



Exploring Life Skills through Museum-Based Heritage Learning: A Qualitative Content Analysis of Senior Secondary Students' Reflection

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Abstract

Education in the contemporary context extends beyond academic achievement to include the development of cognitive, social, emotional and interpersonal competencies. Life-skills education therefore has an important role in supporting the holistic development of learners. Museums and heritage spaces provide opportunities for students to encounter authentic objects, artworks, historical evidence and cultural resources, thereby connecting classroom learning with practical experiences. The present study explores the life-skills learning experiences perceived by senior secondary students following a museum-based heritage learning experience. A qualitative exploratory approach was adopted, and 56 senior secondary students participated in a planned visit to the Museum and subsequently submitted written reflections. The reflections were analysed using qualitative content analysis to identify recurring ideas related to experiential learning, heritage awareness and life-skills learning. The findings indicate that the museum experience provided opportunities for practical understanding of history, observation and interpretation of artefacts, critical thinking, communication and interpersonal interaction, cultural and heritage appreciation, and personal reflection. The findings suggest that museum-based heritage learning can provide an authentic context in which students can practise selected cognitive, social and reflective life skills. The study highlights the educational value of integrating museum and heritage experiences with classroom learning and life-skills education.

Keywords: Life Skills, Museum-Based Learning, Heritage Education, Experiential Learning, Qualitative Content Analysis, Senior Secondary Students, Cultural Heritage.



1. Introduction

Contemporary education increasingly recognizes that academic knowledge alone is insufficient for preparing young people to respond effectively to the demands and challenges of everyday life. Learners require the ability to think critically, generate ideas, solve problems, make responsible decisions, communicate effectively, establish positive relationships, understand themselves and others, and manage emotional experiences. These competencies are broadly addressed within the field of life-skills education.

The World Health Organization (WHO) identifies ten core life skills: self-awareness, empathy, critical thinking, creative thinking, decision-making, problem-solving, effective communication, interpersonal relationships, coping with emotions and coping with stress. The WHO's school-based life-skills framework emphasizes the importance of providing children and adolescents with opportunities to develop psychosocial competence through educational experiences.

Life skills are particularly relevant during adolescence, when students increasingly develop independence, personal identity, interpersonal relationships, decision-making abilities and emotional awareness. Consequently, schools need to provide learning experiences in which students can not only learn about life skills theoretically but also encounter situations that allow them to observe, question, communicate, collaborate and reflect.

One such opportunity is provided by museum-based learning. Museums bring learners into direct contact with authentic objects, artworks, manuscripts, historical evidence and cultural resources. Such experiences can complement textbook-based learning by enabling students to observe objects directly and interpret them within their historical and cultural contexts. Research on informal museum learning has also demonstrated the importance of conversation and reflection in supporting learning from museum experiences.

Heritage education similarly encourages learners to establish connections between the past and present. Recent systematic research has described heritage education as a holistic and transdisciplinary field in which educational approaches can promote appreciation, conservation, care and active engagement with heritage. The literature also highlights

constructivist and active approaches in which students participate in interpreting and understanding heritage rather than simply receiving information.

This is particularly important in the Indian educational context, where students encounter a rich diversity of historical, artistic, religious and cultural traditions. Providing practical exposure to heritage can help students understand that history and culture are not limited to textbook descriptions but can be encountered through authentic material evidence. A museum visit can therefore become an opportunity to connect knowledge with experience.

The present study was undertaken to explore this relationship from the perspective of senior secondary students themselves. Rather than attempting to statistically measure changes in life skills, the study examines what students expressed in their written reflections following a museum-based heritage learning experience.

2. Conceptualizing Life Skills

Life skills can broadly be understood as psychosocial, cognitive, emotional and interpersonal competencies that enable individuals to deal effectively with the demands and challenges of everyday life. The WHO framework provides a particularly useful basis for educational research because it brings together three interconnected areas.



Fig: 1: Three Broad Areas of Life Skills

2.1 WHO Ten Core Life Skills

WHO has identified ten core life skills under the above three broad areas. These competencies help learners recognize emotional responses, regulate reactions and deal constructively with challenging situations.

The three dimensions should not be regarded as isolated. For example, effective decisionmaking may require self-awareness, critical thinking and emotional regulation, while empathy may influence communication and interpersonal relationships.

Thus, life skills education is inherently interconnected.

