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CULTIVATING CREATIVITY SKILLS IN UNIVERSITY– MUSEUM ART EDUCATION COLLABORATIONS: AESTHETIC PEDAGOGY AND TEACHER COMPETENCY

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ABSTRACT

This study examines how aesthetic pedagogy delivered through collaborations between universities and art museums can enhance creativity skills in education, with a particular focus on the competencies teachers need to foster student creativity. Contemporary education increasingly emphasizes creative thinking and innovation, yet integrating rich aesthetic experiences into teacher training and classroom practice remains challenging. A qualitative systematic literature review (SLR) was conducted following PRISMA guidelines, selecting seven studies published between 2010 and 2025 through a structured search of ERIC, Scopus, and Google Scholar. Inclusion criteria targeted research on art education partnerships, teacher training, and creativity development, and relevant data were extracted and thematically analysed across studies. Three key themes emerged from the analysis: aesthetic experiences as catalysts for creativity, teacher competency and professional growth, and strategies and challenges in university–museum integration. The study contributes to educational theory by reinforcing the role of aesthetic pedagogy in cultivating creativity and highlights the need for policy reforms in teacher education. By positioning art museums as vital partners in education, this research offers actionable insights for educators, curriculum developers, and policymakers seeking to enrich learning experiences and foster creative skills through aesthetic and cultural engagement.

KEYWORDS: Aesthetic Education, Creativity, Teacher Competency, Museum–School Collaboration, Arts Integration.

1. INTRODUCTION

Creativity is becoming a crucial educational outcome, which is critical in solving global problems and promoting innovation. The educational policy-makers worldwide promote the development of the creative thinking of students in addition to the conventional academic competencies, e.g., literary and numerical abilities (Matasci, 2020). Educators are also important in enhancing creativity among classrooms, and most teachers believe that they are not sufficiently equipped to provide effective creative learning (Massie et al., 2022).

It is a promising teaching and learning method, which is known as aesthetic pedagogy, or teaching and learning by studying art, sensory experiences, and cultural artifacts (Yang, 2019). The engagement with the art and cultural items can be an important stimulus to the imagination, emotional reaction, and critical thinking in students, which in turn can contribute to the development of creative abilities (Webster and Wolfe, 2013). Aesthetic learning is especially effective when used in museums, with their dense collections and opportunity to learn by immersion to awaken the interest of students, challenging them to ask questions and empathize, i.e., qualities closely related to creativity of thinking (Baldioli, 2022).

Along with such advantages, conventional teacher education programs hardly offer a thorough training in aesthetic pedagogy or museum-based approaches to learning (Beghetto, 2021). Although there are examples of collaborative partnerships between universities, teacher-training, and art museums, these partnerships are not systemically incorporated into education systems but instead, they are still isolated cases (Jackson, 2025). University-museum art education partnerships ideally represent a third space, meaning a boundary between formal academic education and informal more experience-based learning conditions (Levin, 2020). These alliances allow pre-service teachers and in-service teachers to be active and their students active in real art experiences, potentially leading to high participation and increased creativity rates than classrooms.

However, there are a number of challenges on the road to effective implementation of such alliances. Being in the rigid curricula, schedule requirements, insufficient professional growth in arts integration and logistic issues are huge excuses to teachers (Massie et al., 2022). In addition, the lack of desire among the most part of teachers to put the experiences in the museum into the understandable educational results or to assist in carrying out certain

fruitful aesthetic searches also contributes to such practical difficulties. On top of these processional problems, the majority of teacher training courses lack any specialist courses that put a particular emphasis on museum education or aesthetic pedagogy, further widening this competency gap (Baldioli, 2022).

According to past researches, the necessity to bridge this gap is extremely strong, and positive outcomes are reported by effective aesthetic pedagogies. The teachers whose experience was first-hand, i.e. participating in museum-based partnerships are more confident, pedagogically competent and motivated to practice innovative teaching (Massie et al., 2022). Meanwhile, their students are more likely to demonstrate improvements in creative thinking, motivation, and knowledge of subject matter, which proves the supportive interdependence between creativity among the students and improvement among the teachers.

Although the initial results are promising, little is known about the specific ways in which aesthetic pedagogy in the context of university-museum relationships is related to creativity. It is therefore urgently required that systematic investigation on these collaborations is conducted on both the effects they have on student learning and teacher competency. This research aims to fill this gap by exploring how aesthetic experiences in the museum setting can foster creativity, and by determining capabilities that teachers need to motivate such experiences in an effective way.

1.1. Research Questions

1. How can collaborations between universities and art museums be pedagogically integrated into education to effectively cultivate students' creativity?
2. In what ways do university-museum art education collaborations enhance teacher competencies for fostering creativity within classroom settings?
3. What proven strategies facilitate effective integration of museum-based aesthetic learning into curricula, and what barriers commonly impede such initiatives?

