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Extended Abstract

A Qualitative Exploration of the Teaching-Learning Environment Characteristics of Generation Alpha in Primary Schools

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Introduction

In modern education, the teaching–learning environment plays a crucial role (Bandara et al., 2024). This environment is shaped by teachers' interaction and management, as well as students' attitudes toward their teachers (Hosseini et al., 2025). Its effectiveness in reducing stress and anxiety, enhancing happiness and optimism, and improving students' efficiency and self-confidence has been well established (Arifah et al., 2021).

One of the most important components of the teaching–learning environment is the curriculum, which encompasses all learning opportunities and experiences that students should acquire under the guidance of teachers and the supervision of schools. The primary purpose of the curriculum is to guide individuals in life, and it should provide a structured, systematic, well-organized, and coherent framework to achieve specific educational goals. The curriculum should be developed in alignment with students' needs and technological advancements to enhance its effectiveness. A review of previous studies indicates a research gap in this area, which the present study aims to address, highlighting the novelty of the topic.

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Furthermore, generational differences reflect variations in knowledge, attitudes, and behaviors across generations, although overarching continuities are shaped by social, cultural, and historical contexts. A generational gap becomes apparent when distinct generational groups are formed. Therefore, considering that teaching and learning processes differ among generations and that the curriculum must adapt to students' needs and technological changes to remain effective, this issue warrants further investigation.

Methodology

In this study, a qualitative (interpretive) research methodology was employed. Among various qualitative research strategies, the grounded theory approach was selected due to its specific features that align with the study's objectives. Considering that the characteristics of the teaching–learning environment for Generation Alpha are examined from the perspective of primary school teachers, the research approach is exploratory in nature.

The statistical population consisted of primary school teachers, and a non-random purposive sampling method was used through the Delphi technique. Karaj city was selected from among the cities of Alborz Province, and within Karaj, District 4 was chosen from its four educational districts. From this district, five primary schools were selected for participation.

To analyze the characteristics of the teaching–learning environment for Generation Alpha from teachers' perspectives, semi-structured interviews with experts were conducted as the main data collection tool, and the coding method was applied for data analysis. Coding refers to the process of breaking down data, conceptualizing it, and then reorganizing it in new ways. The coding process in this study included the following stages: identifying verbal evidence; conceptualization; categorization and naming of categories; establishing relationships between categories; and identifying the overall research model.

Based on the literature review and the systematic framework of grounded theory, the interview questions were developed. The interviews were conducted in a semi-structured format, guided by an interview protocol and administered by the researcher in participants' workplaces. Additional questions were asked based on the respondents' answers.

Open coding began with repeated readings of the completed interviews to gain a general understanding of the data. Different parts of each interview were then examined and compared with the overall impression obtained from that interview. Subsequently, the researcher analyzed individual words, phrases, sentences, and paragraphs. During the axial coding stage, using a paradigmatic approach and considering the dimensions identified as the main phenomenon, codes, concepts, and categories were organized in a structured manner. Finally, in the selective coding stage, the identified categories were integrated around the characteristics

of the teaching–learning environment of Generation Alpha from the perspective of primary school teachers.

Findings

The following categories resulted from the selective coding related to the characteristics of the teaching–learning environment for Generation Alpha from the perspective of primary school teachers. To create a teaching–learning environment suitable for Generation Alpha, a deep technological understanding of this generation must be taken into account, as they are highly interactive with technology, technologically literate, and easily adapt to digital tools.

Appropriate equipment and facilities should be provided for them; for example, classrooms should include computers, smart boards, and high-speed Internet access. Curriculum support resources must also be available in this environment, meaning that learning content should be delivered electronically, supported by visual and audio materials, educational software, and animated instructional content.

Another key point identified was that teachers must possess strong information-processing skills. Specifically, teachers should be able to integrate diverse information sources, analyze and organize information effectively, and demonstrate the ability to present information clearly.

Finally, it was noted that this generation tends to exhibit a degree of passivity; therefore, to mitigate this tendency, the teaching–learning environment for Generation Alpha should actively promote pragmatism. In practice, this means that children should be encouraged to engage in fieldwork and be taught to take constructive risks.

Conclusion

It should be noted that, in order to create a teaching–learning environment suitable for Generation Alpha, a deep technological understanding of this generation must be considered. This generation interacts naturally with technology, is technologically literate, and quickly adapts to digital tools. Appropriate equipment and facilities should therefore be provided; for example, classrooms should include computers, smart boards, and high-speed Internet access. Curriculum support resources should also be available in this environment. Learning content must be presented electronically, supported by visual and audio materials, educational software, and animated content. Another point emphasized was that teachers must possess strong information-processing skills. Specifically, they should be able to integrate different types of information, analyze and organize data effectively, and demonstrate the ability to present information clearly.

Finally, it was mentioned that this generation tends to show a certain degree of passivity; therefore, to counteract this tendency, the teaching–learning environment for Generation Alpha should promote a spirit of pragmatism. In practice, children should be encouraged to participate in fieldwork and to take constructive risks. These findings align with the results reported by Palar et al. (2023), who identified the promotion of pragmatism as a fundamental dimension of the next-generation learning environment. In addition, Yousefi Hamedani et al. (2021) underscored the critical role of providing adequate equipment and facilities, whereas Barrett et al. (2020) highlighted that an effective learning environment necessitates a comprehensive technological understanding.

In explaining these results, it should be emphasized that individuals born into Generation Alpha, under the influence of globalization, tend to exhibit a global lifestyle that is not necessarily aligned with local culture. This is reflected in features such as multicultural diversity and visual communication. Their social environment differs fundamentally from that of previous generations—not only in clothing and language use but also in how they access information and communicate, often transcending traditional physical and legal boundaries.

Members of this plural digital generation are less attached to traditional social reference groups. Formal schooling and university education may seem like old museums they visit out of necessity rather than desire. They are more strongly influenced by their peers than by family or adults, and their peer connections—maintained through social media platforms such as Facebook and Instagram—form a much wider communication network than that of previous generations. This digital social world extends beyond family and close friends, serving as a key source of information, opinions, and belief formation.

Furthermore, Generation Alpha's frequent interaction with digital tools has led many to prefer watching visual content, such as videos, over reading printed materials. Analyses of their learning styles indicate that visual and hands-on learning dominate over auditory and textual approaches. These emerging students do not attend school merely to listen to teachers repeating textbook content; instead, they seek active engagement and practical experiences. Consequently, Alpha learners construct knowledge through doing and experiencing, and schools should therefore create environments that foster experiential learning.

Recommendations:

- Regarding deep technological understanding: Technology should not be treated as an end in itself but should be used effectively and appropriately to support learning.
- Regarding teachers' information-processing ability: Information literacy training courses should be organized for primary school teachers to develop the key components of information literacy identified in this research.

- Regarding the encouragement of pragmatism: Educators and teachers should provide opportunities that foster students' development and promote a culture of continuous learning among teachers themselves.

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