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Sustainable Learning in Gifted Students: The Relationship Between Cultural Capital and Lifelong Learning

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Abstract: This study explores the relationship between cultural capital and lifelong learning within the context of sustainable education for gifted students. The research measures the cultural capital, lifelong learning skills, and critical-reading abilities of gifted students and examines whether cultural capital influences their lifelong learning and critical-reading proficiency. Additionally, participants' perspectives on lifelong learning and critical reading were collected. Employing a mixed-methods design, the study synthesizes both quantitative and qualitative data. The quantitative results demonstrate a significant positive correlation between critical reading and lifelong learning skills, with the impact of cultural capital on both variables being supported by qualitative findings. Students with higher levels of cultural capital clearly outperform others in these areas, as reflected in both the quantitative data and qualitative insights. Cultural capital is identified as a significant determinant of students' academic and cognitive abilities. Furthermore, critical-reading skills were found to positively influence students' self-confidence. Based on these findings, it is recommended that support for gifted students be tailored to address individual and social differences. The study underscores the need for educational programs to be restructured to prioritize the development of critical thinking and lifelong learning competencies.

Keywords: gifted; cultural capital; lifelong learning; critical reading; sustainable education

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1. Introduction

Individuals who exhibit superior qualities in terms of intelligence, creativity, and motivation compared to their peers are often referred to as gifted [1,2]. Special educational activities for students identified as gifted are carried out in many countries [3–5]. It is widely accepted that approximately 2% of a given population consists of gifted individuals [6,7]. Numerous countries have implemented special provisions and practices for the education of this group [8,9]. For example, in Türkiye, Science and Art Centres (SAC) have been established for these students [10]. Gifted students continue their education alongside their peers in their regular schools while also receiving education at an SAC. These centres are designed to identify and cultivate the artistic, intellectual, and creative capacities of gifted and talented students. Failure to provide learning environments tailored to the needs of gifted individuals may result in the underachievement of these individuals during the educational process. According to Tomlinson [11], when differentiated educational models that address the academic and social needs of gifted students are not implemented, these students are at risk of experiencing boredom, loss of motivation, and, consequently, poor academic performance. Reis and McCoach [2] highlight that in such circumstances, gifted students may fail to reach their full potential and may gradually distance themselves from success. Inadequate learning environments may also lead to emotional and social issues in these students. Neihart, Reis, Robinson, and Moon [1] emphasise that gifted students may face anxiety and self-esteem issues if their social and emotional development is not supported. In this context, it is possible to argue that providing a special education for gifted students is closely related to the concept of sustainable education. The notion

of sustainability not only encompasses the preservation of natural resources but also implies the optimal realisation of individuals' potential [12,13]. This process must continue throughout one's lifetime and be passed on to future generations [14]. Maximising the potential of gifted individuals is important not only for their personal success but also for the lifelong development and prosperity of societies. The failure to provide gifted individuals with appropriate education not only leads to individual losses but also depletes society's pool of innovative, creative, and leadership-oriented talent [11]. Therefore, special educational activities should be considered a critical investment for the sustainability of societal gains, and these individuals should be supported, given the long-term contributions they will make to society.

1.1. Cultural Capital

The elements individuals acquire from their families and surroundings, such as knowledge, language skills, aesthetic appreciation, and general culture, are explained by Bourdieu [15] through the concept of cultural capital. Research indicates that parents' educational levels can be viewed as an indication of their children's academic success and cultural capital [16]. Additionally, the number of books in the home is another significant indicator of cultural capital. Children's access to books within their upbringing environment influences their reading habits, language skills, and general cultural knowledge [17]. Another factor contributing to the formation of cultural capital is the opportunity for individuals to travel abroad. This experience broadens their worldview and introduces them to cultural diversity, thus enriching their cultural capital [12]. Considering cultural capital from the perspective of lifelong learning is expected to yield outcomes which are more comprehensive. Some researchers associate lifelong learning with post-school learning activities. For instance, Koulaouziades and Popović [18] approach lifelong learning within the context of adult education. They explore the social, historical, and political background of lifelong learning. One notable finding of Koulaouziades and Popović [18] is that while lifelong learning offers a flexible approach focusing on individual needs, it has evolved, under the influence of neoliberal ideologies, towards an excessive emphasis on individualism, which weakens social solidarity. Scientifically testing the impact of an emphasis on individualism versus an emphasis on collectivism as to lifelong learning skills poses many challenges. However, understanding the differences created by the varying societal opportunities for individuals can provide insight into this issue. Comparing the cultural-capital status of gifted students with their lifelong learning and critical-reading skills will allow for further inferences to be made in this context. In this regard, factors shaping the cultural capital of gifted individuals, such as parental education, possession of books and a library, and opportunities for travel abroad, are examined [19].

