of ideas, knowledge, and experiences to enrich individual learning outcomes (Boud et al., 1999). It reduces social comparison, fostering an inclusive and universal learning environment (Elizabeth et al., 2023; Wentzel & Wigfield, 2009), thereby providing equal opportunities for participation to students from different SES backgrounds.

Peeragogy learning relies on team interaction and the learning environment, inherently emphasizing collaboration, knowledge sharing, and consensus-building among students (Qiu et al., 2023), rather than individual economic or familial backgrounds. Moreover, schools, as relatively equal environments, provide all students with similar learning tools and support—such as opportunities for group discussions and collaborative tasks.

In structured peeragogy learning tasks, teachers typically allocate responsibilities and goals clearly on the basis of equality and mutual benefit. This structured approach diminishes the influence of SES (Chen et al., 2023). Additionally, peeragogy learning relies more heavily on group members' interactions and cooperation, such as social interactions (e.g., communication and collaboration), which are often based on interpersonal skills rather than personal economic backgrounds, further reducing the impact of SES (Liu & Xu, 2024) .

Conclusion

This study reveals the tendencies of art students toward the peeragogy learning approach based on demographic factors. Students of different genders and socioeconomic statuses (SES) exhibited similar tendencies and preferences toward peeragogy. Although gender differences were observed in the "goal-oriented" approach, SES had no significant impact on peeragogy, reflecting the inclusivity and collaboration inherent in this learning model. These findings contribute to the advancement of equitable education and help in understanding the importance of students' diverse learning behaviors, allowing educators to better optimize teaching strategies. This, in turn, fosters a more efficient and engaging learning environment that promotes students' personal growth.

This research also has significant implications for enhancing teaching practices in art education. By identifying how students from various backgrounds respond to peeragogy, educators can tailor their teaching strategies to create more inclusive, diverse, and collaborative learning environments. Peeragogy, with its emphasis on shared responsibility and mutual support, fosters a sense of community among students. In the context of art education, this is particularly valuable, as collaboration and creativity are at the core of artistic processes. Through peer learning, students can learn to critique constructively, exchange ideas freely, and approach creative challenges from multiple perspectives. This not only promotes individual artistic growth but also enriches the collective learning experience, leading to innovative solutions and breakthroughs in artistic expression.

Moreover, peeragogy's ability to transcend gender and socioeconomic barriers offers substantial benefits in terms of educational equity. By emphasizing inclusivity, mutual respect, and the shared nature of learning, peeragogy creates a level playing field for all students,

regardless of their background. It fosters a collaborative learning environment where students can learn from one another, share unique perspectives, and grow together. Peeragogy can help bridge gaps between students from different backgrounds, ensuring that all students have access to the same opportunities for growth, development, and academic success. This study underscores the importance of creating an educational environment that is responsive to the needs of diverse learners. It offers a clear model for how peeragogy can be integrated into various educational contexts, enhancing creativity and encouraging the exchange of ideas and knowledge in a collaborative setting. By prioritizing inclusivity and cooperation, peeragogy can play a pivotal role in shaping the future of education by addressing issues of inequality and promoting social cohesion within classrooms.

In addition, the findings of this study can inform future educational policies and practices, especially those aimed at fostering collaborative and student-centered learning environments. By recognizing the positive impact of peer learning, educators and institutions can develop strategies that equip students with the skills needed for success in the increasingly interconnected and collaborative world. These strategies should not only focus on academic achievement but also on developing critical life skills, such as communication, teamwork, and problem-solving. Overall, this research underscores the transformative potential of peeragogy in art education. It paves the way for more inclusive, dynamic, and effective teaching practices that empower students to reach their full creative potential. By encouraging peer learning, students are better prepared to navigate complex, real-world challenges, thereby fostering innovation and artistic expression that can contribute to society at large.

However, this study may have certain limitations, such as a small sample size. Therefore, future research could consider using larger sample sizes to further validate the findings of this study and explore the potential impact of socioeconomic status on peeragogy learning methods in greater depth.

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The research involved a questionnaire survey, and all collected data were completely anonymous, with no personally identifiable information recorded. The study adhered to the principles of the Declaration of Helsinki and complied with all relevant institutional and ethical guidelines throughout the research process.

