

LEARNING LOSSES OF MIDDLE SCHOOL STUDENTS DURING THE
PANDEMIC ACCORDING TO TEACHERS' VIEWS



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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

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ABSTRACT

This qualitative case study aims to investigate the learning losses that emerged among middle school students during the Covid-19 pandemic. With the transition to face-to-face education, learning losses have begun to be observed among students. As part of this study, interviews were conducted with 32 middle school teachers who were at the forefront during this period to investigate the presence of learning losses, their underlying causes, and consequences. In addition, in the interviews conducted with teachers, the measures that had already been implemented and those that were deemed necessary by the teachers for the compensation of learning losses were investigated. Among the findings, it is observed that learning losses vary among students and occur for various reasons, that remote education is one of the main reasons for learning losses, and that the inequality of opportunity among students is an important factor in the differentiation of these losses. Additionally, it was found out that teachers were also negatively affected by the delay in the curriculum, regression in previous educational levels, lack of motivation, and additional workload. The findings of this study, which aim to identify suitable solutions for compensating learning losses in order to ensure the continued quality of education, are considered of utmost importance.

Keywords: Learning loss, Covid-19 pandemic, distance education

ÖZET

Bu nitel durum çalışması, Covid-19 pandemi sürecinde ortaokul öğrencilerinde ortaya çıkan öğrenme kayıplarını araştırmayı amaçlamaktadır. Yüzyüze eğitime geçilmesi ile birlikte öğrencilerde öğrenme kayıpları gözlemlenmeye başlanmıştır. Bu çalışma kapsamında, dönemin ön saflarında yer alan 32 ortaokul öğretmeniyle gerçekleştirilen görüşmelerde, öğrenme kayıplarının varlığı, ortaya çıkmasının temel nedenleri ve sonuçları araştırılmıştır. Ayrıca, öğretmenler ile yapılan görüşmelerde, öğrenme kayıplarının telafisi için ne gibi çalışmalar yapıldığı ve yapılması gerektiği de araştırılmıştır. Bulgular arasında, öğrenme kayıplarının öğrenciler arasında farklılık gösterdiği ve çeşitli nedenlerle meydana geldiği, uzaktan eğitimin öğrenme kayıplarının temel nedenlerinden biri olduğu, öğrenciler arasındaki fırsat eşitsizliğinin bu kayıpların farklılaşmasında önemli bir etken olduğu görülmektedir. Ayrıca, öğretmenlerin de müfredatın gecikmesi, önceki eğitim düzeylerine gerileme, motivasyon eksikliği ve ek iş yükü nedeniyle olumsuz etkilendiği tespit edilmiştir. Eğitimin kaliteli devam edebilmesi adına öğrenme kayıplarının telafisi için uygun çözümler bulmak amacıyla bu araştırmanın bulguları son derece önemli kabul edilmektedir.

Anahtar Kelimeler: Öğrenme kayıpları, Covid-19 pandemisi, uzaktan eğitim

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iv
ABSTRACT	v
ÖZET	vi
TABLE OF CONTENTS	vii
LIST OF FIGURES	x
LIST OF TABLES	xi
LIST OF ABBREVIATIONS	xii
CHAPTER 1: INTRODUCTION.....	1
1.1. Purpose of the Study	3
1.2. Significance of the Study	4
1.3. Assumptions.....	5
1.4. Limitations.....	5
CHAPTER 2: LITERATURE REVIEW.....	6
2.1. The Covid-19 Pandemic	6
2.2. Impact of Covid-19 on Education.....	8
2.2.1. Online education in the Covid-19 period	10
2.2.2. Inequality caused by Covid-19 in education	11
2.2.3. Teachers' adaptation process in the Covid-19 period	13
2.3. Post Covid-19 Period in Education.....	15
2.3.1. Learning loss caused by Covid-19 pandemic	15
2.4. Impact of Covid-19 Pandemic in Turkey	18
2.4.1. Effects of Covid-19 pandemic in education	18
2.4.2. The studies done for the learning losses in Turkey	22
CHAPTER 3: METHODOLOGY	24
3.1. Design of the Study.....	24
3.2. Participant Group	25
3.3. Development of the Interview Form.....	27

3.4.	Implementation of the Interview Form and Data Collection.....	29
3.5.	Data Analysis	31
3.6.	Validity and Reliability.....	34
3.7.	Procedures.....	36
CHAPTER 4: FINDINGS		39
4.1.	Face-to-face Education Before the Pandemic.....	42
4.1.1.	Students were more interested in the lessons	42
4.1.2.	It was easier to communicate with the students	43
4.1.3.	It was easier to progress in the curriculum.....	43
4.1.4.	Classroom management was easy	44
4.2.	Face-to-face Education After the Pandemic	44
4.2.1.	Decreased students' achievement.....	45
4.2.2.	Difficulty in communicating and supervising students	45
4.2.3.	Decreased interest and motivation.....	46
4.2.4.	An increase in anxiety	46
4.3.	Similarities in Face-to-face Education Before and After the Pandemic.....	47
4.3.1.	No similarities	47
4.3.2.	The characteristics of students remain the same	48
4.3.3.	The continuity of the teachers' efforts.....	48
4.3.4.	A classroom environment with ongoing curriculum	48
4.3.5.	Continuation of pre-pandemic problems	49
4.4.	Differences in Education Before and After the Pandemic.....	49
4.4.1.	Differences in students	50
4.4.2.	Differences in teachers	52
4.4.3.	Differences at school	53
4.5.	Causes of the Learning Losses.....	55
4.5.1.	Lack of face-to-face education and discipline.....	55
4.5.2.	Lack of opportunities and connection problems	56
4.5.3.	Adaptation to online education.....	58
4.5.4.	Loss of interest and motivation	58
4.5.5.	Parents' lack of interest and involvement	59
4.5.6.	There are no learning losses	60

4.6.	Reasons for Differentiation of Learning Losses Among Students	61
4.6.1.	Individual differences	61
4.6.2.	Parents' involvement	62
4.6.3.	Inequality of opportunity in education	63
4.6.4.	Discipline and sense of responsibility	64
4.6.5.	There is no differentiation in learning losses	64
4.7.	The Effect of Learning Losses on Teachers	65
4.7.1.	Difficulty in progressing the curriculum	65
4.7.2.	The increase in the workload.....	66
4.7.3.	Difficulty in adjusting to school.....	67
4.7.4.	More in need for self-development	67
4.7.5.	Decreased time devoted to academic careers	68
4.8.	Studies Done at School to Compensate for Learning Losses	69
4.8.1.	Additional studies and courses	70
4.8.2.	Compensatory courses during the summer holiday.....	70
4.8.3.	Individual compensatory programs	71
4.8.4.	Retrospective course repetitions.....	71
4.8.5.	Help provided for students with no opportunities	72
4.9.	What Should Be Done to Compensate for Learning Losses	72
4.9.1.	Studies should be done to compensate for learning losses.....	73
4.9.2.	Studies for the compensations should have been carried out at the beginning of the pandemic	77
4.9.3.	The studies carried out for the compensations are sufficient	78
CHAPTER 5: DISCUSSION AND CONCLUSION.....		80
5.1.	Discussion.....	80
5.2.	Conclusion	83
5.3.	Suggestions for Further Research	87
REFERENCES		90
APPENDIX A: INTERVIEW FORM.....		98
APPENDIX B: INTERVIEW RESEARCH PERMIT.....		104
APPENDIX C: ETHICS COMMITTEE APPROVAL.....		105

LIST OF FIGURES

Figure 1: Definition of learning loss

Figure 2: EBA TV program for middle level of students

Figure 3: Development process of the semi-structured interview form

Figure 4: Implementation of the interview form and data collection process

Figure 5: Data analysis process



LIST OF TABLES

Table 1: Participant Group

Table 2: Themes and sub-themes corresponding to the research questions

Table 3: List of themes and sub-themes



LIST OF ABBREVIATIONS

WHO – World Health Organization

SARS - Severe Acute Respiratory Syndrome

Covid-19 – Coronavirus disease of 2019

MoNE – Ministry of National Education

EBA (Eğitim Bilişim Ağı) – Educational Informatics Network

TRT (Türkiye Radyo Televizyon Kurumu) – Turkish Radio and Television Corporation

CHAPTER 1: INTRODUCTION

A pandemic is the worldwide spread of a new disease. It is a very extensive and contagious disease that affects an entire country or even more continents simultaneously (Honigsbaum, 2009). A pandemic disease transmits from person to person on a global scale. They are not the same as seasonal influenza and are generally derived from animal influenza viruses (What is a pandemic?, 2022). When a pandemic arises, the World Health Organization (WHO) declares it. WHO monitors the virus and, when necessary, communicates with health specialists, alerting the public about the pandemic's path and issuing a formal statement (What is a pandemic?, 2022). Throughout history, there have been numerous pandemics. Smallpox, cholera, plague, dengue fever, AIDS, influenza, Severe Acute Respiratory Syndrome (SARS), West Nile disease, and Tuberculosis are examples of pandemics that have occurred since 1920 (Fouzia Malik et al., 2021). Most recently, there is an ongoing covid-19 pandemic since 2019.

When pandemics strike, they have a wide range of consequences which can be divided into four categories: health, economy, security, and social. When we consider the health field, we can observe their effect by looking at the sheer number of people who are impacted by it and the corresponding casualties (Qiu et al., 2017). In the economic field, volatility can result in long-term costs and indirect costs. The deaths and economic instability that the pandemic has caused are a threat to security (Maurice, 2016). Under the heading of social repercussions, we can include travel restrictions, movement restrictions, market closures, and school closures (Qiu et al., 2017).

The SARS pandemic began at the beginning of the twentieth century, and it was the closest pandemic to our history before Covid-19 pandemic. The SARS pandemic can be described as the century's first devastating disease. It started in Hong Kong and has had a wide range of effects on people's lives. It quickly spread from China, resulting in 8000 cases along with 774 deaths. SARS had an impact on education as well, and schools were forced to close unexpectedly (Fox, 2004).

It is an undeniable fact that education is one of the most important aspects of our lives and it's a necessity. Education is more than simply a concept associated with grades; we give job advancement, character development, time management, and societal advancement as a result of education (Editor & Team, 2014). In order to attain the overall empowerment of a country's youth, educational institutions should focus on teaching knowledge, skill, and value-based education to students (Bhardwaj, 2016).

According to a study that included the perspective of teachers in education during the SARS pandemic, teachers described the closure as chaotic, that they had no guidelines on how to spend this closure period, and that they could not even receive proper internet training (Fox, 2004). Despite the years that have passed by, there is still a lack of research regarding how past pandemics had an effect on our educational system.

Since 2019, the pandemic has replicated itself, and the Covid-19 pandemic has entered our life, following the SARS pandemic. School systems were understandably overwhelmed and unequipped to respond when Covid-19 began rapidly spreading in the spring (Dorn et al., 2021). The closure of schools was a common response in the different countries and the full impact of the Covid-19 school closures on learning is thought not to be known for several years (Conto et al., 2020).

Education has been the pillar of every nation's progress; hence, its preservation is of utmost importance to the growth and progress of all nations (Fouzia Malik et al., 2021). Therefore, we must fully comprehend the extent of learning loss occurred during the Covid-19 period, as education influences all aspects of life and its value should not be underestimated.

1.1. Purpose of the Study

The aim of the research is to investigate learning losses in middle schools during the pandemic period according to teachers' views. It is aimed to shed light on the learning losses experienced during the Covid-19 period and the educational implementations for the compensation of these losses by taking the opinions of teachers.

Based on this purpose, answers to the following questions will be searched:

1. According to teachers' opinions, were there any learning losses students experienced during the pandemic?
2. According to teachers' opinions, were there any differences among students in terms of learning loss during the pandemic? If so, what were the factors affected the differences among students?
3. If learning losses have occurred during the pandemic, what had been done to compensate for these learning losses?
4. If learning losses occurred during the pandemic, how can these learning losses be compensated according to the opinions of the teachers?

1.2. Significance of the Study

This study is significant in a variety of ways.

First of all, the developing Covid-19 pandemic has had a wide-ranging influence on people's quality of life. It was expected that there would be negative repercussions in this unprepared Covid-19 pandemic process, but it was not anticipated to what extent these effects would occur. Nobody could have predicted the magnitude of educational losses in the online education process. Even today, while the full extent of SARS's impact is still unknown, given that the world has entered the post-Covid-19 phase, it has started to become clearer how students used their time during the online education process, compared to those who had no opportunity at all to engage in online education process.

Along with the fact that middle school students had to switch from face-to-face education to online education, teachers' views on the learning losses they experience in this online education process, as well as the education process prior to and after the epidemic, are questioned. In order to make future educational activities more efficient and sustainable, it is vital to identify the types of schools, internet connections, hardware problems, and other factors that cause learning losses, as well as their differentiation across students. This study is significant at this time in terms of shedding light on future online education practices by revealing student thoughts and situations on online education with the assistance of our teachers, whom I feel are the best observers, during the Covid-19 outbreak. It is important to point out the learning losses and conduct studies to compensate for these losses for those students who had already fallen behind education system (Dorn et al., 2021). Because this concept of inequality,

which existed prior to the epidemic, can really let us conceive better educational systems, and, to the extent possible, take action to achieve that desired future (Arnove, 2020).

1.3. Assumptions

It is assumed that the teachers who participated in the interviews responded honestly and sincerely to the questions.

It is assumed that the developed semi-structured interview form will reveal the learning losses of middle school students experienced during the Covid-19 pandemic.

1.4. Limitations

Covid-19 is a recent pandemic. When it comes the particularly concerning the term of “learning loss”, there has been minimal research on how Covid-19 impacted it.

The main limitation of the research is that it is limited to teachers’ experience. The study has been conducted with the perspectives of 32 middle school teachers who live in the city İstanbul. However, every instructor branch could not be found in equal numbers.

Another limitation is the increase in the number of cases associated with the Covid-19 epidemic, as well as the emergence of new variants over time, it makes arranging interviews with teachers, particularly face-to-face setting, increasingly challenging.

CHAPTER 2: LITERATURE REVIEW

2.1. The Covid-19 Pandemic

Covid-19 was first seen in Wuhan, China. It was later declared a global pandemic, a public health emergency which is the highest level of alarm by WHO (World Health Organization, 2020). The virus is very contagious and easily spreadable, it can infect people even with small liquid particles if they speak, cough, sneeze or even breathe (WHO, 2020). Since the virus is easily transmissible, when Covid-19 started spreading throughout the countries, people also had to take various precautions such as wearing masks, avoiding crowds and starting to distance themselves physically (World Health Organization, 2021).

The Covid-19 virus, which affects the entire world, has undoubtedly changed many things in life in many ways. Due to the ever-increasing loss of human life, countries have begun to take drastic measures in the face of such a threat. As a result of this, countries have taken various measures to increase social distancing during this pandemic, which threatens human health. People have been warned by the organization WHO that social isolation is a must, because every person is under threat of Covid-19. Against such a threat, Turkey has also taken some precautions to reduce the risks and slow down its spread around the country. People were forced into lockdown, social distance and self-isolation. Restaurants were closed and it was forbidden to travel during the lockdown period. Only grocery stores within certain areas remained open (T.C. İçişleri Bakanlığı Bilgi Teknolojileri Genel Müdürlüğü, 2021).

Covid-19 has impacted every country, though, its' effects have not been equal for every person. Due to the lockdowns, some families did not have financial difficulty

because they could work from home, while other families who could not go to work faced economic problems. For instance, farmers were unable to go to collect their crops. A lot of people lost their jobs. Families who did not receive adequate support from the government and could not make a living without work had to continue working under poor conditions during the pandemic. As a result, they had to put themselves and the health of their families at risk. This led to people taking out predatory loans. Financially, not only individuals and families, but every country and every company, large or small, has suffered significantly from the Covid-19 pandemic (World Health Organization, 2020).

The world was not prepared for this kind of struggle. Therefore, this is one of the factors that makes the process even more challenging. Although there is a great risk to human health in the first place, the world does not face the virus only physiologically, but also psychologically (Cullen et al., 2020). The pandemic eventually will be over, however, its psychological effects will remain for a long time (Fiorillo & Gorwood, 2020).

Shortages of livelihoods caused psychological stress and unhappiness in people's lives. In particular, in the example given above, people having loss of income and anxiety can lead to behavioural disorders. In addition, there are also other factors such as staying away from loved ones, loneliness, and facing bad news or misinformation on the social media that can lead to psychological disturbances (Sood, 2020). Due to these problems people face in the Covid-19 period, people had a higher tendency to start using drugs and alcohol to take extra help in their increased level of insomnia and anxiety. Besides, it has been stated that Covid-19 itself may lead to

complications like delirium, stroke and lastly agitation (World Health Organization, 2020).

In this era, in which there is a high risk of people having traumatic stress disorder and burnout, it is essential to understand the psychological effects of the pandemic to prevent such problems (Sood, 2020). In an article, it was stated that psychological effects caused by Covid-19 pandemic was under-recognized in China where the Covid-19 pandemic emerged from. It was suggested for government to take additional steps for pointed mental health problems and negative psychological effects caused by the pandemic (Duan & Zhu, 2020).