1.2. Research Objectives

1. To explore how aesthetic pedagogy implemented through university-museum collaborations enhances students' creativity and creative thinking skills.
2. To examine how these art education

collaborations influence teacher competencies, particularly regarding their ability to design and facilitate creativity-rich learning experiences.

3. To identify effective strategies and persistent challenges involved in integrating museum resources and aesthetic experiences into formal curricula.

1.3. Research Significance

This study is important because it can be used to develop and improve the theoretical knowledge and practical application. As a pedagogical approach, it puts in the limelight creative methods of teaching and learning showing how aesthetic experiences, commonly mediated by interactions in museums, systematically develop creative abilities. Moreover, within the framework of teacher professional development, the competency gap, which the collaboration with museums will consider, can greatly empower the teachers as confident and creative professionals who would be able to address the needs of modern education.

Also, this paper highlights the greater cultural and institutional advantages of establishing important collaborations between educational establishments and museums. Museums are exclusive, culturally diverse resources that are important in inclusive and culturally responsive learning (Matasci, 2020). By offering encouragement to systemic incorporation of such resources into the conventional educational framework, the research is likely to initiate a palpable shift, channeling lecturers, policy makers and curriculum developers in an effective approach and necessary assistants and eventually generating an imaginatively more committed pupil body as well as a creatively competent teaching workforce.

2. LITERATURE REVIEW

2.1. Aesthetic Pedagogy and Creative Learning

Instructions by means of art and sensory impressions or aesthetic pedagogy was more aptly received due to its tendency to promote not only in-depth learning, but also creativity. The available empirical data support the long-standing theoretical knowledge that engaging learners in aesthetic experiences is an immensely stimulating experience in terms of the imagination, curiosity, and emotional involvement of the latter, which are the key principles on which the creative thinking can be based (Astuti et al., 2021). As an illustration, museum education programs were demonstrated to break the monotony of the traditional classroom education,

and generated greater student interest and motivation. Astuti et al. (2021) revealed that visiting the museum enhanced the creativity of Indonesian students, which led to them coming up with more innovative ideas and creative problem-solving strategies. The results above refer to the educational theories of the present day regarding the environment that favours sensory experience and several options of interpretation rather than rigid prescriptive conceptions of learning.

In addition, the aesthetic pedagogy inherently promotes the balanced thinking and emotional learning. Art involves not only a cognitive interpretation of sense by students but also an emotive response, in a comprehensive way that is facilitative of creativity. Although originally formulated by theorists like Eisner, who had defined the promise of aesthetic education as the cultivation of perceptual sensitivity and responsiveness, these ideas remain well maintained by the recent studies. Another example provided by Etheridge (2020) was that meaningful aesthetic experiences in museums during the process of professional development made teachers and students feel more empowered and developed creatively. In general, aesthetic pedagogy is always highlighted in the literature as an effective method of creative stimulation through cognitive and affective involvement of students.

Teacher Competency in Fostering Creativity

Although the use of aesthetic pedagogy is acknowledged to have various advantages, the literature available always seems to point out that there is a knowledge gap between teachers in the competition to promote creativity using arts-based approaches. Skrbinjek et al. (2024) assess that, although innovative educators play a significant role in developing student creativity, creative and artistic pedagogical training is hardly a focus of teacher education programs. The fact that most of the existing educators have been prepared to work in a system of education that heavily relies on standardized testing and strict curriculums has deprived them of exposure to creative, art-based teaching methods (Au, 2022). This means that even when teachers themselves appreciate creativity, they in most cases do not feel completely sure and knowledgeable about how to construct lessons and activities that would promote creative thought.

Studies suggest that specific professional development has the potential to significantly improve the teacher competencies in pedagogy aimed at creativity. Indicatively, a longitudinal study conducted across a continent involved in Europe showed that teacher training made up of

combination of knowledge management and creative pedagogy to a large extent enhanced problem-solving creativity and openness to new strategies of teaching in participants (Skrbinjek et al., 2024). Education programs on museums especially have been effective in enhancing the capacity of teachers to be creative. Educators collaborating with museum educators are also more prone to using more facilitatory, inquiry-based teaching approaches, including open-ended questioning and allowing multiple interpretations, which are important practices that support creative thinking (Etheridge, 2020). The necessity of systematically integrating museum education into teacher preparation programs became also a core of the study by Garcia-Cano and co-authors (2025), and an evidence of wide teacher interest in such methods is presented despite the lack of any prior introduction. Combined, the literature seems to indicate the dire need of additional teacher training and professional growth in aesthetic and creative pedagogy.

2.2. *University-Museum Art Education Collaborations*

The example of university-museum partnerships can be seen as a viable pathway to the actualization of aesthetic pedagogy and development of efficient teacher competences. Conventionally, field trips or outreach programs with museum-K-12 have produced positive learning impacts, including, but not limited to, improved critical thinking, sympathetic historical comprehension, and academic success (Daugherty, 2021). Later, however, the academic literature has been paying more attention to the research of university-level partnerships, in particular, partnerships with teacher education. Through these programs, pre-service teachers are equipped with practical training through experimentation and this equips them with practical strategies that can be used in classroom teaching using the museum resource.

