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Views of Different School Stakeholders on Middle School Students' Learning Losses*

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ABSTRACT

This study examines the perspectives of diverse school stakeholders regarding student learning loss, contextualized through an analysis of policy documents on academic attrition issued by the Ministry of National Education. Employing a qualitative case study design, the research adopts extreme/outlier case sampling—a purposive sampling strategy—to select two contrasting school contexts: one characterized by acute learning loss and another exhibiting mitigated attrition. The participant cohort (n=18) comprised school psychological counsellors, branch teachers (Mathematics, Turkish, Science, English), and administrators from both school tiers, identified in collaboration with the Provincial Directorate of Education. Semi-structured interview protocols, tailored to distinct stakeholder roles, served as the primary data collection instrument. Thematic content analysis of responses revealed pronounced learning loss in Mathematics across both school contexts, with English additionally emerging as a critical domain in high-attrition settings. Stakeholders unanimously emphasized the necessity of early targeted interventions, evidence-based guidance systems, and contextual adaptation of pedagogical environments—integrating school, familial, and community resources—to align with student needs. These findings underscore the imperative of multidimensional strategies to address learning loss, as advocated in Ministry's policy frameworks, while highlighting subject-specific vulnerabilities requiring prioritized remediation.

Keywords: Learning loss, stakeholder perceptions on learning loss

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Introduction

Learning constitutes a dynamic process characterized by the transmission of knowledge from proficient individuals to learners within interactive frameworks (Selvi, 2020). Senemoğlu (2010) further conceptualizes learning as an experiential phenomenon that induces enduring and measurable behavioral modifications, distinguishable from transient physiological alterations associated with maturation. For such learning processes to materialize effectively, the interdependent stages of input (knowledge acquisition), process (cognitive integration), and output (behavioral manifestation) within educational systems must operate cohesively and efficiently. Concurrently, Yeşilyurt (2021) underscores the necessity for all institutional stakeholders—including educators, administrators, and policymakers—to adopt a concerted focus on student behavior, oriented toward facilitating constructive behavioral transformations aligned with pedagogical objectives. These intentional behavioral shifts, when systematically cultivated, serve to cultivate metacognitive awareness and facilitate meaningful learning outcomes within learners.

The absence of sustained learning engagement among students precipitates a narrowing of the input-output gap within educational systems (Education Reform Initiative [ERI], 2022). This phenomenon, termed "unlearning," is underpinned by multiple factors, including challenges in retrieving prior knowledge due to inadequate reinforcement (Baz, 2021) and cognitive attrition resulting from temporal displacement (Sulak & Çapanoğlu, 2022). Such impediments are exacerbated during prolonged discontinuities in formal education, including scheduled academic breaks or unanticipated disruptions. The Ministry of National Education (MoNE) codifies these disruptions in Article 7 of its Regulation on Preschool Education and Primary Education Institutions (2023a), delineating "extraordinary circumstances" as events—such as natural disasters, adverse meteorological conditions, pandemics, or socio-political crises—that impede institutional operations. Extended scholastic absences under such conditions correlate strongly with regression in academic proficiency, a trend empirically documented as learning loss (Özgürden & Okur, 2022).

Learning loss has emerged as a critical concern within global educational dislesson, particularly in light of the United Nations Sustainable Development Goal 4 (SDG 4), which prioritizes universal access to inclusive, equitable quality education and lifelong learning by 2030. Despite this imperative, the Global Education Monitoring Report (2017/18) underscores persistent systemic failures, with millions of children remaining excluded from primary and secondary education and failing to attain foundational competencies. To mitigate such disparities, Gökalp (2005) advocates for institutional and pedagogical continuity as a cornerstone of skill acquisition, positing that uninterrupted learning trajectories are essential for fostering cognitive and adaptive capacities. This perspective aligns with the epistemic frameworks of the information society, which emphasize the centrality of perpetual learning in addressing contemporary educational inequities.

