



ANALYSIS OF HISTORY TEXTBOOKS ON THE SCIENCE OF ANCIENT MESOPOTAMIAN ZIGGURAT ARCHITECTURE

ANALISIS BUKU TEKS SEJARAH TENTANG ILMU ARSITEKTUR ZIGGURAT MESOPOTAMIA KUNO

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Abstract

This article aims to analyze the scientific content in the field of Ancient Mesopotamian ziggurat architecture presented in the History textbook of the 2009 School-Based Curriculum by Tarunasena M. This study uses a qualitative approach with a content analysis method to examine historical discourse related to the development of science, technology, and civilization in Mesopotamia, especially in the Sumerians, Assyrians, and Chaldeans. The results of the Analysis show that the narrative in the textbook has included a representation of the progress of Mesopotamian civilization through orderly urban planning, the use of clay building materials, mastery of arithmetic and geometry, metal processing, the construction of ziggurats as religious and political symbols, the establishment of libraries as centers of knowledge, and the creation of monumental architectural works such as the Hanging Gardens of Babylon. These findings indicate that textbooks play an important role in transmitting to students the values of scientific progress, innovation, and the heritage of civilization.

Keywords : History Textbook, Ancient Mesopotamia, Ziggurat, Content Analysis, Science.

Abstrak

Tujuan penelitian ini untuk menganalisis muatan ilmu pengetahuan dalam bidang arsitektur ziggurat Mesopotamia Kuno yang disajikan dalam buku teks Sejarah Kurikulum Tingkat Satuan Pendidikan 2009 karya Tarunasena M. Penelitian ini menggunakan pendekatan kualitatif dengan metode analisis isi untuk mengkaji wacana sejarah yang berkaitan dengan perkembangan ilmu pengetahuan, teknologi, dan peradaban Mesopotamia, khususnya pada bangsa Sumeria, Assyria, dan Khaldea. Hasil analisis menunjukkan bahwa narasi dalam buku teks telah memuat representasi kemajuan peradaban Mesopotamia melalui tata kota yang teratur, penggunaan bahan bangunan dari tanah liat, penguasaan ilmu hitung dan geometri, pengolahan logam, pembangunan Ziggurat sebagai simbol religius dan politik, pendirian perpustakaan sebagai pusat ilmu pengetahuan, serta penciptaan karya arsitektur monumental seperti Taman Gantung Babilonia. Temuan ini menunjukkan bahwa buku teks berperan



penting dalam mentransmisikan nilai-nilai kemajuan ilmu pengetahuan, inovasi, dan warisan peradaban kepada peserta didik.

Kata Kunci : Buku Teks Sejarah, Mesopotamia Kuno, Ziggurat, Analisis Isi, Ilmu Pengetahuan.

1. INTRODUCTION

The Mesopotamian civilization, located between the Tigris and Euphrates rivers, is often referred to as the cradle of civilization due to its system, legal, political, and administrative innovations (Umar, 2009). Meanwhile, Ibtihal (2006) explained that Mesopotamia spans a vast area from the northern region of Anatolia to the southern Persian Gulf, with plains on the outskirts of cities that support agriculture, settlements, and the beginnings of human civilization. In fact, Syafarudin (2025) stated that Mesopotamia is the only civilization to have contributed to science and culture.

Mesopotamia had an agrarian empire that began with Sumeria, an early kingdom of cities, followed by Akkadian, a Babylonian kingdom with a strong legal and governance system, and Assyria, known as a military power (Aksa, 2022). On the other hand, the agrarian kingdom plays an essential role in managing agriculture and natural resources, especially river water, and plays a critical role in survival, in addition to producing an agricultural surplus that supports state administration, trade, urban growth, and social, economic, and cultural development of civilization in a sustainable manner (Dilman & Sabir, 2025).

One of the most visually striking and dominant achievements is the ancient landscape called the Ziggurat, as explained (Rukhsar, 2021). In this case, among others, the sacred building, which functions as a religious center, serves as a link between the earth and the sky, where the gods are believed to descend and dwell, and as a symbol of political power and a marker of the city center and the spiritual identity of the Mesopotamian people.

A textbook can be interpreted as a book containing subject matter systematically designed to make it easier for learners to understand the lesson content during the teaching and learning process under the direction of an educator (Pahlefi, 2020). In the learning process, teachers need learning resources that function as information references for students. In addition, these learning resources serve as a support tool that helps teachers deliver subject matter more effectively (Astari, 2022). The intended learning resource is a history textbook.

According to Febriana et al. (2022), textbooks are among the most commonly used learning resources across educational levels. In addition, Syafarudin et. al. (2024) and Syafarudin & Saputri (2025) explained that textbooks are learning resources that contain historical knowledge from past events. This textbook can be interpreted as a collection of writings, structured by experts in their fields, including historical subject matter aligned with the indicators and standards of the applicable curriculum.

Analysis is an approach used to determine whether a discourse is intended for a specific purpose and to assess how it affects its readers (Ratnaningsih, 2019). In addition, according to Syakur & Sumarlam (2021), the content analysis model is designed to highlight the structure



of a text's discourse. Meanwhile, according to Nasution (2024), Analysis is a process or step for describing and understanding a text or social reality being researched by a specific individual or group.

This section discusses the findings of the discourse in the 2009 textbook, History of the Education Unit Level Curriculum, by Tarunasena M. For class X, especially in the content of the Science material on Ancient Mesopotamian Ziggurat architecture. This article is part of the assignment for the History of Western Civilization course. By developing the ability to think analytically through the use of history textbooks, especially on the material of Mesopotamian civilization.

