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AN EXAMINATION OF THE EFFECT OF THE DIGITAL CONTEXT-BASED LEARNING APPROACH ON LEARNING: THE CASE OF THE SOCIAL STUDIES COURSE

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Abstract

The aim of this study is to examine the impact of the digital context-based learning approach on achieving the intended learning outcomes of the fifth-grade Social Studies course, specifically within the learning domain "Economy in Our Lives." In this context, the study also investigates its effect on domain-specific, conceptual, and socio-emotional learning skills, as well as on learners' tendencies and the value–action framework defined for this domain. For this purpose, the digital context-based learning approach was designed for the first time within the scope of this research. The learning process, conducted through the digitalization of contexts, was structured using widely used social media platforms. A quantitative research design was employed, specifically a quasi-experimental model with a pre-test–post-test paired control group. The study group consisted of 102 students selected through simple random sampling from two schools in Erzincan city center during the 2024–2025 academic year. During data collection, the sub-dimensions of the targeted instructional content were transformed into control forms by the researcher. For data analysis, paired-samples t-tests were used to compare the pre-test and post-test scores of the experimental and control groups, while independent-samples t-tests were conducted to examine the relationship between pre-test and post-test scores. The results revealed a statistically significant difference between the experimental group's pre-test and post-test scores, and the comparison of group means indicated that the post-test results were in favor of the experimental group. These findings demonstrate that the digital context-based learning approach has a positive effect on student learning.

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Keywords: Economy in our lives learning field, digital context-based learning, social media, social studies education.

Dijital Bağlam Temelli Öğrenme Yaklaşımının Öğrenmeye Etkisinin İncelenmesi: Sosyal Bilgiler Dersi Örneği

Öz

Bu araştırmanın amacı, dijital bağlam temelli öğrenme yaklaşımının 5. sınıf sosyal bilgiler dersi "Hayatımızdaki Ekonomi" öğrenme alanında kazandırılması hedeflenen öğrenme çıktıları ile alan, kavramsal, programlar arası bileşenlerin öğrenmeye etkisini incelemektir. Bu doğrultuda dijital bağlam temelli öğrenme yaklaşımı ilk kez bu çalışma için tasarlanmıştır. Bağlamların dijitalleştirilmesi yoluyla öğrenme süreci popüler sosyal medya araçları aracılığıyla yapılandırılmıştır. Araştırmada nicel yöntem kullanılmış; nicel yöntem, ön test-son test eşleştirilmiş kontrol gruplu yarı deneysel desenle tasarlanmıştır. Araştırmanın çalışma grubunu 2024-2025 akademik yılında Erzincan il merkezinde basit seçkisiz örnekleme yöntemiyle belirlenen iki farklı okuldaki 102 öğrenci oluşturmuştur. Veri toplama sürecinde ilgili öğrenme alanına yönelik öngörülen içeriğin belirlenen alt boyutları araştırmacı tarafından kontrol formlarına dönüştürülmüştür. Bu doğrultuda elde edilen nicel verilerin analizinde deney ve kontrol gruplarının ön test-son test puanlarını karşılaştırmak amacıyla bağımlı örneklem t-testi; ön test ve son test puanları arasındaki ilişkiyi incelemek içinse bağımsız örneklem t-testi kullanılmıştır. Sonuçlar, deney grubunun ön ve son test puanları arasında anlamlı bir farklılık olduğunu; deney ve kontrol grupları puan ortalamalarının ise son test ve deney grubu lehine olduğunu göstermektedir. Bu sonuçlar, dijital bağlam temelli öğrenme yaklaşımının öğrenmeyi olumlu yönde etkilediğini göstermektedir.

Anahtar kelimeler: Hayatımızdaki ekonomi öğrenme alanı, dijital bağlam temelli öğrenme, sosyal medya, sosyal bilgiler eğitimi.

Introduction

Education is a process that prepares individuals for social and cultural life. The education system is directly influenced by societal transformations and technological developments. In this context, continuous change and development occur in education. In particular, the rapid evolution of technology has necessitated the transformation of technological and communication tools in response to individuals' increasing needs and demands (Solmaz et al., 2013).

In the modern era, face-to-face communication has increasingly been replaced by technology-mediated forms of interaction. One of these tools is social

media. Social media platforms have become central to communication, deeply affecting interpersonal interaction, collaboration, work styles, and learning processes. They have opened new avenues for education while also driving change and transformation in educational practices (Öztürk & Talas, 2015).

