

Architectural Education as an Approach to Developing Active Citizenship in Children: An Evaluation through Primary School Textbooks

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Abstract: This research addresses the role of architectural education as an innovative pedagogical approach to fostering active citizenship and civic awareness among children, rejecting the view of the child as a passive user of space and proposing project-based learning as a mechanism to transform abstract values of citizenship into conscious behavioral practices and collective action. The study adopts a descriptive-analytical methodology, utilizing a content analysis card to examine a purposive sample of social studies activity books (History, Geography, and Civic Education) for the fifth year of primary education in Algeria. The results reveal a clear variation in the inclusion of the established criteria; the Geography textbook excelled in developing awareness of the built environment and attachment to place, the Civic Education textbook uniquely reinforced responsibility and the preservation of public property, while the History textbook focused on deepening the dimensions of identity and emotional national belonging. Despite this integration, the study uncovered a shared shortcoming: the dominance of traditional, rote-learning activities and the absence of the practical application of extended field projects. Consequently, the study recommends integrating participatory design workshops and micro-urban projects into child-centered curricula to empower children to practice real-world citizenship roles and develop their critical and creative skills from an early age.

Keywords: Architectural education; active citizenship; project-based learning; content analysis; primary school curricula.

Introduction:

Preparing children to become active citizens has become one of the principal goals of contemporary education. Beyond transmitting academic knowledge, educational systems are increasingly expected to develop learners who can participate responsibly in society, engage critically with community issues, and contribute to improving their physical and social environments. Within this perspective, active citizenship is understood as a multidimensional educational outcome encompassing participation, responsibility, collaboration, critical thinking, and respect for shared public spaces. These competencies begin to develop during early childhood, making primary education a particularly important stage for fostering civic values and behaviors. Recent educational research has emphasized that civic learning is most effective when children experience citizenship through authentic activities rather than through theoretical instruction alone. Consequently, innovative pedagogical approaches have sought to connect learning with real-life contexts, enabling children to explore their surroundings, solve practical problems, and participate in meaningful decision-making processes. Among these approaches, architectural education, also referred to as built environment education, has attracted growing international attention as an educational field that develops children's understanding of the spaces in which they live while strengthening their sense of belonging, environmental responsibility, and community engagement.

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Architectural education views children not merely as users of the built environment but as active participants capable of observing, interpreting, and improving their surroundings. Through activities involving spatial exploration, design, and environmental problem-solving, children develop visual literacy, collaborative skills, creativity, and awareness of public space. International studies consistently demonstrate that participation in architectural projects promotes children's civic engagement and strengthens their sense of ownership toward their communities. For example, Özsoy and Ensarioğlu (2021) found that involving children in participatory playground design enhanced both environmental awareness and civic responsibility. Likewise, Lozanovska and Xu (2013) reported that collaborative school design projects empowered children to participate in decision-making concerning their daily environments, while Can and İnalhan (2017) highlighted the contribution of participatory design activities to children's communication, negotiation, and democratic participation skills. Similarly, El-Aasar et al. (2018) concluded that architectural workshops constitute an effective educational model for preparing responsible future citizens.

The educational potential of architectural education is further strengthened when implemented through Project-Based Learning (PBL). PBL provides authentic learning situations in which children investigate real-world problems, collaborate with peers, develop practical solutions, and create tangible products. Such learning experiences encourage autonomy, critical thinking, teamwork, and shared responsibility, all of which closely correspond to the core dimensions of active citizenship. Rather than learning civic concepts abstractly, children experience them through participation in meaningful projects related to their everyday environment. Consequently, numerous educational studies regard PBL as one of the most appropriate instructional approaches for integrating architectural education into primary education.

Despite this growing body of international literature, an important research gap remains. Existing studies have largely examined architectural education from the perspectives of environmental awareness, creativity, or design thinking, whereas relatively limited attention has been devoted to its contribution to developing active citizenship, particularly through systematic analysis of school curricula. Moreover, research addressing this relationship within Arab educational systems remains scarce, and studies conducted in the Algerian context are particularly limited.

This gap is especially significant because Algeria has introduced competency-based educational reforms that emphasize citizenship, participation, and learner-centered pedagogies. Nevertheless, little evidence exists regarding the extent to which these educational orientations are reflected in primary school textbooks or whether project-based learning activities actually support children's understanding of the built environment and public property. Accordingly, examining Algerian textbooks offers an opportunity to evaluate how architectural education can contribute to citizenship education within the national curriculum and to identify opportunities for further curricular development.

The originality of the present study lies in bridging these two educational fields architectural education and active citizenship through a content analysis of History, Geography, and Civic Education textbooks for the fifth year of primary education in Algeria. Rather than evaluating children's behaviors directly, the study investigates the educational opportunities embedded within textbook activities and project-based learning tasks that may foster children's connection to the built environment, public property, and civic participation. In doing so, the study contributes to expanding the literature on built environment education within the Arab context while providing evidence-based recommendations for curriculum development.

Accordingly, the objectives of this study are to:

- Examine the theoretical relationship between architectural education and active citizenship;
- Analyze the extent to which project-based learning activities in fifth-grade History, Geography, and Civic Education textbooks support children's attachment to the built environment and public property;
- Identify curricular strengths and gaps and propose educational recommendations for strengthening architectural education within Algerian primary education.

Based on these objectives, the study addresses the following research questions:

- What theoretical and conceptual foundations explain the relationship between architectural education and the development of active citizenship among primary school children?
- To what extent do project-based learning activities presented in Algerian fifth-grade History, Geography, and Civic Education textbooks promote children's understanding of the built environment, public property, and active citizenship?
- What strengths, gaps, and educational implications emerge from the content analysis of these textbooks for enhancing architectural education within the Algerian primary curriculum?