The literature identifies significant learning losses in particular fields, including Turkish, mathematics (Alkan & Özdemir, 2023; Sulak & Çapanoğlu, 2022), science (Ceran-Aydın & Ergül, 2022), English (Saygılı, 2023), and social studies (Arıkan & Kaya, 2023). Other studies link learning losses to prolonged school closures during summer holidays (Arı, 2005; Arı, 2004; Blazer, 2011; Cooper, 2003; Doğuş, 2022), the COVID-19 pandemic (Akkaş-Baysal & Ocak, 2021; Çelik, 2020; Di Pietro, Biagi, Costa, Karpiński, & Mazza, 2020; Dorn, Hancock, Sarakatsannis, & Viruleg, 2020; Sezgin, Erdoğan, & Dağ, 2020; Sulak & Çapanoğlu, 2022), and disruptions caused by migration due to disasters and war (Atalay, 2023; Güneş, 2023; Ulutaş & Kuzucu-Aydoğdu,

2022; Yavuz & Çetin, 2022).Studies focusing on middle school level education have proliferated, underscoring the prevalence of learning loss at this level (Balcı, 2020; Bayram, Bıyık, & Gölbaşı, 2021; Baz, 2021; Can, 2021; Carlana, Eliana, & Lopez, 2023; Ceran-Aydın & Ergül, 2022; Dündar & Kızık, 2023; Filiz & Gökmen, 2022; Kayır & Özçelik, 2018; Kuhfeld, Tarasawa, Johnson, Ruzek, & Lewis, 2020; Yüksel, 2023). However, a gap in the literature exists regarding studies that integrate the perspectives of multiple school stakeholders—teachers, psychological counsellors, and administrators—on the issue of learning loss.

To address this lacuna in the scholarly and operational landscape, the selection of three distinct school stakeholders—notably school psychological counsellors—as the research sample was necessitated by Article 5 of the MoNE Guidance and Psychological Counselling Regulation (2020). This provision stipulates that "guidance and psychological counselling shall be conducted through an accountable, collaborative approach involving all stakeholders, unified in their commitment to fostering student development." Consequently, the interdependent roles of these stakeholders—teachers, psychological counsellors, and school administrators—constitute the tripartite focus of this inquiry. Teachers, functioning as pedagogical facilitators, are instrumental in attenuating and preempting learning loss through curriculum delivery and adaptive instructional strategies. Psychological counsellors, operating at the nexus of educational, personal, and social domains, mitigate learning loss by providing empathetic, individualized support that addresses cognitive and affective barriers to academic engagement. School administrators, tasked with cultivating an institutionally aligned, resource-efficient environment, assume a systemic role in combatting learning loss by ensuring operational coherence and equitable access to institutional supports. Their collective agency, as delineated in the MoNE framework, underscores the necessity of multi-stakeholder collaboration in bridging the gap between policy imperatives and educational outcomes.

This study aims to explore the perspectives of school stakeholders on the phenomenon of learning loss in middle school level. The research seeks to answer the following questions:

1. What are the views of different stakeholders on learning loss among middle school students?
2. How is learning loss addressed in the reports and official documents published by the Ministry of National Education?

Method

This study adopts a case study design (Yıldırım & Şimşek, 2021) to examine the perspectives of school administrators, psychological counsellors, and teachers from subject areas notably affected by learning loss. The research explores their experiences and reflections on the challenges associated with this phenomenon. This methodological approach was chosen to provide a comprehensive understanding of the difficulties encountered in teaching within school settings, with the aim of enhancing instructional quality and improving overall school effectiveness (Özenç-Yeşilbaş, 2022). By collecting insights from key stakeholders—namely, school administrators, psychological counsellors, and teachers—the study seeks to elucidate the educational challenges they face and their evaluative responses to these issues.

Study Group

This study employed extreme/outlier case sampling, a purposeful sampling technique, to identify schools within the city where learning loss is observed at the highest and lowest levels of severity. Extreme/outlier sampling involves the examination of both typical and atypical cases within a research context (Yağar & Dökme, 2018). Data regarding these schools were obtained from the City Provincial Directorate of National Education, and one school from each category was selected following consultations with the respective school administrations. The study sample consisted of psychological counsellors, subject teachers specializing in Mathematics, Turkish, Science, and English—areas most impacted by learning loss—as well as school administrators from the selected schools. The inclusion criteria for participation in the study were as follows:

- Employment in the district of the province.
- Active service in the school with the highest level of learning loss.
- Employment in the school with the least adverse impact from learning loss.
- Professional roles as psychological counsellors, branch teachers, or school principals in the identified schools.

In this context, the inclusion of diverse participants and varying situations in the study demonstrates the achievement of maximum variation. The demographic characteristics of the study group are presented in Table 1.