1.2. Lifelong Learning

A connection can be drawn between cultural capital and lifelong learning skills, particularly critical-reading skills. In modern societies, individuals are expected to be critical and rational, recognising and solving problems through education [20,21]. Individuals use these skills throughout their lives. In the 21st century, it is essential for people to continuously update their knowledge and skills to remain productive and successful, both professionally and personally. As a result, education and learning extend beyond the confines of school in terms of time and space. Education and learning must be dynamic and progressive processes. This has led to the increasing prominence of the concept of lifelong learning in recent years. This understanding of learning can be simply defined as the continuous acquisition and development of skills throughout life [22]. Lifelong learning practices have existed in various forms since the beginning of educational history. However, the concept of "lifelong learning" was first discussed at the UNESCO International Conference on Adult Education held in Nairobi in 1976 [23]. At this conference, the idea that individuals should be supported in their continuous learning processes was emphasised. Subsequently, the concept of lifelong learning began to be discussed more widely in academic and institutional settings,

and research in this area increased. Notably, the 2000 European Commission's Lifelong Learning Memorandum gave new momentum to this field, highlighting the importance of lifelong learning and providing strategic recommendations to EU member states [24]. These developments have led to lifelong learning being recognised as a critical factor, not only for individual development, but also for societal development. Longworth and Davies [25] define lifelong learning as a vital necessity for individuals, institutions, and societies in the dynamic and ever-changing world of the 21st century. They argue that this approach expands the scope of education and learning, transforming individuals and societies and assigning them new roles. From this perspective, the education of gifted individuals can be seen as aiming to instil permanent learning skills and discipline. Maximising and sustaining the potential of these students will contribute to the economic, scientific, and artistic advancement of societies [10]. This mission requires gifted individuals to adopt a lifelong learning mindset. Lifelong learning can be simply understood as the continuous development of knowledge and skills throughout an individual's life. Jarvis [22] emphasises that lifelong learning is not only important for academic development but also for personal growth and social cohesion. Klug et al. [26] explored how classroom practices can support students' lifelong learning skills. They found that fostering critical thinking and problem-solving skills significantly contributes to students' lifelong learning processes. Preece [27] also points out that lifelong learning plays a critical role in societal development and economic competitiveness. The education of gifted students may provide functional outcomes by uncovering the relationship between lifelong learning and critical reading. There are several reasons for this. First, research on critical thinking skills suggests that gifted students have a high potential to develop these skills [28,29]. For example, Kettler [30] found that gifted students' critical thinking performance is higher than that of their peers. The findings that highlight the effectiveness of a language education which focuses on critical thinking in enhancing the critical thinking skills of gifted students are noteworthy [31,32]. The second reason is that lifelong learning has the potential to benefit both gifted individuals and society in terms of productivity and creativity, thus advancing society. Ultimately, researching the education of gifted individuals from the perspective of critical-reading skills and lifelong learning can yield valuable contributions. One of the key components of lifelong learning is the set of skills comprising critical reading.

1.3. Critical Reading

Paul and Elder [33] define the critical-reading process as the reader's exploration of underlying meanings in a text, evaluation of the author's arguments, and questioning of the content. Similarly, Wallace [34] views critical reading as a process in which readers engage with a text not only to acquire information but also to analyse the author's purpose, the evidence presented, and the assumptions made. While critical reading involves analysing, evaluating, and interpreting a text, critical thinking extends beyond reading to encompass the development of analytical, evaluative, and reasoning skills across all thinking processes [35]. Research demonstrates that cultivating critical-reading skills enables students to think more deeply, reach independent judgments, and approach texts with a questioning mindset [36]. To better understand critical reading, it is useful to revisit perspectives on critical thinking. Bowell and Kemp [37] define critical thinking as the process of carefully and systematically analysing, evaluating, and constructing arguments. This process involves reasoning, evaluating evidence, ensuring logical consistency, and reaching accurate conclusions. They suggest that critical thinking also encompasses other elements, including analytical thinking, logical coherence, evidence, reflective thinking, and open-mindedness. Critical thinking has been defined in various ways by other researchers. Paul and Elder [33] describe it as the systematic control and improvement of the thinking process. This perspective focuses on the metacognitive aspect of critical thinking. Facione [38] highlights both the cognitive and emotional components of critical thinking. He argues that curiosity, open-mindedness, and impartial evaluation are important in this process. Facione [38] also notes that critical thinking is not a closed-loop system but

rather one that interacts with nature, society, and personal life. Similarly, Halpern [39] understands critical thinking as a rational approach to decision-making processes that should be logical, systematic, and impartial. Those who view critical thinking as a rational process emphasise that it involves asking the right questions, analysing arguments, and evaluating conclusions [40,41]. All these definitions and perspectives demonstrate that critical thinking is a complex, multi-dimensional process and a vital skill for effective learning, decision-making, and problem-solving. Therefore, activities that foster the development of critical thinking skills are necessary [35,42]. A similar finding was highlighted by Tsui [42], who demonstrated that critical-reading activities contributed to the development of critical thinking skills in secondary school students. Behar-Horenstein and Niu [43] tested the same phenomenon at the higher education level and reached similar conclusions. Paul and Elder [44] view critical thinking skills as an essential tool for lifelong learning and personal development.