2. RESEARCH METHOD

This research uses a qualitative approach with a content analysis method. Content analysis aims to explore the meaning considered relevant to a given aspect (Nugraha, 2025). This approach uses stratified data collection techniques to analyze discourse, both in terms of the text and in its social and historical context. The data analysis process in this method involves three main stages: description, interpretation, and explanation (Syahrman & Mulyana, 2017).

The data source was obtained from the discourse in the 2009 History textbook by Tarunasena M., for class X, which contains the material titled "Ziggurat Architectural Traces as a Symbol of the Progress of Ancient Mesopotamian Civil Engineering." The data is analyzed by debunking, describing, and interpreting the text critically. This process aims to obtain a detailed analysis of how the historical narrative of the civilization is constructed in school textbooks.

3. RESULT AND DISCUSSION

This section presents the findings and discusses them in accordance with the Analysis of the discourse on science as a symbol of the progress of ancient Mesopotamia. The results of this research were based on the 2009 History textbook by Tarunasena M. for High School Class X. Textbooks serve as learning resources that transmit knowledge and construct historical values for students. Based on the findings of the narrative about the science of Ancient Mesopotamian Ziggurat architecture. The results of the textbook analysis show that the narrative about Ziggurat includes fundamental aspects such as the use of clay materials and the relationship between mathematics and architecture. This is contained in the findings of the discourse in the sub-science of the field of architecture, Ziggurat, the following urban buildings:

The Sumerians had built cities with neat city planning, and each building used the Ziggurat model. In addition, the Sumerians were highly skilled in metalworking, including the making of weapons. The Sumerians knew the science of arithmetic, 360-degree circles, and buildings made of sun-dried clay (Tarunasena, 2009:180).



This text explains that, by using clay as their primary building material, the Mesopotamian people adapted to the natural environment near waterways. This reflects the use of natural materials such as clay available in the environment around the seas. Clay processing and solar heating demonstrate the community's traditional knowledge in building a residence in accordance with local natural conditions. According to Moorey (1994), clay-based adhesive materials are protected from erosion by the building structure itself. In addition, it demonstrates the Sumerians' mastery of metalworking technology. The skills of the community reflect the level of progress in science, technology, and culture (Karim, 2014). This shows that science and technology are experiencing rapid development and have become a symbol of a nation's progress (Asry, 2020). Mesopotamian civilization is evident in the development of cities along the banks of the Nile, Tigris, and Euphrates rivers (Hardiyati, 2020; Syafarudin, 2025), as a place of social relations among people from various regions.

The Sumerians could plan an orderly city, reflecting an advanced civilization, a settled, organized people's life, and architectural progress through the construction of Ziggurat buildings. In addition, the Sumerians had mastered the science of calculation and the concept of geometry, reflecting intelligence, a systematic mindset, and innovation that marked an advanced civilization and provided an important legacy for the development of science to this day. As civilization developed in Mesopotamia, it also advanced science, including the building of libraries. As in the following discourse findings:

The Assyrians at the time of Ashur-banipal had created the world's oldest library. The construction of a library is a characteristic of a leader's concern for the importance of science (Tarunasena, 2009:180).

The text above explains that the construction of libraries shows a high appreciation for science as the foundation of civilization. Libraries are a means of preserving, developing, and disseminating knowledge. In line with Kurniati (2023), the role of libraries is to serve as cultural and scientific heritage for the future. It can be seen that Ashru Bhanifal is described as a leader with foresight, understanding that the nation's progress depends on the mastery and development of science. The establishment of libraries reflects leaders' responsibility to provide public access to knowledge, not just for the benefit of individuals or specific groups.

The library serves as a repository for manuscripts and historical records, thereby demonstrating concern for the preservation of culture and the heritage of civilization. The existence of the world's oldest library signifies a high level of advanced civilization, where science is the leading indicator of a nation's progress.

Likewise, the Chaldeans during the Neo-Babylonian kingdom succeeded in building the Hanging Gardens, which are among the wonders of the world (Tarunasena, 2009:180).

The text above explains that the Hanging Park demonstrates the Chaldean nation's ability to innovate and create extraordinary architectural works that differ from typical buildings. The success of building multi-storey gardens reflects the mastery of advanced engineering, architecture, and irrigation systems of the time. The process of building Taman Gantung requires significant effort, precision, and perseverance, so that it reflects the spirit of hard work



of the community and its rulers. The Hanging Park not only serves as a building but also symbolizes the beauty and harmony between nature and human works. As one of the wonders of the world, the Hanging Gardens are a source of pride for the Chaldean nation and reflect the identity of an advanced and influential civilization.

4. CONCLUSION

Based on the results of the discourse analysis of the 2009 History textbook, it can be concluded that the material on the science of Ancient Mesopotamian Ziggurat architecture has comprehensively represented the progress of civilization. The narrative presented describes the Sumerians' ability to practice orderly urban planning, master clay building techniques, and understand arithmetic and geometry as the basis for the construction of Ziggurat architecture. In addition, textbooks also depict the development of science and technology through metalworking, the establishment of libraries during the Assyrian period, and the construction of the Babylonian Hanging Gardens by the Chaldeans as a symbol of innovation and civilizational excellence. Thus, history textbooks serve not only as a source of factual information but also as a means of constructing historical values that emphasize the importance of science, technology, and human creativity in building civilization.

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