2.2. Impact of Covid-19 on Education

In this section, it will be mentioned about how Covid-19 had an impact on education. It was inevitable that Covid-19 would have an impact on education. Due to Covid-19, most countries have transitioned to an online schooling system without any preparation (Akbulut et al., 2020). Schools had begun to close from the country China where the Covid-19 pandemic originated. It spread swiftly, and within three months, it had impacted all levels of schooling in 188 countries, resulting in school closures. Closures have an influence on roughly 90% of the world's students as of March 29, 2020 (UNESCO, 2020).

Most schools have put lessons and learning materials online since the emergence of Covid-19 and the transition to online education, but this does not assure that students will actively participate in these educational materials (Hippel et al., 2020). Furthermore, the epidemic has not only forced schools to remain closed; it has also led to some children abandoning the public school system entirely. Some parents

who can afford it have opted for private schools, epidemic pods, or home-schooling for their children. Other students, who do not have that option, dropped out entirely (Dorn et al., 2021). In the Covid-19 era, fast decisions had to be made and many changes had to be done, due to these factors, schools came to a point that they could no longer guarantee to meet the needs of those students before they graduate and enter the world (Zhao & Watterston, 2021).

The vast majority of Pakistani children were unable to continue their online education. According to statistics, out of a total population of 70 million, there are 22.8 million non-schoolers. According to Umbreen Arif, an educational advisor in central Pakistan, 50 million students at various institutes are at risk of falling behind in their studies as a result of the closure (Zehra-Malik, 2020).

Apart from that, students must be in a physical and emotional state that allows them to study, in addition to having access to and receiving a high-quality education. The Covid-19 pandemic has caused turmoil in families, putting many children in jeopardy (Dorn et al., 2021). According to the Feeding America group, 1 in 6 of the 13 million students in the United States will be vulnerable to food insecurity by 2021 (Hake et al., 2021). The challenges that children face at home, of course, had an impact on the students' online education lives during the Covid-19 era.

Similarly, Owusu-Fordjour, Koomson, and Hanson (2020) conducted a research in Ghana to examine the impact of school closures on students' learning and academic progress. As a result of the findings, it was found out that pandemic had a negative impact on students because it left many students to study on their own but they were unable to learn independently. Parents were unable to assist their children in learning how to use the online learning network, nor were they able to track their children's

development at home without difficulty. Furthermore, the majority of the students had limited internet access and knowledge of technology (Owusu-Fordjour. et al., 2020).

2.2.1. Online education in the Covid-19 period

In 2020 education year with Covid-19, many solutions have been reached to ensure that the students did not fall behind in education. During this uncertain period, it is aimed to minimize the loss of education. In order to avoid a pause in education, it has been decided to switch to an online education system. For this reason, by using different online platforms, students continued to take courses online. Which brings us to the question, what is online learning?

Online learning is a type of learning that you can experience using devices such as mobile phones, laptops, phones etc. with an internet access. With the help of these devices, students can be everywhere independently, remotely learn and interact with their instructors and other students (Singh & Thurman, 2019). Online education is a learning system that allows students to attend classes from anywhere by using electronically supported devices that relies on the internet for teacher/student interaction. Both advantages and disadvantages can be mentioned in online education system.

Online education directly contributes to education by providing answers to issues such as time and space constraints in formal education, a shortage of educators, difficulty in school-based instruction, resource constraints, and the inability to reach every student. At the same time, it indirectly aids traditional education by ensuring that images, sound, graphics, and multimedia are used effectively and repeatedly (Arslan & Yetgin, 2020).

While online education offers flexibility and benefits in addressing students' educational needs, it can also have detrimental consequences on education in a wide variety of ways (Dumford & Miller, 2018). Insufficient interaction between the learner and the teacher as a result of the lack of face-to-face connection, minimal feedback, lack of experience, technological issues, and inadequate skill and attitude development are all issues that are associated with online education (Bilgiç ve Tüzün, 2015).

The benefits and drawbacks of online schooling during the Covid-19 pandemic were examined through the views of instructors and students in a study done by Khadijah Mukhtar. It is found useful that with the help of online education, the education system could be continued throughout the Covid-19 crisis. It helped students to become more self-directed learners who could learn any moment during the day. However, teachers were unable to measure students' understanding during online lectures due to their shortcomings, such as a lack of feedback. Students also complained about their short attention spans and the resource-intensive nature of online learning. Since students are aware that they will receive the recordings, they do not pay attention to the lecture correctly. There is also a discipline issue, as some students have been known to misbehave during lectures (Mukhtar et al., 2020).

2.2.2. Inequality caused by Covid-19 in education

With the outbreak of the Covid-19 pandemic and the shift to online education, inequality was the most felt notion. Despite the fact that we live in a technological age where the internet and television are commonly used resources, not all teachers or students have access to these resources (Akbulut et al., 2020). The fact that not every student has the equal opportunity is one of the aspects that emphasizes the concept of

inequality in such a method. There is no way to measure the magnitude of educational disparities (Blaskó et al., 2021).

Though there have been many efforts to eliminate inequality, education has struggled to keep up, and not all students have been able to benefit equally from it (Akbulut et al., 2020). Many students, particularly those from low-income households, lack access to the internet, devices, and a dedicated, peaceful study space (Dorn et al., 2021).

To give an example, one seventh-grader at a low-cost private school in a north western Pakistani area received her schoolwork on her father's smartphone from January to April. Her father was then summoned to his out-of-town job. Since she lost her only way to receive schoolwork, she spent most of her time working on her handwriting (Zehra-Malik, 2020). Another research has indicated that children from low-income homes in the UK do worse than children from higher-income families. Children from low-income families are roughly two years behind their classmates from higher-income families by the time they exit school. In addition, it has been mentioned that the educational attainment gap in the United Kingdom is increasing, and narrowing this gap at pre-Covid -19 levels of public expenditure would take 500 years (Hippel et al., 2020).

When examining these cases, it is clear that the majority of children will experience learning loss, with a strong likelihood that disadvantaged children would experience higher learning loss than their more affluent counterparts (Covid-19 Back to School, Rebuilding a Better Future for All Children, 2020). Similarly, this disparity was discovered in another research. In a study conducted by Ebru Külekçi (2020) with school administrators, the technical deficiency was identified as a major issue. Within the framework of this issue, school officials have claimed that teachers' limited internet

access, the lack of internet in their locations, and the fact that certain teachers and students lack equipment such as tablets and PCs all obstruct online instruction and activities (Çakın, 2020).

In a study, it was also claimed that inequality is seen not just in terms of opportunities, but also in terms of gender. There is evidence that girls are better equipped to endure adversity at home. Furthermore, parents tend to devote more time to educational activities with their sons than they do with their daughters. Boys, on the other hand, are more frequent and early users of information technology, which may provide them an advantage in digitally based learning environments. Given the psychological and financial hardships experienced during the epidemic, we would anticipate girls' stronger endurance to overcome any supposed technological advantage perceived by boys (Engzell et al., 2020).

2.2.3. Teachers' adaptation process in the Covid-19 period

School principals reported they were in continual communication with teachers during the online education process according to a research. They stated that they supplied instructors with information about the process, provided financial and spiritual support, listened to their concerns, and organized activities and seminars to help with the process. This is regarded to be beneficial in terms of enhancing teacher motivation and keeping them from feeling lonely during the process (Çakın, 2020).

Teachers, who are at the core of education, were just as badly damaged by this process as pupils, as this study indicates. As a result of the introduction of Covid-19 pandemic, teachers faced a slew of new obstacles. Teachers were pushed to become more imaginative as they were forced to work in a digital world and faced the challenge

of discovering pupils who needed multimodal engagement. When a teacher taught in person, those who normally walk in the classroom had to walk in digital space and find diverse interactions. Asking for students to turn on their cameras, asking them to get up and move can be given as examples for interactions that teachers came up with (The Future of DPT Education Post COVID-19, 2021). Additionally, teachers needed to be instructed on how to use internet platforms effectively in this difficult time (Fouzia Malik et al., 2021). Teachers had to devote additional time to learn how to use online platforms.

Inequality is another obstacle that teachers faced during the online process. For instance; considering a teacher's perspective on the subject, he mentioned that out of 500 students, he could only get in contact with only 200-250 of them as most students do not have access to the internet or technological devices (Akbulut et al., 2020). Since not every student has the same possibilities, the teacher should devote particular attention to the students who are less fortunate.

According to a research conducted by Sema Fison (2020) with 5,661 teachers, 81 percent of the teachers had no prior experience with online education, and 80 percent of them thought distance education alone was insufficient. Simultaneously, they indicated that they had spent a significant amount of time developing materials. Furthermore, 83.5 percent of the parents of the study's 25 thousand pupils believed that formal education was more effective than online learning (Fison, 2020). It might be concluded that both parents and teachers are low motivated towards online education. In the pandemic, where parental support is critical, additionally teachers has to engage with parents more and provide inspiration as a result of their poor belief and motivation.

Similar to the teachers, students and parents have been supported with psychosocial support services to help them during the difficult process. In order to reduce the negative psychological effects on children caused by Covid-19 pandemic, suggestions and guidance have been presented to help their psychological well-being (Gençoğlu & Çiftçi, 2020).

2.3. Post Covid-19 Period in Education

In this section, it will be mentioned about the post pandemic period and its effects in education.

2.3.1. Learning loss caused by Covid-19 pandemic

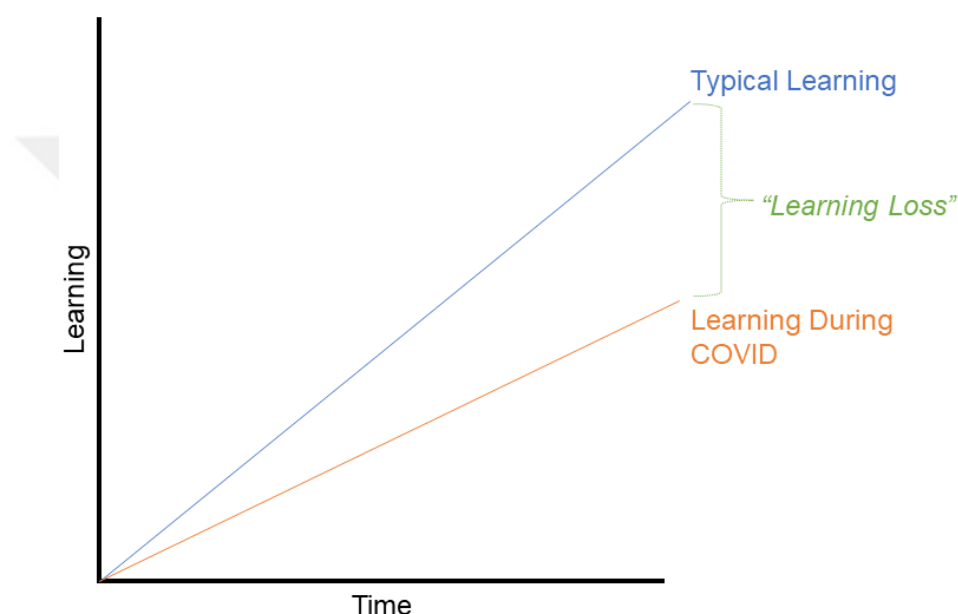
For roughly four months, after the schools closed in March 2020, students did not acquire any new content and may have even regressed once the epidemic struck (Dorn et al., 2021). Although it is impossible to foresee the level of injury and learning loss that will occur as a result of Covid-19, the following conclusion can be drawn: The more time students spend in online learning and the longer schools are physically closed, the more learning loss is projected. Besides, the longer schools remain closed, it could further reinforce inequalities among students (Blaskó et al., 2021).

Naturally, researchers began to notice the results of how we spent online schooling in the post-covid time, and came across the concept of "learning loss," which originated during the pandemic. Of course, after seeing the results of how the online education process was being spent, the concept of "learning loss" developed during the epidemic.

What exactly is the meaning of learning loss?

As can be seen in the table of learning loss, we can define it as follows, especially when we examine the pandemic period: The difference between what they would have learned in a normal year and what they learn during the pandemic is what we refer to as “learning loss.” Learning loss happens when educational progression does not occur at the same rate as it has in the past when compared to previous years (Pier et al., 2021).

Figure 1: Definition of learning loss



Source: Pier, L., Hough, H. J., Christian, M., Bookman, N., Wilkenfeld, B., & Miller, R. (2021, January 25). COVID-19 and the educational equity crisis: Evidence on learning loss from the CORE Data Collaborative [Commentary]. Policy Analysis for California Education. <https://edpolicyinca.org/newsroom/covid-19-and-educational-equity-crisis>

“Multiple studies have reported long-term learning loss due to this past year of Covid-19 to be as much as 1.5 years loss over time.” (Terry, 2020). Even if schools follow the best approach and spend the online education period as effective as it can be and improve their teaching in the future, many months of learning have already been wasted. Even if schools follow the most carefully structured, evidence-based approach to get the most out of remote learning and improve their teaching going forward, the

reality is that many months of learning have already been lost. As a result, if we are to make up on what has been lost due to the epidemic, educational institutions must implement a fundamental change in students' learning (Dorn et al., 2021).

The degree of learning loss among students is also affected by inequalities among students. Clearly, children from poorer socioeconomic backgrounds and with less resources were already performing poorly before the epidemic, and they are at a considerably higher risk of performing much worse during the pandemic. This would result in even poorer success for disadvantaged groups and, as a result, increased intra-country inequities (Blaskó et al., 2021).

After realizing the learning losses in the post-pandemic studies, governments and education actors decided to take an action for these losses. Following the discovery of learning losses in post-pandemic research, governments and education actors decided to take action. Furthermore, governments and education actors have begun to create accelerated learning and catch-up programs to recover learning lost as a result of these disruptions (Conto et al., 2020).

Given the extent of the learning loss thus far and the limits of online education, students will certainly require more learning hours to make up for the loss. This may be accomplished through extended school days and organized after-school programs, weekend school, and summer school programs, all of which have already been shown to be beneficial (Dorn et al., 2021). Furthermore, it is expected that teachers, who serve as a conduit between students and education in the current process, will embrace their responsibilities and work more diligently, reducing educational losses (Çakın, 2020).

2.4. Impact of Covid-19 Pandemic in Turkey

In this section, it will be mentioned about how Covid-19 pandemic had an effect in Turkey.

2.4.1. Effects of Covid-19 pandemic in education

Sudden decisions had to be made due to pandemic and many countries have been compelled to shift to online education without any thorough preparations. Since there has been a huge increase in infected cases, MoNE has decided to close schools from March 17, 2020 until April 2020. Turkey had switched to online education on March 23rd, 2020 for all levels starting from kindergarten to high school. The online instruction process was prepared only in a week which shows clear proof of the sudden transition to online education (Milli Eğitim Bakanlığı, 2020).

With the transition to online education, MoNE started teaching courses through the platform called EBA (Eğitim Bilişim Ağı) which stands for Educational Informatics Network. Additionally, the materials used for online education via national channels are prepared in a short time (Özer, 2020).

Figure 2: EBA TV Program for middle level of students

SINIF	SAAT	PAZARTESİ	SALI	ÇARŞAMBA	PERŞEMBE	CUMA
ORTAOKUL 5. SINIF	09:00	TÜRKÇE-5	SOSYAL BİLGİLER-5	İNGİLİZCE-5	TÜRKÇE-5	İNGİLİZCE-5
	09:30	MATEMATİK-5	FEN BİLİMLERİ-5	MATEMATİK-5	DİN KÜLTÜRÜ VE AHLAK BİLGİSİ-5	FEN BİLİMLERİ-5
ORTAOKUL 6. SINIF	10:00	TÜRKÇE-6	SOSYAL BİLGİLER-6	İNGİLİZCE-6	TÜRKÇE-6	İNGİLİZCE-6
	10:30	MATEMATİK-6	FEN BİLİMLERİ-6	DİN KÜLTÜRÜ VE AHLAK BİLGİSİ-6	MATEMATİK-6	FEN BİLİMLERİ-6
ORTAOKUL 7. SINIF	11:00	TÜRKÇE-7	SOSYAL BİLGİLER-7	İNGİLİZCE-7	TÜRKÇE-7	MATEMATİK-7
	11:30	MATEMATİK-7	FEN BİLİMLERİ-7	MATEMATİK-7	DİN KÜLTÜRÜ VE AHLAK BİLGİSİ-7	FEN BİLİMLERİ-7
ORTAOKUL 8. SINIF	12:00	TÜRKÇE-8	T.C. İNKILAP TARİHİ VE ATATÜRKÇÜLÜK-8	İNGİLİZCE-8	TÜRKÇE-8	İNGİLİZCE-8
	12:30	MATEMATİK-8	FEN BİLİMLERİ-8	DİN KÜLTÜRÜ VE AHLAK BİLGİSİ-8	MATEMATİK-8	FEN BİLİMLERİ-8
İMAM HATİP ORTAOKULU	13:00	ARAPÇA-5	ARAPÇA-6	ARAPÇA-7	ARAPÇA-8	KUR'AN-I KERİM
UYUM SINIFLARI	13:30	UYUM İÇİN TÜRKÇE	UYUM İÇİN TÜRKÇE	UYUM İÇİN TÜRKÇE	UYUM İÇİN TÜRKÇE	UYUM İÇİN TÜRKÇE
ÖZEL EĞİTİM	14:00	MATEMATİK	AİLE BİLGİLENDİRME	TÜRKÇE	AİLE BİLGİLENDİRME	HAYAT BİLGİSİ
VELİ KUŞAĞI	21:00	BİZDEN		BİZDEN		BİZDEN
TEKRAR 14:30 - 20:00						

Source: MEB. (2020, June 1). EBA TV Ortaokul. TRT EBA TV. Retrieved November 11, 2022, from <https://www.eba.gov.tr>

In the table above, the program for the middle level of students in the EBA TV can be seen. Since the research aims to investigate learning losses in middle school level of students, the EBA program for middle schools has been shown. In the EBA platform, courses for middle schools were given between 09:00 and 14:30. Repetitions of the courses were given between 14:30 and 19:30 in the same order. Lastly, at 21:00, a program called “Bizden”, which could also be called as the parents’ hour, was given for parents (Özer, 2020). Since there was a course aimed for the parents, it can be concluded that parents were one of the important factors with Covid-19 pandemic and switch to online education. Parents’ hour took place in the EBA program in order to

support parents as they are role models for the students (Meb'den veliler için 'bizden' kuşağı: Bakan Selçuk Anlatacak, 2020). In case students might have limitations, they were provided 8gb of free internet to have an easy access on the platforms (Selçuk, 2020).