The transformation in education has made individual differences in learning more pronounced. Consequently, curricula have been restructured to adapt to the changing educational paradigm. These redesigned curricula aim for students to understand where and how to access information, explain knowledge in context, effectively apply knowledge to solve problems, and consciously manage their learning processes by becoming aware of their own learning methods (Güneş Koç, 2013). By keeping pace with technological developments, the learning process is made more conscious.

Technological advancements, particularly the transition from Web 1.0 to Web 2.0, have altered the structural characteristics of digital environments. While Web 1.0 positioned users as passive consumers of information, Web 2.0 enabled them to become producers and sharers of knowledge (İneç, 2017; O'Reilly, 2005). Web 2.0 technology allows for dynamic content integration, fostering interactive structures. This interactivity accelerated the development of social media platforms and increased the popularity of social networks, supporting continuous digital presence for users. Subsequently, Web 3.0, with its semantic web approach, made the internet smarter and more personalized, emphasizing data identification and content delivery tailored to individual needs. In other words, web technologies began to assume a user-specific dimension (İneç, 2017). The emerging Web 4.0 further advanced human-machine integration through intuitive, predictive, and IoT-based approaches, as well as affective computing (Fowler & Rodd, 2013). These technological developments continue rapidly and are integrated into education. In this context, Web 3.0-based social media tools were used to form the technological infrastructure of digital contexts, supporting digital context-based learning.

Digital context-based learning is built upon the principles of context-based learning. Its distinction lies in subjecting real-world contexts to digital transformation. Context-based learning aims to concretize knowledge and convey it to students through experiences, linking topics to contexts for meaningful and lasting learning. It seeks to provide students with real-life contexts, making knowledge functional through experience (Acar & Yaman, 2011; Ayas et al., 2007; Glynn & Koballa, 2005; Gürkan, 2015). Digital context-based learning extends this by digitally transforming real-life contexts.

This approach enables students to establish meaningful connections between theoretical knowledge and daily life experiences. By using digital tools and media content, students are provided with learning environments linked to real-life scenarios. Abstract concepts are connected with concrete contexts. Real-life scenarios, videos, digital stories, and interviews presented digitally allow students to directly relate the learning material to their lives, facilitating the practical application of knowledge. Digital context-based learning not only conveys information but also aims to integrate that information into students' experiences in digital environments. In digital context-based learning, scientific content is presented in relation to digital environments, technological developments, and applications that students commonly use or encounter in their daily lives. Technological elements such as social media platforms, games, digital content creation tools, digital stories, and digital books are incorporated to provide meaningful and lasting learning. Consequently, social studies courses are integrated with digital experiences, making them more meaningful, accessible, and functional for students.

Social studies courses are presented interactively using multimedia elements. Learning and teaching processes are supported not only by videos and animations but also by geo-media, dynamic geographic information systems, and other technologies, allowing real-time sharing, interpretation, and interaction (İneç, 2017; İneç & Akpinar, 2017; İneç & Akpinar, 2018). The integration of technology

in classroom environments transforms instructional practices. Multimedia tools enable students to create their own materials, while communication technologies contribute to social studies education and foster diverse teaching approaches (İneç, 2012; İneç & Akpinar, 2017). In this way, technology in social studies promotes the acquisition of varied skills and content.

In order to conduct the educational process effectively, course content is enriched with various instructional methods and models, such as digital context-based learning, thereby creating a dynamic structure that accommodates different learning styles. In this context, the Social Studies course, structured around human, societal, and interpersonal interactions (Kabapınar, 2014), stands out with its interdisciplinary and integrated nature, aiming to develop individuals' knowledge, awareness, and responsibility toward social life.

While digital context-based learning can be applied to social studies content, the literature reveals limited studies on how to integrate this approach, which tools and materials to use, the challenges faced during implementation, and strategies to overcome them. Therefore, the present research aims to address this gap and provide a new perspective to the literature.The limited number of studies examining the effects of digital context-based practices on domain-specific conceptual skills, literacy, dispositions, and values; the use of digital social media content as instructional material; and the employment of researcher-developed instruments instead of standardized tools commonly found in the literature distinguish this study from others in the field.