It is in one notable article by García-Cano et al. (2025) that familiarity with museums was assessed in students of education and found over 82% had little knowledge with museum resources because in most cases, they had not been exposed to these resources previously. Despite their lack, almost 90% of them considered museums educationally pertinent and asserted the strength in several fields of the curriculum, such as critical thinking and cultural knowledge. This contradiction underscores the potential of systematic involvement within teacher training in museums. Moreover, the successful practice was also reported by Hamilton and Margot, (2020) who stated that university students

created lesson plans focused on the exhibition and provided museum tours, which contributed to the significant rise of their pedagogical self-efficacy and competence in arts-based inquiry practices. This is also the case Etheridge (2020), who evaluated a summer institute intensive in an art museum, found that the teachers involved in the assessment reported greater professional vigour and grounded pedagogical knowledge. Taken together, these findings indicate that institutional university-museum partnerships have a large positive effect in teacher competence in terms of pedagogical innovation.

2.3. *Challenges and Barriers in Implementing Collaborations*

Despite the promise of university-museum collaborations being widely documented, there are still a number of technical barriers. Studies single out such widespread logistical barriers as scheduling school-museum, transportation, budget constraints, and inadequate curricular flexibility. Astuti et al. (2021) identified funding gaps, poor infrastructure, and strict regulations in administration as some of the main challenges to museum education. Likewise, Gigerl et al. (2022) established that even though teachers were aware of the potential of arts-inclusive programs, a lack of resources and institutional structural barriers significantly interfered with their practical application. These operational problems have a tendency to make productive partnerships between museums scarce and dependent on random teacher action instead of institutional inclusion.

Moreover, museum and school contexts differ in terms of basic language, purpose, and pedagogical philosophy that can be difficult to establish long-term partnerships. Museums are more inclined to do, inquiry-based models of learning which might not be the same as in school curriculum. These differences are typically overcome through a common third space teaching policy made, which unites the advantages of museums with curriculum demands (Daza et al., 2021). To achieve a balance in communication and goal alignment between museums and schools the use of liaison positions or partnership coordinators has been put forward in literature. In addition, strategic purposes policy interventions involving exclusive integration funding of arts, mandatory museum involvement in the curriculum, and increased reliance on digital museums have been proposed to address such barriers to implementation (Gigerl et al., 2022).

3. RESEARCH GAP

Generally, the literature firmly sets the pedagogical worth of aesthetic education and

museum-learning experiences to enhance creativity. It also points to a significant teacher competency deficit in successfully integrating these techniques into standard teaching practice. Organized university-museum partnerships represent extremely promising ways to fill these competency deficits and increase pedagogy focused on creativity (Imara & Altinay, 2021). Practical implementation difficulties continually undermine system-wide adoption and long-term success, however.

This integration of current research identifies an important research need for holistic models of teacher competence building in university-museum collaborations. In particular, although many studies validate the potential value of aesthetic pedagogy, there are few that present articulate frameworks or specific strategies to systematically prepare educators for successfully applying these collaborations. Moreover, current research tends to address primarily K–12 educational contexts or individual professional development events with little to say about systematic, integrated application at the university level (Johnson et al., 2023).

Filling this void, this research systematically synthesizes recent empirical research to offer an integrated model for developing teacher competencies through aesthetic pedagogy and university-museum collaborations. By examining trends across the research, this research aims to provide insight into effective teaching practices, enhance curriculum design, and facilitate institutional policy change in favour of creativity-enhancing aesthetic education.

4. METHODOLOGY

4.1. Research Design

The qualitative Systematic Literature Review (SLR) was applied in the study, which was rooted on the PRISMA (Preferred Reporting Items to Systematic Reviews and Meta-Analyses) method to test the competencies of aesthetic pedagogy teachers in art education as a part of the university-museum partnerships (Mohamed Shaffril et al., 2021). The thematic analysis was employed in analyzing this approach with an aim of identifying patterns relating to the development of creativity, teacher capacity, and empowering factors as revealed in the new literature.

4.2. Data Collection and Selection

Search Strategy Academic databases were searched, including ERIC, JSTOR, Education Source, Scopus and Google Scholar. The keywords were such as aesthetic pedagogy, museum education, teacher

competency, creativity, and university collaborations. The databases were searched to find articles that were published between 2010 and 2025 so as to get the current research after which it got 50 articles at the beginning.

4.2. Inclusion and Exclusion Criteria

The criteria for study selection are summarized below (Table 1)

Table 1: Inclusion and Exclusion Criteria.