Additionally in order to create more opportunities for students who do not have access to the internet in the online education process, the videos in the EBA TV have been transferred to TRT (Turkish Radio and Television Corporation). In this way, students who could not access internet, could still participate through television (Özer, 2020). Three separate channels have been established for students to be used in the online education process which are TRT EBA TV Primary School, TRT EBA TV Middle school and TRT EBA TV High School (Gençoğlu & Çiftçi, 2020).

In a research conducted with math teachers, it has been found out that almost all teachers who were involved in the research had a positive attitude towards TRT EBA TV Middle School. It was stated that TRT EBA TV had its advantages in broadcasting a repetition of the courses, providing access with different facilities, providing visual richness and variety of questions. Last but not least, EBA TV ensured that students were not cut off from education and helped students to continue their education during the pandemic process (Şen, 2021).

At the same time, students' not being in the center of the education, not being able to replace formal education, being bored in a long term and lastly not having a class layout were seen as the weaknesses of the courses in TRT EBA TV (Şen, 2021). In addition to these weaknesses, EBA is not sufficient in terms of communication. The platform does not allow students to send direct messages to their teachers. Students can receive messages from their teachers and can only send messages in online lessons.

Moreover, the fact that EBA platform had caused technical problems in some cases made teachers switch to different applications such as WhatsApp and Telegram (Akbulut et al., 2020).

Even though the students have been provided with 8GB connection for free for students to join the lessons and there has been many attempts for students to get courses through many platforms, there is still not equality of opportunity. One of the students mentioned that she has no connection in her house and connects courses via phone. But since each course takes one GB, it can quickly reach a point where she no longer has the opportunity to join the class. Another student mentioned that he has been left behind education wise due to inequality problems. Even if students have the opportunity to have access to EBA TV, still it's not enough for topics to be reinforced and there is a lack of feedback (Akbulut et al., 2020).

Not being able to reach out to every students brought out the question: "How evaluation is going to take place?" MoNE announced that due to inequalities students faced during the year, second semester exams were applied optionally. As students only needed one semester for the evaluation, students can be evaluated with the grades of the period they want (Eğitim, 2021).

It is an extremely important step that the scope of central exams is limited to a semester by MoNE in order to eliminate inequality of opportunity for those students who are partially or completely deprived of access to online education due to Covid-19 pandemic (Gençoğlu & Çiftçi, 2020).

2.4.2. The studies done for the learning losses in Turkey

The length of time that schools were closed because of the Covid-19 epidemic had disrupted schools' responsibility in decreasing inequities, compensating for, and giving equitable chances. As a result, some studies on learning losses were conducted throughout the whole world. However, these studies are still not enough for an extensive degree for the country (Aydın Ceran et al., 2022). The studies done for the detection and compensations for the learning losses in Turkey are not yet accessible. Just a few studies have been done for the learning losses and in this section it will be mentioned about these studies.

It has been announced that an acquisition assessment will be used to compensate for learning losses caused by the Covid-19 epidemic during the 1.5-year online education process in Turkey. (Tc Ministry of National Education) This application will be held with the involvement of 4 million 565 thousand 916 pupils, according to the announcement. They claimed that the research, which will be performed with the participation of students in the seventh, eighth, eleventh, and twelfth grades, will be carried out in 81 provinces. As a result of this application, it is hoped that learning losses would be detected and the software will be updated to account for these losses (Milli Eğitim Bakanlığı, 2021).

Furthermore, Minister of National Education Mahmut Özer stated that, while continuing face-to-face education, on the other hand, they support students to make up for their learning losses, and for this purpose, as of October 16, 2021, the ministry will also provide support for 7th and 11th grade students. Özer stated that they began the face-to-face training courses for free. In this context, Eyüpsultan Municipality

collaborated with Istanbul University Cerrahpaşa Hasan Ali Yücel Faculty of Education on the project "Detecting and Removing Learning Losses in the Pandemic." Major and secondary school kids were identified as the primary target audience for this one-year project. The project includes scientific investigations, accomplishment tests, content and material development, and program development activities that will be carried out within the context of learning losses (Eyüpsultan Belediyesi, 2021).



CHAPTER 3: METHODOLOGY

In this section, design of the study, participants of the study, development of the interview form, implementation of the interview form and data collection, data analysis and lastly procedures will be discussed.

3.1. Design of the Study

This study employs a qualitative case study approach to investigate the learning losses experienced by middle school students during the Covid-19 pandemic. The learning losses occurred with the Covid-19 pandemic in 2020 have greatly affected the students' education. Therefore, it is a necessity to learn more about this umbrella term. In this sense, the causes and the compensations of learning losses need to be revealed with new dimensions. The qualitative research is about interpreting experiences and the meanings attributed to the experiences. It is very important to understand how people make sense out of the experiences (Merriam & Tisdell, 2016). By focusing on the experiences and perspectives of middle school teachers, this research aims to gain a deeper understanding of the learning losses.

The case study approach is particularly useful for the research. Case study involves a detailed description of the setting or individuals, followed by analysis of the data for themes or issues (Creswell et al., 2018). As teachers were at the forefront of adapting to the challenges posed by the pandemic, their experiences and observations are critical. The approach provides a nuanced understanding of the experiences and perspectives of teachers. Additionally, the use of a case study approach in this research provides a valuable means of investigating of learning losses during the Covid-19

pandemic. Additionally, it will help generating insights into potential solutions for compensation of these losses.

3.2. Participant Group

Teachers were selected as participants. It is believed that the teachers are able to make the most contribution to the research as they have been at the center of the Covid-19 pandemic process. The selected participants were interviewed in Istanbul with middle school teachers from both public and private schools regardless of the districts. There were no restrictions on the professions of teachers; they could come from any branch. The fact that the participants had at least two years of experience at the school they attended was emphasized. Thus, it was envisaged that teachers would have witnessed both the pre-covid transition and the online education process, as well as the post-covid transition to face-to-face education. They could be able to compare their educational condition in both ways this manner.

The research was conducted with 19 state school and 13 from private school teachers with a total of 32 teachers. These teachers are from a private school A, a state school B and voluntary teachers from other various institutions. The following table shows the branches, genders, ages, experience, institution, education and numbers of teachers interviewed for the research. 19 teachers are from state schools where as 13 teachers are from private schools. The teachers' names were coded based on their institution. Teachers from state schools were coded with "S" whereas teachers from private schools were coded with "P". For the genders of the teachers: 21 teachers are females, and 11 teachers are males. 6 teachers have graduated with a master's degree. 9 teachers participated in the research are between the ages of 24-29, 10 teachers are

between the ages of 30-34, 9 teachers are between the ages of 35-39, 3 teachers are between the ages of 40-44. and a teacher is between the ages of 45-49.

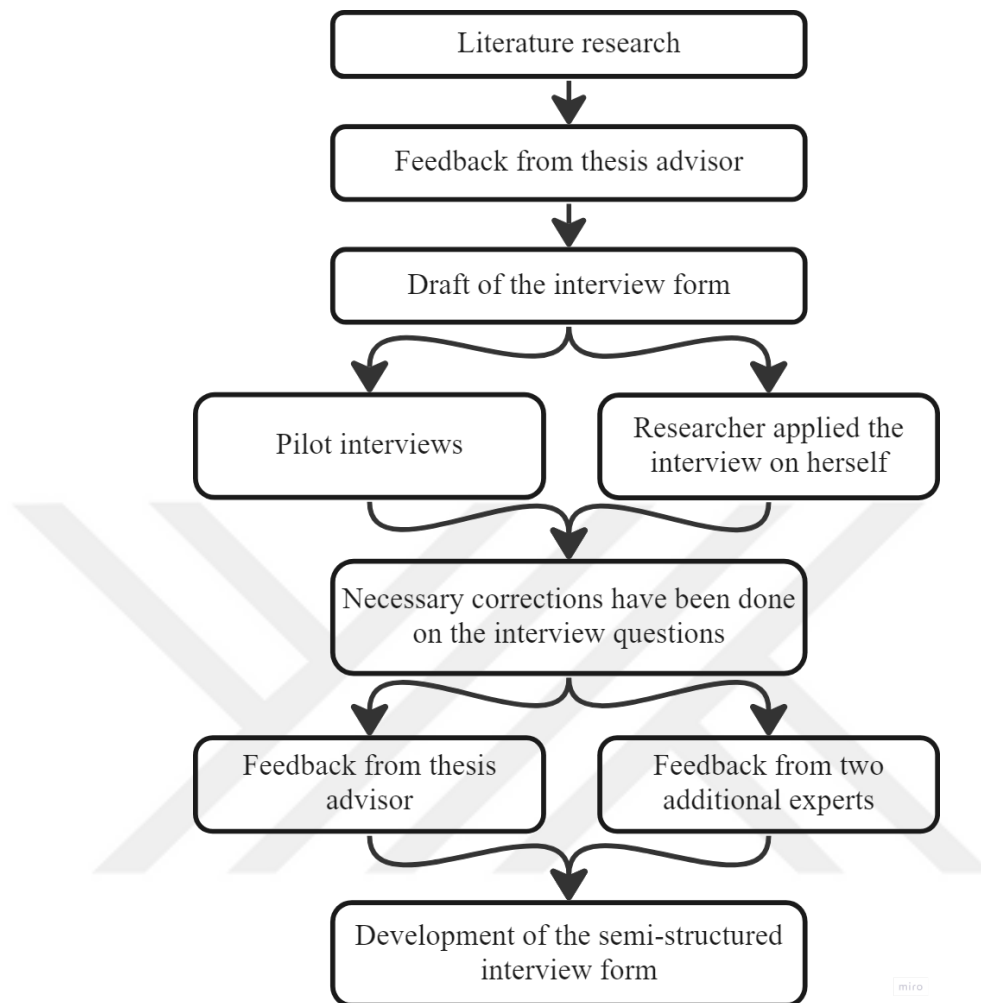
Table 1: Participant Group

Participatns	School Types	Branch	Experience
P1	Private	Turkish	11 years
P2	Private	Social Sciences	5 years
P3	Private	Information Technology	6 years
P4	Private	Science	10 years
P5	Private	Religion	3 years
P6	Private	Turkish	3 years
P7	Private	Math	20 years
P8	Private	Turkish	5 years
P9	Private	Social Sciences	15 years
S1	State	Science	15 years
P10	Private	Psychological Counselling	17 years
S2	State	Turkish	7 years
S3	State	English	13 years
S4	State	Social Sciences	10 years
S5	State	Music	15 years
S6	State	Turkish	5 years
S7	State	Math	5 years
S8	State	Turkish	11 years
S9	State	English	7 years
S10	State	Turkish	11 years
P11	Private	Math	4 years
P12	Private	Science	24 years
S11	State	Science	6 years
S12	State	English	9 years
S13	State	English	9 years
S14	State	Social Sciences	3 years
P13	Private	English	4 years
S15	State	English	3 years
S16	State	English	9 years
S17	State	Religion	2 years
S18	State	English	2 years
S19	State	English	9 years

3.3. Development of the Interview Form

The semi-structured interview form has been used in this research. The interview technique is a process in which there is a researcher and a participant. Both engage in a conversation focused on questions related to the research (DeMarrais, 2004). It is a person-to-person interaction in which one person elicits information from another (Merriam & Tisdell, 2016). The reason for selecting interview technique is to analyse the learning losses produced by the Covid-19 pandemic on students and to identify solutions by including the perspectives of our teachers. The data of the study is collected through a semi-structured interview form. The semi-structured interview is a less structured option. Typically, particular information is sought from all respondents, in which case a more structured section of the interview is conducted. However, the majority of the interview is led by a list of questions or issues to be addressed, and neither the specific phrasing nor the order of the questions is predetermined. This method allows the researcher to respond to the issue at hand, the respondent's developing perspective, and new insights on the topic (Merriam & Tisdell, 2016).

Figure 3: Development process of the semi-structured interview form



An in-depth review of the literature was conducted. Following the literature review, first draft of the semi-structured interview form was created. With the thesis advisor's feedback, necessary arrangements were made on the questions of the interview. As a teacher, the researcher piloted the interview on herself and made the appropriate accommodations. Two additional experts were then consulted, and the draft interview form was reviewed by the experts. Based on the experts' comments and reviews, necessary corrections have been made on the interview questions.

Following the preparation of interview questions, trial interviews were conducted with 3 more teachers from a variety of branches. The interview questions

were reviewed to ensure that they were comprehensible enough by the teachers. Following thereafter, it was checked whether the teachers provided appropriate and adequate responses to the questions. It was seen that some questions were too broad so they had to be separated in order to get more explicit information about the regarding topic. Therefore, more questions were added to the interview form. Following the pilot interviews, required changes were made to the interview questions and the interview questions were revised once again by the thesis advisor. Having given the final form for the semi-structured interview, it was applied for the permission of ethics committee. The semi-structured interview form evolved as a result of this procedure.

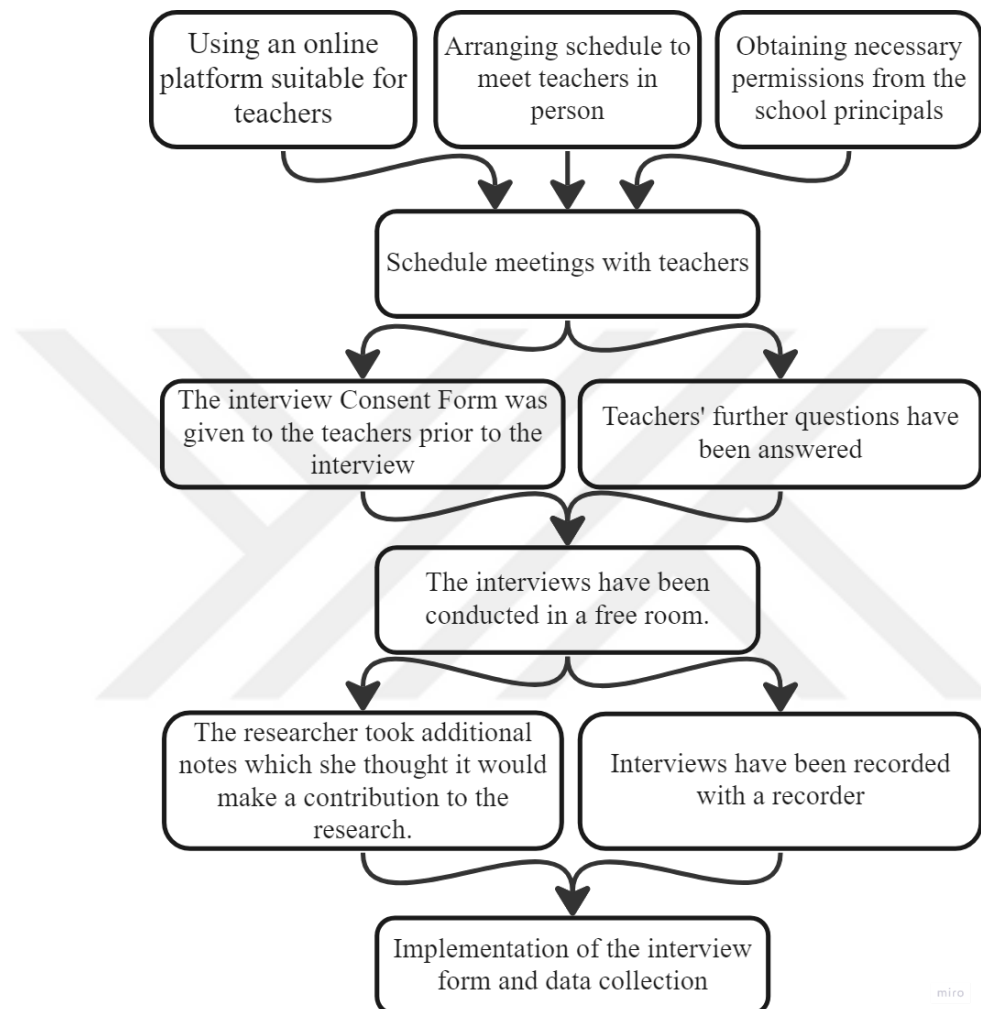
The final form of the interview consists of two pages. At the first page, there is an interview consent form. In this page, participants are informed with the title and a brief information about the research. The participants are also informed about being recorded with a voice recorder in order to prevent data loss. The second page involves personal information and interview questions. In the personal information section, teachers are asked about their ages, branches, schools, years of experience and their educational status. Interview questions come after the personal questions. There are a total of nine questions in the final form of the interview.