Purpose of the Study

The purpose of this study is to examine the impact of the digital context-based learning approach, implemented for the first time, on the achievement of the intended learning outcomes in the fifth-grade Social Studies course, specifically within the "Economy in Our Lives" learning domain. In particular, the study investigates its effect on the acquisition of domain-specific skills, conceptual skills, and interdisciplinary components. In line with this purpose, digital contexts were

structured through social media tools, while pedagogical contexts were designed in accordance with the principles of context-based learning. Within this framework, the study is guided by the following sub-problems:

1. Effect of digital context-based learning on domain and conceptual skills social studies.
2. Effect of digital context-based learning on students' tendencies in social studies.
3. Effect of digital context-based learning on socio-emotional skills and values social studies.
4. Effect of digital context-based learning on literacy skills social studies.

The Importance of this Research

Technology has become a significant tool for development in education, in line with the changes required by the contemporary era. The use of technology in delivering course content surpasses traditional teaching approaches, providing students with flexible learning opportunities that meet their individual needs. The advancement of technology influences individuals and shapes their expectations, creating a demand for fundamental changes in educational systems to meet these expectations. These transformations, reflected in education, play a crucial role in the transfer of domain knowledge, conceptual skills, tendencies, and interdisciplinary components, necessitating the use of new strategies, methods, and techniques.

The findings obtained from this study are expected to contribute to the literature by clarifying the role of the digital context-based learning approach in Social Studies instruction and by providing guidance for future research. Furthermore, the absence of detailed studies in the literature regarding the implementation of digital context-based learning highlights the significance of this research. It is essential that curriculum content is meaningfully connected to students' daily lives and delivered within authentic real-life contexts. Within this framework, the digital context-based learning approach is considered to be the most

suitable method for achieving this objective. A review of the existing literature reveals that context-based learning approaches have predominantly been applied in disciplines such as Science, Mathematics, and Chemistry. In contrast, research on digital context-based learning in the field of Social Studies is almost non-existent. For this reason, the present study is expected to address a significant gap by contributing both to the scientific literature and to the needs of the field.

1. Method

1.1. Research Model

The quantitative dimension of the study was conducted using a quasi-experimental design with a pre-test–post-test matched control group. Quasi-experimental designs are preferred in situations where experimental control is difficult to achieve, where establishing causal relationships poses challenges, and where manipulation of the independent variable is problematic (Başol, 2008). Furthermore, due to the difficulty of creating completely equivalent groups, it is emphasized that the observed outcomes in such studies are attributed to the independent variable, while the random distribution of other factors across groups is limited (Black, 1999).

Within the framework of scientific methods, experimental studies are those in which definitive findings can be obtained, and the researcher conducts comparable practices. Such studies are expected to lead the researcher toward conclusive interpretations (Büyüköztürk, 2013). In this context, since it was not possible to assign students randomly to experimental and control groups, the existing groups were randomly designated as experimental and control groups. This method is frequently employed by researchers and is defined as a quasi-experimental model (Özmen, 2014). For these reasons, the quasi-experimental method was adopted by the researcher in this study.

1.2. Data Collection

Prior to the commencement of the research, ethical approval was obtained from the Erzincan Binali Yıldırım University Human Research Ethics Committee in

Educational Sciences (Erzincan Binali Yıldırım University Educational Sciences Ethics Committee Decision dated 01/11/2024, Protocol No. 15/12.). In addition, the necessary permissions for data collection were obtained from the Erzincan Provincial Directorate of National Education. Within this framework, parental consent was secured through the "Parental Consent Form" and participant consent was obtained via the "Detailed Information and Voluntary Participation Form." Since no existing scale was found in the scientific literature to assess the acquisition levels of the skills specified in the *Maarif Century Social Studies Curriculum*, the researcher developed control forms by converting the items representing the D2 levels of the relevant skill sub-dimensions, as outlined in the book *K-12 Skills Framework: Turkey Holistic Model*, into applicable instruments.

At the beginning of the implementation process, the instruments FS-CSCF, TICF, SELS-VICF, and LSCF were administered as pre-tests to both the experimental and control groups. At the end of the process, the same instruments were administered again as post-tests. Subsequently, these control forms were analyzed, and the quantitative data were rendered meaningful.