1.4. Objective

A review of the literature reveals that there are a limited number of studies investigating the relationship between lifelong learning and critical thinking or critical reading [45] However, no research has been found that examines these skills in relation to individuals' cultural capital. This gap in the literature can be considered a problem in the context of sustainable education. Based on this problem, the aim of this study is to explore the views of gifted students regarding lifelong learning and critical reading, as well as to identify the relationships between their lifelong learning skills and critical-reading levels.

To structure the findings of this research and obtain more detailed results, the following research questions have been formulated:

1. What are the views of gifted students on lifelong learning and critical reading?
2. Is there a relationship between gifted students' lifelong learning skills and their critical-reading skills?
3. Do gifted students' lifelong learning and critical-reading skills vary according to their cultural capital?

2. Materials and Methods

2.1. Study Design

In this study, the relationship between the lifelong learning skills and critical-reading skills of gifted students was examined. Additionally, the research tested whether the cultural capital of gifted students creates a difference in their lifelong learning and critical-reading skills. At this stage, quantitative data were collected, analysed, and interpreted. In the second stage, the participants' views on lifelong learning and critical reading were determined, and qualitative data were utilized. The study includes both quantitative and qualitative data; therefore, a mixed-methods approach was employed. The mixed-methods approach is a research method that combines both quantitative and qualitative research methods [46,47]. In this research, the sequential explanatory design, a type of mixed-method design, was used. This type of design allows for a more comprehensive and in-depth analysis by combining the strengths of both methods [48,49]. In a sequential explanatory design, quantitative data are collected and analysed first, and this is followed by the collection and analysis of qualitative data to explain these quantitative findings [46]. Accordingly, in the quantitative phase, data representing the cultural capital of gifted students, as well as data related to their critical-reading and lifelong learning skills, were collected and analysed appropriately. This phase helps to develop a general understanding of the research question and determines the findings. In the qualitative phase, qualitative data were collected to gain a deeper understanding of these quantitative findings. The views of gifted students regarding their critical thinking and lifelong learning skills were identified.

2.2. Participants

The study group consists of gifted students. A sample of 280 gifted students aged 12–15, each studying at one of several different SACs in Türkiye, was selected. These students were in the 5th, 6th, 7th, and 8th grades. At an SAC, students are enrolled in different programs based on the grade level of the student. Accordingly, 5th and 6th graders are included in the Individual Abilities Recognition (IAR) program, while 7th and 8th graders are included in the Special Abilities Development (SAD) program. The study group selected for this research consists of students from both the IAR and the SAD programs. To represent gifted students, students from Antalya Alanya Science and Art Centre, Batman Science and Art Centre, and Denizli Ülker Yörükoğlu Science and Art Centre were selected. There are several reasons for this selection. These centres are in different geographical regions, thus reflecting the various social, economic, and cultural backgrounds of gifted students. Data on participants' household ownership of bookshelves and books, travel abroad, and parental education levels were collected. Based on these data, participants were grouped in terms of cultural capital: Upper, Middle, and Lower.

As seen in Table 1, the study group consists of a total of 280 gifted students. Of these, 151 are female (53%) and 129 are male (47%). The upper group includes 115 students in total, with 58 in the IAR program and 57 in the SAD program; the lower group includes 90 students in total, with 45 in the IAR program and 45 in the SAD program; and the middle group includes 75 students in total, with 30 in the IAR program and 45 in the SAD program.

Table 1. Study group.

		IAR		*SAD*		*Total*	
Level	**Sex**	**N**	**%**	**N**	**%**	**N**	**%**
Upper	Female	30	11	27	10	57	20
	Male	28	10	30	11	58	20
Middle	Female	16	5	23	8	38	13
	Male	14	5	22	8	37	13
Lower	Female	23	8	22	8	45	17
	Male	22	8	23	8	45	17
Overall	Female	73	26	78	27	151	53
	Male	60	22	69	25	129	47
	Total	133	48	147	52	280	100

Note: N = sample size; % = percentage; IAR = individual abilities recognition program; SAD = special abilities development program.

2.3. Data Collection Tools

Quantitative data for the study were collected using the Personal Information Form (PIF), the Critical Reading Skills (CR) scale, and the Lifelong Learning Skills (LL) scale. Qualitative data were collected using the Interview Form (IF).

2.3.1. Critical Reading (CR) Scale

The "Critical Reading Self-Efficacy Scale" developed by Kurnaz and Çelikkanat Nas [50] was used in this study to measure middle school students' perceptions of critical-reading self-efficacy. The relevant validity and reliability studies of the scale have been conducted, and the scale consists of 19 items. The scale includes four sub-dimensions: analysis, research, questioning, and difficulty. The items in the scale are Likert-type, rated from 1 to 4. The scale was administered online via Microsoft Forms. Participants were allowed to complete the scale in a single session without any time limitation, but they were required to answer each item.

According to Table 2, the critical-reading skills of gifted students are at a moderate level (X = 2.66). When examining the sub-dimensions, the skill levels, from highest to

lowest, were measured as follows: analysis (X = 3.22), research (X = 2.94), questioning (X = 2.34), and difficulty (X = 1.94).

Table 2. Descriptive statistics for the critical reading scale.