Table 1. Demographic variables of the study group

Learning Loss Level of the School	Code	Branch	Years of Experience
The most frequently victimised school	P1	School Administrator	8
	P2	School Psychological Counsellor	16
	P3	Maths	15
	P4	Maths	6
	P5	Maths	14
	P6	Turkish	14
	P7	Turkish	25
	P8	Science	18
	P9	English	13
	P10	English	4
	P11	Social Studies	16
	P12	Social Studies	13
The school with the least victimisation	P13	School administrator	18
	P14	School Psychological Counsellor	18
	P15	Maths	10
	P16	Turkish	17
	P17	Science	29
	P18	English	25

Data Collection Tools

The primary data collection instrument was an interview form designed to gather insights from various school stakeholders, including psychological counsellors, subject teachers, and administrators from the selected schools. The interview questions, developed as parallel forms tailored to address the issue of learning loss, were informed by an extensive literature review. For these questions, an examination was made in the literature, especially on the definition of learning loss, the reason for it, and the lessons with the most learning loss (Baz, 2021; Blazer, 2011; Carlana et al, 2023; Kaffenberger, 2021; Kuhfeld et al, 2020; Raharjo & Nurhayati, 2024; Rediani & Kaize,

2023; Sulak & Çapanoğlu, 2022; Ulutaş & Kuzucu-Aydoğdu, 2022; Yüksel, 2023). The interview form was piloted with two teachers, revised accordingly, and finalized to include six main questions with accompanying probes. In addition to the interviews, official documents published by the Ministry of National Education related to learning loss in schools were also analysed to complement the data collection process.

Data Collection

Ethical approval was obtained prior to data collection. Data were collected during the 2023–2024 academic year in collaboration with the Aydın Provincial Directorate of National Education. Schools were selected based on the severity of learning loss, with one school representing high levels of learning loss and another representing low levels. Face-to-face interviews were conducted with psychological counsellors, subject teachers, and school administrators from the selected schools, with participants' consent for audio recording. In total, data were collected from 18 participants using a semi-structured interview format.

Data Analysis

Thematic content analysis method was used to analyse the data obtained as a result of the research. Thematic content analysis refers to the process of systematic identification, coding and interpretation of specific themes, patterns or meaningful units in a data set. This method is generally preferred within the scope of qualitative data analysis and for in-depth understanding of the research phenomenon. In summary, content analysis is an examination method in which data are systematically analysed in depth and coding such as concepts and themes are created (Altunışık, Coşkun, Bayraktaroğlu & Yıldırım, 2010; Yıldırım & Şimşek, 2008/2016/2021). To enhance rigor, two researchers independently coded the data at different times. These initial codes were subsequently reviewed and refined based on feedback from a field expert. The finalized codes and themes were presented in the findings section.

Validity and Reliability

Validity, which ensures the research remains objective and aligned with its purpose, and reliability, which reflects the consistency of research results, were key considerations (Yıldırım & Şimşek, 2021; Karataş, 2015). Lincoln and Guba's (1982) framework of credibility, transferability, consistency, and confirmability guided the establishment of validity and reliability. In order to ensure validity, the criteria of credibility in internal validity and transferability in external validity are considered. The way to ensure reliability is through the realisation of the criteria of consistency and confirmability (Arslan, 2022). Credibility was established by formulating interview questions grounded in a comprehensive literature review and by consulting field experts during the question development process. Additionally, detailed pre-interview briefings with participants were conducted to further enhance credibility. Transferability was ensured through purposive criterion sampling for participant selection and by providing a detailed account of the data collection and analysis procedures. Consistency was maintained by involving two researchers who independently coded the data and by incorporating direct quotations in the findings section. Confirmability was achieved through the secure storage of collected data, thereby ensuring transparency and traceability throughout the research process.

Ethics Committee Approval Process

This study was carried out with the approval of Aydın Adnan Menderes University Ethics Commission dated 01/12/2023 and issued 2023/10-XXII.

Findings

Learning Loss in Students and Factors Affecting Learning Loss

The first theme identified in the study is 'Learning Loss and Contributing Factors.' The categories, codes, and frequencies related to this theme are presented in Table 2. The findings associated with this theme provide insights into the perspectives of various school stakeholders working in the school with the highest incidence of learning loss and the school with the lowest incidence. Specifically, the findings explore stakeholders' views on the definition of learning loss among middle school students and the factors influencing this phenomenon.