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References

- Balanoff, C., Fatunmbi, A., Aarons, C., Protyniak, B., Joshi, A., Woelfel, I., & Hoffman, R. (2022). Relationship between gender, training level and goal orientation achievement motivation: Implications for learners and faculty. *Journal of Surgical Education*, 79(6), e38–e47. <https://doi.org/10.1016/j.jsurg.2022.07.015>
- Barak, M., & Yuan, S. (2021). *A cultural perspective to project-based learning and the cultivation of innovative thinking*. *Thinking Skills and Creativity*, 39, 100766. <https://doi.org/10.1016/j.tsc.2020.100766>
- Bellhäuser, H., Liborius, P., & Schmitz, B. (2022). Fostering self-regulated learning in online environments: Positive effects of a web-based training with peer feedback on learning behavior. *Frontiers in Psychology*, 13, Article 813381. <https://doi.org/10.3389/fpsyg.2022.813381>
- Bhargav, U., Brady, C., Madathil, K. C., Bertrand, J., McNeese, N. J., & Gramopadhye, A. (2024). Collaborative augmented reality in higher education: A systematic review of effectiveness, outcomes, and challenges. *Applied Ergonomics*, 121, 104360. <https://doi.org/10.1016/j.apergo.2024.104360>
- Bond, T. G., Yan, Z., & Heene, M. (2020). *Applying the Rasch model: Fundamental measurement in the human sciences*. Routledge. <https://doi.org/10.4324/9780429030499>
- Boud, D., Cohen, R., & Sampson, J. (1999). Peer learning and assessment. *Assessment & Evaluation in Higher Education*, 24(4), 413–426. <https://doi.org/10.1080/0260293990240405>
- Cahusac de Caux, B., & Pretorius, L. (2024). Learning together through collaborative writing: The power of peer feedback and discussion in doctoral writing groups. *Studies in Educational Evaluation*, 83, 101379. <https://doi.org/10.1016/j.stueduc.2024.101379>
- Chadha, A. (2019). Deepening engagement: The intimate flow of online interactions. *International Journal of Online Pedagogy and Course Design*, 9(3), 32–47. <https://doi.org/10.4018/IJOPCD.2019070103>
- Chen, L.-Y., Zhou, W.-W., Hsieh, W.-Z., & Chou, R.-J. (2023). Establishing a professional learning community for cultivating future design talents using a ‘peer coaching’ mechanism. *Heliyon*, 9(10), e20906. <https://doi.org/10.1016/j.heliyon.2023.e20906>
- Deng, Y., & He, Y. (2022). The internal mechanism, external manifestations, and implementation strategies of knowledge co-construction through peer-assisted learning. *Global Education Outlook*, (08), 28–38.
- Fu, H., Li, C., & Lü, B. (2018). The impact of gender stereotypes on mathematics learning and strategy analysis. *Teaching and Management*, (9), 32–34.
- Gesbert, V., Hauw, D., Kempf, A., Blauth, A., & Schiavio, A. (2022). Creative togetherness: A joint-methods analysis of collaborative artistic performance. *Frontiers in Psychology*, 13, Article 835340. <https://doi.org/10.3389/fpsyg.2022.835340>
- Gesbert, V., Hauw, D., Kempf, A., Blauth, A., & Schiavio, A. (2022). *Creative togetherness: A joint-methods analysis of collaborative artistic performance*. *Frontiers in Psychology*, 13, 835340. <https://doi.org/10.3389/fpsyg.2022.835340>
- Gomez-Ruiz, L., & Sánchez-Expósito, M. J. (2020). The impact of team identity and gender on free-riding responses to fear and cooperation sustainability. *Sustainability*, 12(19), 8175. <https://doi.org/10.3390/su12198175>
- Hollister, B., Nair, P., Hill-Lindsay, S., & Chukoskie, L. (2022). *Engagement in online learning: Student attitudes and behavior during COVID-19*. *Frontiers in Education*, 7, Article 851019. <https://doi.org/10.3389/feduc.2022.851019>