1. Definition of research concepts

1.1 Architectural education

An educational process aimed at developing children's understanding of the built environment and the architectural spaces surrounding them. It equips them with the ability to observe and analyze spatial problems, and to participate in proposing solutions for them, thereby enhancing their awareness of the urban environment and their role in its development (Cavdar, R. C., 2012).

1.2 Active citizenship:

Active citizenship is defined as an individual's ability to engage in conscious and responsible participation in social and civic life, through taking responsibility, demonstrating initiative, participating in decision-making, and contributing to solving community problems (Hoskins, B., & Mascherini, M., 2009).

1.3 Project-based learning:

Project-based learning is defined as a learner-centered instructional model in which children engage in investigating real-world problems and producing concrete projects through research, planning, collaborative work, and continuous assessment (Aiche, M., 2009).

2.Theoretical Relationship between Architectural Education and Active Citizenship: A Critical Synthesis

2.1 Environmental Psychology and Children's Relationship with the Built Environment

Environmental psychology provides one of the principal theoretical foundations for understanding how architectural education contributes to children's civic development. Rather than considering the built environment as a neutral physical setting, this perspective views it as an educational context that shapes children's perceptions, behaviors, and social interactions. Through continuous engagement with their surroundings, children gradually develop a sense of place attachment, environmental responsibility, and awareness of the collective value of public spaces.

Recent empirical studies largely support this perspective. For example, Jansson et al. (2022) argued that children's exploration and interpretation of urban environments strengthen their emotional attachment to place and encourage responsible environmental behavior. Likewise, architectural education initiatives consistently demonstrate that when children actively observe and analyze their surroundings, they become more capable of recognizing environmental problems and proposing improvements. Nevertheless, most of these studies primarily assess changes in environmental awareness rather than examining whether educational curricula systematically provide opportunities for developing these competencies. Consequently, evidence remains limited regarding the extent to which school textbooks themselves embed learning experiences that cultivate children's relationship with the built environment.

2.2 Empowerment Theory and Participatory Learning

Empowerment theory complements environmental psychology by explaining how participation transforms environmental awareness into civic action. From this perspective, children develop citizenship competencies when they are treated as active contributors rather than passive recipients

of knowledge. Educational experiences that encourage children to express opinions, participate in solving problems, and influence their immediate environment enhance their sense of agency, self-efficacy, and responsibility.

Several recent studies support this interpretation. Olsen (2023) demonstrated that involving children in environmental decision-making increases autonomy and confidence in civic participation. Similarly, Arminda and al. (2024) reported that participation in community-oriented educational activities strengthens civic awareness and reinforces children's sense of responsibility and belonging. Although these studies consistently emphasize participation as a prerequisite for citizenship development, they mainly investigate extracurricular or community-based initiatives rather than formal educational curricula. Consequently, they provide limited evidence regarding whether curriculum materials offer structured opportunities for children's empowerment through project-based educational activities.

2.3 Democratic Education as a Framework for Architectural Education

Democratic education provides a broader pedagogical framework that connects architectural education with active citizenship. This perspective argues that democratic values cannot be effectively transmitted through direct instruction alone but must be experienced through authentic participation, dialogue, collaboration, and shared decision-making. Architectural education naturally supports these principles because it engages children in collaborative design processes requiring negotiation, consensus-building, and collective responsibility.

Empirical findings generally converge around this assumption. Woolner et al. (2021) found that children's participation in designing and evaluating educational spaces promotes communication, teamwork, and respect for diverse viewpoints. Likewise, Eijkholt (2022) emphasized that recognizing children's right to participate in decisions affecting their environments contributes to the development of civic identity, while Riádigos-Couso and Gradaílle-Pernas (2024) showed that meaningful participation encourages initiative, cooperation, and long-term community engagement. Despite this broad agreement, existing studies differ in the educational settings they investigate, ranging from school design projects to community participation programs, making it difficult to determine how democratic participation is embedded within official school curricula.

2.4 Towards an Integrated Conceptual Framework

Taken together, these theoretical perspectives offer complementary rather than competing explanations of how architectural education promotes active citizenship. Environmental psychology explains why interaction with the built environment influences children's civic attitudes by emphasizing place attachment and environmental responsibility. Empowerment theory explains how participatory experiences develop children's agency, autonomy, and civic competence. Democratic education clarifies the pedagogical conditions under which these experiences become meaningful learning opportunities through dialogue, collaboration, and shared decision-making.

Collectively, these perspectives suggest that architectural education can contribute to active citizenship only when educational activities simultaneously encourage environmental understanding, meaningful participation, and collaborative problem-solving. Project-Based Learning (PBL) represents an educational approach capable of integrating these three dimensions because it engages children in authentic environmental projects that require investigation, teamwork, critical thinking, and the production of practical solutions.

2.5 Research Gap and Justification for the Present Study

Although the international literature demonstrates broad agreement regarding the educational value of architectural education and participatory learning, several important gaps remain. First, most previous studies evaluate children's participation in workshops, community projects, or experimental educational programs, whereas comparatively little attention has been paid to the extent to which official school curricula institutionalize these educational opportunities. Second, existing research has predominantly examined outcomes such as environmental awareness,

creativity, or participation, while relatively few studies have analyzed how curricular content explicitly supports the development of active citizenship through architectural education. Third, evidence from Arab educational systems and particularly from Algeria remains extremely limited. These gaps justify the present study. Rather than measuring children's behavioral outcomes directly, this research examines whether the educational foundations identified in environmental psychology, empowerment theory, and democratic education are reflected in the content of Algerian fifth-grade History, Geography, and Civic Education textbooks. Through systematic textbook content analysis, the study investigates the presence of project-based learning activities that foster children's relationship with the built environment, public property, participation, and civic responsibility. In doing so, it addresses an important empirical and contextual gap while providing evidence that can inform future curriculum development in Algerian primary education.