1.3. Data Collection Instruments

In the study, the *Field Skills and Conceptual Skills Control Form (FS-CSCF)*, the *Tendency Identification Control Form (TICF)*, the *Socio-Emotional Learning Skills and Values Identification Control Form (SELS-VICF)*, and the *Literacy Skills Control Form (LSCF)*, all developed by the researcher, were utilized. Since no scale exists in the scientific literature to determine the level of acquisition of the skills included in the *Century of Education Social Studies Curriculum*, the sub-dimensions of the relevant skills at the D2 level, as outlined in the book "K-12 Skills Framework Türkiye Holistic Model" and the UNICEF guidebook. The checklists consisted of dichotomous ("Yes"/"No") items, each reflecting the sub-dimensions of the relevant skills. As the items were not altered, the instruments were fully structured.

To determine the validity and reliability of the developed checklists, feedback was obtained from three field experts. Since no corrections, additions, or modifications were requested in their feedback, comparative analysis was not deemed necessary. This process supports the content and face validity of the instruments. In terms of reliability, the incorporation of expert feedback into the development process enhanced the consistency and usability of the instruments. For the control groups, lessons continued with the existing curriculum without any intervention.

1.4. Data Analysis

For the analysis of the quantitative data, two statistical tests were employed. A paired-samples t-test was used to compare the pre-test and post-test scores of the experimental and control groups, while an independent-samples t-test was utilized to determine the differences between the pre-test and post-test scores of the groups. Quantitative research findings encompass the systematic and objective observation of numerical data, as well as reproducible measurements that provide insights into the meaning of the phenomenon under investigation (Burns & Grove, 1993). All statistical analyses were conducted using the SPSS software package.

2. Findings

The findings obtained in relation to the sub-problems are presented below under subheadings.

2.1. The Effect of Digital Context-Based Learning on Domain and Conceptual Skills

Within the scope of the study, participants were administered a control form regarding “Domain Skills and Conceptual Skills in the Social Studies Course.” The control form consisted of three sub-dimensions: “resource management skills,” “summarization skills,” and “interpretation skills.” Necessary analyses were conducted for the pre-test and post-test scores of the experimental and control groups. In this regard, paired-samples t-tests were employed to compare the pre-test and post-test scores of the experimental and control groups, while independent-

samples t-tests were used to examine the differences between the pre-test and post-test scores across groups. The results of these tests are presented in Table 1.

Table 1: *T-test Results for Domain and Conceptual Skills in the Social Studies Course*

Group	Sub-Dimension	Process	$\bar{x}$	SD	df	t	p
Experimental	Resource Management Skill	Pre-test–Post-test	-1.89	0.19	46	-9.82	0.00
	Summarizing Skill	Pre-test–Post-test	-2.89	1.31	46	-15.19	0.00
	Interpretation Skill	Pre-test–Post-test	-1.47	0.72	46	-14.02	0.00
Control	Resource Management Skill	Pre-test–Post-test	-0.22	0.744	53	-2.19	0.05
	Summarizing Skill	Pre-test–Post-test	-0.14	0.596	53	-1.82	0.07
	Interpretation Skill	Pre-test–Post-test	-0.09	0.68	53	-1.00	0.32
Pre-test	Resource Management Skill	Experimental–Control	-1.6	0.191	99	-8.42	0.58
	Summarizing Skill	Experimental–Control	-2.59	0.196	99	-13.22	0.29
	Interpretation Skill	Experimental–Control	-1.19	0.133	99	-9.05	0.11
Post-test	Resource Management Skill	Experimental–Control	0.062	0.113	99	0.552	0.00
	Summarizing Skill	Experimental–Control	0.149	0.143	99	1.04	0.00
	Interpretation Skill	Experimental–Control	0.176	0.111	99	1.58	0.00

An examination of Table 1 shows that participants in the experimental group exhibited a statistically significant difference between their pre-test and post-test scores across all sub-dimensions [t(46)=p<.05]. Considering the mean scores, it can be concluded that this difference favored the post-test results, indicating that the digital context-based learning approach had a positive impact on learning. In contrast, no significant differences were observed between the pre-test and post-test scores of the control group across all sub-dimensions [t(46)=p>.05].

Furthermore, Table 1 demonstrates that there were no significant differences in pre-test scores between the experimental and control groups across all sub-dimensions [t(99)=p>.05], which confirms the homogeneity of the groups at the outset. Conversely, significant differences were found in the post-test scores between the experimental and control groups across all sub-dimensions [t(99)=p<.05]. These

differences were in favor of the experimental group, further supporting the conclusion that digital context-based learning positively influenced students' learning outcomes.