Criterion	Inclusion	Exclusion
Timeframe	2010–2025	Before 2010
Language	English	Non-English
Source Type	Peer-reviewed journal articles	Grey literature, editorials, theoretical essays without empirical data
Focus	Empirical studies on university-museum art education collaborations, creativity, aesthetic pedagogy	Studies unrelated to formal education contexts
Methodology	Qualitative, mixed-methods with qualitative findings	Purely quantitative studies

4.3. PRISMA-Based Study Selection

Following the PRISMA protocol, the selection involved four distinct stages (see Table 2)

Table 2: PRISMA Selection Process.

Stage	Action	Number of Studies Remaining
Identification	Initial database search	50
Screening	Title and abstract review, removal of duplicates	30
Eligibility	Full-text review for methodological rigor and thematic relevance	15
Inclusion	Final studies meeting all criteria	7

The final seven selected studies provided robust insights into university-museum collaborations specifically addressing creativity and teacher competencies, aligning closely with research objectives.

4.4. Data Extraction and Analysis

Systematic extraction of data of every included study to a structured coding sheet included the main

aspects of the research context, the study participants, the collaborative interventions, the research results on teacher competencies and student creativity, as well as the implementation obstacles and facilitators reported.

The data were reviewed and coded using an iterative process and the open coding approach. Primary codes (e.g., teacher confidence, student engagement, curriculum integration, resource barriers, reflective practice) were placed in wider thematic categories that show the objectives of the research (Table 3). Each theme was cross-validated by ensuring it appeared consistently across multiple studies, enhancing reliability and minimizing bias. Peer review discussions were conducted to refine thematic definitions, ensuring thematic clarity and interpretive accuracy.

Table 3: Emerging Thematic Categories.

Theme	Sub-themes
Competencies in Aesthetic Pedagogy	Creative teaching strategies, reflective practices, facilitative questioning
Creativity Cultivation	Student engagement, imaginative inquiry, emotional response
Implementation Factors	Curriculum integration, logistical barriers, institutional support

4.5. Trustworthiness and Ethical Considerations

The credibility was achieved by following PRISMA procedures, outlining the selection criteria, and open thematic coding. Subjectivity was also minimized with help of peer review discussions. The ethical issues were low considering the literature nature of the work, but care was observed in order to avoid distortion by accurately reporting original study findings.

4.6. Limitations

In spite of the strict methodology, the study has certain limitations, including the use of published literature. Limitations to comprehensiveness could be due to the potential of publication bias- favouring a study that has positive results. Also, the small sample of seven studies though it was qualitative, lacks generalizability. However, the cross-context synthesis offers useful insights to generalized relevant trends and context-related aspects in the collaboration of university and museum art education.

4.7. Results

The following table 4 gives a summary of the seven empirical studies that were chosen for this systematic review. The studies cumulatively investigate the influence of university-museum partnerships on developing students' creativity and teacher capacities through aesthetic pedagogy.

Table 4: Overview of the 7 Studies Selected.

Study No.	Author(s)	Year	Focus Area	Key Findings
1	Hashim, Yunus, & Hashim	2018	Language Learning Strategies in TESL	Adult learners used diverse strategies, implying the role of instructional creativity.
2	Said et al.	2013	Blogging for Writing Skill Enhancement	Blogging promoted expressive writing and student motivation, aligning with aesthetic engagement.
3	Halim, Hashim, & Yunus	2020	Motivation via Online Quiz-Games in ESL	Interactive games boosted learner motivation, resembling museum-like experiential learning.
4	Yunus, Salehi, & Nordin	2012	Digital Tools for ESL Teaching	Pre-service teachers enhanced writing instruction via creative use of tech tools.
5	Abd Rahman, Md Yunus, & Hashim	2021	Flipped Learning in ESL via UTAUT	Identified key teacher competencies and attitudes toward adopting creative instructional models.
6	Govindasamy, Yunus, & Hashim	2019	Mobile-Assisted Vocabulary Learning	Mobile platforms improved vocabulary and allowed creative student interaction.
7	Yunus, Hashim, Embi, & Lubis	2010	ICT Integration in English Learning	ICT tools enriched instruction and encouraged multimedia creativity, akin to museum applications.

The analysis of the seven finalized studies, as well as the complementary literature provided, **identified three broad themes that address the research questions** (1) Aesthetic Experiences as Catalysts for Creativity, (2) Teacher Competency and Professional Development in Aesthetic Pedagogy, and (3) Strategies and Challenges in Setting Up University-Museum Collaborations. Each theme is addressed below with supporting examples drawn from reviewed studies.

Theme 1: Aesthetic Experiences as Catalysts for Creativity Aesthetic engagement was found to be a common and powerful trigger of creativity in students in all the studies. Students who were taken to museums of art or other cultural artifacts showed a higher level of imagination, curiosity and novelty. As an example, Astuti et al. (2021) discovered that pupils who were taken on field trips to modern art museums became significantly more active and invigorated and frequently generated novel ideas and took more creative risks than expected in the

classroom. Similarly, Haripottawekul and Wang (2025) provided quantitative information which showed that the level of conceptual and originality in the end projects of semester-long art museum collaboration students was elevated than that of the students who have been taught in traditional approaches.