3. Research methodology

This study employed the descriptive-analytical approach, using qualitative and quantitative content analysis as its principal methodological procedure. The descriptive-analytical approach is widely used in educational research to systematically describe, classify, interpret, and analyze educational phenomena without manipulating variables. According to Creswell and Creswell, (2018), this approach enables researchers to examine existing educational materials in order to identify patterns, relationships, and educational meanings that contribute to understanding a particular phenomenon.

This methodological approach is appropriate for the present study because the research does not seek to measure the effectiveness of project-based learning in classroom practice. Rather, it aims to analyze the curricular opportunities embedded within official textbooks that may support architectural education and the development of active citizenship. Accordingly, the study examines the extent to which textbook activities provide learning situations related to the built environment, public property, participation, and civic responsibility.

3.1 Study Sample

A purposive sampling strategy was adopted because the objective of the study was not to generalize across all school subjects but to examine the curricular materials most directly associated with citizenship education and children's interaction with their physical and social environments.

The sample consisted of the official History, Geography, and Civic Education textbooks for the fifth year of Algerian primary education. These three textbooks were selected for several reasons.

First, they explicitly address concepts related to citizenship, national identity, environmental responsibility, public property, and community participation.

Second, the fifth year represents the final stage of primary education, during which learners are expected to consolidate civic competencies developed throughout earlier grades before transitioning to middle school.

Third, these textbooks contain the highest concentration of project-based activities, learning situations, and practical tasks that require learners to investigate community issues, cooperate with peers, and engage with their surrounding environment.

Therefore, the selected sample adequately represents the curricular content most relevant to the research problem while remaining consistent with the study's analytical objectives.

3.2 Research instrument

The study employed a content analysis protocol (coding instrument) specifically developed to examine the educational content of the selected textbooks.

Content analysis is defined as a systematic and replicable research technique for analyzing written documents by coding textual units into predefined categories to identify patterns, meanings, and educational characteristics (Krippendorff, 2018).

The coding instrument was designed in light of the theoretical framework of the study and previous literature on architectural education, project-based learning, and active citizenship.

3.3 Unit of Analysis

The learning activity constituted the primary unit of analysis because project-based learning is mainly represented through educational activities and practical tasks rather than isolated textual statements.

When necessary, lessons, projects, accompanying illustrations, and explanatory paragraphs directly related to an activity were also analyzed to ensure complete interpretation of the educational content.

3.4 Coding Procedure

The coding process followed five sequential stages:

1. Reading all selected textbooks to obtain a comprehensive understanding of their structure and content.
2. Identifying all learning activities, projects, and educational tasks related to the research objectives.
3. Coding each activity according to the predefined analytical categories.
4. Recording the occurrence of each indicator using standardized coding sheets.
5. Reviewing and comparing coded data to ensure consistency before statistical summarization and qualitative interpretation.

3.5 Analysis Categories

The coding framework consisted of three principal analytical dimensions derived from the theoretical framework.

Table 1. analysis criteria and indicators

Criteria	Indicators
Developing Awareness of the Built Environment	Identifying the components of the built environment (school, neighborhood, squares, roads, public facilities), Observing the characteristics and functions of urban spaces, Linking the built environment to community needs, Exploring problems associated with the built environment, Utilizing field observations of public spaces.
Developing Place Attachment and a Sense of Belonging	Highlighting the value of the school and neighborhood in the child's life, Fostering pride in the local environment, Developing a sense of responsibility toward the place, Preserving local identity, Participating in activities related to the local environment.
Preserving Public Property	Protecting school equipment and furniture, Maintaining public parks and squares, Rationalizing the use of resources and public facilities, Respecting shared property, Contributing to the improvement and cleanliness of public spaces.
Developing Community Participation	Engaging in teamwork to execute projects, Participating in voluntary campaigns, Cooperating with peers and teachers, Interacting with the local community, Contributing to solving school or local environmental problems.
Developing Civic Responsibility	Abiding by rules and laws, Respecting the rights of others, Bearing individual and collective responsibility, Performing project-related duties, Committing to civic behavior within public spaces.

Developing Decision-Making and Problem-Solving Skills	Identifying problems related to the surroundings, Collecting information and data, Proposing diverse solutions, Selecting appropriate alternatives, Evaluating the outcomes of the proposed solutions.
Developing Critical and Creative Thinking	Analyzing environmental and urban problems, Asking questions and conducting investigations (inquiry), Generating innovative ideas, Designing mock-ups, models, or prototypes, Presenting proposals to improve the built environment.
Embodying the Characteristics of Project-Based Learning	Presence of a core problem or a driving/essential question, Linking the project to the learner's real-world reality, Implementing investigative and inquiry-based activities, Producing a final tangible product or outcome, Presenting and evaluating project results.
Enhancing Active Citizenship Practices	Demonstrating initiative and participation, Cooperating for the public good (common good), Participating in decision-making, Preserving public property, Contributing to the improvement of the local environment, Practicing responsible behavior toward society.

3.6 Data Analysis

Both quantitative and qualitative content analysis were employed.

Quantitatively, the frequency of each analytical indicator was calculated to identify the relative emphasis placed on architectural education, project-based learning, and active citizenship across the selected textbooks.

Qualitatively, the educational meaning of each activity was interpreted to examine how project-based learning opportunities potentially support children's understanding of the built environment and civic participation.

The integration of quantitative frequencies with qualitative interpretation provided a comprehensive understanding of the educational potential represented within the curriculum.

3.7 Methodological Scope

It should be noted that the findings of this study are limited to the analysis of curriculum content as represented in official textbooks.

