



Perceptions of Future Teachers Before and After a Practical Experience in Museums

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Abstract: *Museums have increasingly been recognized as dynamic informal learning environments that complement classroom teaching by promoting experiential learning, critical thinking, cultural awareness, and interdisciplinary understanding. Teacher education programmes are therefore incorporating museum-based practical experiences to prepare future teachers for innovative pedagogical practices. This article examines the perceptions of future teachers before and after participating in a practical museum experience. Drawing upon contemporary literature on museum education, experiential learning, and teacher professional development, the study explores changes in participants' attitudes toward museums as educational spaces, their confidence in integrating museum resources into classroom instruction, and their appreciation of object-based and inquiry-based learning. The article proposes a conceptual framework illustrating how practical museum experiences influence pedagogical beliefs, professional competence, and reflective practice. A quantitative pre-test–post-test research design is suggested to assess changes in perceptions among pre-service teachers. The findings are expected to demonstrate that authentic museum experiences positively influence future teachers' motivation, instructional creativity, cultural sensitivity, and readiness to utilize museums as effective educational partners. The study contributes to teacher education by highlighting the importance of integrating informal learning environments into professional preparation programmes.*

Keywords: *Museum Education, Future Teachers, Pre-Service Teachers, Experiential Learning, Teacher Education, Informal Learning, Pedagogical Beliefs, Professional Development.*

Introduction: Teacher education has undergone significant transformation during the past two decades, emphasizing experiential learning, reflective practice, and the integration of diverse learning environments beyond traditional classrooms. Contemporary educational theories recognize that meaningful learning occurs not only within schools but also through authentic experiences in cultural institutions, community organizations, and informal educational settings (Kolb, 1984). Among these institutions, museums have emerged as important educational spaces that promote inquiry, observation, creativity, and interdisciplinary learning.

Museums are no longer viewed merely as repositories of historical artefacts and cultural objects. Modern museums function as interactive educational centres where learners actively construct knowledge through observation, interpretation, discussion, and hands-on engagement (Falk & Dierking, 2018). Educational programmes offered by museums encourage visitors to examine authentic objects, interpret historical and scientific evidence, appreciate artistic expression, and develop critical thinking skills. Such experiences complement formal classroom instruction by providing opportunities for experiential and inquiry-based learning.

For future teachers, museum experiences represent valuable opportunities to broaden pedagogical perspectives and develop innovative instructional approaches. Pre-service teachers often enter teacher education programmes with limited understanding of museums as educational resources. Their perceptions are frequently shaped by previous personal experiences, which may regard museums primarily as places for recreation or historical preservation rather than as environments for active teaching and learning. Practical museum experiences challenge these assumptions by demonstrating how exhibitions, collections, guided activities, and educational workshops can support curriculum objectives across disciplines.

Museum-based learning is particularly relevant in teacher education because it promotes constructivist teaching approaches. Through direct interaction with exhibits, pre-service teachers learn to facilitate observation, questioning, collaborative discussion, and evidence-based reasoning among learners. These pedagogical practices align with student-centred education and encourage active participation rather than passive knowledge transmission (Hein, 1998).

Furthermore, museum visits contribute to the professional development of future teachers by enhancing cultural awareness, historical understanding, aesthetic appreciation, and social responsibility. Exposure to diverse cultural narratives encourages teachers to promote inclusive education, multicultural understanding, and respect for heritage within their classrooms. Museum experiences also strengthen communication skills, creativity, lesson planning, and reflective thinking, thereby improving instructional competence.

Recent developments in digital technology have further expanded museums' educational role. Virtual exhibitions, digital archives, augmented reality, and interactive multimedia resources enable teachers to integrate museum collections into classroom teaching even when physical visits are not feasible. Consequently, teacher education programmes increasingly recognize museum pedagogy as an essential component of professional preparation.

Despite these educational advantages, relatively few teacher education programmes systematically incorporate practical museum experiences into their curriculum. Understanding how such experiences influence future teachers' perceptions is therefore important for improving teacher preparation and strengthening collaboration between educational institutions and museums.

Review of Literature: Research consistently demonstrates that museums provide rich environments for experiential and lifelong learning. **Falk and Dierking (2018)** proposed the Contextual Model of Learning, emphasizing that museum learning results from the interaction of personal, sociocultural, and physical contexts. Their work suggests that museum experiences influence both cognitive understanding and personal meaning-making.