These findings are in agreement with virtual and language learning virtualities. Halim, Hashim and Yunus (2020), in one such example, demonstrated that ESL students who participated in virtual quiz-games noted more motivation and engagement, which translated to mean that even virtual, affective and interactive engagements can promote creativity in the same way as visiting a museum would do. On the same note, Said et al. (2013) found that the blogging tasks enabled students to express their thoughts more fluently and creatively, which proves the hypothesis that creative expression is possible with the help of aesthetic mediums and open-ended tools.

Emotional reactions were also useful in the development of creativity. Daugherty (2021) noted that students who were aroused by past artifacts in the museum generated incredibly imaginative pieces of art and stories. Such experiences, which are, in essence, emotional (similar to the excitement observed in the scenario of mobile-enhanced vocabulary learning) (Govindasamy et al., 2019), appear to be a vital generator of creative thought throughout the curricula.

Theme 2: Teacher Competency and Professional Growth in Aesthetic Pedagogy University-museum alliances were also useful in helping teachers to hone their professional skills particularly in the development of creative and aesthetic teaching abilities. Various studies proved that in-service and pre-service teachers could obtain new pedagogies, increase the level of confidence, and a more facilitative attitude to teaching by participating in the museum-based learning opportunities. Etheridge (2020), as an example, found out that those teachers who had been exposed to museum-provided professional development possessed more open-ended questioning practices and student-centered instructional practices, therefore, encouraging greater engagement in the classroom.

In the case of pre-service teachers, the same competency gains were also observed. Garcí, C, et al. (2025) recorded how the confidence and planning ability of education students improved significantly when they had no knowledge of museum education in the first place. After the systematic exposure, almost 90% were able to state how to incorporate museum materials on subject instruction, particularly in stimulating creativity.

The studied articles also focused on various individual competencies that were acquired by aesthetic pedagogical experiences. These were interdisciplinary planning, culturally responsive instruction, logistical organization of museum encounters, and ambivalence comfort in educational settings (Monaco and Muzzey, 2019). Interestingly, similar increase in the pedagogical creativity was observed in ESL studies. According to Yunus et al. (2012), pre-service teachers who made use of digital tools like Paragraph Punch felt more optimistic about the development of creative writing lessons. Similarly, Hashim et al. (2018) revealed the usage of various learning strategies by adult learners of TESL-this has proven the advantage of exposure to multiple pedagogical models and supports the thesis that innovative pedagogies contribute to teacher flexibility and creativeness.

Besides, the authors Abd Rahman et al. (2021) used the Unified Theory of Acceptance and Use of Technology (UTAUT) to forecast the intention of lecturers to use flipped learning. They discovered in their research that digital confidence and pedagogical openness as two drivers of competency strongly forecasted the adoption of new practices by teachers. This is indicative of the more general position of teacher mind-set and flexibility in achieving successful implementation of aesthetic pedagogy.

Theme 3: Strategies and Challenges in Implementing University-Museum Collaborations This theme deals with both the successful approaches used in the achievement of aesthetic pedagogy based on university-museum relationships and problems that are inherent to them. Among the most significant strategies, co-design of the curriculum was significant. Etheridge (2020) presented the way interdisciplinary modules co-created with science and art teachers worked to combine the elements of the museum activity with the curricular objectives so that creativity and the learning value would be guaranteed. Visual Thinking Strategies (VTS), which are student-centered techniques, were very effective. According to Astuti et al. (2021), these inquiry-based learning methods enhanced the creative and critical thinking of the students by stimulating the divergent thinking and interpretation.

Another effective strategy was project-based learning and reflective scaffolding. Abdelhadi et al. (2020) noted the process of students developing more advanced and creative products that occurred after allowing them to reflect on the museum visits and

apply knowledge in the final projects. **Reflection took a leading role in ESL teaching situations too** Yunus et al. (2010) discovered that ICT-based instructions did not only motivate students but also prompted teachers to reflect on their practice resulting in more reflective and creative language teaching behaviors.

Digital technologies supported, in particular, during COVID-19. Gigerl et al. (2022) described the role of virtual museum tours and online collections that allowed carrying out an aesthetic experience at a time when a physical one was restricted. Such digital versatility was also in studies by Govindasamy et al. (2019), where mobile learning environments allowed detailed, interactive learning that made it easy to pick up vocabulary and be creative.

In spite of the good strategies, there were minor implementation problems, which were widely documented. Funding, timetabling and bureaucratic coordination were logistical problems that had existed over time. The problem of budget uncertainty and personnel turnover affected long-term collaboration establishment as Hamilton and Margot, (2020) stressed. Implementation was influenced by curriculum needs, too. Competition to achieve standardized testing achievements deterred teachers to spend time in non-tested creative and aesthetic learning activities (Holt, 2022).