3.4. Implementation of the Interview Form and Data Collection

The researcher obtained the necessary permissions from the school principals to conduct the interviews. The data was collected in person during scheduled sessions with teachers in appropriate dates provided by the school principals. It was hard to arrange meetings with the teachers as their schedule was too busy and the school

principal provided a limited time to conduct interviews. For those teachers with busy schedule, interviews have been conducted in an online platform suitable for teachers.

Figure 4: Implementation of the interview form and data collection process



Only three of the interviews have been conducted in an online platform, the rest were in person. Interviews started in March 2022 and continued until April 2022. The longest interview lasted 35 minutes, while the shortest interview consisted of 10 minutes.

“The Interview Consent Form” was given to the teachers prior to the start of the interview. There is no predetermined time limit for the interviews. The length of the

responses offered by the teachers determines the duration of the time. A voice recorder was primarily used for speech transcription. Before the start of the interview, some teachers had some questions regarding the research. In addition, some participants were a bit hesitant in terms of their voice being recorded. The researcher tried to answer the participants' questions in a detailed way, and also offered to send them a copy of the transcript after the interview if requested.

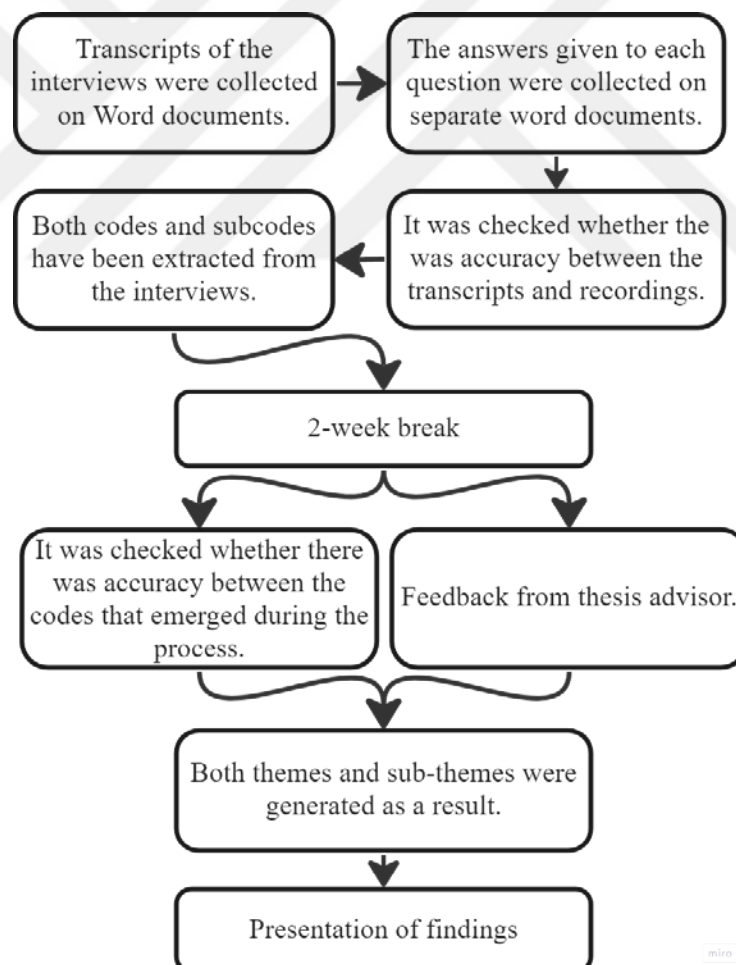
Though the interviews were being recorded with the permission of the teachers, there were some points where some teachers wanted to provide a data without them being recorded. They wanted the interviewer to pause the recording so they could speak more freely. They were afraid that if they had answered the questions while being recorded, they might lose their jobs or might get affected negatively in the future. In these cases, with the permission of the participant, the interviewer took notes and highlighted these points to be careful with it in the data analysis period. In addition, during the interview, the researcher monitored the participants' emotional changes. The researcher took detailed notes on participants' mood such as their excitement and worry, when she thought that it would make a contribution to the research. Overall, all the teachers were very interested in the research and were very eager to contribute in it in any way that they could.

3.5. Data Analysis

In the research, thematic content analysis has been made and themes were extracted as a result. In this section, how the data were analysed by the researcher are given in order.

Interviews with participants were recorded with the permission of the teachers in order to analyse the data collected from the teachers with the voice recorder more easily. The recordings were listened carefully by the researcher to collect teachers' responses on a document. First, for each of the 32 instructors interviewed, a separate word document was opened. Audio recordings were played over these Word documents for the transcriptions. The names of the teachers were coded with numbers and initial letters of their institution in order to ensure confidentiality. To avoid errors, the transcribed documents were listened to and examined several times.

Figure 5: Data analysis process



Later, this data was examined in a more detailed way. New Word documents equivalent to the number of interview questions were formed. First of all, the researcher collected all the responses to the first question on the first created Word document. After listing all the responses to the first questions, researcher started to read them one by one. The researcher extracted a code from the first answer given to the first question by the first participant. Later, the researcher examined the answer of the second participant to the first question. If the extracted code was same with the first participant, it was included to his/hers. If not, then it has been extracted as a new code. The coding progress was applied to the all participants' response to the first question. After being done with the first question, The identical procedure was then followed for the second question. Again, all of the responses to Question 2 were compiled in a Word document. The responses to these questions were coded once more. If an answer to question 2 pertains to question 1, it is included in that section, and any appropriate changes have been made. This method was followed for all inquiries. Themes and subthemes are categorized based on the codes. Based on the facts that the middle school teachers who participated in the research mentioned extensively, the codes were started to be extracted, relations between these codes were established and categorized. Besides the categories, direct quotations of participants' statements were used when found necessary. Finally, the researcher analysed the data by adding his own interpretation as well as her own analysis (Baltacı, 2019).

After giving a final form for the codes, the researcher gave a break to the coding and revised it again two weeks later. It was checked whether there was accuracy between the codes that emerged during the process. After the coding, these codes have been collected in a Word document with teachers' quotations and then sent to the thesis

advisor for his feedback. With the help of thesis advisor's feedback, necessary corrections had been made over the codes. At the end of the process, the advisor checked once again whether the necessary corrections were done properly by the researcher.

3.6. Validity and Reliability

In this section, it will be explained the issues related to the reliability and validity of the research. Validity is important part of qualitative research which hinges upon whether the collected data are accurate, main points that need to be addressed are trustworthiness, credibility and authenticity (Creswell et al., 2018). Along with validity, reliability is also very important part of the research. In order for research to be reliable, researchers document the entire procedure of their case studies, along with all the steps taken during the entire length of the research, so others can follow and replicate it in the future (Creswell et al., 2018).

The matters that are considered for validity and reliability have been categorized and given below.

Development of the Interview Form:

- Thesis advisor actively got involved in the process of developing the interview form. Throughout the development of the interview form process, the researcher and the thesis advisor actively exchanged ideas and made corrections on the questions.
- The researcher, as a teacher, piloted interview questions on herself and made necessary accommodations.

- After having a draft of the interview form, pilot interviews have been done with three teachers. It was aimed to find out whether the answers provided to the questions were appropriate and adequate in order to get explicit information.
- The interview questions were thoroughly reviewed by consulting two more experts. Necessary adjustments were made on the questions with the opinions of the experts.

Implementation of the interview form and data collection

- Before conducting the interviews, researcher made sure that she had enough knowledge about the school and the regarding topic in order to conduct more effective interviews.
- On the days of interviews, a private room had been requested from principals for interviews to take place. The researcher aimed to conduct interviews with teachers in one-on-one places so that teachers would be able to convey their ideas more freely.
- Before the interviews, teachers were given “Interview Consent Form” to let them know about the study itself. Participants were informed that the interviews were completely voluntary and that their contributions would be kept completely confidential. If they had further questions, the researcher answered them in a detailed way.
- The researcher kept the questions within the framework of the interview and did not guide participants in any way.

Data Analysis

- The interviews have been recorded with a recorder. The collected data were transcribed by the researcher herself.
- The thesis advisor actively participated in the data analysis process. He checked the results of the codes and made sure there was a consistency between the codes.
- In addition to the interviews, the researcher used her highlighted notes in which she thought it would make a contribution to the research.
- After extracting both themes and sub-themes, the researcher gave a break to the data analysis process and revised it again two weeks later in order to check the accuracy between the codes that emerged during the data analysis process.

Findings

- Direct quotations of the participants were included in order to reveal the impartiality and to deal with the research problem as a whole.

3.7. Procedures

In this section, it will be mentioned about the procedures that the researcher went through for the research.

Having decided the title and the aims for the research, it was applied ethics committee in order to get necessary permissions. The researcher had to fill out a form which included the title of the research, information for both the researcher and thesis advisor, the importance of the research along with its purpose, sample selection and lastly ethical matters. With the approval of the thesis advisor, it was sent to the committee and necessary permissions have been obtained.

Having given a final form for the semi-structured interview, it was decided to interview middle school teachers with 2 years of experience from both state and private schools. However, in order to be able to interview teachers from various schools, necessary permissions from MoNE had to be obtained. For this purpose, an application had been made to MoNE in order to get necessary permissions to interview teachers from both state and private schools. The application form involved the consent form, the interview questions, and thesis proposal for both Turkish and English languages. As the permissions were granted from MoNE, the researcher set up meetings with the school principals to get their permission to conduct interviews in the school.

It was aimed to interview teachers from both state and private schools. In this manner, the researcher set up meetings with school principals in their available time. School principals were informed briefly about the thesis research. The necessary permissions from both MoNE and ethics committee were handed to the school principals. The researcher answered school principals' questions and tried to inform them as much as she could. Some school principals had to reject due to teachers' busy schedule and some had to reschedule to a later time. For those principals who gave permission for the researcher to conduct interviews, they used group chats to let middle school teachers know about the research. It was decided on the appropriate dates to conduct interviews with the teachers based on the schools' condition.

As necessary permissions had been obtained from school principals, the researcher went to the schools on the scheduled time. It was asked for a separate room in order to conduct interviews. The teachers were handed out a consent form. They were briefly informed and how their contribution would have an effect on the research. It was asked

for teachers' permission to record their voice during the interview. Teachers were explicitly informed it would be made sure to ensure confidentiality.



CHAPTER 4: FINDINGS

In this chapter, the findings obtained from the interviews will be presented. A deep content analysis has been made and both the themes and sub-themes have been extracted from the research. In the table given below, the themes corresponding to the research questions are indicated:

Table 2: Themes and sub-themes corresponding to the research questions

1- According to teachers' opinions, were there any learning losses students experienced during the pandemic?	There are learning losses experienced by the students due to: • Lack of face-to-face education and discipline • Lack of opportunities and connection problems • Adaptation to online education • Loss of interest and motivation • Parents' lack of interest and involvement
2- According to teachers' opinions, were there any differences among students in terms of learning loss during the pandemic? If so, what were the factors affected the differences among students?	• Individual differences • Parents involvement • Inequality of opportunity in education • Interest and motivation • Discipline and sense of responsibility • There is no differentiation in learning losses
3- If learning losses have occurred during the pandemic, what had been done to compensate for these learning losses in teachers' current schools?	• Additional studies and courses • Compensatory courses during the summer holiday • Individual compensatory programs • Retrospective course repetitions • Help provided for students with no opportunities
4- If learning losses occurred during the pandemic, how can these learning losses be compensated according to the opinions of the teachers?	• Additional courses • Reducing the scope of the curriculum • Encouraging the peer-teaching • Psychological support • Cooperation of parents and teachers • Fundamental changes in education

In order to be seen more holistically, all themes and sub-themes as well as their frequency have been listed under:

Table 3: List of themes and sub-themes

Themes	Sub-themes	Frequency
Face-to-face education before the pandemic	Students were more interested in the lessons	11
	It was easier to communicate with the students	6
	It was easier to progress in the curriculum	6
	Classroom management was easy	5
Face-to-face education after the pandemic	Decreased student achievement	11
	Difficulty in communicating and supervising students	10
	Decreased interest and motivation	10
	An increase in anxiety	4
Similarities in face-to-face education before and after the pandemic	No similarities	14
	The characteristics of students remain the same	4
	The continuity of the teachers' efforts	4
	A classroom environment with ongoing curriculum	3
	Continuation of pre-pandemic problems	1
Differences in education before and after the pandemic	Differences in students:	
	• Learning losses experienced by the students	9
	• Students' screen time increased	4
	Differences in teachers:	
	• Difficulty in maintaining discipline in the classroom	7
	• Difficulty in communicating with the students	4
	• Difficulty in supervising students	3
	Differences at school:	
	• Loss of interest and motivation	9
	• Use of masks in the schools	2
Causes of the learning losses	Lack of face-to-face education and discipline	24
	Lack of opportunities and connection problems	19

	Adaptation to online education	11
	Loss of interest and motivation	10
	Parents' lack of interest and involvement	10
	There are no learning losses	1
Reasons for differentiation of learning losses among students	Individual differences	15
	Parents involvement	14
	Inequality of opportunity in education	12
	Discipline and sense of responsibility	5
	There is no differentiation in learning losses	2
The effect of learning losses on teachers	Difficulty in progressing the curriculum	20
	The increase in the workload	16
	Difficulty in adjusting to school	4
	More in need for self-development	4
	Decreased time devoted to academic careers	2
Studies done at school to compensate for learning losses	Additional studies and courses	20
	Compensatory courses during the summer holiday	9
	Individual compensatory programs	8
	Retrospective course repetitions	6
	Help provided for students with no opportunities	2
What should be done to compensate for learning losses	Studies should be done to compensate for learning losses	
	• Additional courses	11
	• Reducing the scope of the curriculum	9
	• Encouraging the peer-teaching	2
	• Psychological support	2
	• Cooperation of parents and teachers	2
	• Fundamental changes in education	2
	Studies for the compensations should have been carried out at the beginning of the pandemic	
	• The lost time cannot be brought back	2
	• Equality of opportunity should have been ensured	2
	• There should have been courses opened by the government with an individualized compensation program	2
	The studies carried out for the compensations are sufficient.	2

Next section will include sections of themes separated by each and they will include detailed explanations regarding the themes and sub-themes. The sub-themes are ordered by the frequency of the data provided by the teachers and it will also include the quotations of the teachers.

4.1. Face-to-face Education Before the Pandemic

The primary focus of this section is the first theme from the table above, namely face-to-face education before the pandemic. In this scope, teachers explained the education that they had before the global pandemic. It was seen that teachers mostly mentioned four headings. Teachers mostly talked about the motivation of the students, communication with the students, curriculum and lastly the classroom management. It is good to mention that most teachers were smiling while talking about the mentioned period. They were mostly using positive words such as good, nice and having a positive attitude in general. Teachers claimed that face-to-face education before the pandemic was seen as a more cheerful and social period.

4.1.1. Students were more interested in the lessons

When the teachers were asked to describe the face-to-face education period before the pandemic, the most frequently mentioned topic was the motivation and interest of the students. Teachers claim that students were more interested in the lessons and therefore, more motivated to study. It has been mentioned that before the pandemic students were listening to the lessons more carefully. Since students were paying closer attention to the lesson, the teachers were able to do more activities regarding the lesson. P2 quotes: *“Before the pandemic, students were more focused and attentive. They were*

aware that the compensation lessons would only be done at school and there would be no other compensations. In this manner, students were more focused while in the pandemic students were less focused.”

4.1.2. It was easier to communicate with the students

Secondly most mentioned topic was the communication with the students. Teachers claim that the communication was easier to construct with the students during the face-to-face period before the pandemic. Students were more open to communication and were more connected with each other. Teachers believe that being in a close environment with students helps them in creating a more sincere environment and understand students' feelings in a more comfortable way. Students were more interested in their environment as well as being more open to communication. Teachers were able to solve the problems faster as students were more open to communication. About the matter, P10 says: *“Students would come to meet about the problems they experience with the school related to friendship, peer relationships, individual development... We would come up with solutions to them very quickly.”*

4.1.3. It was easier to progress in the curriculum

Curriculum was among the most important points mentioned by the teachers. According to the teachers, it was easier to progress in the curriculum in the face-to-face education before the pandemic. Units were separated over the semester and it could be progressed according to the program. Students were already familiar with the school rules and climate, hence they had no adaptation problems. Relatively, it resulted in the curriculum to be progressed much easier by the teachers. S3 says: *“It was much more*

efficient. We were progressing through the curriculum more smoothly. Also the lessons were going smoother. It was a good- a better period.”