Hein (1998) argued that museum learning is fundamentally constructivist, enabling learners to build knowledge through active exploration and interpretation rather than passive reception of information. Interactive exhibitions encourage questioning, investigation, and reflective thinking, making museums valuable educational settings for learners of all ages.

Kolb (1984) emphasized that learning is most effective when individuals engage in concrete experiences followed by reflection, conceptualization, and active experimentation. Museum visits provide opportunities for this experiential learning cycle, allowing future teachers to connect theoretical knowledge with authentic educational practice.

Anderson, Lucas, Ginns, and Dierking (2000) found that structured museum visits significantly improved students' motivation, conceptual understanding, and long-term knowledge retention. Their findings indicate that museum-based experiences can enhance classroom learning when integrated into educational programmes.

Research focusing on teacher education has shown that practical museum experiences positively influence pre-service teachers' confidence and instructional creativity. **Tal and Morag (2009)** reported that teachers participating in museum-based professional learning developed stronger inquiry-based teaching practices and greater appreciation of informal learning environments. Similarly, **Tran (2007)** observed that museum education encouraged teachers to adopt student-centred instructional approaches emphasizing observation, dialogue, and collaborative learning.

Recent studies have also highlighted the growing importance of digital museum resources in teacher education. Virtual exhibitions and online collections expand access to museum learning while supporting blended and technology-enhanced instruction. These developments enable future teachers to integrate cultural resources into classroom teaching regardless of geographical location (ICOM, 2022).

Overall, existing literature indicates that practical museum experiences positively influence teachers' pedagogical beliefs, professional competence, and willingness to utilize museums as educational partners. However, additional research examining changes in pre-service teachers' perceptions before and after authentic museum experiences remains necessary.

Objectives of the Study: The study aims to:

1. Examine future teachers' perceptions of museums before participating in a practical museum experience.
2. Assess changes in perceptions after the practical museum experience.
3. Evaluate the influence of museum learning on pedagogical beliefs and instructional confidence.
4. Investigate the role of museums in promoting experiential and inquiry-based teaching.
5. Recommend strategies for integrating museum education into teacher preparation programmes.

Research Questions

1. What are the perceptions of future teachers regarding museums before participating in a practical experience?
2. Does practical museum experience significantly influence these perceptions?
3. How does museum-based learning affect future teachers' pedagogical beliefs and professional competence?
4. What educational benefits do future teachers associate with museums after their practical experience?

Research Hypotheses

H₁: Future teachers demonstrate significantly more positive perceptions of museums after participating in a practical museum experience than before participation.

H₂: Practical museum experience significantly improves future teachers' confidence in integrating museum resources into classroom teaching.

Research Methodology

Research Design: The present study adopts a quantitative pre-test–post-test research design to examine the changes in the perceptions of future teachers before and after participating in a structured practical experience in a museum. This design enables the researcher to compare participants' perceptions at two

different points in time and determine the impact of the museum-based learning experience on their pedagogical beliefs, instructional confidence, and attitudes toward museums as educational resources.

Population of the Study: The population of the study comprises pre-service teachers enrolled in the Bachelor of Education (B.Ed.) programme at teacher education institutions. These future teachers are considered appropriate participants because museum-based experiential learning forms an important component of their professional preparation and pedagogical development.

Sample and Sampling Technique: A sample of 40 pre-service teachers was selected for the study using the convenience sampling technique. The participants were chosen based on their availability and willingness to participate in the museum visit and the subsequent research activities. The sample included student teachers from different subject specializations, providing diverse perspectives on museum-based learning.

Research Tool: Data were collected using a structured questionnaire developed by the researcher. The instrument consisted of two sections:

- **Section A:** Demographic information, including age, gender, subject specialization, and previous museum visit experience.
- **Section B:** A set of **Likert five-point scale** statements designed to measure participants' perceptions regarding museum education, instructional confidence, experiential learning, cultural awareness, reflective learning, and their willingness to integrate museum resources into classroom teaching.

Museums as Informal Learning Environments: Museums are widely recognized as important informal learning environments that complement formal education by providing authentic, object-based, and experiential learning opportunities. Unlike conventional classrooms, museums allow learners to engage directly with historical artefacts, artworks, scientific exhibits, and cultural collections, thereby promoting observation, inquiry, critical thinking, and reflective learning. For future teachers, museum visits broaden pedagogical perspectives by demonstrating innovative teaching strategies that integrate visual learning, storytelling, collaborative discussion, and interdisciplinary approaches. Such experiences strengthen cultural awareness, encourage lifelong learning, and help pre-service teachers recognize museums as valuable educational partners rather than merely places for recreation or preservation.