Table 2. Findings related to the theme of 'learning loss and affecting factors'

School's Level of Learning Loss	Categories	Codes	*f*
School with the most intense learning loss	Definition of learning loss	Forgetting information over time	7
		Not having normal intelligence	1
		Inability to use intelligence correctly	5
		Defocusing	1
	Factors influencing learning loss	Students' perspective	9
		Student's working style	9
		Family and environment	8
		Classroom environment	2
		Technology	4
School with the least learning loss	Definition of learning loss	Forgetting information over time	3
		Inability to express knowledge verbally/written	1
		Exposure to negative experiences	2
		Defocusing	1
	Factors influencing learning loss	Students' perspective	3
		Student's working style	3
		Family and environment	3
		Classroom environment	1
		Technology	4

When the definition of learning loss of the most intensive school in Table 2 is analysed, it is seen that seven participants explained this situation in terms of forgetting the information over time. P1 expressed learning loss as "I perceive it as the inability of students to recall the information they have learnt after a while". P2, who presented a different opinion from the other two participants by using the expressions of not having normal intelligence and not being able to use intelligence correctly for the definition of learning loss, said, "If a person does not have a mental disability from birth, in my opinion, he/she is born with normal intelligence". According to the situation of using this normal intelligence, if we use our intelligence in the right direction, when we use it in school-related lessons, there is a possibility of being successful in the lessons.

In the same school, nine participants each stated that the student's perspective and the student's study style affected the learning loss. For this, P1's quote "It is something related to the student's perspective and attitude towards the lesson. The fact that the child does not forget something he/she learnt in the physical education lesson, or forgets it in the mathematics lesson, actually the reasons for these need to be looked into. If the student's attitude towards that lesson is positive, he/she does not forget. School stakeholders stated that the factors affecting learning loss are family and environment (f:8), classroom environment (f:2) and technology (f:4). The crucial quotations for these factors are presented below.

"*...the effects of the environment, if the family is not very conscious about this issue or if the classroom environment is not suitable for learning conditions, of lesson the child will experience learning loss. The environment, the family, the school, the classroom environment, from the teacher to the parents, these are the factors that affect the child's development and learning process*." P2

"*We are in the age of technology. Since they spend a lot of time on social media, students' priority is no longer the lesson, subject, academic process. Since their priorities are channelled in different ways, they experience a loss in learning*." P6

An analysis of the school with the least learning loss reveals a consensus with the school experiencing the most severe learning loss that knowledge is forgotten over time. The perspective of one of the three participants who argued that learning loss occurs due to the gradual forgetting of information is presented below.

"*Forgetting the subjects and achievements related to the lesson in a short time after learning them is a learning loss*." P16

In the same school, for the definition of learning loss, one participant explained it as the inability to express the information verbally/written and to move away from the focus, while the other two participants thought that this situation was caused by exposure to negative experiences. For example, one of these views, 'defocusing', emphasises that students shift their attention and energy to other areas other than the lessons they should prioritise. Statements regarding these definitions are given below.

"*The inability of the student to remember the information he/she has learnt before after a certain period of time or to express them verbally or in writing.*" P13

"*If students are exposed to negative experiences, it causes situations that hinder their learning both perceptually and cognitively*." P14

"*I think this loss occurs because students cannot give themselves too much in the learning phase as a result of distraction*." P15

The belief that the factors affecting learning loss are the student's point of view, the student's study style, family and environment was stated by three participants each, the classroom environment was stated by one participant, and technology was stated by four participants. Some crucial quotations are stated below.

"*...it is necessary to explain why the subject should be learnt before the lesson starts. When the student realises why he/she needs to learn that subject, his/her perspective changes a little more. And he/she tries not to forget that information*." P16

"*Repetition, lack of study, loss of motivation can be all of these*." P13

"*One of the most basic problems of learning loss is not revisiting this subject at home. Of lesson, it is forgotten when there is no extra work*." P16

"*It may be due to reasons such as the fact that we do not use alternative assessment and evaluation techniques much in schools and we do not ensure students' participation in the activities much*." P17

"*Since our students spend a lot of time with technology, they have problems with attention. This situation causes difficulties in focusing and perception*." P14

Lessons with the Most Learning Loss, Reasons and Improvement Methods

The second theme of the research is "the lessons with the most learning loss, the reasons and the improvement methods". This theme expresses the lesson with the most learning loss in middle school students, the reason for this lesson and the method that can be done to improve this lesson. The findings obtained are shown in Table 3.

Table 3. Findings related to the theme 'the lessons with the highest learning loss, reasons and improvement methods'

School's Level of Learning Loss	Categories		Codes	*f*
School with the most intense learning loss	The lesson, reason, method with the highest learning loss	Lesson	Turkish	5
			Maths	6
			English	6
			Science	4
			Social Studies	4
		Reason	Not repeating	4
			Lack of sound basic education	1
			Sequentiality of the subjects	2
			Lack of source books	1
			Lack of working environment	1
			Too much information and not utilised	2
		Method	Increasing subject repetition and question solution	4
			Improvement of educational environments	9
School with the least learning loss		Lesson	Turkish	2
			Maths	3
			English	2
			Science	1
			Social Studies	2
		Reason	Failure to bond with the teacher	1
			Difficulties in focusing and perception	4
		Method	Increasing subject repetition and question solution	2
			Improvement of educational environments	5