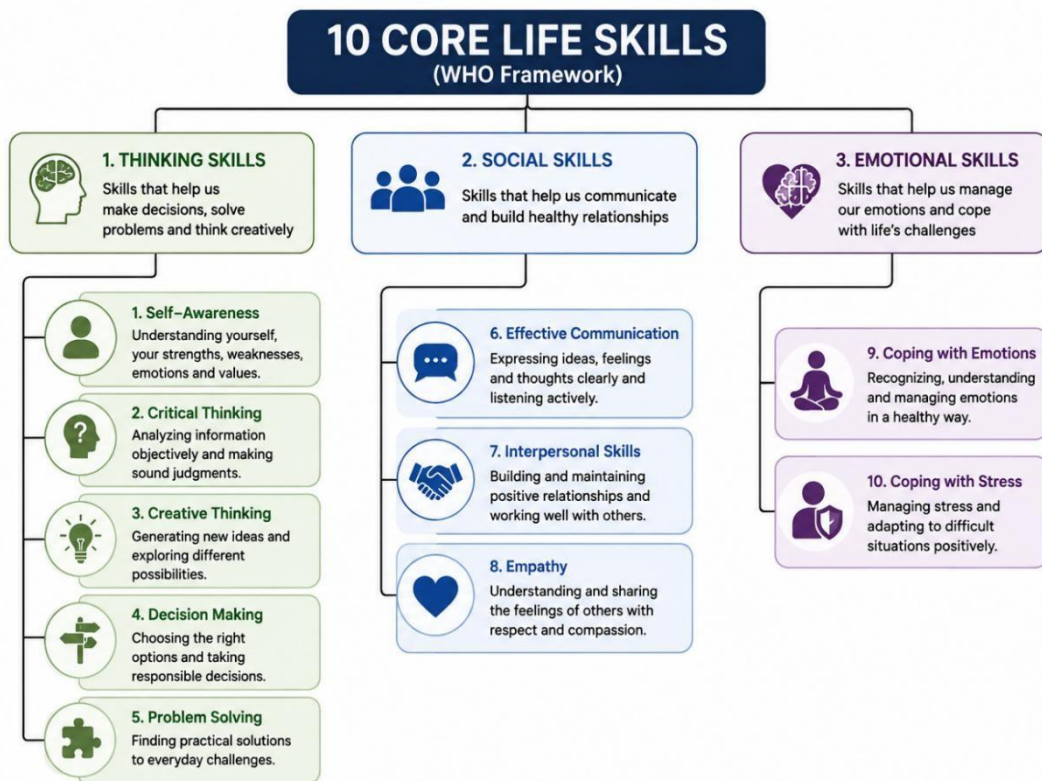


Fig: 2 : WHO Ten Core Life Skills

3. Review of Related Literature

3.1 Museum Learning and Critical Thinking

Critical thinking is one of the most direct connections between museum education and the WHO life-skills framework. Research on museum-based critical thinking has provided empirical support for this relationship. Poce's work on virtual museum experiences examined participants' engagement with visual thinking activities and critical-thinking processes. The study highlighted the potential of aesthetic experience, reflection, interpretation and analysis in museum learning.



Morard, Sanchez and Bonnat's study of a mixed-reality museum game involving 12–15-yearold students similarly demonstrated that ill-structured problems in museum learning environments could encourage some learners to actively process information and engage with questions concerning knowledge and evidence.

A 2025 study of inquiry-based learning at the Radya Pustaka Museum, for example, identified historical literacy and critical engagement as important outcomes of museum-based inquiry.

3.2 Museum Learning and Creative Thinking

Ambarwati et al. (2023) examined museum-based learning for creativity in Indonesia and Malaysia. Their findings emphasized the importance of narratives, internal and external dialogue, imagination and experiential approaches. The researchers also identified practical challenges, including the need for more interactive museum programmes and stronger partnerships between schools and museums.

3.3 Museum Learning and Empathy

Poce and colleagues' heritage education pilot explicitly aimed to promote empathy and critical thinking through Visual Thinking Strategies, reflective questioning, storytelling and objectbased learning. The study reported improvement in an empathy dimension and in indicators associated with critical thinking.

3.4 Museum Learning and Emotional Skills

Elsden et al. (2023), in a mixed-methods study of students from three research-intensive universities in the United Kingdom, examined the role of experiential learning spaces in supporting student well-being. Their findings suggested that spaces such as museums, collections, libraries and gardens hold considerable potential to support students' mental health and well-being. The study further highlighted the importance of considering physical and digital learning environments as part of curriculum design.