4.1.4. Classroom management was easy

Lastly, a small amount of teachers talked about the classroom management. During the mentioned period, teachers mentioned that students were much calmer in terms of classroom management. P12 quotes: *“The face-to-face education before the pandemic... Students were different from their current state. They were more disciplined and more adapted to the school.”* Another teacher also supports the idea by saying that students used to be ready for the lessons by putting their books and notebooks in front of them before the lessons and wait calmly for teacher to start. Therefore, these teachers used to be more comfortable with the classroom management.

4.2. Face-to-face Education After the Pandemic

In this section, it will be mentioned about the second theme which is face-to-face education after the pandemic. To briefly define face-to-face education period after the pandemic, it means to portray the period in the classroom after students went through the online education. Compared to the first theme, the face-to-face education period before the pandemic, it was noticed that teachers showed a more thoughtful and unhappy approach while talking about the face-to-face education after the pandemic. Teachers mostly talked about four headings. These are achievement of students, communication and supervision, interest and motivation, anxiety.

4.2.1. Decreased students' achievement

Decreased students' achievement was the most mentioned heading by the teachers. As students got away from the classroom and got used to their home environment, it became very obvious to see the decrease in the success of students when they got back in the classrooms. Teachers support their idea by saying that students did not just lose 2 years of education, but also fell behind as they had forgotten the knowledge they had already been taught. S12 says: *"When we came back, students had moved to the next grade, but unfortunately the information is missing. And now, we are suffering because of it. In fact, students forgot even the existing information."* As well as S12 teacher, P12 also supports this by saying: *"When students came back this time, the loss of information was too great. A lot of things felt like they were deleted."* The cause of students forgetting the existing information created a gap in the knowledge between grades which resulted in their loss of achievement.

4.2.2. Difficulty in communicating and supervising students

Difficulty in communicating and supervising students was among the most discussed points among the teachers. Students were away from school for almost 2 years. They had to be in lockdown for a long time due to pandemic, hence teachers claim that this made students more introverted. Considering this matter P5 teacher says: *"In the pandemic, they were quieter, they were introverted. They did not prefer to talk, on the contrary, in my opinion, their understanding of gestures have improved."* As can be seen from the quote of the teacher, some students got more introverted due to being in a lockdown for a long time and being away from the actual classroom. However, some teachers have claimed this situation caused them to get more violent. In the face-

to-face education after the pandemic, tendency for violence has begun to be observed. In the topic of violence, P13 claims that students had attempted to beat each other to death and it escalated into a very intense situation in the classroom. This started to create a difficulty in supervising students.

4.2.3. Decreased interest and motivation

Equally with communicating and supervising students, decreased motivation and interest have been observed in students according to the teachers. Teachers see that students' will for learning the lesson has decreased drastically. As students lost their motivation and interest towards the lesson, some students stopped going to the school after the pandemic. S8 says: *"There are students who do not come to school. There are after-school workers. There has been a significant increase in this. There is a serious decrease in lesson motivation. I can see it very clearly."* As students are not really interested in the lesson, they tend to play with their masks or shift their focus to something else happening in the classroom. Teachers say that even if they warn students, it does not help students to stay focused to the lesson. Students' cannot maintain their attention, hence they cannot sustain any activity for too long. They get bored very quickly.

4.2.4. An increase in anxiety

Lastly, a small amount of teachers mentioned an increase in anxiety. According to the teachers, not only students but also teachers were feeling very anxious during the face-to-face education after the pandemic. Especially in state schools, the number of students tends to be very high. For this reason, they were afraid that they would be

infected with Covid-19. S5 adds: *“I had been infected with Covid-19 twice, I got it from students. We are not as comfortable as before. Our anxiety in the lessons as well as in meeting with students did not exist before.”* As students were also afraid that they might get infected, some did not want to come to school. Since there was a panic situation in the schools due to pandemic, both students and teachers had hard time with adjusting.

4.3. Similarities in Face-to-face Education Before and After the Pandemic

In this section, it will be mentioned about the third theme which is similarities in face-to-face education before and after the pandemic. As teachers described these two periods, they thought about the similarities between these mentioned periods. It was noticed that they had a very hard time with finding a similarity, hence they needed a long time to think about it. The small minority of teachers came up with four similarities. These four similarities are: the characteristics of students, the continuity of the teachers' efforts, a classroom environment with ongoing curriculum and continuation of pre-pandemic problems. These headings will be explained in detail under this section.

4.3.1. No similarities

Most of the teachers agreed that there were no similarities between them. They could not find any similarity and even one teacher said that he needed a whole day just to think about this question in order to find a similarity. It is a very difficult thing to do since these two periods are completely different from one another. S11 quotes: *“Unfortunately, the negative aspects are mostly in the foreground.”*

4.3.2. The characteristics of students remain the same

As a similarity, a small amount of teachers claimed that the characteristics of students remained the same. For instance, if the student is not interested in the lesson itself, s/he remained the same and was still not interested in the lesson after the pandemic. Their characteristics remained the same even after behaviourally evaluated. Examples teachers provided include their energy, a need to run and move around the class remained the same as well as their puberty problems.

4.3.3. The continuity of the teachers' efforts

Some teachers could only see their efforts as the only similarity. They believe that the continuity of the teachers' efforts remained the same. Teachers' point of view and attitude towards students did not change after the pandemic. Teachers state that they still tried to reach out to their students as much as they could. Even at some point, teachers had to give more effort than they used to give before the pandemic. P2 quotes: *"Teachers effort! Because a teacher had to spend at least 3 times the effort in the classroom. In terms of education, the burden on the teacher has not changed. On the contrary, the burden on the teacher has increased. That is the only common point."*

4.3.4. A classroom environment with ongoing curriculum

Another apparent similarity seen by the teachers is having a classroom environment. Looking at the situation in a simpler framework, compared to the face-to-face education before the pandemic, there are still teachers and students in the classrooms. Basically, there is still a classroom environment and a curriculum in

progress. Despite the setbacks, the education has continued. S5 adds: *“I think the only similarity is to be able to go back to the classes. We are almost back to the way we used to teach before. Although we have our anxieties, we are returning to the classrooms.”*

4.3.5. Continuation of pre-pandemic problems

Lastly a very few teachers mentioned about the continuation of pre-pandemic problems. According to them, there were already some problems in the field of education before the pandemic. To be more specific, there were some technical and systematic problems. In addition to them, there were lack of resources and books related to some specific branches. The students who were uninterested and had problems also remained so after the pandemic. To sum up, in the face-to-face education after the pandemic, these problems continued without coming to a solution.

4.4. Differences in Education Before and After the Pandemic

In this section, it will be mentioned about the fourth theme which is differences in education before and after the pandemic. As teachers mentioned about the similarities, subsequently, they talked about the differences between the mentioned periods. While naming the differences, it was noticed that teachers categorized their answers in three sections. These sections are differences in students, differences in teachers and lastly differences at school. While talking about the differences in students, they talked about students' learning losses and screen time. When it comes to differences in teachers, the mentioned difficulties are maintaining discipline in the classroom, communication with students and their supervision. Lastly, while talking about the differences at school, teachers came up with two headings: loss of interest

and motivation as well as use of masks in the schools. These headings will be explained in detail under this section.

4.4.1. Differences in students

In this section, it will be mentioned about differences that are seen in students.

4.4.1.1. Learning losses experienced by the students

The first thing and the most realized differentiation between these periods was the learning losses experienced by the students. Learning losses seem to be the biggest issue among all of them. Teachers emphasized that learning losses have occurred to a great degree. S1 says: *“When the students were away from school for 2 years, we started to have great problems. For instance, 5th grade student became a 7th grade student when the pandemic was over. During the two years in between, the behavior that should have been taught to them could not have been achieved. Maybe 3% or 5% could be taught to students instead of 100%. A 2nd grade students came directly to our school without experiencing 3rd or 4th grades.”* As can be seen from the teacher’s quote, students are having a 2 year learning gap in their education. Not only having a learning gap but also there is a loss in their current knowledge. For instance; an English teacher S18 has given an example: *“I teach 6th grades and the students do not know “am/is/are” yet. They do not know the subjects. At first, I teach the Turkish lesson. I teach them what the subjects and verbs are in Turkish, then I switch back to English. Our job got harder. I am speaking on behalf of English field. I am having a more difficult time.”* In conclusion, teachers agree in the period where there was no face-to-

face education, learning losses occurred and these losses were observed when students came back to the actual classroom.

4.4.1.2. Students' screen time increased

Another theme that teachers pointed out was about students' screen time. As students spent their most of time on technological devices like computer, tablet and phones, it resulted in their screen time getting increased. Students had to use their devices to connect to lessons online. Students had to do everything online. Some teachers claimed that this situation actually helped students to improve themselves in using technological devices. Though spending so much time on screen had some positive aspects on students, negative aspects outweighed the positives. Some students became addicted to technological devices and to the virtual environment. Considering addiction to the devices, S13 adds: *"Since they use their tablets and phones more often, it is most likely that everything is in the virtual world for them. Nothing in the real world interests them too much. They want to go home as soon as possible to reach their phones and tablets."* From the teachers' perspective, in addition to students' addiction to devices, screen time also had negative effect on their physical condition. Students' physical activity has decreased as they had to stay at home and connect through their devices. When they came back to the actual classrooms, teachers realized that students had gained a lot of weight. At the same time, students' interests have been decreased drastically as all they want to do is to play games on their devices.

4.4.2. Differences in teachers

In this section, it will be mentioned about the differences that are seen in teachers.

4.4.2.1. Difficulty in maintaining discipline

Teachers claim that the biggest difference is maintaining discipline in the classroom. As students got used to the being in home environment, when they came back to the classes, they wanted to move around as they did in their homes. It is believed by the teachers that students began to have adaptation problems hence they became more undisciplined. Even in private schools where the lessons take 35 minutes, being stuck in a classroom for that period of time did no good for students. Students started to have impulses to go out of the classroom. They asked for permission to go to bathroom or canteen more than they did before the pandemic. S11 quotes: *“Students spent more time outside because of the lack of interest as they have been away from the school during the pandemic. They spent more time on activities that are out of the school. For this reason, it was hard to keep them in the classroom when were back to the schools.”*

4.4.2.2. Difficulty in communicating with the students

Along with discipline problems, communicating with the students was also a point that teachers struggled with. Teachers claim that they started having a communication problem with the students after the pandemic. P9 quotes: *“We did not quite understand what the student meant. At the same time student did not quite understand what we meant. In fact, face-to-face education started after the pandemic,*

but actually it was eye-to-eye education rather than face-to-face education because we had to cover our mouths with a mask.” Not being able to see the mimics of the student had created a communication problem between students and teachers. Furthermore, teachers claim that in education after the pandemic, there was no sincerity in the conversations since students used to be much more social before the pandemic started. For example, when a student talked about an event that s/he experienced, the others would empathize and feel his/her joy or sadness. However after the pandemic, P5 claimed that students have lost the sincerity in their conversations. They would just listen each other as if they were at a conference. For these reasons provided by teachers, communication between students and teachers was affected in a negative way.

4.4.2.3. Difficulty in supervising students

Lastly, a small sample of teachers experienced difficulty in supervising students. According to the teachers, they are having a difficult time with supervising students especially in terms of assessment and evaluation. If the exams were prepared in the classroom environment, they could be more in line with students’ abilities. However, as students were away from the school for a really long time, questions presented in the exams were not very selective in terms of defining students’ success. Teachers could not track students’ success as much as they used to before the pandemic.

4.4.3. Differences at school

In this section, it will be mentioned about the differences seen at school.

4.4.3.1. Loss of interest and motivation

The biggest difference in both teachers and students is the loss of interest and motivation. Teachers claim that there are several reasons for the loss of interest and motivation. For students, spending too much time on screen made them lose their interest in the lessons. Being away from the social environment for almost two years reduced their motivation. Students started having concerns about the future as there was an uncertainty during the pandemic. Some teachers started having financial problems during the pandemic as well as some students' parents. This has convinced teachers that it reduced both teachers' and students' motivation. S15 quotes: *"Students' attention has decreased a lot due to listening to lectures in front of a screen and playing games in the meantime. 40-minute long lessons were reduced to half an hour at my school and we were not extending the time. Even in half an hour, gathering students, adapting them to the classroom, teaching the lesson was feeling like a misery. It was pretty bad, to be honest."*

4.4.3.2. Use of masks in the schools

Teachers claim that the use of masks in schools had an impact on students' interest and motivation. Students had to distance themselves from their peers and they have struggled with their masks in the classrooms considering classrooms are very crowded and closed up areas. The use of masks became more problematic especially in branches such as music. The music teacher S5 explains this situation: *"The use of masks makes it really difficult for us in the classrooms. Especially in my class, it can be difficult for students to use masks all the time for 40 minutes as songs are constantly being sung in the class. We ventilate the classroom as much as possible."*

4.5. Causes of the Learning Losses

In this section, it will be mentioned about the fifth theme which is the causes of the learning losses. Teachers compared before and after face-to-face education both with similarities and differentiations. After the comparison between these two periods, teachers talked about whether they had observed any learning losses in their classrooms. Out of 32 teachers that participated in the interview, all responded with definite yes without any hesitation except for one teacher. For those teachers who had observed learning losses, they were asked about the reasons for learning losses. It was listed in five headings. These are lack of face-to-face education and discipline, lack of opportunities and connection problems, loss of interest and motivation, adaptation to distance education, parents' lack of interest and involvement.

4.5.1. Lack of face-to-face education and discipline

The majority of teachers pointed towards the lack of face-to-face education and discipline as a reason why learning losses have occurred. They believe that serious learning losses are caused due to students staying away from school and online education. In face-to-face education, teachers have a chance to intervene when they see necessary. They have the greater control over students' education. It is easier to check students' homework and make them revise what they have learned throughout the lesson. However, teachers were not able to intervene in the online education. Teachers agreed with having serious problems maintaining discipline, structuring the lessons and motivating the students. Considering the online education, S2 talks about: *“There, we didn't feel like teachers. When you are in a face-to-face education, you are more intertwined with the students. You understand students' feelings better. I don't think it*

is efficient in online learning.” As teachers could not understand students’ feelings and have control over their learning, they could not figure out when students needed help, or got confused over a subject. The online education was also lacking the interaction between the teachers and students. Teachers also claim that the lack of interaction results in knowledge to be forgotten easily. P11 comments: *“Knowledge acquired by interaction is more permanent. But in the other, there is no interaction when the students learns through a small screen. Student learns but the knowledge is not as permanent. It is impersonal knowledge, there is no memory of it. I think the knowledge is being forgotten due to a lack of interaction.”* In online education, there was a problem with the participation. Some students just left online education and stopped participating in the lesson. The system that teachers used in online education did not let teachers know whether students were having connection problems or not. Therefore, teachers were unable to keep track of their students.

4.5.2. Lack of opportunities and connection problems

Teachers also spoke about the lack of opportunities and connection problems as reasons for the learning losses occurred. With the pandemic, online education took place over the face-to-face education. However, in this transaction period, it was not checked whether each student had a technological device to join the lessons. Students in private schools had more access to the technological devices and a better connection. Nevertheless, this was not the case for students in state schools. A math teacher S7, witnessed the online education period in both state and private schools. She compares both private and state schools with these words: *“At the beginning of the pandemic, I used to work at a private school. There were lots of opportunities. We were able to take*

the advantage of educational technologies a lot. I believe that it was effective in this aspect. Rather than a traditional education, a more age-appropriate education could be followed but the same thing did not happen in the public school. I switched to public school in the other half of the pandemic period and my students did not have the opportunity to participate there. Perhaps only 20% was able to participate.” In state schools, students were in a more disadvantaged situation compared to the students in private schools. As students from state schools mostly come from a lower socio-economic background, they have lesser access to the technological devices compared the students in private schools. A state school teacher (S1) said the following about this disadvantaged situation: *“Since we were in a neighbourhood with a low socioeconomic status, it was difficult for students to access the internet, tablet or a phone. There were either none of them at home or there was only one but four siblings had to go to school. They were taking turns to go to class and they were choosing in between important lessons. To give an example, for important lessons: ‘I have a math class, I will use it. You don’t use it for Turkish and social lessons, you will join them tomorrow.’ They used to take turns that way which had disrupted the classes.”* As can be seen from the teacher’s example, some students could not have access to the lessons. Not being able to access the lessons at all have caused learning losses to occur. There was also connection problems both for students and teachers. In the transition period, there was not a stable connection. Everyone was trying to access internet in the lockdown period whether it was educational or not. Teachers said that there were more subscriptions to the internet than it could be handled so it resulted in slow speed and disconnection. Hence teachers’ connection had been cut off every now and then. At the same time, students were having a hard time accessing the lessons.