An analysis of Table 3 indicates that the school experiencing the most severe learning loss reported this phenomenon most prominently in Mathematics (f: 6) and English (f: 6) lessons. Additionally, during the study, learning loss was also identified in Social Studies, a subject not initially included in the research focus. Consequently, interviews were conducted with two Social Studies teachers from the same school, and the findings from these interviews are presented in the tables. Furthermore, in this school, Science (f: 4) and Social Studies (f: 4) were reported as the subjects with relatively lower occurrences of learning loss compared to other branches. To support these findings, direct quotations from selected participants deemed particularly relevant are included.

> "*Learning loss is very common in English and maths. These are lessons that are placed on top of each other. If the foundation is not strong, the floors you build on it are not very strong*." P9

"*Since Turkish, mathematics, science and social studies are theoretical knowledge-based lessons, learning loss is higher in these lessons*." P7

Participants attributed this learning loss primarily to a lack of repetition (f: 4). Additionally, they identified other contributing factors, including insufficient foundational education (f: 1), a lack of reference materials (f: 1), and an inadequate study environment (f: 1). The relevant statement is provided below.

"*No repetition, no reinforcement, no working environment. The absence of a source book may also affect the loss a little bit.*" P4

It is believed that the methods to reduce learning loss will be realized primarily through the improvement of educational environments (f: 9) and, to a lesser extent, by increasing subject repetition and question solving (f: 4). Some statements regarding this are presented as follows.

"*In order to reduce the loss, educational environments can be improved by making the information concrete, combining it with an event they have experienced or with materials they use more actively in their daily lives, using maps, etc.*" P11

"*First of all, the student should have an order and have regular repetitions at home*." P5

When examining the school with the least learning loss, it is the opinion of the participants that the loss is most pronounced in mathematics (f: 3). The least learning loss is observed in science (f: 1). Some statements from the participants are provided below as examples.

"*Since it is an additive lesson, I think it is experienced more in the maths lesson."* P15

Apart from science, which is my branch, it can also be seen in maths and social studies lessons." P17

The opinions of both schools provide important insights into the difficulties encountered in mathematics education. In addition, the fact that learning loss was also observed in the social studies lesson indicates that there are difficulties in verbal areas. In the same school, it was stated that learning loss was mostly caused by difficulties in focusing and perception (f:4) and least by not being able to connect with the teacher (f:1). P15 reveals the difficulties in focusing with the statement "When we cannot include the student in the lesson or when his/her attention is distracted, even if he/she thinks he/she has learnt, he/she can forget it very quickly." P13, on the other hand, stated that "If the student could not understand the lesson, if he/she could not establish a bond with the teacher, if the student did not experience any motivation related to that lesson, losses can be seen." He stated the other reason with his statement. They think that the methods that should be applied to improve learning loss are mostly possible by improving the educational environment (f:5), and the least possible by increasing subject repetition and question solving (f:2). The related opinions are as follows.

"*Planning can be done. It would be more useful if there are restrictions on certain hours and games of students*." P18

Things to be Done to Minimise Learning Loss

The last theme of the research, "What can be done to reduce learning loss" focuses on the findings gathered from various school stakeholders regarding potential measures to reduce learning losses in students. These findings are presented in Table 4.

Table 4. Findings related to the theme 'things to be done to minimise learning loss'

School's Level of Learning Loss	Categories	Codes	*f*
School with the most intense learning loss	Strategy developed to reduce learning loss	Don't spend too much time reminding subjects	5
		Getting down to the level of the student	3
		Organising seminars	1
		Focus on increasing school achievement in specific goals	1
		Getting support from parents	1
		Supporting their socialisation	2
		Making the lesson fun	7
	What students and other relevant stakeholders can do to reduce learning loss	Raising the level of education of parents	8
		MoNE's resource, keeping the curriculum up to date	4
		The administration motivates teachers to reduce learning losses	5
		Teachers try different methods for students to understand the lesson	7
		Self-discovery of the student	4
	To be added about the subject	Early intervention in learning problems, correct orientation	2
		School, family and environment should be adapted to the student	5
School with the least learning loss	Strategy developed to reduce learning loss	Don't spend too much time reminding subjects	1
		Getting down to the level of the student	1
		Organising seminars	1
		Getting support from parents	2
		Supporting their socialisation	1
		Making the lesson fun	3
	What students and other relevant stakeholders can do to reduce learning loss	Raising the level of education of parents	6
		MoNE's resource, keeping the curriculum up to date	1
		The administration motivates teachers to minimise learning losses	3
		Teachers try different methods for students to understand the lesson	5
		Self-discovery of the student	5
	To be added about the subject	Early intervention in learning problems, correct orientation	1
		School, family and environment should be adapted to the student	2
		The habit of reading books should be acquired	2
		Communication skills should be acquired	1