Consequently, the study does not evaluate the actual implementation of project-based learning in classrooms, teachers' instructional practices, or students' learning outcomes. Instead, it identifies the educational opportunities that the curriculum provides for promoting architectural education and active citizenship. Future classroom-based or experimental research is therefore needed to investigate the effectiveness of these curricular opportunities in educational practice.

3.8 Instrument validity

To verify the validity of the content analysis card, face validity (expert judgment) was adopted. The initial version of the card was presented to a panel of professors and experts specializing in curricula, teaching methodologies, and educational sciences. This aimed to ensure the suitability of the criteria and indicators in relation to the study's objectives, as well as their comprehensiveness in covering the dimensions associated with project-based learning, the built environment, public property, and active citizenship.

In light of the referees' feedback, the necessary modifications were made. This included rephrasing certain indicators, removing overlapping ones, and adding others more closely related to the research topic, ultimately producing the final version of the analysis card.

3.9 Analysis reliability

To verify the reliability of the analysis instrument, the intra-rater reliability method (re-analysis over time) was employed. A sample of the content was re-analyzed after an appropriate

time interval, and the reliability coefficient was calculated using Holsti's formula to measure the degree of agreement between the first and second analyses. The reliability coefficient reached 0.93, reflecting the high trustworthiness and stability of the analysis results.

4. Interpretation of results

4.1 Results presentation

To evaluate how dimensions of architectural education, active citizenship, and project-based learning are reflected across the upper-primary curriculum, a detailed content analysis of the fifth-grade social studies textbooks was conducted. The following subsections present the quantitative and qualitative findings for each subject separately. Beginning with the historical dimension.

The content analysis of the fifth-grade primary history textbook demonstrates an uneven representation of the dimensions of architectural education, active citizenship, and project-based learning. The quantitative findings indicate that these dimensions are incorporated to varying degrees, reflecting the textbook's strong emphasis on historical knowledge and national identity while providing comparatively limited opportunities for learners to engage with their immediate built environment or participate in authentic civic experiences.

The weakest dimension identified was awareness of the built environment, with a representation level of only 1%. This finding indicates that the textbook pays minimal attention to introducing learners to the physical components of their everyday environment, such as schools, neighborhoods, roads, public squares, and community facilities. References to these elements appear only incidentally within historical illustrations and documents rather than as explicit learning objectives. Moreover, no activities encourage learners to observe, analyze, or evaluate the functions of built spaces or their relationship to social needs, suggesting that architectural education is largely absent from the curriculum.

By contrast, place attachment and national belonging emerged as the most strongly represented dimension, accounting for approximately 30% of the identified indicators. The textbook consistently emphasizes Algeria's historical development through lessons on popular resistance, the national movement, the Liberation Revolution, and national symbols. This strong representation reflects the curriculum's primary objective of fostering patriotism, reinforcing collective memory, and strengthening learners' emotional attachment to their homeland. While these findings demonstrate the textbook's effectiveness in promoting national identity, they also indicate that citizenship is conceptualized predominantly from a historical and emotional perspective rather than as an active social practice.

The dimension of preserving public property received only 7% representation, revealing limited curricular attention to environmental stewardship and responsibility toward shared spaces. Although the textbook implicitly promotes respect for national achievements through discussions of sacrifice and independence, it provides no explicit guidance or authentic learning experiences related to protecting school facilities, public infrastructure, or community resources. Consequently, learners are rarely encouraged to translate civic values into practical behaviors within their everyday environments.

Similarly, community participation achieved a representation level of 17%, reflecting a moderate-to-weak presence. The textbook includes several activities that encourage classroom cooperation and discussion; however, these remain confined to the instructional setting. There is little evidence of experiential learning opportunities involving community-based projects, collaboration with local stakeholders, or initiatives addressing real issues within the learners' surroundings. This finding suggests that the curriculum promotes collective values primarily through historical narratives rather than through authentic civic engagement.

The analysis further indicates that civic responsibility reached 15%, reflecting a moderate level of representation. Civic values are promoted mainly through themes of patriotism, national struggle, respect for state institutions, and appreciation of the sacrifices made during the liberation movement. These themes contribute to developing learners' civic identity and moral awareness.

Nevertheless, opportunities for applying these values through everyday civic participation, environmental responsibility, or democratic decision-making remain limited.

Table 2. Analysis of the History Textbook

Criteria	Availability Level	Indicators
Developing Awareness of the Built Environment	Very Weak	Educational units do not address the components of the built environment (such as schools, neighborhoods, roads, squares, and public facilities) except incidentally through historical images and documents. The focus is primarily placed on historical events and figures rather than on studying urban spaces and their functions.
Developing Place Attachment and a Sense of Belonging	High	This is one of the most prominent dimensions present in the textbook. National belonging is fostered through the study of Algeria's history, popular resistance movements, the Liberation Revolution, and national state symbols, which contributes to consolidating national identity and pride in the homeland.
Preserving Public Property	Weak	There are no direct activities calling for the protection of public facilities or the maintenance of shared property; however, the values of preserving national achievements may be implicitly inferred from the study of national sacrifices.
Developing Community Participation	Moderate to Weak	Some indicators of teamwork appear through classroom activities and discussions, but the textbook does not include actual community projects or field-based initiatives linked to the local community.
Developing Civic Responsibility	Moderate	The textbook includes content related to national struggle, sacrifice for the homeland, and respect for state institutions, which are contents that contribute to building civic responsibility in an indirect manner.
Developing Decision-Making and Problem-Solving Skills	Moderate	Some activities rely on analyzing historical documents, deducing causes and effects, and interpreting events, which develops analytical thinking. However, the problems presented are historical in nature rather than realistic or contemporary societal issues.
Developing Critical and Creative Thinking	Moderate	The learner is required to analyze historical images, documents, and maps to draw conclusions. However, opportunities to generate innovative solutions or design models and mock-ups are virtually absent.
Embodying the Characteristics of Project-Based Learning	Weak	The textbook relies fundamentally on learning situations and the analysis of historical documents. It does not include integrated projects that meet the characteristics of project-based learning in terms of having a real-world problem, producing a final product, and presenting results.
Enhancing Active Citizenship Practices	Moderate	The textbook focuses on the values of patriotism, belonging, sacrifice, and participating in nation-building, but it rarely transitions into active citizenship practices linked to the local surroundings or the built environment.