- Jamaludin, R., McKay, E., & Ledger, S. (2020). Are we ready for education 4.0 within ASEAN higher education institutions? Thriving for knowledge, industry and humanity in a dynamic higher education ecosystem? *Journal of Applied Research in Higher Education*, 12(5), 1161–1173. <https://doi.org/10.1108/jarhe-06-2019-0144>
- Jamaludin, R., McKay, E., & Ledger, S. (2020). *Are we ready for Education 4.0 within ASEAN higher education institutions? Thriving for knowledge, industry and humanity in a dynamic higher education ecosystem.* *Journal of Applied Research in Higher Education*, 12(5), 1161–1173. <https://doi.org/10.1108/JARHE-06-2019-0144>
- Jin, M., & Hu, S. (2018). Analysis of gender differences in learning engagement among undergraduate engineering students. *Fudan Education Forum*, (5), 61–69. <https://doi.org/10.13397/j.cnki.fef.2018.05.009>
- Jin, X., & Ye, Y. (2022). Impact of fine arts education on psychological well-being of higher education students through moderating role of creativity and self-efficacy. *Frontiers in Psychology*, 13, Article 957578. <https://doi.org/10.3389/fpsyg.2022.957578>
- Kroth, M., Carr-Chellman, D. J., & Rogers-Shaw, C. (2022). Formation as an organizing framework for the processes of lifelong learning. *New Horizons in Adult Education and Human Resource Development*, 34(1), 26–36. <https://doi.org/10.1002/nha3.20348>
- Li, W., Zeng, X., Wang, Y., Curtis, R., & Sparks, E. (2021). Does school matter for students' self-esteem? Associations of family SES, peer SES, and school resources with Chinese students' self-esteem. *Research in Social Stratification and Mobility*, 71, 100565. <https://doi.org/10.1016/j.rssm.2020.100565>
- Liu, D., & Xu, J. (2024). The connotation, theoretical implications, and practical pathways of peer teaching. *Theory and Practice of Education*, (1), 50–56.
- Mohamad, M. M., Tee, T. K., Yee, M. H., Rozali, M. Z., & Mohd Matore, M. E. (2022). *Soal selidik pendekatan paragogi dalam pembelajaran TVET.*
- Mulholland, N. (2019). *Re-imagining the art school: Paragogy and artistic learning.* Springer Nature. <https://doi.org/10.1007/978-3-030-20629-1>
- Pan, F., Zhu, G., Sui, W., & Fu, M. (2024). The effects of peer interaction on learning outcome of college students in digital environment—The chain-mediated role of attitude and self-efficacy. *Studies in Educational Evaluation*, 83, 101404. <https://doi.org/10.1016/j.stueduc.2024.101404>
- Samaniago, M., Usca, N., Salguero, J., & Quevedo, W. (2024). *Creative thinking in art and design education: A systematic review.* *Education Sciences*, 14(2), Article 192. <https://doi.org/10.3390/educsci14020192>
- Vazquez-Marin, P., Cuadrado, F., & Lopez-Cobo, I. (2022). *Linking character strengths and key competencies in education and the arts: A systematic review.* *Education Sciences*, 12(3), 178. <https://doi.org/10.3390/educsci12030178>
- Wei, Y., Chen, Q., Wu, D., Fu, X., & Song, H. (2024). Exploring the role of psychological assistance hotlines in improving mental health problems among Chinese adult women: A perspective based on social expectations and gender roles. *Asian Journal of Psychiatry*, 96, 104026. <https://doi.org/10.1016/j.ajp.2024.104026>
- Wentzel, K. R. (1999). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, 91(1), 76–97.
- Yang, F., & Yuan, J. J. (2021). Research on the problems and countermeasures of public art education in general higher education. *Art Literature*, (09), 89–90. <https://doi.org/10.16585/j.cnki.mswx.2021.09.037>
- Yang, Y., & Heong, Y. M. (2024). *The Significance of Developing Advanced Higher Order Thinking Skills in China's Arts Education.* *Journal of TVET and Technology Review*, 2(1), 28-37.

- Yao, Y. (2023). *Problems and countermeasures analysis of art education development in colleges and universities*. In Guangdong Teachers' Continuing Education Society (Ed.), *Proceedings of the Sixth Teaching Seminar of Guangdong Teachers' Continuing Education Society (IV)* (p. 5). Nanchang Institute of Technology, Jiangxi, China. <https://doi.org/10.26914/c.cnkihy.2023.006010>
- Yu, X. (2018). *The application of peer teaching method in the classroom teaching of Introduction to Literature*. Inner Mongolia Education, (18), 54–56.
- Zhao, Y., & Yang, P. (2021). Mathematics-gender stereotypes and inequality in educational expectations: An empirical analysis based on CEPS. *Education Economics Review*, 4(04), 51–69. <https://doi.org/10.19512/j.cnki.issn2096-2088.2021.04.003>
- Zheng, X., & Li, G. (2021). A study on the influence of peer mutual evaluation on students' cartoon creation ability. *Popular Literature and Art*, (02), 214–215.