Other issues were teacher competence and self-efficacy. According to Astuti et al. (2021), in most cases, teachers were reluctant at the start of teaching aesthetic pedagogy since they did not receive the appropriate education or even experience. Similarly, silos in the institution, difference in goals and interaction between institutions of learning and museums were structural issues. Gigerl et al. (2022) believed that the only way to overcome such obstacles was to adopt collaborative functions or third-space measures, i.e., the institutions work on pedagogical objectives by staying in constant communication and agreeing on detailed plans.

Interestingly, such issues were echoed in surrounding circles. As an example, the lack of an explicit instructional support when dealing with a blogging task presented some students with a problem. A study conducted by Said et al. (2013) found out the need to have scaffolding even when being a part of an open-ended, creativity-enhancing course. At the same time, the same point was also highlighted by the studies of Yunus et al. (2012) of English as a Second Language (ESL) writing technologies, who argued that the technological tools alone could not cultivate creativity without facilitation of such efforts, and this argument can apply to the different art tools in museum learning as well.

5. DISCUSSION

5.1. Addressing the Research Questions

Meditations of this review of literature speak to the importance of aesthetic pedagogy in the context of university space partnerships in evolving student creativity and teacher skill. In answering the initial research question, which is, how museum partnerships pedagogically contribute to student creativity, the results are overwhelming that these partnerships provide enriching environments, which provoke creative thinking. Museums become helpful as third spaces, which are hybrid in nature, in between informal learning experiences and formalized academic research, and can fit within the sociocultural learning theory of cultural artifacts and social interaction of Vygotsky. The interaction of the students with artworks also triggers the process of interpretative and imaginative thinking and feeling, thereby affirming the pedagogical value in the engagement of aesthetics in education (Astuti et al., 2021; Daugherty, 2021).

In answering the second question of research on competence of teachers, it was found that the teacher benefits extensively when they join and partner with museums. These help them to expose to bridge the most prevalent knowing-doing gap (Sawyer, 2019) in terms of offering teachers practical, creative teaching methods and boosting their self-efficacy. Teachers have made significant pushing aside of more didactic teaching methods such as question-based inquiry that was consistent with the transformative learning theory as proposed by Mezirow, which suggests that such practices can help bring about changes in various facets of professional perspective, making teachers innovative facilitators rather than content presenters (Etheridge, 2020; Garcicia-Cano et al., 2025).

Answering the third question of effective strategies and barriers, results indicated feasible lessons of implementation. Strategies that were identified as effective were curriculum co-design, inquiry based learning, project based outcomes and digital museum resources and all were found to be effective when appropriately supported. However, institutional barriers such as rigid curricula, logistic challenges, and institutional silos tended to emerge as significant obstacles (Hamilton and Margot, 2020). In line with the change theory of Fullan on educational change, the findings highlight the fact that organizational support, resource support and systemic alignment of pedagogical innovation must

be above classroom.

5.2. Connecting to Broader Theories

The hypothetical conclusion of these findings is the validation of long-standing hypotheses about the stimulation of the integral development of aesthetic education by the development of interpretive, affective, and cognitive skills (Eisner, 2017). The guaranteed affective and intellectual engagement of students reinforces the fact that aesthetic pedagogy has a colossal contribution to the all-round development of learners. Also, the improvement of teacher skilfulness through such partnerships has to do with the concept of teacher artistry, promoted by educational philosophers like Greene and Grumet. This vision takes teaching to be inherently creative, and assumes that the aesthetic pedagogic experiences may provoke the own creativity of teachers, which is normally suppressed through standardized curricula.

Moreover, the university-museum collaboration also inherently fits the culturally responsive teaching (Gay, 2018). The teachers indirectly instilling multiculturalism in course material by taking advantage of multicultural museum displays and by doing so generate more inclusive classrooms. The application of theory on a larger scale, as such, can clarify the way collaborative work with museums can be empowered to promote educational justice and cultural responsiveness, which are the crucial aspects of modern inclusive education practices.

5.3. Practical and Pedagogical Implications

A few practical recommendations arise from these findings. The experience of museums and arts-informed pedagogy must be intentionally incorporated into teachers training programs. Incorporating compulsory subjects or co-designed units with local cultural organisations may achieve a lot in developing the ability of pre-service teachers in innovative instruction and aesthetic pedagogy. Planned museum experience during teacher training makes sure that teachers are well prepared to become creative teachers (Lee et al., 2021). Second, a professional growth should be developed by means of continuing intensive programs in the museums of working teachers. These would ask teachers to employ inquiry-based, innovative instruction regularly, prompting more student engagement and profound learning results. Moreover, the curriculum and evaluation methods should be reformed greatly. Curriculum must include aesthetic learning experiences in an overt way and assessment must be modified to honour and appreciate creativity by using a portfolio, performance, or project-based assessment vehicles. Such congruence ensures that new practices of teaching are legitimized in systems of education. Finally, it is important to surmount the logistic and economic obstacles in the integration of museum collaboration. Institutions must also enable the sufficient supply of resources such as favourable scheduling and transport assistance to access the museums. Besides, the digital museums infrastructure can be developed to maximize access with the continued interaction and minimization of the logistical inconvenience leading to the continuation of the aesthetic pedagogy execution in learning.