Sub-Dimension	N	Max	Min	M
Analysis	5	4	1	3.22
Research	5	4	1	2.94
Inquiry	5	4	1	2.34
Difficulty	4	4	1	1.94
Total	19	4	1	2.66

Note: N = sample size; M = mean; max = maximum; min = minimum.

2.3.2. Lifelong Learning Skills (LL) Scale

The "Lifelong Learning Skills Scale for Middle School Students" developed by Çiftçibaşı, Korkmaz, and Karamustafaoğlu [51] was used in this study to measure middle school students' lifelong learning skills and tendencies. The relevant validity and reliability studies of the scale have been conducted, and the scale consists of 30 items. The scale includes four sub-dimensions: communication and productivity, collaboration and learning, communication in a foreign language, and self-confidence. The items in the scale are Likert-type, rated from 1 to 4. The scale was administered online via Microsoft Forms. Participants completed the scale in a single session without any time limitation.

According to Table 3, the lifelong learning skills of gifted students are at a good level (X= 3.18). When examining the sub-dimensions, the skill levels, from highest to lowest, were measured as follows: self-confidence (X = 3.40), communication in a foreign language (X = 3.14), communication and productivity (X = 2.92), and collaboration and learning (X = 2.91).

Table 3. Descriptive statistics for the Lifelong Learning scale.

Sub-Dimension	N	Max	Min	M
Communication and Productivity	6	4	1	2.92
Collaboration and Learning	8	4	1	2.91
Communication in a Foreign Language	9	4	1	3.14
Self-confidence	7	4	1	3.40
Total	30	4	1	3.18

Note: N = sample size; M = mean; max = maximum; min = minimum.

2.3.3. Interview Form (IF)

In this study, a semi-structured interview form was employed as the data collection tool. The purpose of the interviews is to gain an in-depth understanding of the relationship between gifted individuals' self-efficacy in critical reading and their lifelong learning skills. Researchers ensured that all data collected during the study would be used exclusively for this research and that participants' identities would remain confidential. The interview questions were structured around specific sub-themes to comprehensively examine critical-reading skills and lifelong learning competencies. The interview questions are organized under the following headings:

Critical-reading competency: In this section, participants were asked to provide self-assessments of their critical-reading abilities. The questions aimed to evaluate critical-reading sub-skills, including identifying conflicting ideas within texts, assessing the verifiability of information, and recognizing implicit messages and persuasive language.

Application of critical reading in daily life: Participants were asked to reflect on the extent to which they apply critical-reading skills in their daily lives and under what circumstances they do so. The questions included competencies such as evaluating readings with a critical perspective, generating new solutions, and accessing information.

Openness to lifelong learning and collaboration: In this section, participants were asked about their openness to new learning experiences and collaboration in their social relationships. The questions explored participants' attitudes toward utilizing information technology, engaging in collaborative activities, and drawing on various resources.

Impact of critical-reading skills on foreign language use: This section examined the impact of critical-reading skills on language skills such as reading, writing, speaking, and comprehension in a foreign language. Participants were asked how critical-reading abilities contributed to their communicative skills in foreign languages.

Critical reading and self-efficacy: Finally, participants were asked to evaluate the effect of critical-reading skills on self-confidence, specifically regarding coping with challenges, as well as confidence in speaking and writing.

An interview-based technique allows participants to express their in-depth views on a particular topic. The Interview Form (IF) was designed to gather detailed information about participants' critical-reading competencies, their use of these competencies in daily communication in relation to lifelong learning, their openness to new learning and collaboration in social relationships, and the impact of critical-reading skills on communication in a foreign language and self-confidence. The semi-structured interview form is considered a valid and reliable data collection method in qualitative research [52]. The IF was administered to 20 participants selected from the study group (Table 4).

Table 4. Interview group.

	IAR		*SAD*		*Total*	
	N	**%**	**N**	**%**	**N**	**%**
Upper	3	15	3	15	6	30
Middle	4	20	4	20	8	40
Lower	3	15	3	15	6	30
Total	10	50	10	50	20	100

Note: N = sample size; % = percentage; IAR = individual abilities recognition program; SAD = special abilities development program.

Several procedures were applied to ensure the validity and reliability of the IF. With respect to content validity, sufficient attention was paid to ensure that the questions on the form covered critical-reading self-efficacy and lifelong learning skills. During this process, the interview form was reviewed by two researchers and one field expert, each of whom evaluated the appropriateness of the questions given the research purpose [53]. A pilot application was conducted to ensure that the questions were understandable and that participants did not struggle to answer them, and the questions were revised based on the feedback obtained from this pilot [52]. To ensure inter-coder reliability, multiple researchers independently coded the same data during the analysis of the interview results, and the consistency between the codes was then evaluated, achieving an adequate consistency rate [53].