2.2. The Effect of Digital Context-Based Learning Approach on Tendencies

Within the scope of the research, the "Social Studies Course Tendency Identification" control form was administered to the participants. This form consists of four sub-dimensions: "Self-Efficacy Tendency Identification," "Responsibility," "Creativity Tendency," and "Original Thinking Tendency." Necessary analyses were conducted regarding the pre-test and post-test scores of the experimental and control groups. In this context, a paired-samples t-test was employed to compare the pre-test and post-test scores of the experimental and control groups. In addition, an independent-samples t-test was applied to examine the relationship between the pre-test and post-test scores of the experimental and control groups. The results of these tests are presented in Table 2.

Table 2: *T-Test Results Regarding the Social Studies Course Tendencies Identification Form*

Group	Sub-dimension	Comparison	M	SD	df	t	p
Experimental	Self-efficacy tendency	Pre-test – Post-test	-0.60	0.54	46	-7.60	.000
	Responsibility	Pre-test – Post-test	-1.81	1.23	46	-10.10	.000
	Creativity tendency	Pre-test – Post-test	-1.11	0.89	46	-8.52	.000
	Original thinking tendency	Pre-test – Post-test	-1.53	0.75	46	-14.05	.000
Control	Self-efficacy tendency	Pre-test – Post-test	-0.13	0.34	53	-2.81	.070
	Responsibility	Pre-test – Post-test	-0.18	0.73	53	-1.86	.070
	Creativity tendency	Pre-test – Post-test	-0.09	0.68	53	-1.00	.320
	Original thinking tendency	Pre-test – Post-test	-0.05	0.60	53	-0.69	.500
Pre-test	Self-efficacy tendency	Experimental – Control	-0.51	0.08	99	-6.09	.310

	Responsibility	Experimental – Control	-1.72	0.17	99	-10.11	.350
	Creativity tendency	Experimental – Control	-1.09	0.13	99	-8.41	.440
	Original thinking tendency	Experimental – Control	-1.40	0.12	99	-11.83	.460
Post-test	Self-efficacy tendency	Experimental – Control	0.04	0.05	99	-1.01	.000
	Responsibility	Experimental – Control	0.10	0.11	99	-0.92	.000
	Creativity tendency	Experimental – Control	0.08	0.11	99	-0.76	.000
	Original thinking tendency	Experimental – Control	0.07	0.10	99	0.74	.000

When Table 2 is examined, it is observed that there is a statistically significant difference between the pre-test and post-test scores of the participants in the experimental group for all sub-dimensions [t(53)=p<.05]. Considering the mean scores, this significant difference is in favor of the post-test. This result indicates that the digital context-based learning approach has a positive effect on learning. On the other hand, it was found that there was no statistically significant difference between the pre-test and post-test scores of the participants in the control group for any of the sub-dimensions [t(53)=p>.05].

When Table 2 is further examined, it is revealed that there was no statistically significant difference between the pre-test scores of the participants in the experimental and control groups across all sub-dimensions [t(99)=p>.05]. This finding suggests that the experimental and control groups possessed similar characteristics. Conversely, there was a statistically significant difference between the post-test scores of the experimental and control groups across all sub-dimensions [t(99)=p<.05]. Considering the mean scores, this difference was in favor of the experimental group. In line with the research problem, this result was an expected outcome.

2.3 The Effect on Digital Context-Based Learning on Socio-Emotional Skills and Values

Within the scope of the research, a control form concerning "Social-Emotional Learning Skills and Values in the Social Studies Course" was administered to the participants. This control form consists of four sub-dimensions: "Self-Regulation Learning Skill," "Communication Skill," "Collaboration Skill," and the values of "Saving and Patriotism." Necessary analyses were conducted regarding the pre-test and post-test scores of the experimental and control groups. In this context, a paired-samples t-test was employed to compare the pre-test and post-test scores of the experimental and control groups. In addition, an independent-samples t-test was applied to examine the differences between the pre-test and post-test scores of the experimental and control groups. The results of these tests are presented in Table 3.