Regarding higher-order cognitive skills, decision-making and problem-solving also recorded 15%, indicating moderate integration. Learners are frequently required to analyze historical documents, identify causal relationships, interpret historical events, and draw logical conclusions. Although these activities promote analytical reasoning, the problems presented remain almost exclusively historical. The absence of contemporary social, environmental, or urban issues limits learners' opportunities to transfer these skills to real-life situations requiring informed civic action.

Likewise, critical and creative thinking reached 8%, suggesting a moderate presence. The textbook encourages learners to interpret historical maps, images, and documentary sources, thereby supporting critical analysis within the historical domain. However, creative thinking receives considerably less attention because learners are not required to generate innovative solutions, design models, construct prototypes, or develop original products addressing authentic community challenges. This imbalance favors analytical interpretation over creative production and innovation. One of the most significant findings concerns the characteristics of project-based learning, which were represented by only 6%, making this one of the least developed dimensions in the textbook. Instruction is primarily organized around historical texts, document analysis, and conventional classroom exercises. Essential features of project-based learning including authentic driving questions, sustained inquiry, collaborative investigation, the production of tangible outcomes, public presentation, and reflective evaluation are largely absent. Consequently, the pedagogical approach remains predominantly teacher-centered and content-oriented rather than inquiry-based and learner-centered.

Finally, the dimension of active citizenship practices achieved only 7% representation. Although the textbook consistently promotes values such as patriotism, belonging, sacrifice, and commitment to national development, these values rarely evolve into practical forms of civic engagement connected to learners' local communities or the built environment. Active citizenship is therefore presented primarily as a moral and historical construct rather than as a set of competencies that learners practice through participation, collaboration, environmental stewardship, and community improvement.

Overall, the quantitative findings reveal a clear curricular imbalance. While the textbook strongly emphasizes historical identity and national belonging, dimensions associated with architectural education, civic participation, environmental awareness, and project-based learning remain substantially underrepresented. This imbalance suggests that the curriculum continues to prioritize the transmission of historical knowledge and patriotic values over the development of practical citizenship competencies and place-based learning experiences. Accordingly, future curriculum revisions should seek a more balanced integration of architectural education principles and project-based pedagogies to enable learners not only to understand their national heritage but also to actively participate in shaping and improving their local environments.

Table 3. Analysis of the Geography Textbook

Criteria	Availability Level	Indicators
Developing Awareness of the Built Environment	High	The textbook focuses on studying the Algerian geographical domain and its natural and human components, which helps the learner perceive the characteristics of their living environment and understand its spatial organization.
Developing Place Attachment and a Sense of Belonging	High	The lessons cover various regions of Algeria and their characteristics, which enhances the learner's connection to their homeland and fosters a sense of belonging to their geographical and cultural domain.
Preserving Public Property	Medium	Values regarding the preservation of national wealth and natural resources appear frequently, but direct references to public property and shared facilities remain limited.
Developing Community Participation	Medium	Some learning situations include problems related to the surrounding environment, prompting the learner to think about the community's roles in addressing them.
Developing Civic Responsibility	High	The textbook instills a sense of responsibility toward the national domain and its natural resources, viewing them as collective property that must be preserved.
Developing Decision-Making and Problem-Solving Skills	High	Activities rely on analyzing geographical situations, drawing conclusions, and proposing ways to face certain environmental and developmental challenges.
Developing Critical and Creative Thinking	High	The textbook provides multiple opportunities to analyze geographical data and deduce relationships between natural and human phenomena.
Embodying the Characteristics of Project-Based Learning	Medium	The textbook adopts an inquiry-based approach and integrative situations, but it does not provide fully integrated projects that include a final product and a systematic presentation of results.
Enhancing Active Citizenship Practices	High	The geographical content contributes to building the citizen's awareness of their role in protecting the environment, utilizing resources rationally, and serving the public interest.

The content analysis of the fifth-grade primary geography textbook indicates a high level of alignment with the dimensions of architectural education, active citizenship, and, to a lesser extent, project-based learning. Unlike the history textbook, which primarily emphasizes historical identity, the geography textbook adopts a place-based perspective that enables learners to explore the characteristics of their physical and human environment through geographical inquiry, spatial analysis, and environmental awareness.

The findings reveal that awareness of the built environment is strongly represented, accounting for 12% of the total coded indicators. The instructional content introduces learners to Algeria's

geographical domain, including its natural and human features, spatial organization, transportation networks, settlements, and regional distribution. Through the interpretation of maps, diagrams, photographs, and geographical representations, learners are encouraged to understand how human activities interact with the surrounding environment. This emphasis contributes to developing spatial awareness and supports one of the fundamental objectives of architectural education by helping learners perceive the relationship between the built environment, geographical organization, and community life.

Similarly, place attachment and a sense of belonging recorded a high level of representation, accounting for 14% of the total coded indicators. The textbook systematically presents Algeria's diverse geographical regions, natural landscapes, economic resources, and cultural characteristics, enabling learners to appreciate the richness of their national territory. By connecting geographical knowledge with national identity, the curriculum strengthens learners' emotional attachment to their homeland while fostering a broader understanding of geographical diversity as an essential component of citizenship education.