2.3.4. Personal Information Form (PIF)

In the study, data on parental education level, the level of household ownership of bookshelves and books, and travel abroad were collected to group gifted students in terms of cultural capital [19]. Participants' responses were then scored based on these criteria. The responses were scored within a range of 5 to 20 points. Based on these data, groups were determined in terms of cultural capital: Upper, Middle, and Lower. The criteria for scoring were as follows:

1. Parental education level: The education level of families is considered an important indicator of socio-cultural capital. The highest education levels of the mother and father were presented and scored as follows: primary school (1), middle school (2), high school (3), university (4), or master's/doctorate (5).

2. Ownership of bookshelves and books at home: Whether there is a common or personal bookshelf at home and the number of books in this bookshelf were evaluated as another indicator of students' cultural capital. Students were asked whether they had a bookshelf at home and the number of books they owned. The options provided were no bookshelf (1), a bookshelf with 0–20 books (2), a bookshelf with 20–100 books (3), a bookshelf with 100–500 books or 500–1000 books (4), and a bookshelf with more than 1000 books (5).
3. Travel abroad: Travel abroad was evaluated as a factor that enriches students culturally. Therefore, participants were asked whether they had travelled abroad. The options provided were the following: No, I have never travelled (1), Yes, I travelled once (2), Yes, I travelled to 1–3 different countries (3), Yes, I travelled to 3–5 different countries (4), and Yes, I travelled to more than 5 countries (5).

The data from the IF were subjected to content analysis. In applying this technique, the qualitative data analysis approaches of Miles and Huberman [53], Creswell and Clark [52], and Merriam [54] were followed. The content of the interviews was coded, relationships between codes were identified, categories were formed from these relationships, and themes were determined. Sub-themes and categories within the themes were described. To present the findings, participant opinions were directly quoted.

2.4. Data Analysis

To determine the relationship between critical-reading skills and lifelong learning skills, the assumption of normal distribution of the data was first examined. For this purpose, the Kolmogorov–Smirnov test was performed on the scores obtained from the CR and LL (Table 5).

Table 5. Kolmogorov–Smirnov test for CR and LL scales.

	N	*p*	SD	Skewness	Kurtosis
CR	280	0.54	0.36	−0.12	1.13
LL	280	0.23	0.45	−0.59	0.45

Note: N = sample size; SD = standard deviation; *p* = significance level.

According to Tabachnick and Fidell [55], for normal distribution, skewness and kurtosis values should fall within the ±2 range. The data from the CR and LL scales are normally distributed, indicating that it is appropriate to apply parametric tests to the data. A correlation analysis was conducted to determine the relationship between the critical-reading skills and lifelong learning skills of gifted students. In this context, Pearson's correlation coefficient (r), which determines the linear relationship between two continuous variables, was used to indicate the direction and strength of the relationship between the variables [56]. To examine the differences in critical-reading and lifelong learning skills according to the cultural-capital levels of gifted students, a one-way analysis of variance (ANOVA) was used. This analysis is preferred for testing the differences between the means of three or more groups [57]. To determine whether there is a significant difference between the groups, the Tukey post hoc test was applied. An independent samples *t*-test was conducted to determine the differences between female and male students. These differences were calculated using Cohen's d test [58].

3. Findings

3.1. Findings Related to the First Research Question

This section presents the content-based analysis of gifted students' views on the themes of lifelong learning and critical reading. The findings are deepened through sub-themes and the categories that constitute these sub-themes (Figure 1).

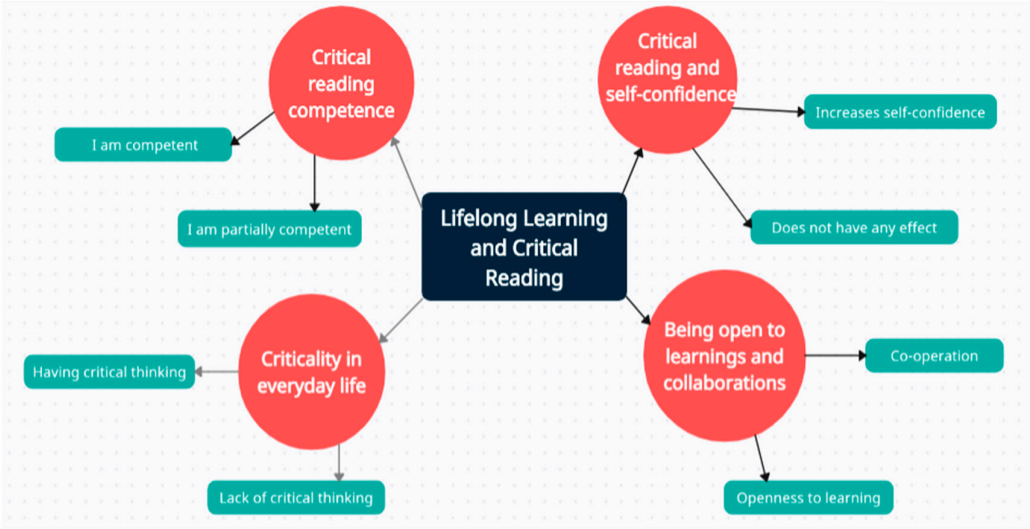

Figure 1. Views of gifted students on lifelong learning and critical reading.