4.5.3. Adaptation to online education

Teachers' point of view is that adaptation to online education was one of the reasons for the learning losses. The face-to-face education was the system that students were always used to. The transition to the online education was so fast that students could not adapt all at once. Rather than being at the school environment, they were at home. They had to take lessons for at least 6 hours a day behind a screen. Therefore, teachers argue that students could not perform well and assimilate to the education. The online education was a new method throughout the whole country. Both teachers and students needed to perform different educational techniques than before. Therefore, it left students and teachers unorganized and unprepared for the new system. Application and adaptation to the new system took a very long time. S18 quotes: *"Online education has not been tried in our country because this need emerged with the pandemic. It already existed before in other countries. Students were able to take some courses online, they were already aware of the online education system. However, we were just starting to online education and most of the students haven't attended online classes before."* resulted in the ineffectiveness of online education.

4.5.4. Loss of interest and motivation

As stated by the teachers, students had lost their interest and motivation. In online education period, some students could not join due to having lack of opportunities. However, in some cases it was not a matter of opportunity but a matter of interest. There were some students who simply did not want to join the lesson out of interest. Teachers believe that these students wanted to spend their time playing at home, some did not want to get out of the bed, some just wanted to play with their pets,

or just wanted to take care of different things at home rather than staying on a computer and listening to the teacher. Teachers claim that it became really difficult for them to push students to get them in to the class. Some students even made up excuses so they would not have to join the class by claiming that they do not have internet or a computer. A Turkish teacher (S8) says that her students came up to her and said *“Teacher, I am not motivated anymore. I don’t have a purpose or a request about anything. Just sitting and solving 5 questions is too hard for me.”* However, she says that these students used to solve more than 300 questions in a day. Because of the loss of motivation and interest, teachers claim that these learning losses occurred.

4.5.5. Parents’ lack of interest and involvement

Lastly, a small amount of teachers talked about parents’ lack of interest and involvement caused learning losses. Especially those parents, who had to work, left some students on their own at home. Therefore, students had to take the responsibility of their own learning. P6 quotes: *“Some students said that their connection was broken and left for a long time. Since their parents were working, it was left to students’ under control. These students had serious learning losses.”* Students were left to their own devices, and teachers believe that some students did not care as much. No one was keeping an eye on the students, eventually they turned off their webcams and just focused on something else rather than the lesson itself. Teachers argue that there should be a cooperation between teachers and parents. Those parents should keep an eye on their student and support their learning throughout the pandemic period as teachers were having a hard time communicating with students on an online platform. Teachers mention that there were some cases where the parents sent students’ homework back to

the teacher for him/her to do it instead of the student. Also some parents did not communicate with the teachers at all. Teachers believe that everything mentioned above points towards learning losses due to parents.

4.5.6. There are no learning losses

Among all teachers that have been interviewed, only one teacher thinks that there are no learning losses considering her branch. The P3 teacher who is an information technologies teacher responded with “no” to the question. She did not observe any learning losses and even claimed that pandemic period has been better for her as her course is already about improving the use of computer skills. In the online period, students had to make more use of the technological devices and improve their skills. As students had to use the program called “Zoom” to access online lessons, skills such as the using the program, recording what you learned, opening a file and etc. have developed more throughout the pandemic. According to her, the limiting factor to not being able to reach out to students directly was the only negative effect. Normally when students had an issue with something on a computer, she would just walk to them and provide help immediately. This was not the case during the pandemic. She could not reach out her students’ computer during the pandemic. P3 quotes: *“Since online lessons were held with the Zoom program, students’ skills such as using the program better, recording what they have learned, and opening files have developed. We just had some difficulties with me being unable to help them but we overcame this problem by making students share their screen.”* However, as she states in her quote, she was also able to come up with a solution to reach out to her students during the pandemic.

4.6. Reasons for Differentiation of Learning Losses Among Students

In this section, it will be mentioned about the sixth theme which is the reasons for differentiation of learning losses among students. Teachers talked about whether all students were affected by the pandemic at the same level or whether the learning losses experienced by students differed among students. Apart from two teachers, the rest agreed that learning losses differed among students. For those teachers who claimed that there is a differentiation between learning losses among students, they categorized the reasons in 5 headings: parents' involvement, inequality of opportunity in education, individual differences, interest and motivation, discipline and sense of responsibility. These headings will be explained in a more detailed way after this section.

4.6.1. Individual differences

Individual differences also mattered for the differentiation. There were some students who took notes while participating the lessons. They recorded the lessons and repeated what they had learned throughout the day. Teachers state that students who were disciplined and organized were one step ahead of the ones who did not do the same. These students were less affected by the learning losses. S15 quotes: *“The students, who were disciplined in the lessons before the pandemic, continued to pay attention to the lessons even after the pandemic. Students who came to lessons from time to time stopped coming completely after the pandemic. Individual differences affected the differentiation of learning losses.”* In addition, some students preferred face-to-face education rather than online education. Students are able to understand lessons more effectively when they have the opportunity to come into the actual classroom and ask questions to the teachers. When it was in online platform, they were

struggling with keeping up their attention. There are also some students who are very dependent on their teacher. These students are the emotional ones that get more efficient when teacher touches their shoulder and makes an eye-contact. As teachers could not convey emotions through the screen, these students experienced more learning losses compared to the others.

4.6.2. Parents' involvement

Teachers mostly talked about the parents' involvement. Some parents with educational background supported their children at home as much as they could, however this was not the case for students whose parents had no educational background. Those students who had no support from their parents would normally take it from their teachers in the classrooms. When students had a hard time communicating with the teacher during the pandemic and could not get help from their parents, got left behind. It also goes same for the parents with interest. There is a big difference between a student who was supervised by their parents and one who was not. This difference was caused by parents' involvement in students' studies. Those parents who followed their children throughout the pandemic resulted in students who were not as affected by learning losses. They were getting feedback from their children by asking questions about their lessons, checking their homework and helping students in need, but for those students lacking self-control over his/her learning, in addition with disinterested or busy parents came with serious learning losses compared to the others.

4.6.3. Inequality of opportunity in education

According to the teachers, another big reason for the differentiation is inequality of opportunity in education. Especially students from private schools had all kind of resources and opportunities at their disposal. Those who had the internet, the computer and a bit of an interest stayed connected to the lessons. Parents with higher socio-economical background also provided private teachers and additional courses for their children to not fall behind with their education. Some students had these opportunities even before the pandemic so it was not something new. However teachers claim that pandemic has deepened the inequality between the ones having the opportunities and the ones that do not. Some students had access to almost none of the technological devices. Some students had to wait for father to come to use his phone in order to connect to the lessons and to do their homework in the EBA platform. Another example, there was only one tablet with an unstable internet connection for 3 to 4 students in a house. They tried to connect to their neighbour's connection and connect lessons to their respective classes. About the inequality, S4 says that it also existed before the pandemic by making an analogy regarding the heading. He thinks of inequality of opportunity as a scissors. He thinks that the scissors were not widely open before the pandemic. However when the pandemic came, it became wide open. He quotes: *"Students are either very good or very bad. This shows that disadvantaged students are more affected by the pandemic. I observe the differences in class participation and exam success. While there are only two students with 100 scores, students with 10 points are much more common. The middle part of the scissors is even narrower, we are at the ends of the scissors."* It is a very dependent on state of economy. If it could

be managed better in terms of each student having a technological device and a connection, the education would have been more effective.

4.6.4. Discipline and sense of responsibility

Lastly, teachers' point of view is that discipline and sense of responsibility was one of the reasons for the differentiation. This is related to the students' self-control. Students who provided self-control and attended classes regularly did not have any problems in terms of education. If the student has a great sense of responsibility, he does his/her part. If the student is also provided a regular and a disciplined environment at home came with less learning losses compared to those who did not. In short, in the online education period, those students who did not forget about being a student and fulfil their responsibilities accordingly, are ahead of others.

4.6.5. There is no differentiation in learning losses

Two teachers claimed that there were no differentiation in learning losses among students. In their perspective, every student is affected in the same way. If a student was a successful student before the pandemic, s/he stayed in that way after the pandemic. Same goes for the unsuccessful students. In short, only success rates were lowered equally for all students. Therefore, these teachers believe that there are no differentiations in terms of learning losses. P5 quotes: *"I don't think it differs. All students are affected in the same way. If a student was ninety percent successful, it dropped to eighty five percent. The student was still defined as a successful one. A 60% successful student got dropped to 55 percent. In short, the success rated were lowered.*

The successful student was still successful, the unsuccessful student still failed. To conclude, I think, there is no change.”

4.7. The Effect of Learning Losses on Teachers

In this section, it will be mentioned about the seventh theme which is the effect of learning losses on teachers. It is very obvious fact that learning losses have a great negative impact on students. Teachers talked about how these learning losses on students had an effect on them. The teachers came up with 5 headings. These are the difficulty in progressing the curriculum, the increase in the workload, difficulty in adjusting to school, more in need for self-development and decreased time devoted to academic careers.

4.7.1. Difficulty in progressing the curriculum

Teachers state that they had hard time with progressing through the curriculum. More than half of the teachers who participated in the interviews had talked about the difficulty in progressing the curriculum. As there are learning losses, students cannot remember previously learned knowledge. For instance, P4 gives an example from her class. Her students from 6th grade already missing subjects from 5th grade. She started to complete missing subjects from 5th grade in the 6th grade. So teachers need to go back in the curriculum and repeat the previous topics to progress current curriculum. However, teachers cannot progress two curriculums at once. Teachers need more time to progress subjects from both current curriculum and the last grade’s curriculum. Some state school teachers mentioned that some students even forgot about how to read and

write. That worried teachers and brought up the question of how to compensate all these learning losses.

4.7.2. The increase in the workload

Teachers talked about the increase of the workload. The pandemic affected teachers' very negatively because their workload exceeded their capacity. Teachers claim that with the pandemic, the workload have been multiplied by two or three times. There is a whole period that has been lost due to pandemic, hence teachers have to try harder to make up for the lost time. There were sudden teacher meetings via platform "Zoom". As it was a new period with new techniques to be applied, a lot of meetings were being held and the decisions were being made for education to be more effective. In addition to more meetings, teachers had their lesson plans all designed for face-to-face education. They had to spend more time in their lesson plans and content to make it more viable for online education. S19 mentions a common thought in society about teachers working less during the pandemic. These claims were not true, in fact teachers had to go to school even more than they used to before the pandemic. For instance, a teacher who used to work half a day for 6 hours had to work more than 10 hours during the pandemic. Along with their additional working hours, teachers had to deal with the parents much more often. Teachers had to stay in touch with the parents in order to compensate for the learning losses. P13 mentioned about a new phrase that came up after the pandemic. After the pandemic, parents started using the phrase "We came from a public school." Basically, this phrase means that students experienced learning losses due to having a poor education from a public/state school in the pandemic period. Therefore, it resulted in more workload for the teachers.

4.7.3. Difficulty in adjusting to school

Teachers feel that they had difficulty in adjusting to both online education and face-to-face education when they came back to school. Teachers felt under-pressure in the online platform. They felt stressed when they tried to include everyone to participate in the online lessons. As it was a new system after a traditional one, teachers had hard time with adjusting to it. When teachers came back to the school after the online education, they did not feel fully prepared. After having a 2 year gap, they felt stunned teaching in an actual classroom environment as it has been a really long time. There was an observed inability to adapt to school. There were even some cases like S4 who confessed that he even thought about taking a break at the start of the year. In face-to-face education, students and teachers learn mutually, so teachers believe that learning losses did not only occur in students but also in teachers. That made adaptation process even harder when they got back to school. Teachers found out that students did not feel comfortable in the classroom environment when they got back from online education to classrooms. Hence, teachers could not feel comfortable in the presence of students feeling anxious.

4.7.4. More in need for self-development

Teachers were more in need for self-development. There were some teachers who did not know how to connect to internet and online lessons. There were also some teachers who did not know enough about PowerPoint or Excel to make a presentation. Therefore these teachers simply wanted to continue the way they did in face-to-face education by using the traditional white board lecturing technique in online education. Basically teachers were recording themselves in front of a white board and lecturing on

the camera. Also, some math teachers were projecting their white paper on the screen while they were solving equations on it. However, students had a hard time with reading the board or the paper through the camera. As there were getting more and more complaints, teachers started to learn more about technological applications to be more effective in the lessons. Especially to be more effective in “Zoom” platform while online lecturing, teachers had to learn more about Zoom’s board options. They had to come up with a new content to use in the virtual classroom. There are two different perspectives about the effect of lockdown period on the teachers. P3 claimed that the lockdown period had been better for her in terms of self-development. Instead of spending 1 to 1.5 hour travelling, she spent this time at home training herself in terms of self-development. She bought educational programs and spent the process mostly improving herself. However, S19 sees this self-development progress rather unnecessary. He thinks teacher had to put in more effort than usual for their self-development. He claims these efforts were unnecessary because they no longer use it. There are only a few teachers who carried what s/he learned to the post-pandemic period.

4.7.5. Decreased time devoted to academic careers

In the pandemic, teachers had drastically decreased time devoted to academic careers. As teachers had to put in more effort than they were used to, it interrupted the time they devoted to their academic careers. Teachers spent all their energy and effort on how to make their lessons more effective for students learning as well as compensating for the learning losses. In addition, there was an online transition period.

Their tries to adapt themselves to occurring events resulted in less time devoted to their academic careers.

In addition to these codes mentioned above, S15 wanted to talk about a matter that affected her life greatly. She was very hesitant to talk about it while being recorded so she wanted to talk about it off-record. There were students who did not come to school in the pandemic period, she gave those students 50 points. Later, a paper from MoNE has been published addressed for the teachers. In this paper, it was written that students will not be given any low points. The lowest grades should be at least 70 points. At this point, however, there were still some teachers who gave low points to the students. That caused a discussion among teachers. She felt very withdrawn from teaching when this happened. She had to give high points to every student even to those who did not come to the class at all and did not know anything. She thought her work had no meaning. She did not want to work any longer and even submitted her resignation letter. She did not want to work in these conditions as she was a perfectionist wanting to do her job properly.

4.8. Studies Done at School to Compensate for Learning Losses

In this section, it will be mentioned about the eighth theme which is about studies done at school to compensate for learning losses. Out of 32 teachers participated in the interview, 3 teachers said that there were no studies being done for the compensation of these losses. Those teachers who said that there are studies being done for the learning losses came up with 6 headings. These headings are: additional studies and courses, compensatory courses during the summer holiday, individual

compensatory programs, retrospective course repetitions, increase of class hours and help provided for students with no opportunities.

4.8.1. Additional studies and courses

More than half of the teachers talked about additional studies and courses. After the summer break, some schools provided an accelerated recap courses for the first two weeks. However, teachers do not think that this course was sufficient for students' learning losses. Some schools provide additional courses after the school. In these courses, teachers deal with the current curriculum instead of compensating for the learning losses. On the other hand, additional weekend courses are being provided in some schools. Course and study plans are made in accordance with students' losses and homework assignments are made accordingly. Teachers try to compensate for the learning losses with the help of additional courses. There were also educational courses given for teachers. Teachers talked about courses provided by MoNE for teachers. In this MoNE 2.0 use of tools course, teachers were educated in usage of technological tools, content and activities creation. It was a very important course in terms of teachers to develop themselves during the pandemic. All teachers had to do was to apply and they could freely attend courses remotely.

4.8.2. Compensatory courses during the summer holiday

Compensatory courses were given throughout the summer holiday. In schools, there were make-up weeks and make-up camps for the learning losses especially during the summer holidays. These summer compensations were also about socializing children after 2 years of loss. Still these compensations could not be conducted

consistently by the teachers and the participation in these compensations was not really high. About conducting these compensatory programs S7 quotes: *“For example, there were compensatory programs but we could not follow up. Because we were at a point where everyone had to be prepared individually. Some students were too far ahead, some too far behind. I think it was really difficult to plan this.”* There were also courses provided by MoNE. Some teachers from state schools said that learning losses were so huge that some students even forgot how to read and write. So these MoNE courses were meant for those who had forgotten about writing and reading in the summer period. However, this also lacked participation because these students already felt disconnected from school so they preferred to work at an actual job rather than study.

4.8.3. Individual compensatory programs

There are some students having more trouble in the class. For those students, teachers try to make them repeat more in terms of education by taking them into individual programs. Some students also want to talk to teacher and ask individually. Teachers say that they try to do their best as long as students come and ask for help. In addition, when teachers notice a learning loss in the classroom through his/her observations, they try to help those students individually. Since the degree of learning losses differs from one student to another, additional courses were not sufficient. There had to be individual programs for those who fell far behind other students.

4.8.4. Retrospective course repetitions

To compensate for the learning losses, retrospective course repetitions are being made by the teachers. While there used to be an hour of reading lessons per week, now

there is an hour of reading every day of the week. Afterwards, teachers repeat from general subjects to lost subjects all over again to remind students. Some teachers teach previously learned subjects by making little recaps in their lessons. It can be said that each teacher tries to make up for the learning losses in their classes in their own way. This had resulted in the increase of class hours since teachers needed more time to progress both the current curriculum and the lost past year's curriculum.