When Table 4 is analysed, it is observed that in the school with the highest learning loss, efforts were primarily made to make the lesson enjoyable (f: 7) in order to reduce learning loss. One participant stated that seminars were attempted, a focus was placed on increasing school success through special targets, and support was sought from parents. The opinions of the participants on the subject are presented as follows.

> "*I generally try to make it fun such as concretisation, associating with concepts, turning it into a song, rhythmic work, drama, theatre.*" P3

"*We definitely organise seminars for students to support their personal development and to increase their school success as a special target every year*." P2

"First of all, parents should support their children in every field and be intertwined with the teacher during the education process." P9

It was the opinion of the participants that the most important action to reduce learning loss is raising the level of education among parents (f: 8). It was stated by four participants that learning loss can be reduced through MoNE's resources, the updating of the curriculum, and students' self-discovery. Direct quotations related to these views are provided below.

"*Parents should be interested in students' lessons so that they can learn with them.*" P11

"*There will be various needs in schools. Improvement of the physical conditions of schools should be supported regionally, especially at the ministry level regarding these needs.*" P8

"As he reads books, he will improve himself more, open his mind and focus more on the lesson." P1

The contributions of the participants regarding the issue of learning loss were shaped by the view that the most important factor was making the school, family, and environment suitable for the student (f: 5), while the least important was early intervention in learning problems and correct orientation (f: 2). Some excerpts of the participants' opinions on the subject are provided below.

"*Middle school minds are numbed by imitating what they see on TV and Instagram. The student focuses on short videos. Since they cannot focus on the 40-minute lesson time, a subject that is 100% explained remains around 20%. These subjects should be limited in accordance with the student and his/her environment.*" P1

"*I think that some things will improve if the causes of learning loss are learnt and intervened early."* P2

Looking at the school with the lowest learning loss in Table 4, it is seen that the participants mostly used the strategy of making the lesson fun (f:3) to reduce learning loss. One participant stated that they preferred strategies such as spending a lot of time to remind the subjects, going down to the level of the students, giving seminars and supporting their socialisation to reduce learning loss. Related participant quotations are given below.

"*I try to make the lesson more fun. I make the activity I do a game, I make it a story. I try to make them like school, the school environment and support their socialisation.*" P16

"*First of all, it is necessary to get along well with the students, establish a good dialogue and get down to the level of the student*." P13

"*We organise seminars especially as the guidance service*." P14

"*We do more repetition, we give examples from daily life*." P18

Participants thought that the most that students and other relevant stakeholders could do to reduce learning loss would be to increase the level of education of parents (f:6). At least, it was stated that MoNE could reduce learning loss by keeping the resources and curriculum up to date (f:1). The statements related to these views are given below.

"*We will be able to solve these problems by increasing the level of education of parents*." P16

"*I believe that if the exercises and subjects in the books are up-to-date, appropriate to the level of the students and in a way that can attract their interest, they will be more permanent for the students*." P18

The contributions of the participants on the subject are related to making the school, family, and environment suitable for the student (f: 2), fostering the habit of reading books (f: 2), early intervention in learning problems, providing correct orientation, and developing communication skills. The opinions of the participants are provided below as examples.

"*The physical conditions of all schools should be improved and since the neighbourhood or environment where each student is located is different, an education-teaching plan should be made accordingly*." P17

"*It is necessary to analyse the students in a very good way and examine the underlying causes of learning loss.*" P14

"*Students' inability to understand what they read and communication problem is one of the biggest problems. Solving this and gaining communication skills will be better for the student, the country and the future*." P13

"*Reading books is also essential. To exercise our mind. This will prevent learning loss*." P16

Learning Loss in Reports and Written Documents Published by the Ministry of National Education

In this part of the study, the report on formal education for the years 2022-2023 from the official statistics published by the Ministry of National Education (MoNE), documents on learning loss from OECD reports, UNESCO reports, reports prepared by UNICEF, and documents on learning loss from educational research and development reports were analysed. The findings related to the way learning loss is included in these published reports/written documents are shown in Table 5.