Recent research has begun to explore museums as environments that may support psychological well-being, stress management and emotional regulation. Hassan et al. (2025), through a qualitative document analysis of literature on museum-based learning and pedagogy, proposed a conceptual framework positioning museum education as a potentially supportive approach to student stress management. The authors highlighted the immersive and



studentcentred characteristics of museum environments and their potential to promote reflective engagement and emotional regulation.

Dupuy et al. (2024) investigated psychological responses to museum visits among 16 older women and found that engagement during artwork analysis was associated with reductions in self-reported anxiety and stress.

3.5 Museum Learning and Communication and Interpersonal Skills

The Yale Peabody Museum's Youth Gallery Educator Program provides high-school students with training and practical experience in public speaking, science communication, leadership and teamwork, while the National Palace Museum's Youth Cultural Ambassador programme similarly emphasizes communication, collaboration, exploration and shared learning among senior high-school students.

Perry, S. (2026). examined a museum-facilitated youth panel at a UK science and nature museum. The programme involved young people aged 16–23 from across the UK.

3.6 Heritage Education and Holistic Development

Valencia Arnica et al. (2023) conducted a systematic review using the PRISMA methodology to examine didactic models, educational settings, heritage categories and educational design approaches in heritage education, drawing on studies published between 2018 and 2022 and identified through Web of Science, Scopus and Dimensions. Their review highlighted the predominance of constructivist approaches, active teacher facilitation and increasing student participation in heritage-learning processes.

4. Research Gap

The review suggests the following gaps:

1. Museum education is frequently studied in relation to knowledge acquisition and historical learning rather than life skills.
2. Limited research examines museum-based learning through the WHO's ten core life skills framework.
3. The potential relationship between heritage experiences and emotional and social life skills requires further exploration.



4. There is scope for developing a context-specific instrument for examining students' perceived life skills after structured heritage learning experiences.
5. More research is required at the senior secondary level, where students are developing greater independence, decision-making capacity and social-emotional competencies.

5. Theoretical Framework

The present study is informed by three complementary perspectives: the WHO Life Skills Framework, Experiential Learning Theory and Constructivist Learning Theory.

5.1 WHO Life Skills Framework

The WHO Life Skills Framework provides the central conceptual basis for examining students' reflections. The ten life skills provide a broad framework for considering cognitive, social and emotional competencies relevant to students' everyday lives.

For the present study, the framework was used primarily as an interpretive framework rather than as a measurement scale. The students' reflections were examined for evidence of experiences related to selected life skills.

5.2 Experiential Learning Theory

Kolb's (1984) Experiential Learning Theory emphasizes learning through experience, reflection, conceptualization and application. A museum visit provides a natural context for experiential learning because students encounter authentic objects and environments, observe them, receive information, interpret what they see and subsequently reflect on the experience.

The museum experience can therefore be understood as a movement from:

Direct Experience → Observation → Interpretation → Reflection → Learning

This perspective is particularly relevant to the present study because students' written reflections provided evidence of how they interpreted and made meaning from their direct experience.

5.3 Constructivist Perspective

From a constructivist perspective, learners actively construct knowledge through interaction with their environment and by connecting new experiences with prior knowledge. Museum objects do not necessarily communicate only one predetermined meaning. Students may interpret the same artefact differently depending on their prior knowledge and perspectives.

Museum-based heritage learning can therefore provide opportunities for students to ask questions, compare information, develop interpretations and connect new knowledge with what they already know.



Fig: 3 : Theoretical Framework

6. Research Methodology

6.1 Research Approach

The study adopted a qualitative exploratory approach to understand students' perceptions and learning experiences following a museum-based heritage learning experience. A qualitative approach was considered appropriate because the study focused on students' own written expressions rather than numerical measurement of life-skills development.

6.2 Participants

The participants were 56 senior secondary students who participated in a planned museum-based heritage learning visit to the Museum of Ahmedabad. Following the visit, all 56 students submitted written reflections describing their observations, learning experiences and personal responses to the visit.

The students' reflections constituted the primary qualitative data for the study.



6.3 Data Collection

Data were collected through students' written reflections following the museum visit. Students were encouraged to reflect on what they observed, what they learned about heritage and culture, how the experience influenced their thinking, and what personal or interpersonal learning they gained from the experience. Each reflection was anonymised and identified using codes. The reflections were treated collectively for analysis rather than presenting individual student profiles.