4.8.5. Help provided for students with no opportunities

Least of all, teachers talked about the studies done for students with no opportunities. Books have been distributed for students who needed financial support. The computer room of the school has been provided for those in need. There have been some voluntary places where there were distributed tablets. Teachers tried to direct students to those places though these aids were insufficient.

4.9. What Should Be Done to Compensate for Learning Losses

In this part, it will be mentioned about the ninth theme which is what should be done to compensate for learning losses. Teachers' responses were categorized into three sections. Some teachers think that the current studies done for the learning losses are not sufficient, hence there should be more studies done for the compensation. In this category, teachers came up with 6 headings. These are additional courses, reducing the scope of the curriculum, encouraging the peer-teaching, psychological support, cooperation parents and teachers and fundamental changes in the education. Some teachers think that studies for the compensations should have been carried out at the beginning of the pandemic. The damage was done and the learning losses occurred in

return. At this point, these teachers see no point in talking about 2 year old gap. They believe in learning from mistakes. Under this section, teachers came up with 4 headings. These teachers believe that the lost time cannot be brought back, equality of opportunity should have been ensured, there should have been courses opened by the government and lastly there should have been an individualized compensation program. In the last section, teachers believe that the studies carried out for the compensations are sufficient. Therefore it does not require any additional study regarding the losses. All of these categories will be explained in detail under this section.

4.9.1. Studies should be done to compensate for learning losses

In this section, it will be mentioned about the teachers who believe there should be studies done to compensate for learning losses.

4.9.1.1. Additional courses

The majority of teachers believe that there should be additional studies and courses. They believe that these losses cannot be compensated in the school hours so there should be courses after the school hours. They also believe that the current courses for learning losses are not sufficient. S3 quotes: *“We could have increased the number of courses. National education support courses are opened, the number of these courses can be increased. Saturday and Sunday courses could also be increased. We are not in a country with a teacher shortage, we don’t have any problems in terms of employment and schools. More teachers can be appointed. We could have a better academic year through these appointments, however we continue as if nothing had happened.”* With

additional courses, it may not be possible compensate learning losses for every student, however there is a high chance to minimize the learning losses.

4.9.1.2. Reducing the scope of the curriculum

Teachers believe that there should be a reduction in the curriculum. The curriculum continues in the new year as if these learning losses have not happened. It causes a problem in the classrooms. Teachers encounter with students who skipped to the next grade with gaps in the knowledge during the pandemic period. Teachers not only have to progress in the current curriculum but also have to compensate for the 2 lost years in students' education. Unfortunately, it is not possible for teachers to do all at once as their schedule is so tight. In addition to catching up with the current curriculum and also compensating the learning losses at the same time overwhelm students in terms of knowledge. Students started the year with a full curriculum after the pandemic, hence it has been difficult for both teachers and students. Students already lack motivation and do not want to come to school. They have adaptation problems. In the meantime, they also have to catch up with a heavy curriculum. It seems students just memorize all this knowledge without actually learning or internalizing it. To conclude, teachers believe that either the current curriculum should be reduced or there should be a new mixed curriculum of the previous years.

4.9.1.3. Encouraging the peer-teaching

Teachers believe that peer-teaching should be encouraged. As mentioned in the curriculum section, students should not be overwhelmed by the information. There should be a soft transition from online education to face-to-face education. Teachers should create an environment for students that will not be tense with his/her friends.

Students will not only share their information but also get information in return. P13 mentioned about a beneficial technique he used in his class. Assuming student A is a very good at math, he says to his class: “If you don’t want to ask questions to your math teacher or don’t want to disturb him, just ask for help from student A.” He applies this to all of the lessons. Those students become responsible for specific lessons. Hence they improve themselves even more, in the meantime they also help others.

4.9.1.4. Psychological support

Some teachers agree that rather than helping students academically, they should strengthen the students psychologically. Students have seen that their world can be turned upside down at a very young age. In this psychological condition, it would not be helpful for them to focus on education because it starts to make no sense to the students. Psychological counselling services are believed to be more effective at the time being.

4.9.1.5. Cooperation of parents and teachers

Teachers strongly believe that there should be a cooperation between parents and teachers. The teacher is a great observer in the classroom, so s/he has a great understanding about the students. Teachers believe that they know about the students more than anyone. Hence, for the learning lessons the teacher is already a guide. Parents should listen to the guidance of each branch teacher and cooperate with the teacher when it is necessary. It is not something that a teacher can do alone and school by itself is not sufficient. Teachers cannot control students’ house environment. Parents should support their students in that manner.

4.9.1.6. Fundamental changes in education

A small amount of teachers agreed upon fundamental changes in education. Ultimately, teachers cannot go far beyond a certain plan and framework. S19 thinks that education should be removed directly from being compulsory. He believes that in serious situations like pandemic or such events that might occur in the future, the students' crowd that brought to the school by force will negatively affect other students. S19 quotes: *"The unwilling student population creates the "nobody is coming" mentality in the online education. Among those students who want to come to the education are perceived as a weird person. Students were perceived as a problem even by the teachers as these student wanted to continue the lessons and were constantly trying to come to the lesson. There were also fake students trying to come to the class. They were opening the class but sleeping in the meantime. It was seen how the majority affects the minority in this way."* When promising students see the majority not attending the class, they also tend to follow the crowd in order not to be seen as a weird person by his/her friends. Even teachers start to perceive differently those students who constantly comes to the class because they also get affected from the mentioned mentality. In conclusion, if school was not mandatory, it is believed that school would be valuable. Coming to school and being at the school would be perceived as being something nice. Students will be more positively affected by those who want to come to school. In fact, it is believed that there will be people in the crowd who will be inspired to go to school. In addition, the existing opportunities will be transferred more successfully. Even the online education period could have been more active period. In this sense, greater things could have been achieved in terms of education.

4.9.2. Studies for the compensations should have been carried out at the beginning of the pandemic

In this section, it will be mentioned about the teachers who believe the studies for the compensations should have been carried out at the beginning of the pandemic.

4.9.2.1. The lost time cannot be brought back

Some teachers believe that it is too late to do something for the learning losses because the lost time cannot be brought back. S1 quotes: *“It is not easy to make up for the loss of 2 years of education. It is an impossible thing to do. You can try to close the gap as much as you can but you cannot close it. The only thing that cannot be brought back is the time. 2 years of students’ time is gone. It never can be brought back. You may try to close the gap but you can never do that either.”* Hence, it is safe to say that rather than thinking what to do now, the question “What could have been done for the learning losses?” should be focused on because it is believed that it is too late for us to think about learning losses at this point.

4.9.2.2. Equality of opportunity should have been ensured

Teachers believe that equality of opportunity should have been ensured at the start of the pandemic. Though there has been some volunteer donations and school help for students in need, it was still insufficient. The promising students could not attend the class due to lack of opportunity. If it was approached differently for those students with no opportunity, this situation could change for the better.

4.9.2.3. There should have been courses opened by the government with an individualized compensation program

A small majority of teachers believe that there should have been courses opened by the government. These courses could have been given at the schools. A somewhat individualized compensation program could have been taught in these lessons because students' learning losses differ from one to another. For instance, P6 gives an example for the reason why there should be an individualized compensation program. Students took the classes of the ones they liked the most, however skipped the ones they disliked. Comparing the learning loss between students' lessons, it is safe to say that it is not on the same level. Also, learning losses between students are not equal to be put in the same classroom environment because every students' loss is different from each other. These programs were done relatively in private schools, but in public schools it could have been done longer and more seriously as it is difficult to make up for the losses over a summer.

4.9.3. The studies carried out for the compensations are sufficient

A very small amount of teachers agree that the studies carried out for the compensations are already sufficient and no further studies are needed. It has been realized that teachers who agreed the studies are already sufficient are all private school teachers. These teachers believe that there is nothing extra that can be done especially in private schools. There is already increased amount of course hours which in range between 3 to 4 hours. Also, teachers have been trying way too hard since the beginning of the pandemic to be more efficient for students. As long as teachers continue with the daily routines, nothing else is needed for the compensations.

As a matter of fact, a teacher was too hesitant to give a reply to the question. She gave too much thought about it. She even explicitly asked the interviewer whether her reply to this research would have any effect on her or not. She had this kind of a behavior as if she wanted to avoid more workload.



CHAPTER 5: DISCUSSION AND CONCLUSION

In this section, findings and conclusion of the research will be presented, followed by suggestions for further research.

5.1. Discussion

Learning losses have become a term that is felt very much in the new educational era, which was brought about by the Covid-19 epidemic. The first signs of learning losses did not arise till the post-covid era. It was noticed that there was a loss in students when it was transitioned into face-to-face education, however, it was not known to what extent it was and what would be done to make up for it. At the same time, it was not known what the potential long-term repercussions would be. Many studies have been conducted in support of learning loss. The majority of research stated how crucial it is to identify the severity of these learning losses and come up with a solution. Since these learning losses will undoubtedly have long-term effects, it goes without saying (Zhdanov et al., 2022).

Undoubtedly, the field of education is crucial. A US study found that compared to the typical curriculum, American students in kindergarten through fifth grade lost 33% of their arithmetic skills and 20% of their reading skills (COVID learning loss will cost the US trillions, 2021). Given these setbacks, it is anticipated that these students will find jobs with lesser skills in the future. Obviously, this is expected to have a profoundly negative economic impact in the future, costing trillions of dollars (COVID learning loss will cost the US trillions, 2021). In this regard, education is unquestionably a key

area for the future. In this direction, it is aimed to investigate learning losses in middle schools during the pandemic period according to teachers' views.

In this study, a comparison was done between the pre-pandemic and post-pandemic face-to-face education eras. In this regard, no study has been discovered to compare between mentioned periods; hence, there is a gap in the literature. There is a significant variation between the two time periods described. Face-to-face education before the pandemic is considered as a better era, in which a particular system is maintained with a strong motivation along with an ongoing curriculum. It is observed that it became upside down in post-covid. Teachers' efforts and the continuance of a classroom atmosphere are the only similarities teachers could find while comparing the periods. In a sense, teachers even had to put in more effort.

The teachers were put through a lot during this process. Teachers felt the need to improve themselves and their motivation had been reduced. The working hours of the teachers have significantly increased, and they have begun working one-on-one with the students during their spare time. Additionally, teachers had to attend more meetings than they used to before. Teachers had to offer more from their academic careers, and they had to work harder. Along with the increased workload, in a parallel research, it was observed that teachers had difficulties with communicating with students and with parents during the Covid-19 pandemic (Önder, 2022). Teachers had to communicate with parents more frequently. With the school closure and the transition to online education, students could not find the education they received at school at their homes (Booth et al., 2021). Students had to take on more responsibility at this time and required their parents' support. Of course, this was returned to the instructors more as a workload. According to the research findings, it tired out teachers mentally as well as

academically. Similarly, in one study, it was shown that more than half of the participating instructors were suffering from stress (Ozamiz-Etxebarria et al., 2021). The contagion of the pandemic has stressed teachers about returning to school.

Another study done in the same manner found that in online education, students became disengaged from the lesson and it was difficult for instructors to recognize this scenario, according to the perspectives of classroom teachers. Simultaneously, they stated that the tools utilized in online education do not allow students to observe what is going on in the background (Tunç & Gök, 2022). Similarly, teachers in this study reported that students were playing games in the background and were not engaged in the class. Similar findings were discovered in this regard. Students had to be responsible for their own studies during the pandemic. Students could handle the epidemic process with less learning loss if they were able to take control of their own learning. Without the teacher's supervision, however, the students who are prone to have fun and desire to play more games had significant learning loss.

One of the most significant discoveries in the post-pandemic period was a decrease in students' success and occurrence in learning losses. As explained by the teachers, students suffered critical losses and the prevalence of online education along with the lack of face-to-face education played an important role during this period. The teachers stated that online education is a very new and an untested method. The subject of what can be done for the compensation of learning losses was presented to teachers in this study. In a similar study that sought teachers' comments, it was discovered that teachers' extra course/study activities would contribute to lowering the learning losses (Önder, 2022). In another study, it was noted that delivering additional lessons to students, engaging with families, and providing supporting education to both families

and students would help prevent learning losses (Baz, 2021). There are similar findings in this study as well. Most teachers believe that extra coursework and parental involvement may be utilized to compensate for learning losses. This study, however, had some different results. Some teachers feel that compensation is not possible. They stated that the lost time cannot be brought back, instead, what could have been done should be investigated. This is a critical point of view that establishes the groundwork for future study, because the lesson learnt will allow improved steps to be implemented in a situation that might impact the globe in the future.

5.2. Conclusion

The primary objective of the conclusion is to summarize and highlight the key themes and findings that have been established throughout the course of this thesis, which are deemed essential to the topic at hand.

According to the findings, face-to-face education before the pandemic is seen as a much better period than after. There were some difficulties experienced before the pandemic, but an existing tradition was maintained. In this sense, there was order. But it was impossible to establish an order during the pandemic's aftermath. Both students and teachers had to put in a lot of work to adjust to it. The feeling of stress and anxiety increased as a result of the pandemic. It was a time of great fear and uncertainty. The students realized anything bad could happen at any moment. This made the effects of the post-pandemic period harsher. Due to the concern for personal health and contagion, students avoided attending school.

Teachers claim that they transitioned from face-to-face education to online education during the pandemic in about two weeks. Additionally, no

preparation-related courses were given to them before this process. Due to a lack of preparation, the teachers were inefficient during this period. The teachers conducted the methods utilized in face-to-face education in online education during this time when they were ill-prepared. The use of technology has not been adequately adapted by the teachers. In consequence of this, online education has not been very successful.

In all courses, there has been experienced learning losses. Students did not only experience learning losses but even regressed back to their previous level. Some students have actually fallen so far behind that they have forgotten even the most fundamental skills. Unfortunately, some students' writing and reading skills have declined. Teachers began to wonder how they would progress with the courses when they had lost so much knowledge of reading and writing. Observing such a significant setback has caused teachers to become even less motivated. Students' learning losses vary from one another. While some students had learning losses that were too great, others were able to resume their studies with fewer setbacks. Differentiating between students' learning losses is influenced by a variety of circumstances.

Students' computing skills have only improved since the outbreak. Students gained increased knowledge using computers. However, this has also end up hurting the students with its drawbacks. Students lost interest in studying as they started to view life increasingly as a virtual environment. They stopped caring about the real world. The virtual world piqued their attention more. Students desired to interact more on the phone and computer.

Teachers claim that parents are at a crucial juncture. Teachers claimed that they could only be successful in educating children in the classroom and that they were unable to do more. Teachers then suggested that parents ought to help their children at

home. They must work closely with the parents and support the students when they need help. Teachers highlight that with such collaboration, student learning losses may be avoided. Parents need to set up the right environment for learning, provide information when it's needed, and track the students' progress at home. Parents must take an interest in their children, and they must occasionally check their homework.

In the years following the pandemic, curriculum was discovered to be a major issue. The curriculum did not change during the following year's term, which began with face-to-face education. The same occupancy persisted throughout the curriculum. However, after the two-year pandemic period, the students returned with significant losses. Teachers started to find difficulty progressing forward with the curriculum as a result of the learning losses experienced by students who attended school after receiving online education. Lessons build upon one another. Every year, development is made by expanding on previously acquired knowledge. Teachers were required to finish the previous curriculum and switch to the present curriculum for this reason. The two curricula were combined as a result. Teachers made an effort to elevate the curriculum for the current level while also making up for a two-year loss. The lessons become extremely difficult to teach as a result.

Though inequality between students was a concern before the epidemic, it became far more significant after it. Before the epidemic, the teachers at the school sought to bridge the opportunity gap between the students. However, as the Covid-19 virus spread, teachers started to lose their ability to act. Some students who didn't have the opportunity were left behind while the students who had it started to advance further. Students who lacked the access to a computer were unable to attend the class at all. Teachers' expectations of success from students have decreased. Regardless of whether

they attended the course or not, students' grades were raised during the online education process. The students passed to the next course with great marks, despite receiving low results on the exams. The students' motivation and sense of trust in the school were affected by this. Students had the misconception that they could pass any class no matter what they did, which diverted their focus away from the lessons.

After the pandemic, it was extremely difficult for teachers to manage a class full of students who had experienced all degrees of learning losses. Due to the differences in learning losses experienced by students, teachers were unable to provide the students with appropriate assistance due to the coexistence of different levels. It is improper for students who need special accommodations to be in the same classroom as students who do not. Students need to be assessed and measured thoroughly at this point. In addition to having difficulty advancing the curriculum when teachers repeated all of the lost subjects. It was also seen that the majority of students who previously knew these subjects became bored. At this moment, it was claimed that students should receive more individualized attention.

Teachers don't want to experience online education ever again. Teachers believe that online education is not advantageous and cannot ever take the place of face-to-face education. When speaking face-to-face, they can tell from a single gesture whether a student is understanding the material and how they are feeling. However, they believe that there is a barrier in the online learning. Students cannot use what they have learned in online education. Students cannot apply what they have learned; it only exists in that particular lesson. In addition, it is believed to be highly challenging to concentrate on the lesson for six hours while sitting in front of a computer.