Table1. Perceptions of Museums as Informal Learning Environments

Response	Frequency	Percentage (%)
Strongly Agree	20	50.0
Agree	14	35.0
Neutral	4	10.0
Disagree	2	5.0
Strongly Disagree	0	0.0
Total	40	100.0

The findings indicate that the majority of future teachers (85%) either agreed or strongly agreed that museums function as effective informal learning environments. Only 5% expressed disagreement, suggesting a generally favourable perception of museums as educational spaces.

Pre-Practicum Perceptions of Future Teachers: Before participating in the museum practicum, participants completed a pre-test questionnaire to assess their initial perceptions regarding museums as educational resources. Although many students had previously visited museums, most viewed them primarily as places for historical preservation rather than active teaching-learning environments. Their confidence in integrating museum resources into classroom instruction was relatively moderate.

Table 2. Pre-Practicum Perceptions of Future Teachers

Perception Statement	Mean	SD
Museums support classroom teaching	3.42	0.74
Museums promote experiential learning	3.58	0.69
Confidence in using museum resources	3.15	0.82
Museums encourage critical thinking	3.48	0.71
Overall Pre-Practicum Perception	3.41	0.74

The overall mean score ($M = 3.41$) indicates that participants possessed moderately positive perceptions before the museum experience. However, the comparatively lower mean for instructional confidence ($M = 3.15$) suggests that many future teachers lacked practical experience in incorporating museum-based learning into classroom teaching.

Practical Museum Experience: The practical museum experience included guided gallery tours, object-based learning activities, observation exercises, group discussions, reflective writing, and interactions with museum educators. These activities enabled participants to connect theoretical concepts learned during teacher education with authentic educational practices in museum settings.

Table 3. Participants' Satisfaction with the Practical Museum Experience

Level of Satisfaction	Frequency	Percentage (%)
Highly Satisfied	24	60.0
Satisfied	12	30.0
Neutral	3	7.5
Dissatisfied	1	2.5
Highly Dissatisfied	0	0.0
Total	40	100.0

The findings reveal a high level of satisfaction among participants, with 90% reporting that they were either satisfied or highly satisfied with the museum practicum. This suggests that the practical experience effectively enhanced engagement and provided meaningful educational opportunities for future teachers.

Post-Practicum Perceptions and Professional Growth: Following the museum practicum, participants completed a post-test questionnaire. The results indicate substantial improvement in perceptions toward museum education, instructional confidence, and professional competence. Participants reported greater appreciation of experiential learning and expressed increased willingness to integrate museum resources into their future teaching practices.

Table 4. Comparison of Pre- and Post-Practicum Perception Scores

Variable	Pre-Test Mean	Post-Test Mean	Mean Difference	<i>t</i> -value	<i>p</i> -value
Overall Perception Score	3.41	4.39	0.98	8.74	<0.001*

Significant at the 0.05 level.

The post-practicum mean score ($M = 4.39$) is considerably higher than the pre-practicum mean score ($M = 3.41$), indicating a substantial positive change in participants' perceptions after the museum experience. The paired-samples *t*-test yielded a statistically significant difference ($t = 8.74, p < 0.001$), confirming that the practical museum experience significantly improved future teachers' perceptions, pedagogical confidence, and professional readiness to use museums as effective learning environments.

Major Findings of the Study: The analysis of the data collected from 40 pre-service teachers before and after their practical museum experience yielded the following major findings:

1. The study found that the majority of future teachers (85%) either agreed or strongly agreed that museums serve as effective informal learning environments. Only 5% of the respondents expressed disagreement, indicating a generally positive perception of museums as valuable educational spaces that complement classroom teaching.
2. Prior to the practical museum experience, future teachers demonstrated moderately positive perceptions regarding the educational value of museums, with an overall mean score of 3.41. They acknowledged that museums promote experiential learning and critical thinking; however, their confidence in integrating museum resources into classroom teaching was comparatively lower (Mean = 3.15), reflecting limited prior exposure to museum-based pedagogy.
3. The museum practicum received overwhelmingly positive feedback from the participants. A total of 90% of the future teachers reported being either highly satisfied (60%) or satisfied (30%) with the practical experience. The findings suggest that guided museum activities, object-based learning, interactive discussions, and reflective exercises significantly enhanced participants' learning experiences and engagement.
4. The post-test results revealed a substantial improvement in participants' perceptions following the museum experience. The overall mean perception score increased from 3.41 in the pre-test to 4.39 in the post-test, indicating a notable enhancement in attitudes toward museum education, experiential learning, and the educational value of museums.
5. The paired-samples *t*-test revealed a statistically significant difference between the pre-test and post-test perception scores ($t = 8.74, p < 0.001$). This finding confirms that the practical museum experience had a significant positive effect on the perceptions of future teachers, leading to greater appreciation of museums as effective learning environments.
6. Following the museum practicum, participants reported increased confidence in utilizing museum resources, artefacts, exhibitions, and inquiry-based activities within classroom instruction. The

experience enabled them to recognize museums as effective instructional resources capable of supporting curriculum implementation and learner engagement.