The dimension of preserving public property accounted for 6% of the total coded indicators, reflecting a moderate level of representation. The textbook repeatedly emphasizes the importance of protecting natural resources, conserving environmental wealth, and ensuring the sustainable use of national assets. However, explicit references to preserving public facilities, community infrastructure, and shared urban spaces remain comparatively limited. Consequently, environmental stewardship is addressed more comprehensively than responsibility toward the built public environment.

A similar pattern is observed in community participation, which represented 5% of the total coded indicators. Several learning situations encourage learners to reflect on environmental challenges, resource management, and community responsibilities. Nevertheless, these activities remain primarily classroom-based and analytical. The textbook provides few opportunities for learners to engage directly in field investigations, collaborative community projects, or authentic civic initiatives within their local environment, thereby limiting the practical dimension of community participation.

In contrast, civic responsibility emerged as one of the strongest dimensions, accounting for 17% of the total coded indicators. The textbook consistently promotes responsibility toward protecting the national territory, conserving natural resources, respecting the environment, and recognizing these resources as collective national assets. This strong representation reflects a comprehensive understanding of civic responsibility that extends beyond patriotic values to include environmental ethics and sustainable resource management.

The development of decision-making and problem-solving skills also demonstrated a high level of representation, accounting for 15% of the total coded indicators. Learners are frequently required to analyze geographical phenomena, interpret environmental problems, identify causal relationships, compare regional characteristics, and propose appropriate responses to developmental and environmental challenges. These inquiry-oriented activities encourage analytical reasoning and support learners' ability to apply geographical knowledge in interpreting real-world situations.

Likewise, critical and creative thinking represented 15% of the total coded indicators, confirming the textbook's substantial emphasis on higher-order cognitive skills. Learners are encouraged to analyze maps, statistical data, photographs, and geographical documents, identify relationships between natural and human phenomena, and formulate evidence-based conclusions. Although opportunities for creative production, such as designing models or developing innovative environmental solutions, remain relatively limited, the textbook provides considerably richer opportunities for critical inquiry than those observed in other social studies subjects.

Regarding the integration of project-based learning, the analysis revealed a moderate level of representation, accounting for 6% of the total coded indicators. The textbook incorporates inquiry-based learning situations and integrative activities that originate from realistic geographical contexts and require learners to observe, investigate, analyze, and propose solutions. Nevertheless, these learning situations do not fully satisfy the defining characteristics of project-based learning, as they

rarely culminate in the production of authentic artifacts, collaborative long-term projects, or systematic presentation and evaluation of final outcomes. Therefore, while the textbook demonstrates partial alignment with project-based learning principles, it does not fully implement this pedagogical approach.

Finally, active citizenship practices accounted for 13% of the total coded indicators, reflecting a high level of representation. The geographical content consistently encourages learners to recognize their responsibilities toward environmental protection, sustainable resource use, and the promotion of the public good. Unlike the history textbook, where citizenship is primarily framed through historical memory and patriotism, the geography textbook extends citizenship to encompass practical environmental responsibility and awareness of local and national geographical issues. However, opportunities for direct civic participation beyond classroom activities remain limited.

Overall, the quantitative findings demonstrate that the fifth-grade geography textbook offers the strongest alignment with the dimensions of architectural education and active citizenship among the social studies textbooks analyzed. Its emphasis on spatial awareness, environmental responsibility, geographical inquiry, and analytical thinking provides learners with meaningful opportunities to understand the relationship between people and place. Nevertheless, the moderate representation of community participation (5%), public property preservation (6%), and project-based learning (6%) indicates that further curriculum development is needed to strengthen authentic place-based projects and experiential civic engagement. Integrating collaborative field investigations and community-oriented projects would enable learners not only to understand their environment but also to participate actively in its preservation and sustainable development.

The content analysis of the fifth-grade primary civic education textbook demonstrates a strong alignment with the dimensions of active citizenship, while its contribution to architectural education is comparatively moderate. The quantitative findings indicate that the textbook is primarily designed to cultivate civic values, responsible citizenship, and social participation, placing considerably greater emphasis on civic competencies than on learners' understanding of the built environment.

The analysis shows that awareness of the built environment accounted for 6% of the total coded indicators, reflecting a moderate level of representation. The textbook introduces learners to everyday civic spaces, including schools, public institutions, and community services, as environments in which citizenship is practiced. However, these spaces are presented mainly from a functional and civic perspective rather than as components of the built environment requiring observation, analysis, or architectural understanding. Consequently, learners develop awareness of the social roles of these places without acquiring a deeper understanding of their spatial or urban characteristics.

In contrast, place attachment and a sense of belonging represented 10% of the total coded indicators, indicating a high level of representation. Throughout the textbook, learners are encouraged to strengthen their attachment to the homeland and their local community through lessons emphasizing national identity, citizenship values, respect for state institutions, and appreciation of national symbols. This consistent focus contributes to reinforcing learners' emotional connection to their country while promoting social cohesion and national identity.

The dimension of preserving public property emerged as one of the most prominent criteria, accounting for 19% of the total coded indicators. The textbook repeatedly emphasizes the importance of protecting public facilities, preserving school equipment, maintaining cleanliness in shared spaces, and using collective resources responsibly. These values are reinforced through practical examples, behavioral guidelines, and everyday civic situations, demonstrating the curriculum's strong commitment to developing responsible attitudes toward public property.

Similarly, community participation achieved a high level of representation, accounting for 11% of the total coded indicators. Numerous educational activities encourage learners to cooperate with others, participate in school life, contribute to community initiatives, and engage in actions that

promote the common good. Although these activities are generally classroom-based rather than community-based, they provide meaningful opportunities for learners to understand the importance of participation, collaboration, and collective responsibility.