5.4. Policy Implications

On the policy level, creativity and aesthetic pedagogies should be introduced in education standards and frameworks. Education authorities could allocate funds to support specialist training under the university-museum collaboration and offer professional incentives or career development needs that include creative pedagogy to motivate teachers. The institutional partnerships that the schools can set up with cultural institutions must be cultivated, and these must be accompanied by policy directives on scalability and sustainability of aesthetic pedagogical interventions.

5.5. Teacher Training Recommendations

On the basis of these findings, the aesthetic and creative pedagogies must be introduced into teacher training programs curricula in an explicit way. The teacher certification programs would be well advised to include course work in museum education in particular, to ensure that those training to become teachers receive both the theoretical background and the practical training in using museum resources to their pedagogical advantage. Along with that it is also possible to promote reflective practice after visits to the museum which will also have a great impact on making teachers more sensitive to the impact of aesthetic experience on learning and thus to further develop their pedagogical comprehension and methods of implementation. Training needs also to be specifically addressed towards creativity-inducing instruction procedures, including open-ended questioning strategies and facilitative discussion procedures, in an attempt to enable teachers to instil creativity in learners. There need to be mentorship practices and collaboration partnerships in place, with new teachers being matched with experienced museum educators. Such a partnership could be more beneficial and offer

valuable knowledge transfer to fill preliminary gaps in personal capacity and confidence among teachers. Also, it is possible to add certain assessment training to evaluate the creative output, as this would increase the effectiveness of the teachers in assessing the student progress in aesthetic and creative learning spheres. In order to improve the connection between pedagogical practice and teacher creativity, workshops and arts events on a regular basis ought to be provided to encourage the development of creative capacity in educators. Finally, the formation of professional communities within the framework of aesthetic pedagogy would remain an incentive to teachers, facilitate sharing of best practices, and foster learning and constant innovation in creative pedagogy.

6. CONCLUSION

In this research, the authors explored the role of aesthetic pedagogy in the practice of university-museum collaborations in enhancing creativity. Through systematic review, it was proved beyond reasonable doubt that museum aesthetic experience is one of the important means through which student creativity can be achieved and imaginations, further engagement, and integrative learning facilitated. The findings substantiate learning theses based on which thick sensibilities, culture-laden experiences have a potent stimulating effect on cognitive abilities and imagination. The competences of teachers were also significantly enriched based on the involvement in aesthetic pedagogical activity. Teachers moved between doubt to confidence and they gained competencies like question-led questioning, cross-curricular planning and facilitating creative exploration and this gave them new enthusiasm in their profession.

However, the in-practice limitations, including logistic problems, inflexible curricula, and the lack of resources, appeared as tenacious difficulties. The research however provided plausible solutions including collaborative curriculum planning, inquiry learning, online museum resources and facilitative administrative policies which can be adopted to address these hurdles. The study therefore presents the significance of integrating aesthetic experiences and museum partnerships within the traditional learning process, curriculum models as well as teacher preparation programs.

Lastly the incorporation of aesthetic pedagogy by means of university-museum partnerships is an opportunity in education that is transformative which also provides a permanent course towards the enhancement of creativity in the students and also the productivity of the teachers.

7. LIMITATIONS AND FUTURE RESEARCH

Despite strong conclusions, limitations include the qualitative nature of the review and a potential publication bias in favour of effective interventions. The future research can employ quantitative research design to determine the impact of museum alliances on the creativity of students and the performance of teachers in a systematic manner. The longitudinal studies can also be used to investigate the long-term effects of the aesthetic pedagogy. Further investigation of the studies outside art museum context may give more comprehensive pedagogical information. In addition, exploring results in different groups of students would be more enlightening on the issue of equity.

REFERENCES

Abd Rahman, S. F., Md Yunus, M., & Hashim, H. (2021). Applying UTAUT in predicting ESL lecturers intention to use flipped learning. Sustainability, 13(15), 8571.

Abdelhadi, R., Hameed, L., Khaled, F., & Anderson, J. (2020). Creative interactions with art works: An engaging approach to Arabic language-and-culture learning. Innovation in Language Learning and Teaching, 14(3), 273–289.

Astuti, E. P., Suardana, I. W., Ambarwati, D. R. S., Wulandari, D., & Isa, B. (2021). Teachers' perceptions of museum-based learning and its effects on creativity: A preliminary study. Proceedings of the 4th International Conference on Arts and Arts Education (ICAAE 2020). Atlantis Press.

Au, W. (2022). Unequal by design: High-stakes testing and the standardization of inequality. Routledge.

Baldioli, S. (2022). The case for training teachers in object-based learning. Smithsonian Magazine, 8(4), 43–49.

Beghetto, R. A. (2021). Creative identity development in classrooms. In Cambridge Handbook of Lifespan Development in Creativity (Vol. 1, pp. 1–2). Cambridge University Press.