3.1.1. Critical-Reading Competence

Most gifted students feel confident in their critical-reading proficiency. Those who consider themselves proficient express opinions such as "I can evaluate texts from different perspectives" (f = 10) and "I can focus on details and read in-depth" (f = 8). Those who consider themselves partially proficient state, "I can think critically in some texts, but I struggle" (f = 6) and "I am working to improve my critical-reading skills" (f = 6) (Table 6).

Table 6. Gifted students' views on critical-reading proficiency.

Category	Code	f
Competence	I can evaluate texts from different perspectives	10
	I can do in-depth reading by focusing on details	8
Partial Competence	I can think critically about some texts. but I struggle	6
	I work on improving my critical reading skills	6

Note: f = frequency.

Most participants feel confident in their critical-reading skills (f = 18).

"I can focus on details while reading critically" (S8).

"Different perspectives while reading texts gives me a great advantage" (S17).

Some replies indicate partial competence. In some instances, some participants indicated that they were developing their critical-reading skills but did not yet feel fully proficient.

"I am working hard to improve my critical reading skills, but I still have shortcomings" (S7).

"I can think critically in some texts, but I struggle with more complex ones" (S12).

3.1.2. Critical Thinking in Daily Life

Most gifted students stated that they possessed a critical perspective in their daily lives. Those who agreed with these expressed opinions such as "I act critically in my daily life" (f = 15), "I can generate new solutions to problems" (f = 14), and "Critical thinking helps me reach accurate information" (f = 13). A few participants mentioned that they did not use their critical-reading skills in daily life (Table 7).

Table 7. Gifted students' views on the use of critical reading in daily life.

Category	Code	f
Having critical thinking skills	I act critically in my daily life	15
	I can generate new solutions to problems	14
	It helps me reach accurate information	13
Lack of critical thinking skills	I have no idea	2

Note: f = frequency.

As for demonstrating critical thinking, most participants indicated that they effectively used their critical-reading skills in their daily lives (f = 42).

"Thanks to critical reading, I am more curious about reaching information" (S16).

"Critical reading skills help me generate different solutions to problems I encounter" (S13).

As to the lack of critical thinking, a few students stated that they did not use their critical-reading skills in daily life, expressing the view that they did not find it necessary (f = 2).

"I don't use it because it's not needed" (S20).

3.1.3. Being Open to New Learning and Collaboration

Gifted students generally consider themselves open to new learning and collaboration in their social lives. Regarding openness to new learning, they hold opinions such as "I use computers or other information technologies for new learning" (f = 18), "I am open to collaboration with my social circle" (f = 14), and "I use materials like books and magazines for assignments/research" (f = 8). The details of this sub-theme are presented in Table 8.

Table 8. Gifted students' views on openness to new learning and collaboration.

Category	Code	f
Openness to Learnings	I use new technologies for my new learnings.	14
	I listen to different perspectives and don't find it difficult to accept them	6
Co-operation	I am open to collaboration with my social circle.	16
	I take an active role in group projects	8

Note: f = frequency.

As for openness to learnings, most students indicated that they used the latest technologies to learn new things (f = 14) and easily adopted others' opinions if they are reasonable (f = 6).

"I use computers or other information technologies for new learning" (S3).

"I am open. For example, I listen to and evaluate my friends' opinion on a topic" (S4).

For co-operation, in the collaboration category, participants stated that they were open to collaboration with their social circle (f = 4) and played an active role in group projects (f = 14).

"I learn new things from my friends during group work" (S = 15).

"Working and learning with my friends is very beneficial; I enjoy it" (S = 11).

3.1.4. Critical Reading and Self-Confidence

Most gifted students believe that critical-reading skills positively impact their self-confidence. Those who agree express opinions such as "It increases confidence in speaking"

(f = 17), "It increases confidence in writing" (f = 12), and "It helps in dealing with challenges" (f = 10) (Table 9).

Table 9. Views on the relationship between critical reading and self-confidence.

Category	Code	f
Increased self-confidence	Increases confidence in speaking.	17
	Increases confidence in writing.	12
	Provides benefits in dealing with obstacles.	10
No Impact	No impact	2

Note: f = frequency.

Most participants indicated that critical-reading skills increased their self-confidence (f = 39).

"Yes, it develops a sense of confidence" (S11).

"We become more confident while speaking" (S16).

A few participants stated that critical reading had no effect on their self-confidence (f = 2).

"I don't think it affects self-confidence because critical reading and self-confidence are not related" (S16).

3.2. Findings Related to the Second Research Question

The relationship between gifted students' lifelong learning and critical-reading skills was determined using Pearson's correlation test (Table 10).

Table 10. Correlation test showing the relationship between CR and LL scores.

	N	r	*p*
CR	280	0.64	0.000
LL	280		

Note: N = sample size; r = correlation coefficient; *p* = significance level; CR = critical-reading scale; LL = lifelong learning skills scale.

There is a positive, moderate, and significant correlation between the average scores associated with gifted students' critical-reading skills and lifelong learning skills (r = 0.64; $p < 0.05$). Accordingly, critical thinking skills and lifelong learning skills influence each other. As the critical-reading skills or lifelong learning skills of gifted students increase or decrease, the other variable is positively or negatively affected.