Table 5. The way in which learning loss is included in the reports published by MoNE

Reports/Written documents	***The way in which the learning loss takes place***
National education statistics formal education 2022-2023 OECD reports (documents on learning loss) UNESCO reports UNICEF reports Educational research and development reports (documents on learning loss)	In the MoNE's statistical report, under the heading of non-formal education, the phrase 'Teaching literacy, preparing continuing education opportunities to complete their incomplete education (MoNE, 2023b)' is used: ***Incomplete education*** In educational research and development reports, learning is referred to as 'the process of acquiring knowledge (Ministry of National Education (MoNE) (EARGED), 2011)'. The way in which this process is not realised: ***Inadequacy in teaching the prescribed information*** The definition of learning loss in EdGlossary (2013): Outcomes of Education (Düşkün and Korlu, 2021) is the loss of knowledge and skills acquired by the learner, usually when education is interrupted or interrupted: ***Loss of academic progress*** The way in which a student is 10 years old and has difficulty in reading and understanding a text at a basic level (The World Bank, UNESCO, and UNICEF, 2021; ERI, 2023): ***Learning poverty***

Upon examining Table 5, it is observed that learning loss in the reports is categorized under headings such as incomplete education, insufficiency of projected knowledge in teaching, loss of academic progress, learning poverty, and similar topics.

Discussion and Conclusion

Learning loss has been defined by both school levels examined in this study as the gradual forgetting of information over time, based on findings derived from the perspectives of various school stakeholders regarding middle school students' academic regression. A higher prevalence of learning loss was reported by the school demonstrating the most significant decline, with this phenomenon being attributed by stakeholders to the influence of students' perspectives and study styles. Conversely, technology was identified by the school exhibiting the lowest level of learning loss as the primary contributing factor. In existing literature, definitions analogous to those articulated by research participants have been employed, including "the inability to recall information not reviewed over time" (Sulak & Çapanoğlu, 2022) and "the difficulty experienced when information is not used for an extended period" (Dündar & Kızık, 2023). Furthermore, in an investigation into the effects of distance education on Turkish language instruction, it was reported by Bayram et al. (2021) that technology was perceived by participants to induce distractions among students, thereby impeding their capacity to maintain focus. These assertions align with the conclusion drawn in the present study that concentration challenges and learning losses are exacerbated by technological influences. As evidenced by the findings, it is posited that the academic performance of students in institutions with elevated learning loss is adversely affected by their perspectives and study habits. In contrast, technology is emphasized by schools with minimal learning loss as a catalyst for such decline. A consensus, however, is reflected across all stakeholders: the necessity of repetition for effective learning retention is universally acknowledged.

The study found that in the school with the highest level of learning loss, mathematics and English lessons showed the greatest losses, while social studies exhibited the least. Conversely, in the school with the lowest level of learning loss, mathematics showed the highest losses, and science the least. In a study on learning losses in science among middle school students, Hamidi, Jumadi, Nurohman, and Febrian (2023) concluded that students began to forget the learning environment and showed decreased interest in this subject, although they also found that the ease of access to information became appealing for students. Yüksel (2023), in his study on learning loss in mathematics lessons in Anatolian high schools, found that only 40% of 12th-grade students achieved the expected learning outcomes, indicating a high level of learning loss in mathematics. Several studies in the literature have also shown that learning loss is more pronounced in mathematics and reading (Betthäuser, Bach-Mortensen, & Engzell, 2023; Carlana et al., 2023; Kuhfeld et al., 2020), while other studies have highlighted significant losses in English vocabulary and grammar due to the summer break (Kayır & Özçelik, 2018). In the study conducted by Akkaş-Baysal and Ocak (2021), it was found that learning loss was most pronounced in Turkish, mathematics, science, physics, chemistry, and English lessons, while losses were minimal in subjects such as social studies, biology, history, music, and art. This finding aligns with other research results, indicating that participants experienced learning loss in mathematics and English lessons and, to a lesser extent, in social studies and science lessons. Based on the findings of the research, it is observed that learning loss in mathematics is present in both schools. This result indicates that difficulties are encountered by students in the development of metacognitive skills, including problem-solving, mathematical literacy, and arithmetic operations. In social studies and science lessons, where learning loss has been identified, challenges in memorizing previously acquired knowledge, particularly in areas such as environmental literacy, are evident. In the English lesson, where the highest level of learning loss is recorded, despite the acquisition of the necessary knowledge for written and spoken communication, students are unable to perform

effectively. Considering these findings, it is concluded that a greater focus should be placed on mathematics in both schools, while English should be prioritized in the school experiencing high learning loss, and science should be emphasized in the school with lower levels of learning loss.