Table 3: *t-test Results Regarding Social-Emotional Learning Skills and Values in the Social Studies Course*

Group	Sub-dimension	Comparison	M	SD	df	t	p
Experimental	Self-regulation learning skill	Pre-test – Post-test	-2.29	1.74	46	-9.03	.000
	Communication skill	Pre-test – Post-test	-2.85	2.02	46	-9.61	.000
	Cooperation skill	Pre-test – Post-test	-1.46	0.88	46	-11.42	.000
	Values of frugality and patriotism	Pre-test – Post-test	-2.40	1.60	46	-9.75	.000
Control	Self-regulation learning skill	Pre-test – Post-test	-0.50	1.14	53	-3.07	.000
	Communication skill	Pre-test – Post-test	-0.22	1.35	53	-1.20	.030
	Cooperation skill	Pre-test – Post-test	0.14	0.52	53	-2.05	.040
	Values of frugality and patriotism	Pre-test – Post-test	-0.42	1.15	53	-2.66	.010
Pre-test	Self-regulation learning skill	Experimental – Control	1.98	0.24	99	-8.05	.160

	Communication skill	Experimental – Control	-2.72	0.26	99	-10.46	.650
	Cooperation skill	Experimental – Control	1.32	0.11	99	-11.23	.990
	Values of frugality and patriotism	Experimental – Control	-1.97	0.25	99	-7.67	.990
Post-test	Self-regulation learning skill	Experimental – Control	0.19	0.13	99	-1.39	.000
	Communication skill	Experimental – Control	0.09	0.20	99	-0.45	.000
	Cooperation skill	Experimental – Control	0.00	0.08	99	-0.01	.000
	Values of frugality and patriotism	Experimental – Control	0.00	0.14	99	0.00	.000

When Table 3 is examined, it is observed that there is a statistically significant difference between the pre-test and post-test scores of the participants in the experimental group for all sub-dimensions [t(53)=p<.05]. Considering the mean scores, this significant difference favors the post-test. This result indicates that the digital context-based learning approach positively affects social-emotional learning skills and values in the Social Studies course. Similarly, for the control group, a statistically significant difference was also found between the pre-test and post-test scores for all sub-dimensions [t(53)=p<.05]. According to the means, this significant difference is observed in the post-test scores. This indicates that over time, both the experimental and control groups showed a positive increase in social-emotional learning skills and values in the Social Studies course.

Furthermore, it was found that there was no statistically significant difference between the pre-test scores of the participants in the experimental and control groups across all sub-dimensions [t(99)=p>.05]. This finding suggests that the experimental and control groups were comparable in terms of initial characteristics. In contrast, a statistically significant difference was found between the post-test scores of the experimental and control groups across all sub-dimensions [t(99)=p<.05]. Considering the mean scores, this difference favors the experimental group. This result again provides evidence that the digital context-based learning

approach positively affects social-emotional learning skills and values in the Social Studies course.

2.4. The Effect of Digital Context-Based Learning on Literacy Skills

Within the scope of the research, a control form regarding "Literacy Skills in the Social Studies Course" was administered to the participants. This control form consists of five sub-dimensions: "Information Literacy," "Digital Literacy," "Visual Literacy," "Financial Literacy," and "Sustainability Literacy." Necessary analyses were conducted regarding the pre-test and post-test scores of the experimental and control groups. In this context, a paired-samples t-test was employed to compare the pre-test and post-test scores of the experimental and control groups. Additionally, an independent-samples t-test was applied to examine the relationship between the pre-test and post-test scores of the experimental and control groups. The results of these tests are presented in Table 4.

Table 4: *T-Test Results Regarding Literacy Skills in the 5th Grade Social Studies Course*

Group	Sub-dimension	Comparison	ẋ	SD	df	t	p
Experimental	Information literacy	Pre-test – Post-test	-2.38	2.11	46	-7.74	.00
	Digital literacy	Pre-test – Post-test	-7.51	3.72	46	-13.85	.00
	Visual literacy	Pre-test – Post-test	-2.32	1.07	46	-14.92	.00
	Financial literacy	Pre-test – Post-test	-4.19	2.16	46	-13.28	.00
	Sustainability literacy	Pre-test – Post-test	-2.49	1.68	46	-10.16	.00
Control	Information literacy	Pre-test – Post-test	-0.33	1.36	53	-1.81	.02
	Digital literacy	Pre-test – Post-test	-1.00	2.62	53	-2.79	.01
	Visual literacy	Pre-test – Post-test	-0.03	0.84	53	-0.32	.75
	Financial literacy	Pre-test – Post-test	-0.72	1.52	53	-3.48	.00
	Sustainability literacy	Pre-test – Post-test	-0.53	1.19	53	-3.30	.00