3.3. Findings Related to the Third Research Question

The differentiation and group differences relating to gifted students' lifelong learning and critical-reading skills, as based on cultural-capital advantage, were determined using the ANOVA test (Table 11).

Table 11. Effect of cultural capital and sex on critical-reading skills.

		N	M	SD	F/t	*p*	η^2/d	Difference
Level	Upper	94	2.77	0.39	6.28	0.002	0.043	Upper-Middle Upper-Lower
	Middle	93	2.63	0.30				
	Lower	93	2.58	0.39				
Sex	Female	151	2.7	0.13	−8.55	0.006	0.641	
	Male	129	2.61	0.15				

Note: N = sample size; M = mean; SD = standard deviation; F = F statistic; t = independent samples *t*-test; *p* = significance level; d = Cohen's d test and η^2 eta squared.

The effect size (η^2 = 0.043) indicates that 4.3% of the total variance is explained by cultural capital. This suggests that the impact of cultural capital on critical-reading skills is represented by a small effect size. The critical-reading skill scores are highest in the Upper group associated with cultural capital (X = 2.77). This is followed by the Middle group (X = 2.63). The lowest average is in the Lower group (X = 2.58). The findings indicate that cultural capital significantly affects critical-reading skills (F = 6.28; $p < 0.05$). When looking at the differences between groups, the Upper group differs and performs better than the Middle and Lower groups. Excluding other factors affecting critical reading, cultural capital is a determinant of critical-reading skills. The results indicate that there are no statistically significant differences between males and females in terms of critical reading (t = −8.55; $p < 0.05$) (Table 12).

Table 12. Effects of cultural capital and sex on lifelong learning skills.

		N	M	SD	F/t	*p*	η²/d	Difference
Level	Upper	94	3.24	0.38	24.77	0.001	0.152	Upper-Middle Upper-Lower
	Middle	93	3.01	0.34				
	Lower	93	2.83	0.44				
Sex	Female	151	3.01	0.22	4.76	0.07	1.351	
	Male	129	3.27	0.16				

Note: N = sample size; M = mean; SD = standard deviation; F = F statistic; t = independent samples *t*-test; *p* = significance level; d = Cohen's d test and η^2 eta squared.

The effect size (η^2 = 0.152) indicates that 15.2% of the total variance is explained by cultural capital. This demonstrates that the impact of cultural capital on lifelong learning represents a medium-to-large effect size. The lifelong learning skill scores are highest in the Upper group, which has an advantage in cultural capital (X = 3.24). The scores are lower in the Middle (X = 2.63) and Lower groups (X = 2.58). According to the ANOVA results, cultural capital significantly affects lifelong learning skills (F = 24.77; $p < 0.05$). Within the group differences, the Upper group is significantly more successful than the Middle and Lower groups. In simple terms, it can be concluded that cultural capital influences the lifelong learning skills of gifted students. Similarly to the critical reading findings, no statistically significant differences were found between the male and female groups in terms of lifelong learning (t = 4.76; $p < 0.05$).

4. Results

4.1. Relationship Between Critical-Reading Proficiency and Lifelong Learning

The qualitative findings indicate that gifted students perceive their critical-reading skill levels to be high and effectively utilise these skills in their daily lives. Quantitative data support these findings, as correlation test results reveal a significant positive relationship between critical-reading skills and lifelong learning abilities (r = 0.64; $p < 0.05$). This suggests that the development of critical-reading skills positively impacts lifelong learning abilities, indicating that improvement in one skill reinforces the other.

4.2. Impact of Socio-Cultural Status on Critical Reading and Lifelong Learning

The influence of socio-cultural status on critical-reading and lifelong learning skills is supported by both qualitative and quantitative findings. The ANOVA results demonstrate that cultural capital significantly affects both skills, with students from higher socio-cultural backgrounds performing better. This is consistent with the qualitative data, in which students with higher levels of cultural capital were found to have more positive attitudes towards critical thinking and openness to new learning experiences. These results underscore the importance of socio-cultural conditions as a key determinant of students' academic and intellectual abilities.

4.3. Critical Reading and Self-Confidence

The qualitative data suggest that critical-reading skills contribute to an increase in students' self-confidence. Students reported that this skill particularly boosted their confidence in speaking and writing. This finding offers further support for the positive relationship between lifelong learning skills and critical reading ($r = 0.64$; $p < 0.05$). Thus, the development of critical-reading skills has not only academic benefits but also positive impacts on personal growth. The critical-reading skills of gifted students are closely linked with their lifelong learning abilities, and fostering these skills enhances both academic success and self-confidence. Cultural capital plays a significant role in the development of these skills. Therefore, it is crucial to design support systems for students which take individual and social differences into account. These findings highlight the necessity of restructuring educational programmes to focus on the development of critical-reading and lifelong learning skills.