6.4 Data Analysis

The written reflections were analysed using qualitative content analysis.

The reflections were read carefully to identify recurring ideas and meaningful statements. Similar responses were grouped into broad categories. The WHO life-skills framework was used as a guiding framework for interpreting the emerging categories, while observations that did not directly correspond to the WHO framework were retained as emerging themes.

Importantly, the analysis did not assume that all ten WHO life skills would necessarily be represented. The findings therefore focus on those life-skills dimensions that were most clearly reflected in the students' written responses.

7. Museum-Based Learning Context

The museum visit provided students with direct exposure to a range of historical and cultural artefacts. The exhibits included sculptures, paintings, manuscripts, coins and other heritage resources representing diverse periods and traditions. Selected photographs of the museum exhibits are presented below to illustrate the type of heritage resources encountered by the students.



GYANBODH

An International Multidisciplinary
Peer Reviewed Journal

ISSN:3048-9792

Volume: 3

Issue: 4

July - August: 2026





Fig. 4: Selected sculpture observed during the museum visit

Source: Photograph taken during the museum visit.



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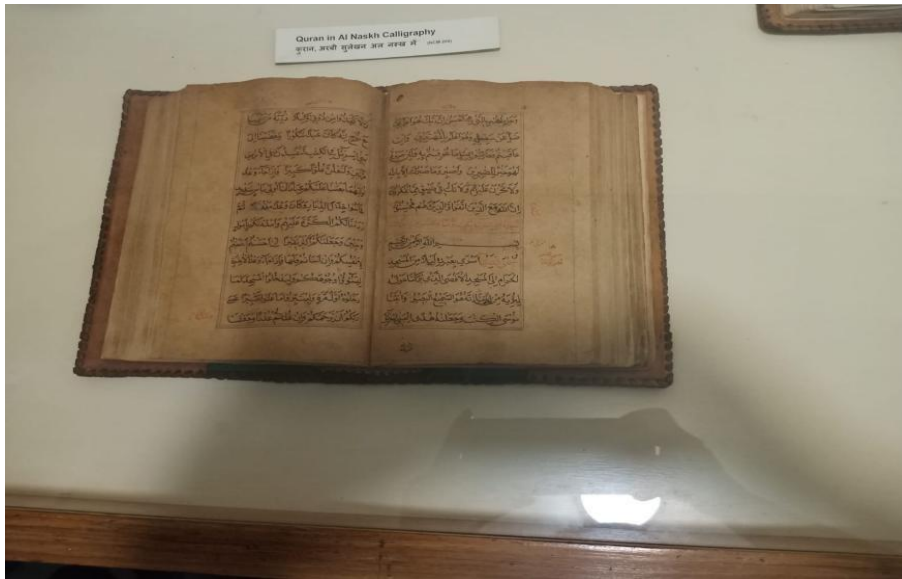


Fig. 5. Selected heritage artefact observed during the museum visit

Source: Photograph taken during the museum visit.

Findings

The collective reflections of the 56 senior secondary students who participated in the museum visit were analysed to identify the major learning experiences emerging from their responses.

- The reflections indicated that the museum-based heritage learning experience extended students' understanding beyond textbook-based knowledge and provided opportunities for direct observation, interpretation, cultural understanding and personal reflection.
- One of the most prominent findings was the students' recognition of the value of practical learning. Rather than learning about history only through textbooks, students were able to directly observe historical artefacts, sculptures, coins, paintings and manuscripts. The reflections specifically described the museum visit as providing "amazing insights and practical study of history."
- Students observed collections representing different historical periods and regions, including Gandhara and Mathura sculptures, ancient coins, miniature paintings and manuscripts. They also learned about the classification of historical sources and the role of artefacts in reconstructing the past.

Related life-skill dimension: Critical Thinking, Self-awareness and Creative Thinking.

- The reflections demonstrated that students were encouraged not merely to look at museum objects but to observe, compare and interpret them. For example, students noted the differences between the Buddha sculptures from Gandhara and Mathura and connected these differences with the influence of different cultural traditions.
- The museum experience encouraged students to examine information, identify differences and construct interpretations from physical evidence.

Related life-skill dimension: Critical Thinking and Creative Thinking.