Table 4. Analysis of the Civic Education Textbook

Criteria	Availability Level	Indicators
Developing Awareness of the Built Environment	Medium	The textbook addresses some spaces that the learner interacts with in their daily life, such as the school, public institutions, and social services. However, the focus is placed on their civic functions rather than their urban or architectural characteristics.
Developing Place Attachment and a Sense of Belonging	High	The lessons focus on consolidating a sense of belonging to the homeland and strengthening the connection to the local community through the values of citizenship, national identity, and respect for state institutions.
Preserving Public Property	Very High	This is one of the most heavily featured criteria in the textbook, with recurring guidelines and instructions related to protecting public property, preserving collective facilities, and rationalizing their use.
Developing Community Participation	High	The educational activities and situations include scenarios that encourage cooperation and active participation within both the school and the local community.
Developing Civic Responsibility	Very High	This criterion represents the core essence of the textbook, as most learning units center on developing civic responsibility and fostering an awareness of rights and duties.
Developing Decision-Making and Problem-Solving Skills	Medium	The activities include problem-solving situations that prompt the learner to think about solutions and take appropriate stances toward various civic and social issues.
Developing Critical and Creative Thinking	Medium	The book provides opportunities to discuss civic stances and evaluate behaviors, but indicators of creativity and the production of innovative solutions are not significantly prominent.
Embodying the Characteristics of Project-Based Learning	Medium	The textbook relies on realistic situations and group activities, but it does not feature fully structurally sound projects according to the methodology of project-based learning.
Enhancing Active Citizenship Practices	Very High	This criterion represents the most prominent dimension in the textbook, as the various lessons actively aim to shape a conscious, active, and responsible citizen within their society.

The strongest emphasis within the textbook is placed on civic responsibility, which represented 18% of the total coded indicators. As the central organizing principle of the curriculum, this dimension is consistently reflected throughout the learning units, which focus on developing awareness of rights and duties, respect for laws and regulations, responsible behavior, and commitment to ethical civic conduct. The prominence of this criterion demonstrates that the primary objective of the textbook is to prepare learners to become responsible and law-abiding citizens.

Regarding higher-order thinking skills, decision-making and problem-solving accounted for 5% of the total coded indicators, reflecting a moderate level of representation. The textbook presents learners with civic and social situations that require evaluating alternatives, identifying appropriate solutions, and making responsible decisions. While these activities support reflective thinking and ethical judgment, they are generally limited to predefined classroom scenarios and rarely extend to authentic community problems requiring sustained inquiry.

Likewise, critical and creative thinking represented 6% of the total coded indicators. Learners are encouraged to discuss civic issues, evaluate behaviors, and reflect on appropriate attitudes toward various social situations. These activities contribute to the development of critical thinking by promoting analysis and reasoned judgment. However, opportunities for creativity remain comparatively limited, as learners are seldom required to design innovative solutions, develop original initiatives, or produce tangible outcomes addressing real societal challenges.

The analysis also indicates that the characteristics of project-based learning accounted for 5% of the total coded indicators, representing a moderate level of implementation. The textbook incorporates realistic learning situations and collaborative classroom activities that relate to learners' daily experiences. Nevertheless, these activities do not fully reflect the essential principles of project-based learning, as they lack authentic driving questions, long-term collaborative inquiry, the production of concrete outputs, and systematic presentation and evaluation of learners' work.

Finally, active citizenship practices constituted the most dominant dimension in the textbook, accounting for 20% of the total coded indicators. The curriculum consistently encourages learners to participate responsibly in school and community life, cooperate with others, serve the public interest, respect social norms, and contribute positively to society. These findings confirm that the textbook places active citizenship at the core of its educational philosophy by emphasizing citizenship as a set of everyday practices rather than merely a body of theoretical knowledge.

Overall, the quantitative findings indicate that the fifth-grade civic education textbook provides the strongest support for developing active citizenship among the social studies textbooks analyzed. The curriculum gives particular prominence to active citizenship practices (20%), preserving public property (19%), and civic responsibility (18%), demonstrating its commitment to preparing learners for responsible participation in society. Nevertheless, the comparatively moderate representation of awareness of the built environment (6%) and project-based learning (5%) suggests that greater integration of architectural education, place-based learning, and authentic community projects would further strengthen the textbook's capacity to connect civic values with learners' everyday physical and social environments.

4.2 Interpretation and Discussion of Results in Light of Previous Studies

The comparative content analysis of the History, Geography, and Civic Education textbooks reveals substantial differences in the extent to which the dimensions of architectural education, active citizenship, and project-based learning are represented. These differences appear to reflect the pedagogical orientation and disciplinary objectives of each subject rather than a coherent cross-curricular strategy for promoting active citizenship. While each textbook contributes to specific dimensions of citizenship education, the findings suggest that these contributions remain fragmented, limiting learners' opportunities to develop an integrated understanding of citizenship that combines knowledge, values, spatial awareness, and authentic civic action.

The Geography textbook demonstrated the strongest representation of the dimensions related to awareness of the built environment and place attachment. This finding is consistent with the disciplinary nature of geography, which emphasizes spatial thinking, human–environment relationships, and the interpretation of geographical phenomena through maps, visual representations, and environmental inquiry. The result supports the arguments of Sobel (2004), who emphasized that place-based education strengthens learners' understanding of their local environment and enhances civic engagement. Similarly, Fien and Tilbury (2002) argued that environmental education contributes to developing responsible citizenship by connecting learners with their immediate surroundings. However, unlike several place-based education models reported

in the international literature, the analyzed textbook rarely extends this geographical understanding into authentic community action or participatory environmental projects. This finding suggests that although environmental awareness is strongly represented, opportunities for translating this awareness into civic practice remain limited within the textbook itself.