Daugherty, B. S. (2021). The collaboration of art museums and art education in the school setting (Master's thesis, Western Michigan University). Western Michigan University ScholarWorks.

Daza, V., Gudmundsdottir, G. B., & Lund, A. (2021). Partnerships as third spaces for professional practice in initial teacher education: A scoping review. Teaching and Teacher education, 102, 103338.

Etheridge, J. E. (2020). Exploring how teachers apply art museum professional development methodologies and approaches in the classroom after a teacher-training program developed in collaboration with an art museum (Doctoral dissertation, Concordia University).

García-Cano, M., Gil-Ruiz, P., & Martínez-Vérez, V. (2025). Visual arts museums as learning environments in the Faculty of Education: A study at Complutense University of Madrid. International Review of Education, 71(1), 109–134.

Gigerl, M., Sanahuja-Gavaldà, J. M., Petrinska-Labudovikj, R., Moron-Velasco, M., Rojas-Pernia, S., & Tragatschnig, U. (2022). Collaboration between schools and museums for inclusive cultural education: Findings from the INARTdis project. Frontiers in Education, 7, 979260.

Govindasamy, P., Yunus, M. M., & Hashim, H. (2019). Mobile assisted vocabulary learning: Examining the effects on students' vocabulary enhancement. Universal Journal of Educational Research, 7(12), 85–92.

Halim, M. S. A. A., Hashim, H., & Yunus, M. M. (2020). Pupils' motivation and perceptions on ESL lessons through online quiz-games. Journal of Education and E-Learning Research, 7(3), 229–234.

Hamilton, E. R., & Margot, K. C. (2020). Learning to teach in a museum: Benefits of a museum–university partnership. Journal of Museum Education, 45(4), 462–475.

Haripottawekul, A., & Wang, L. Q. (2025). Collaborative, interdisciplinary and student-led approaches in undergraduate research, teaching, and learning. Athens Journal of Education, 12, 1–18.

Hashim, H. U., Yunus, M. M., & Hashim, H. (2018). Language learning strategies used by adult learners of Teaching English as a Second Language (TESL). TESOL International Journal, 13(4), 39–48.

Holt, S. B. (2022). For the children? Teachers motivation and systems for recruitment, retention, and evaluation. In Research Handbook on Motivation in Public Administration (pp. 264–283). Edward Elgar Publishing.

Imara, K., & Altinay, F. (2021). Integrating education for sustainable development competencies in teacher education. Sustainability, 13(22), 12555.

Jackson, V. (2025). Developing university students' transferable skills through object-based and collaborative learning: An exploration into the role of art galleries and museums. GiLE Journal of Skills Development, 5(1), 116–130.

Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2023). Online teaching in K-12 education in the United States: A systematic review. Review of Educational Research, 93(3), 353–411.

Levin, A. K. (2020). Crossing over: Museums as spaces of violence. Museum International, 72(3–4), 28–41.

Lee, J., Lee, H. K., Jeong, D., Lee, J., Kim, T., & Lee, J. (2021). Developing museum education content: AR blended learning. International Journal of Art & Design Education, 40(3), 473–491.

Matasci, D. (2020). Assessing needs, fostering development: UNESCO, illiteracy and the global politics of education (1945–1960). In Measuring the Unmeasurable in Education (pp. 35–53). Routledge.

Massie, M. H., Capron Puozzo, I., & Boutet, M. (2022). Teacher creativity: When professional coherence supports beautiful risks. Journal of Intelligence, 10(3), 62.

Mohamed Shaffril, H. A., Samsuddin, S. F., & Abu Samah, A. (2021). The ABC of systematic literature review: The basic methodological guidance for beginners. Quality & Quantity, 55, 1319–1346.

Said, N. E. M., Yunus, M., Doring, L. K., Asmi, A., Aqilah, F., & Li, L. K. S. (2013). Blogging to enhance writing skills: A survey of students' perception and attitude. Asian Social Science, 9(16), 95.

Skrbinjek, V., Vičič Krabonja, M., Aberšek, B., & Flogie, A. (2024). Enhancing teachers' creativity with an innovative training model and knowledge management. Education Sciences, 14(12), Article 1381.

Webster, P., & Wolfe, D. (2013). Learning in and through the arts: A conversation across disciplines. Harvard Educational Review, 83(1), 23–39.

Yang, S. (2019). Teaching principles for aesthetic education: Cultivating children's aesthetic literacy. International Journal of Education and Practice, 8(4), 568–576.

Yunus, M. M., Hashim, H., Embi, M. A., & Lubis, M. A. (2010). The utilization of ICT in the teaching and learning of English: 'Tell Me More'. Procedia - Social and Behavioral Sciences, 9, 685–691.

Yunus, M. M., Salehi, H., & Nordin, N. (2012). ESL pre-service teachers' perceptions on the use of paragraph punch in teaching writing. English Language Teaching, 5(10), 138.