Pre-test	Information literacy	Experimental – Control	-2.12	0.29	99	-7.20	.73
	Digital literacy	Experimental – Control	-5.97	0.58	99	-10.21	.13
	Visual literacy	Experimental – Control	-2.12	0.16	99	-12.77	.14
	Financial literacy	Experimental – Control	-3.08	0.38	99	-8.10	.06
	Sustainability literacy	Experimental – Control	-1.73	0.26	99	-6.51	.18
Post-test	Information literacy	Experimental – Control	0.07	0.21	99	-0.34	.00
	Digital literacy	Experimental – Control	0.53	0.35	99	1.51	.00
	Visual literacy	Experimental – Control	0.15	0.10	99	1.46	.00
	Financial literacy	Experimental – Control	0.38	0.20	99	1.89	.00
	Sustainability literacy	Experimental – Control	0.21	0.16	99	1.32	.00

When Table 4 is examined, it is observed that there is a statistically significant difference between the pre-test and post-test scores of participants in the experimental group for all sub-dimensions [t(53)=p<.05]. Considering the mean scores, this significant difference favors the post-test. This result indicates that the digital context-based learning approach positively affects literacy skills in the Social Studies course. Similarly, for the control group, a statistically significant difference was also found between the pre-test and post-test scores for all sub-dimensions [t(53)=p<.05]. According to the mean scores, this significant difference is observed in the post-test scores.

Furthermore, a statistically significant difference was found between the post-test scores of the experimental and control groups across all sub-dimensions [t(99)=p<.05]. Considering the mean scores, this difference favors the experimental group. This result confirms that the digital context-based learning approach positively impacts literacy skills in the Social Studies course. In contrast, no statistically significant difference was found between the pre-test scores of the

participants in the experimental and control groups for any of the sub-dimensions [t(99)=p>.05], indicating that the experimental and control groups were comparable in terms of initial characteristics.

3. Discussion and Conclusion

The limited number of similar studies in the literature restricts the availability of relevant sources. This study's integration of a digital context, its focus on 5th-grade students, and its implementation within the field of social studies underscore both its originality and the gaps present in the existing literature. Moreover, by adapting context-based learning to a digital environment and incorporating domain-specific skills, conceptual skills, student tendencies, and cross-curricular components, this research differentiates itself from previous studies and makes a substantial contribution to the literature.

According to the findings obtained from the first sub-research problem of the study, participants in the experimental group showed a statistically significant difference between their pre-test and post-test scores in domain-specific skills (Entrepreneurship; Resource Management). The results indicate that the post-test scores of the experimental group were higher, demonstrating a positive effect of the digital context-based learning approach on the comprehension of domain-specific skills. Additionally, no significant difference was found between the pre-test scores of the experimental and control groups, indicating that the groups were homogeneously selected. In contrast, a significant difference was observed between the post-test scores of the experimental and control groups, with the experimental group achieving higher mean scores.

Although no prior studies directly supported this result, related studies in other fields provided corroboration. Aktemur (2022) found that within a context-based learning framework, the digital game *Cities: Skylines* positively affected participants' entrepreneurial skills, supporting the positive effect of digital context-based learning on domain-specific skills. Similarly, King et al. (2011) reported that

context-based learning enhanced decision-making, entrepreneurship, and interpretation skills, which aligns with the present findings.

Regarding conceptual skills (Summarizing, Interpretation), a statistically significant difference was also observed between pre-test and post-test scores of the experimental group. The post-test scores were higher, indicating a positive effect of digital context-based learning on the comprehension of conceptual skills. No significant difference was found between pre-test scores of the experimental and control groups, confirming group homogeneity. In contrast, post-test scores showed a significant difference, with the experimental group achieving higher means. Yu et al. (2015) reported that context-based learning improves everyday life skills, supporting this study's findings. Keleş (2019) observed improvements in inquiry-based learning skills, Kocabaş (2021) reported positive developments in analytical cognitive skills, and Yıldız (2011) found high levels of critical thinking in analysis, evaluation, and inference sub-dimensions. These studies collectively support the positive impact of digital context-based learning on conceptual skills. The consistency of these results is likely due to the integration of real-life contexts with lesson content, which positively influenced both domain-specific and conceptual skill acquisition, classroom interactions, and teacher-student engagement. Accordingly, the use of digital technology in education is beneficial, and technological innovations contribute significantly to making abstract topics concrete and meaningful (Güneş & Bulut, 2017).