The Civic Education textbook exhibited the highest representation of civic responsibility, active citizenship practices, and the preservation of public property. These findings are consistent with the primary objectives of civic education and align with the Council of Europe (2018), which identifies responsibility, participation, democratic values, and respect for public goods as essential components of education for democratic citizenship. Likewise, (UNESCO ,2015) emphasized that citizenship education should cultivate learners' willingness to participate actively in improving their communities. Nevertheless, the present findings also reveal an important limitation. Although the textbook strongly promotes civic values and responsible behavior, most learning situations remain classroom-oriented and are only occasionally connected to authentic participation in the local community. Consequently, the textbook appears to prioritize the development of civic awareness over the practical experience of citizenship. This observation differs from studies advocating action-oriented citizenship education, which emphasize direct learner participation in addressing real community issues as an essential condition for developing civic competence.

The History textbook, in turn, made its strongest contribution to strengthening national identity, collective memory, and learners' sense of belonging. This finding supports Barton and Levstik's (2004) argument that history education plays a fundamental role in constructing civic identity through engagement with a shared national past. Likewise, (OECD, 2018) recognizes identity and belonging as important foundations for active citizenship. However, the current analysis also suggests that historical identity alone may not be sufficient to foster active citizenship unless it is complemented by opportunities for civic participation, collaborative problem-solving, and engagement with contemporary societal issues. This interpretation extends previous research by highlighting that citizenship education requires a balance between historical consciousness and practical civic experience.

One finding common to all three textbooks concerns the relatively limited representation of the defining characteristics of project-based learning. The analyzed textbooks include inquiry activities, discussion tasks, and problem-solving situations, yet these rarely develop into extended projects involving authentic problems, sustained investigation, collaboration, the creation of meaningful products, and public presentation. While this observation is consistent with Thomas (2000) and Larmer and (Mergendoller, 2015), who argued that many curricula claim to adopt project-based learning without fully implementing its essential design principles, it is important to acknowledge the methodological limits of the present study. Because the analysis focused exclusively on textbook content, it cannot determine how teachers actually implement these learning activities in classrooms. Consequently, conclusions regarding the effectiveness or absence of project-based learning should be interpreted as relating only to the explicit curriculum represented in the textbooks rather than to classroom practice.

Taken together, these findings indicate that the three textbooks offer complementary rather than integrated contributions to citizenship education. Geography primarily develops spatial awareness and environmental understanding; Civic Education emphasizes civic values, responsibility, and participation; while History reinforces identity and national belonging. However, the absence of stronger curricular connections among these dimensions may reduce learners' opportunities to perceive citizenship as a holistic concept integrating knowledge, identity, participation, and responsibility toward the built environment. This fragmentation suggests a need for greater interdisciplinary coordination within the Algerian primary curriculum.

The findings have several implications for curriculum development. First, architectural education should be incorporated more explicitly across social studies subjects by introducing learning activities that help learners observe, analyze, and improve their local built environment. Second, curriculum developers should strengthen authentic place-based learning through community investigations, neighborhood observations, and participatory environmental initiatives that connect

classroom learning with everyday civic life. Third, textbook authors should move beyond knowledge transmission by embedding structured project-based learning experiences that include authentic driving questions, collaborative inquiry, product creation, public presentation, and reflective evaluation. Finally, educational policymakers should provide curriculum guidelines and teacher professional development that support the effective integration of architectural education, active citizenship, and inquiry-based pedagogies. Future research should complement textbook analysis with classroom observations, teacher interviews, and learner assessments to determine how these curricular intentions are implemented in educational practice and how they influence learners' civic competencies.

Conclusion

This study examined the extent to which the fifth-grade primary school textbooks of History, Geography, and Civic Education in Algeria incorporate the dimensions of architectural education, active citizenship, and project-based learning through a descriptive-analytical approach based on content analysis. The findings revealed that the three textbooks provide complementary, yet uneven, contributions to these dimensions. The Geography textbook showed the strongest representation of awareness of the built environment and place attachment, the Civic Education textbook placed the greatest emphasis on civic responsibility, active citizenship practices, and the preservation of public property, while the History textbook primarily reinforced national identity and a sense of belonging. At the same time, the analysis identified a relatively limited representation of authentic project-based learning and architectural education across the three textbooks, particularly with regard to activities that engage learners in investigating real-world problems, collaborative inquiry, and the production of meaningful outcomes.

These findings suggest that the analyzed curricula contain promising opportunities for strengthening the integration of architectural education and active citizenship within primary education. However, they also indicate that these dimensions are distributed across subjects rather than organized within a coherent interdisciplinary framework capable of connecting spatial awareness, civic values, historical identity, and authentic learning experiences.

Based on these findings, curriculum developers and textbook authors are encouraged to strengthen the explicit integration of architectural education by incorporating place-based learning activities, participatory design tasks, and authentic community-oriented projects that relate to learners' everyday environments. Greater emphasis should also be placed on interdisciplinary learning experiences that connect History, Geography, and Civic Education while reflecting the essential principles of project-based learning.

The present study is subject to several limitations. First, it relied exclusively on textbook content analysis and therefore reflects the intended curriculum rather than classroom implementation or learners' actual knowledge, attitudes, or behaviors. Second, the analysis was limited to fifth-grade primary school textbooks, which restricts the generalizability of the findings across other educational levels and curriculum materials. Consequently, the results should be interpreted as evidence of the educational potential embedded within the curriculum rather than evidence of its effectiveness in developing active citizenship or influencing learners' behavior.

Future research should extend this work by examining how teachers implement these curricular dimensions in classroom practice, investigating learners' experiences with place-based and project-oriented learning, and evaluating curriculum interventions that integrate architectural education into primary education. Comparative studies across grade levels or national contexts may also provide deeper insights into how architectural education can be more effectively embedded within citizenship education curricula.

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