The study also revealed that the school with the highest level of learning loss attributed this loss to the lack of review. In contrast, the school with the lowest level of learning loss believed that the loss was due to students' difficulties in focus and perception. Both schools agreed that improving educational environments would be an effective method to mitigate this loss. Similar to the research result, a study on learning loss has linked one of the reasons for the loss to students not repeating the information they have acquired (Kaffenberger, 2021). Dündar and Kızık (2023) included in their research that activities for students' socialization and parent-student interactions should be provided.

As a result of the research, it was agreed at both school levels that the strategy developed to mitigate learning loss was to make lessons more engaging. The only distinction observed in the strategies formulated at the two school levels was that, in the school experiencing the highest level of learning loss, an emphasis was placed on incorporating specific goals aimed at enhancing overall academic achievement. Furthermore, the findings of the research indicated a shared perspective at both school levels that increasing the educational attainment of parents and other relevant stakeholders is essential for reducing students' learning loss. Raharjo and Nurhayati (2024) found in their research that in order to reduce learning loss, strategies such as utilising different strategies, resources such as social media and learning, making improvements in education, ensuring the active participation of students through question-answer method, and determining the role of parents in education should be emphasised. In another study, it was mentioned that cooperation in education is necessary, especially the effectiveness of school stakeholders and parents in the learning phase is important in reducing learning loss (Rediani & Kaize, 2023). These results show that there is a similarity between the strategies developed by the participants in the study on learning loss and what other stakeholders should do.

In addition, opinions such as early intervention in learning difficulties, appropriate guidance, and the adaptation of the school, family, and environment to the student's level were included at both school levels. Furthermore, in the school experiencing the least learning loss, the importance of fostering students' reading habits and communication skills as a means of mitigating learning loss was emphasized. In the research conducted by Kaffenberger (2021), it was stated that curricula should be designed to align with students' learning levels. Additionally, it was highlighted that improvements would be more effective if planned in advance, followed by a structured transition to the curriculum phase. This finding aligns with the results of the study, which emphasize early intervention in preventing learning loss and ensuring that the student's environment is appropriately structured. In the research conducted by Akbaş-Baysal and Ocak (2021) on addressing learning loss resulting from the pandemic, various suggestions were made by teachers, among which the inclusion of more reading activities was emphasized. In this context, it can be said that the teachers and the participants of this study agree on gaining the habit of reading books to reduce learning loss. In addition, Ergin and Birol (2005), who emphasised the relationship between learning and communication, stated that the realisation of learning would be possible with the acquisition of communication skills. In relation to the research, it can be said that the participants attribute the reduction of learning loss to the healthy realisation of the communication process during learning. As a result, it has been observed that similar results in the literature for learning loss related to this study are intense and different results are less.

From the research, it can be inferred that the learning loss observed in mathematics and English lessons in schools with high levels of learning loss is attributable to students' perception of these subjects as difficult to understand and their lack of effective study strategies. Additionally, in the same schools, the learning loss identified in social studies is attributed to the subject's requirement for frequent repetition. In contrast, the relatively lower learning loss in science lessons in schools with less overall learning loss is associated with the availability of more favourable opportunities for practical application. This finding aligns with the impact of technology on mitigating learning loss in schools. Based on these results, it is recommended that educational guidance services be provided in schools with significant learning loss to support students in developing effective study habits. Furthermore, in schools where learning loss is lower, implementing strategies to minimize distractions is anticipated to be beneficial.

Suggestions

Based on these findings, several suggestions were presented to researchers:

- To mitigate learning loss, a curriculum may be designed in accordance with improvement methods identified by participants, such as gamification of activities, the inclusion of case studies, rhythmic exercises, drama, and conceptual associations.
- Textbooks incorporating game-based content, appropriate for students' age groups and designed to prevent disengagement, can be developed for different subject areas.
- Curricula may be diversified to address the specific needs of different regions.
- A collaborative process planning may be conducted by experts in the field of education and psychological counsellors to enable the early analysis of learning losses.
- It may be ensured that basic education is completed without learning loss, and to achieve this, in-service training can be provided to both teachers and parents to facilitate full learning.

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Conflicts of Interest

The first author is responsible for the conduct of the study. Both authors contributed equally to the planning of the study, discussion and interpretation of the findings, and reporting of the study. There is no conflict of interest.

Ethics

This study was conducted with the approval of the Ethics Committee, in accordance with the decision dated December 1, 2023, and numbered 2023/10-XXII, as issued by the Aydın Adnan Menderes University Educational Research Ethics Committee.

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