The findings obtained from the second sub-research problem of the study consist of four sub-dimensions. The results showed that participants in the experimental group demonstrated a statistically significant difference between pre-test and post-test scores in tendencies (Self-Efficacy, Responsibility, Creativity, Original Thinking). The post-test scores were higher, indicating a positive effect of digital context-based learning on the comprehension of tendencies. No significant difference was observed in the control group between pre-test and post-test scores.

Furthermore, no significant difference was found between the pre-test scores of the experimental and control groups, suggesting homogeneity. However, a significant difference was observed in post-test scores, favoring the experimental group.

Although direct supporting studies were lacking, indirect evidence was found in the literature. Karabacak (2011) reported a significant difference in favor of female students in the "self-regulation" sub-dimension, and Kızıltaş (2011) found that critical thinking tendencies were at a moderate level. Ayra and Şahin (2024) reported a positive relationship between high school students' creative thinking tendencies and lifelong learning tendencies. These findings support the conclusion that digital context-based learning positively affects the comprehension of tendencies.

The findings obtained from the third sub-research problem of the study consist of five sub-dimensions. Participants in the experimental group demonstrated a statistically significant difference between pre-test and post-test scores in social-emotional learning skills (Self-Regulation, Communication, Collaboration), with higher post-test scores, indicating a positive effect of digital context-based learning. Similarly, the control group showed significant improvement in these skills over time. Pre-test comparisons indicated no significant difference between groups, confirming homogeneity, while post-test scores showed a significant difference favoring the experimental group.

Direct literature support was limited, but related studies corroborated the findings. Broman et al. (2018) reported that problem-solving skills improved through the implemented practices, a finding that corroborates the results of the present study. Similarly, Çelik (2021) demonstrated that context-based learning makes a significant positive contribution to the development of problem-solving skills, thereby reinforcing these outcomes. In parallel, Akın Yanmaz (2021) concluded that the use of guiding materials plays a crucial role in the effective delivery of course content and the transfer of related skills. Moreover, Maulana et al. (2021) revealed that the context-based learning approach fosters collaboration and self-regulation

skills, further supporting the results obtained in this research reported a 91.8% improvement in student skills, Songül (2019) found significant positive correlations between social-emotional learning sub-dimensions and academic achievement, and Ingram (2003) concluded that context-based learning positively influenced students' attitudes and engagement in lessons. These results suggest that digital context-based learning applications in social studies foster the development of students' social-emotional learning skills.

Participants' values (Saving and Patriotism) also showed statistically significant improvement in post-test scores in both experimental and control groups, with a higher increase in the experimental group, indicating that digital context-based learning positively influences the comprehension of values. Yediyıldız and Beldağ (2020) reported that school-based values education positively affected environments outside of school, supporting these findings.

The findings obtained from the fourth sub-research problem of the study included five sub-dimensions. Participants in the experimental group showed statistically significant differences between pre-test and post-test scores in literacy skills (Information, Digital, Financial, Visual, Sustainability), with post-test scores being higher. This indicates that digital context-based learning positively affects literacy skill comprehension. The control group also showed significant differences between pre-test and post-test scores, favoring the post-test. Additionally, post-test comparisons between experimental and control groups showed a significant difference in favor of the experimental group, whereas pre-test scores showed no significant difference, confirming group homogeneity.

Although direct literature support was limited, related studies provided corroboration. Çiğdemoğlu (2012) found that context-based learning improved chemistry literacy compared to other approaches. Yıldırım and Öztürk (2023) reported positive results in literacy skills in experimental groups, supporting the positive impact of digital context-based learning. Ocak and Serin (2024) found that

digital literacy levels increased significantly. Adalar (2019) reported that teachers' use of multimedia and social media tools enhanced students' literacy skills. Furthermore, studies on teacher candidates' media literacy competencies demonstrated above-average proficiency, indicating that widespread technology use positively contributes to literacy skill development.

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