5. Discussion

This research demonstrates that critical-reading skills form a cornerstone for sustainable learning. Blake, Sterling, and Goodson [59] emphasise that critical reading enables individuals to engage with the flow of information in their environment with deeper awareness, thereby enhancing their capacity for sustainable learning. Our findings indicate that by encouraging individuals not only to consume information but also to analyse and question it, critical reading strengthens sustainable learning abilities. Similarly, socio-cultural status has been found to influence both critical reading and lifelong learning. Darling-Hammond et al. [60] argue that students with higher levels of cultural capital are more predisposed to sustainable learning. Their research highlights that students with access to socio-cultural resources develop cognitive skills essential for sustainable learning, such as critical thinking and openness to new knowledge. This suggests that cultural capital provides a foundational framework that supports individuals' learning potential. Our qualitative findings reveal that critical-reading skills boost students' self-confidence. Leal Filho et al. [61] underline that self-confidence supports sustainable learning by fostering openness to acquiring new knowledge and skills. In this context, skills such as critical reading empower individuals to approach information with confidence, thereby encouraging active participation in sustainable learning pathways. Loh and Sun [62] analyse adolescents' reading habits across high, middle, and low socioeconomic status groups, exploring reading as a form of cultural capital. Their findings suggest that cultivating students' engagement in reading practices fosters the development of the students. In a similar vein, this study demonstrates that cultural capital significantly enhances critical-reading skills. Lapienienė and Mažeikienė [63] emphasise the importance of family and school environments in supporting children's reading development within the framework of cultural capital. Consistent with their findings, our research shows that students from lower socioeconomic groups face disadvantages in acquiring critical-reading skills, underscoring the necessity of targeted interventions.

Scholarships are a strategy commonly used to address educational inequalities. Hossler and Vesper [64] and Reay [65] argue that scholarships enable individuals from lower socioeconomic backgrounds to enhance their own cultural and social capital, promoting equity in education. In Türkiye, for instance, scholarships awarded to high-achieving students from disadvantaged backgrounds have been shown to significantly improve their academic trajectories [66]. Our findings align with these studies, indicating that such interventions positively contribute to sustainable educational outcomes by fostering critical reading and cultural-capital development.

Our research highlights the interconnections between lifelong learning, sustainable learning, and cultural capital. Critical reading emerges as a foundational skill for sustainable learning, enabling students to critically engage with information. Koulaouziades and Popović [18] advocate for the socialisation of lifelong learning, suggesting that education systems should promote social solidarity and personal development. In line with this,

our study indicates that improving students' socio-cultural conditions enhances both their academic and personal growth.

Cultural capital also plays a crucial role in fostering lifelong learning. Hale et al. [67]; Zhang and Wang [68]; and Jin, Ma, and Jiao [69] consistently demonstrate that cultural capital positively influences academic success and learning attitudes. AlAli and Wardat's [70] meta-synthesis on student engagement highlights the finding that self-directed learning skills and socioeconomic factors significantly contribute to lifelong learning. These findings resonate with our study, confirming that cultural capital lays a solid foundation for lifelong learning by fostering critical thinking and openness to new knowledge.

Koulaouziades and Popović [18] argue that addressing global crises necessitates moving beyond an exclusive focus on economic skills within education systems. Our research supports this argument by demonstrating that critical reading enhances self-confidence, a vital component of sustainable learning. Leal Filho et al. [61] further note that confident learners are more receptive to acquiring new knowledge and skills, strengthening their sustainable learning processes.

Numerous studies have explored the relationship between lifelong learning and sustainability. Similarly, Chen [71] conceptualises sustainable learning as a prerequisite for sustainable development. Chen's findings reveal that students' individual learning practices within online learning communities enhance the students' sustainable learning competencies, indirectly contributing to societal sustainable development. In parallel, this study concludes that creating enriched learning environments for gifted students can foster their lifelong learning abilities. The contributions made by gifted individuals to sustainable development and innovation are described by both scientific research and historical evidence. Enhancing the learning environments of such students thus emerges as a crucial factor for promoting sustainable development and innovation.

Finally, while Örs [72] suggests that income is not always a reliable predictor of cultural capital, this study presents contrasting findings. We argue that income significantly influences the acquisition of cultural capital, particularly regarding critical-reading skills. These results underscore the need for further research to clarify this relationship across diverse contexts and populations.

As a result, our findings underscore the critical roles of cultural capital and critical reading in promoting lifelong learning and sustainable education. Policymakers and educators should prioritise creating equitable opportunities and targeted interventions to support students from diverse socioeconomic backgrounds. By doing so, the broader goals of sustainable development and innovation can be achieved more effectively.

6. Limitations and Suggestions for Future Research

This study has limitations in terms of sample size and diversity. The literature review was limited to data obtained through the snowballing method from the WOS, SCOPUS, ERIC, ULAKBİM, and Google Scholar databases. Although studies from different countries were included, the fact that the majority were from Türkiye may also be an additional limitation.

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Informed Consent Statement: Participants were informed about the purpose, scope, and confidentiality of the study, and their voluntary participation was obtained through signed consent forms. All procedures were carried out in accordance with ethical standards to ensure the protection of participants' rights and privacy.

Data Availability Statement: Data are contained within the article.

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