- The reflections expressed appreciation of India's diverse cultural heritage and historical legacy. The experience therefore enabled students to encounter cultural diversity through authentic objects rather than solely through written descriptions. The students'



concluding reflection that the museum provided a "galore of Indian history and historical displays" illustrates their broader appreciation of India's cultural heritage.

Related life-skill dimension: Empathy and Self-awareness, with cultural awareness emerging as an important complementary theme.

- The students' reflections also highlighted the importance of interaction with museum educators and guides. The explanations provided by the museum educators helped students understand the significance, symbolism and historical context of the objects they observed.
- The experience therefore involved listening, questioning, interpreting and exchanging understanding, rather than passive observation. Such experiences can provide an authentic context for practising communication and interpersonal skills.

Related life-skill dimension: Effective Communication and Interpersonal Relationships.

- The final theme was reflection and personal learning. Students expressed enthusiasm and gratitude for the opportunity to participate in the museum experience and described themselves as continuing learners.
- The reflections suggest that direct engagement with heritage encouraged curiosity and helped students connect historical knowledge with their own learning experiences. The visit also appeared to encourage students to reconsider history as something more than a collection of dates and events; instead, they experienced it as a combination of human experience, culture, artistic expression and heritage.

Related life-skill dimension: Self-awareness and Coping with Emotions.

Discussion

The findings suggest that a museum-based heritage experience can extend learning beyond the conventional classroom and provide students with opportunities to engage with historical and cultural knowledge through direct experience.

The first major finding concerned practical learning. Students valued the opportunity to see historical artefacts, sculptures, coins, paintings and manuscripts directly. This supports the principles of experiential learning, where knowledge is constructed through experience



followed by reflection. The findings are also consistent with research showing that museum learning can support learning through direct engagement, conversation and reflection.

The second finding concerned observation and critical interpretation. Students compared different artistic representations and attempted to understand their historical and cultural contexts. This corresponds with the role of museum learning in encouraging observation, interpretation and critical engagement. Previous research has similarly suggested that museum environments can create opportunities for learners to examine evidence and engage with questions about knowledge and interpretation.

The third finding related to communication and interpersonal interaction. Students' interactions with educators and explanations provided during the visit helped them understand the significance of the objects. The museum therefore functioned as a social learning environment rather than merely a physical space containing artefacts. This finding is consistent with research emphasizing dialogue, participation and interaction in museum education.

The fourth finding, cultural and heritage appreciation, is particularly significant for heritage education. Students encountered different forms of Indian artistic, religious and cultural heritage through authentic objects. The experience therefore provided an opportunity to connect historical knowledge with cultural understanding. This is consistent with heritage education research that emphasizes appreciation, care and active engagement with heritage. Valencia Arnica et al. (2023), for example, describe heritage education as a holistic and transdisciplinary field in which active and constructivist approaches can support meaningful engagement with heritage.

Finally, the reflections indicated personal reflection and meaningful learning. Students expressed curiosity and appreciation and connected the museum experience with their broader understanding of history. This finding is relevant to experiential learning because reflection is an essential component of transforming an experience into meaningful learning.

Taken together, the findings suggest that museum-based heritage learning can provide opportunities for the practice of several cognitive, social and reflective life skills. However, the findings should not be interpreted as evidence that the museum visit caused an improvement in



life skills. Rather, the students' reflections demonstrate that the experience provided opportunities to practise and perceive aspects of these skills.

Educational Implications

Museum visits can be integrated with classroom teaching and life-skills activities rather than being treated only as educational excursions.

Heritage-based learning can provide students with opportunities to connect curriculum content with real-world experiences.

Museums can design student-oriented activities involving observation, discussion, interpretation, collaboration and reflection.

Museum-based heritage experiences can serve as an authentic context for practising cognitive, social and emotional life skills.

Limitations

1. The study involved only 56 students.
2. The study was conducted in a particular educational context.
3. Data were based on students' written reflections.
4. The study explores perceived learning experiences and does not establish a causal relationship between museum visits and life-skills development.

Conclusion

The study highlights the potential of museum-based heritage learning as an experiential approach to life-skills education. The reflections of the participating students indicate that engagement with heritage can provide opportunities for observation, critical and creative thinking, communication, collaboration, empathy and personal reflection. Museums can therefore be viewed not merely as repositories of historical and cultural resources, but also as meaningful learning environments that connect academic knowledge with practical experiences. Integrating structured museum experiences with life-skills education may contribute to more holistic and meaningful learning among senior secondary students.



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