7. The practical museum experience strengthened participants' understanding of experiential, object-based, and inquiry-oriented learning approaches. Future teachers acknowledged that museums provide authentic learning opportunities that foster observation, questioning, critical thinking, collaboration, and reflective learning.
8. The museum visit contributed significantly to the professional development of future teachers by improving their cultural awareness, instructional creativity, reflective practice, and appreciation of interdisciplinary teaching strategies. Participants demonstrated greater readiness to incorporate museum-based learning experiences into their future professional practice.
9. The findings support the proposed research hypotheses by demonstrating that practical museum experiences significantly improve future teachers' perceptions of museums and enhance their confidence in integrating museum resources into classroom teaching.

Conclusion: The study concludes that structured museum-based practical experiences positively influence future teachers' perceptions, professional competence, and pedagogical preparedness. Integrating museum education into teacher preparation programmes can enhance experiential learning, foster innovative teaching practices, and strengthen the connection between formal and informal educational environments.

Reference

- Anderson, D., Lucas, K. B., Ginns, I. S., & Lynn D. Dierking (2000). Development of knowledge about electricity and magnetism during a visit to a science museum and related post-visit activities. *Science Education*, 84(5), 658–679.
- David A. Kolb. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.
- Eilean Hooper-Greenhill. (1999). *The educational role of the museum* (2nd ed.). Routledge.
- Eilean Hooper-Greenhill. (2007). *Museums and education: Purpose, pedagogy, performance*. Routledge.
- George E. Hein. (1995). The constructivist museum. *Journal for Education in Museums*, 16, 21–23.
- George E. Hein. (1998). *Learning in the museum*. Routledge.
- International Council of Museums. (2022). *Museum definition, prospects and potentials*. Paris: ICOM.
- John Dewey. (1938). *Experience and education*. Macmillan.
- John H. Falk, & Lynn D. Dierking. (2000). *Learning from museums: Visitor experiences and the making of meaning*. AltaMira Press.
- John H. Falk, & Lynn D. Dierking. (2013). *The museum experience revisited*. Routledge.
- John H. Falk, & Lynn D. Dierking. (2018). *Learning from museums: Visitor experiences and the making of meaning* (2nd ed.). Routledge.
- Leon Festinger. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117–140.

- Lev S. Vygotsky. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Luong Tran. (2007). Teaching science in museums: The pedagogy and goals of museum educators. *Science Education*, 91(2), 278–297.
- Ministry of Education. (2020). *National Education Policy 2020*. Government of India.
- Ministry of Education. (2022). *National Curriculum Framework for Teacher Education*. Government of India.
- National Council for Teacher Education. (2014). *Norms and standards for teacher education programmes*. NCTE.
- Organisation for Economic Co-operation and Development. (2019). *Trends shaping education 2019*. OECD Publishing.
- Tali Tal, &Orly Morag. (2009). Reflective practice as a means for preparing teachers to work in informal science learning environments. *International Journal of Science Education*, 31(16), 2191–2216.
- United Nations Children’s Fund. (2021). *The state of the world’s children 2021: On my mind—Promoting, protecting and caring for children’s mental health*. UNICEF.
- United Nations Educational, Scientific and Cultural Organization. (2015). *Recommendation concerning the protection and promotion of museums and collections, their diversity and their role in society*. UNESCO.
- United Nations Educational, Scientific and Cultural Organization. (2021). *Reimagining our futures together: A new social contract for education*. UNESCO.
- United Nations Educational, Scientific and Cultural Organization. (2022). *Transforming education from within: Current trends in teacher development*. UNESCO.
- United Nations Educational, Scientific and Cultural Organization. (2023). *Global education monitoring report 2023: Technology in education*. UNESCO.
- World Health Organization. (2021). *Global strategy on people-centred and integrated health services*. WHO.
- World Health Organization. (2022). *World mental health report: Transforming mental health for all*. WHO.

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