Private schools are believed to handle the epidemic era better than public schools. Opportunities are better in private schools than in public schools. The participation in the public schools was lower than in private schools. Students from state schools lacked access to technological devices to connect to the online classes. Also, internet and computer skills were lacking among students in public schools. Public schools lost many students' motivation until these were provided. Major issues with public schools are the lack of facilities and infrastructure, as well as inadequate technology. In addition to inadequate technology, the students could not be supervised by the teachers during the online education process. When students find it difficult to force themselves out of bed or fall asleep at the start of class, it is beyond the teachers' control. The system they employ does not allow them from verifying whether a student's internet is indeed down when they claim their connection has been lost and leave. Some students' presence was merely a formality; students were present but did not participate. The teachers were unable to control how the assigned schoolwork turned out.

The pandemic has significantly impacted both the social and educational lives of the students. Students experience a barrier in communication since they are so used to spending their time alone and in front of screens. The masks that students are wearing prevent them from wanting their voices to be heard. At this point, it shouldn't be based around education, students' social support should be taken into consideration.

5.3. Suggestions for Further Research

The study has shed light upon important issues on learning losses in middle school level of students. However, there is still much that can be explored through additional research. Therefore, in this section, suggestions for further research will be presented.

This research is limited to only 32 teachers. However, learning losses involve a period of 2 years and the problem still continues. Since it is an issue that affects the world so much, it is possible to meet with different teachers as well as teachers from different regions. In fact, the participants can be expanded and a research can be made involving the students themselves and even their parents.

There is a genuine learning loss in pupils, and that this loss differs from student to student. However, we do not know the magnitude of these losses. Also, inequality is something that the Covid-19 pandemic has made quite plain to us. This sense of inequality that was felt during the pandemic can now be viewed as an opportunity. Even though pandemic has forced students to face challenges, it can also be seen as an inspiration to bring equality to the education system. The question of how this situation could have been managed so that no learning losses would take place could be researched. Better countermeasures to possible risks can then be made in this fashion.

The curriculum has never been harder to catch up. The teachers not only have to teach the current curriculum, but also need to compensate for the losses of the last years' curriculum. This creates a great difficulty. At this point, studies can be done to make curriculum more efficient. Researches can be made to develop a more lighter and a more appropriate curriculum that combines both the interrupted curriculum and the current curriculum.

The Covid-19 pandemic has made it clear the importance of online education. Therefore, a more serious infrastructure for online education should be established in the education system. The established system should allow teachers to follow students' attention and attendance. At the same time, it should allow access for students to reach

out for school materials. Teachers should also be given training on how to be more effective in online education.

The Covid-19 pandemic had an effect not only on education but also on social lives. Therefore, psychological support should be provided for both students and teachers. In this respect, social activities should be planned for both students and teachers who are feeling burnout and overwhelmed during the pandemic period.



REFERENCES

- Akbulut, M., Şahin, U., & Esen, A. C. (2020). More than a virus: How COVID 19 infected education in Turkey? *Journal of Social Science Education*, 19, 30–42.
- Alban Conto, C., Akseer, S., Dreesen, T., Kamei, A., Mizunoya, S. and Rigole, A. (2020). COVID-19: Effects of School Closures on Foundational Skills and Promising Practices for Monitoring and Mitigating Learning Loss, *Innocenti Working Paper* 2020-13, UNICEF Office of Research – Innocenti, Florence.
- Arnone, R. F. (2020). Imagining what education can be post-COVID-19. *PROSPECTS*, 49(1-2), 43–46. <https://doi.org/10.1007/s11125-020-09474-1>
- Arslan, K. & Yetgin, G. (2020). Çevrimiçi değerlendirme sistemlerinin eğitimde kullanımı: bir içerik analizi, *Turkish Studies - Education*, 15(2), 651-671. <https://dx.doi.org/10.29228/TurkishStudies.39646>
- AYDIN CERAN, S., & ERGUL, E. (2022). Determination and compensatory methods of learning losses within the primary school science lesson during the COVID-19 pandemic process. *Educational Academic Research*, 1(45), 144–159. <https://doi.org/10.54614/aujkef.2022.1006145>
- Baz, B. (2021). COVID-19 Salgını Sürecinde Öğrencilerin Olası Öğrenme Kayıpları Üzerine Bir Değerlendirme. *Temel Eğitim Dergisi*, 3(1), 6-19. <https://doi.org/10.52105/temelegitim.3.1.3>
- Belediyesi, T. C. E. (2021, July 5). *Türkiye'de ilk! Pandemide öğrenme kayıpları tespit edilip giderilecek*. Retrieved January 28, 2022, from <https://www.eyupsultan.bel.tr/tr/main/news/turkiyede-ilkpandemide-ogrenme-kayiplari-tesp/16379>

- Bhardwaj, A. (2016). Importance of Education in Human Life: a Holistic Approach. *International Journal of Science and Consciousness*; 2(2): 23- 28.
- Bilgiç, A. G. D. H. G. & Tüzün, D. D. H. (2015). Yükseköğretim kurumları web tabanlı uzaktan eğitim programlarında yaşanan sorunlar . *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 1 (3) , 26-50 . Retrieved from <https://dergipark.org.tr/tr/pub/auad/issue/3028/42071>
- Blaskó, Zsuzsa & Sylke, Schnepf & Costa, Patricia. (2021). Learning Loss and Educational Inequalities in Europe: Mapping the Potential Consequences of the COVID-19 Crisis.
- Booth, C., Villadsen, A., Goodman, A., & Fitzsimons, E. (2021). Parental perceptions of learning loss during COVID-19 school closures in 2020. *British Journal of Educational Studies*, 69(6), 657–673. <https://doi.org/10.1080/00071005.2021.1984390>
- COVID learning loss will cost the US trillions. (2021). *Education Journal*, (441), 37.
- Creswell, J. W. (2018). Validity and Reliability. In J. D. Creswell (Ed.), *Research Design* (Fifth, pp. 274–275). essay, SAGE Publications, Inc.
- Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the COVID-19 pandemic. *QJM: An International Journal of Medicine*, 113(5), 311–312. <https://doi.org/10.1093/qjmed/hcaa110>
- Demarrais, Kathleen. (2004). Qualitative interview studies: Learning through experience. *Foundations for Research Methods of Inquiry in Education and the Social Sciences*. 51-68.
- Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. (2021). COVID-19 and Learning Loss—Disparities Grow and Students Need Help. *Lunch With Lori Series*.

- Duan L, Zhu G. Psychological interventions for people affected by the COVID-19 epidemic. *Lancet Psychiatry*. 2020; 7:300–2.
- Dumford, A.D., Miller, A.L. Online learning in higher education: exploring advantages and disadvantages for engagement. *J Comput High Educ* 30, 452–465 (2018). <https://doi.org/10.1007/s12528-018-9179-z>
- Editor, U., & Team, U. (2014, May 20). Education importance in today's society. *Udemy Blog*. Retrieved January 24, 2022, from <https://blog.udemy.com/education-importance/>
- Eğitim, H. (2021, May 17). MEB, Akla Takılan Tüm Soruları Yanıtladı. *Hürriyet*. Retrieved January 28, 2022, from <https://www.hurriyet.com.tr/egitim/meb-akla-takilan-tum-sorulari-yanitladi-41812405>
- Engzell, P., Frey, A., & Verhagen, M. D. (2020). Learning inequality during the COVID-19 pandemic. *SocArXiv*, 29.
- Fiorillo A, Gorwood P (2020). The consequences of the COVID-19 pandemic on mental health and implications for clinical practice. *European Psychiatry*, 63(1), e32, 1–2 <https://doi.org/10.1192/j.eurpsy.2020.35>
- Fison, S. (2020, May 15). Uzaktan Eğitim Raporu Açıklandı: öğrencilerin yüzde 75'i Uzaktan Eğitimi Eğlenceli Buluyor. *İhlas Haber Ajansı*. Retrieved January 25, 2022, from <https://www.ihb.com.tr/haber-uzaktan-egitim-raporu-aciklandi-ogrencilerin-yuzde-75i-uzaktan-egitimi-eglenceli-buluyor-845301/>
- Fleming, N. (2020, May 8). Curbing teacher burnout during the pandemic. *Edutopia*. Retrieved January 1, 2023, from <https://www.edutopia.org/article/curbing-teacher-burnout-during-pandemic>
- Fouzia Malik, Fouzia Ajmal, & Zohran Jumani. (2021). The effects of COVID-19 on education in Pakistan: Students' perspective. *International Journal of Distance*

Education and E-Learning, 6(1), 217–234.

<https://doi.org/10.36261/ijdeel.v6i1.1431>

Fox, R. (2004). SARS epidemic: Teachers' experiences using ICTs. In R. Atkinson, C. McBeath, D. Jonas-Dwyer & R. Phillips (Eds), *Beyond the comfort zone: Proceedings of the 21st ASCILITE Conference* (pp. 319-327). Perth, 5-8 December.

Gençoğlu, C. & Çiftçi, M. (2020). Covid-19 Salgınında Eğitim: Türkiye Üzerinden Bir Analiz. *Journal of History School*, 46, 1648-1673.

Haber7.com. (2020, April 6). Meb'Den veliler için 'bizden' kuşağı: Bakan Selçuk Anlatacak. *Haber7*. Retrieved January 28, 2022, from <https://www.haber7.com/guncel/haber/2960588-mebden-veliler-icin-bizden-kusagi-bakan-selcuk-anlatacak>

Hake, M., Summerfelt, T., Dawes, S., Strayer, M., Engelhard, E., & Dewey, A. (2021, March). The impact of coronavirus on food insecurity. *Feeding America*. Retrieved January 24, 2022, from <https://www.feedingamerica.org/research/coronavirus-hunger-research>

Hippel, P. V., Shinwell, J., Mann, E., Henderson, E., Brownlee, L., Stretesky, P., Long, M., McKenna, J., Daly-Smith, A., Lalli, G., Bundy, D., & Drake, L. (2020). *Covid-19: Back to School, Rebuilding a Better Future for All Children*.

Honigsbaum, M. (2009). Pandemic. *The Lancet*, 373(9679), 1939. [https://doi.org/10.1016/s0140-6736\(09\)61053-9](https://doi.org/10.1016/s0140-6736(09)61053-9)

Külekçi Akyavuz, E., Çakın, M. (2020). Covid-19 salgınının eğitime etkisi konusunda okul yöneticilerinin görüşleri. *Turkish Studies*, 15(4), 723-737. <https://dx.doi.org/10.7827/TurkishStudies.44140>

- Maurice J. (2016). Cost of protection against pandemics is small. *Lancet* (London, England), 387(10016), e12. [https://doi.org/10.1016/S0140-6736\(16\)00156-2](https://doi.org/10.1016/S0140-6736(16)00156-2)
- Mukhtar, K., Javed, K., Arooj, M., & Sethi, A. (2020). Advantages, Limitations and Recommendations for online learning during COVID-19 pandemic era: Online learning during COVID-19 pandemic era. *Pakistan Journal of Medical Sciences*, 36(COVID19-S4). <https://doi.org/10.12669/pjms.36.COVID19-S4.2785>
- ÖNDER, E. (2022). Covid-19 Salgininda öğretmenlerin Uzak EĞİTİME ilişkin DENEYİMLERİ. *Milli Eğitim Dergisi*, 51(233), 399–418. <https://doi.org/10.37669/milliegitim.787838>
- Owusu-Fordjour, C., Koomson, C. K., & Hanson, D. (2020). THE IMPACT OF COVID-19 ON LEARNING - THE PERSPECTIVE OF THE GHANAIAN STUDENT. *European Journal of Education Studies*, 7(3). <https://doi.org/10.5281/zenodo.3753586>
- Ozamiz-Etxebarria, N., Berasategi Santxo, N., Idoiaga Mondragon, N., & Dosil Santamaría, M. (2021). The psychological state of teachers during the COVID-19 crisis: The challenge of returning to face-to-face teaching. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.620718>
- Özer, M. (2020). Türkiye’de Covid-19 Salgını Sürecinde Milli Eğitim Bakanlığı tarafından Atılan Politika Adımları. *Kastamonu Eğitim Dergisi*, 28(3), 1124–1129. <https://doi.org/10.24106/kefdergi.722280>
- Pier, L., Hough, H. J., Christian, M., Bookman, N., Wilkenfeld, B., & Miller, R. (2021, January 25). COVID-19 and the educational equity crisis: Evidence on learning loss from the CORE Data Collaborative [Commentary]. *Policy Analysis for California Education*. <https://edpolicyinca.org/newsroom/covid-19-and-educational-equity-crisis>

- Qiu, W., Rutherford, S., Mao, A., & Chu, C. (2017). The Pandemic and its Impacts. *Health, Culture and Society*, 9, 1–11. <https://doi.org/10.5195/hcs.2017.221>
- Selçuk, Z. (2020, March 19). Bakan Selçuk, 23 mart'ta Başlayacak Uzaktan Eğitime İlişkin Detayları Anlattı. *T.C. Milli Eğitim Bakanlığı*. Retrieved January 28, 2022, from <https://www.meb.gov.tr/bakan-selcuk-23-martta-baslayacak-uzaktan-egitime-iliskin-detaylari-anlatti/haber/20554/tr>
- Şen, E. Ö. (2021). Evaluation Study of Middle School Mathematics Courses Broadcasted on TV Through Distance Education in the Pandemic Process. *Journal of Ziya Gökalp Faculty of Education*, (40), 71–83. <https://doi.org/http://dx.doi.org/10.14582/DUZGEF.2021.178>
- Sood, S. (2020). Psychological effects of the Coronavirus disease-2019 pandemic. *Research & Humanities in Medical Education*, 7(11), 23-26.
- T.C. İçişleri Bakanlığı Bilgi Teknolojileri Genel Müdürlüğü. (2021, April 26). 81 il Valiliğine Tam Kapanma tedbirleri Genelgesi Gönderildi. *T.C. İçişleri Bakanlığı*. Retrieved January 28, 2022, from <https://www.icisleri.gov.tr/81-il-valiligine-tam-kapanma-tedbirleri-genelgesi-gonderildi>
- Terry, B. (2020, April 20). Covid-19 learning loss. *Scholar Within*. Retrieved January 25, 2022, from <https://scholarwithin.com/covid-19-learning-loss>
- The Future of DPT Education Post Covid-19. (2021, June). *Apta Magazine*, 32–42.
- Tunç, Z. & Gök, B. (2022). Covid-19 pandemisi sürecinde ortaya çıkan öğrenme kayıplarına ilişkin sınıf öğretmenlerinin görüşlerinin incelenmesi. *Türk Eğitim Bilimleri Dergisi*, 20(2), 471-497. <https://doi.org/10.37217/tebd.1026925>
- Uzaktan Eğitimdeki öğrenme Kayıplarının Tespiti için Kazanım Değerlendirme Uygulaması Başladı. *T.C. Milli Eğitim Bakanlığı*. (2021, October 26). Retrieved January 28, 2022, from <https://meb.gov.tr/uzaktan-egitimdeki-ogrenme->

[kayiplarinin-tespiti-icin-kazanim-degerlendirme-uygulamasi-basladi/haber/24396/tr](https://www.kayiplarinin-tespiti-icin-kazanim-degerlendirme-uygulamasi-basladi/haber/24396/tr)

Vandana Singh & Alexander Thurman (2019) How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018), *American Journal of Distance Education*, 33:4, 289-306, DOI: [10.1080/08923647.2019.1663082](https://doi.org/10.1080/08923647.2019.1663082)

What is a pandemic? *healthdirect*. (n.d.). Retrieved January 23, 2022, from <https://www.healthdirect.gov.au/what-is-a-pandemic>

World Health Organization. (2020). Coronavirus disease (COVID-19). *World Health Organization*. Retrieved January 28, 2022, from https://www.who.int/health-topics/coronavirus#tab=tab_1

World Health Organization. (2020, October 5). Covid-19 disrupting mental health services in most countries, who survey. *World Health Organization*. Retrieved January 28, 2022, from <https://www.who.int/news/item/05-10-2020-covid-19-disrupting-mental-health-services-in-most-countries-who-survey>

World Health Organization. (2021, October 1). Advice for the public: Coronavirus disease. *World Health Organization*. Retrieved January 28, 2022, from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public>

Zehra-Malik, M. (2020, July 14). The coronavirus effect on Pakistan's digital divide. *BBC Worklife*. Retrieved January 24, 2022, from <https://www.bbc.com/worklife/article/20200713-the-coronavirus-effect-on-pakistans-digital-divide>

Zhao, Y., & Watterston, J. (2021). The changes we need: Education post covid-19. *Journal of Educational Change*, 22(1), 3–12.

<https://doi.org/10.1007/s10833-021-09417-3>

Zhdanov, S. P., Baranova, K. M., Udina, N., Terpugov, A. E., Lobanova, E. V., & Zakharova, O. V. (2022). Analysis of Learning Losses of Students During the COVID-19 Pandemic. *Contemporary Educational Technology*, 14(3), ep369.

<https://doi.org/10.30935/cedtech/11812>



APPENDIX A: INTERVIEW FORM

GÖRÜŞME ONAY FORMU

Değerli katılımcı,

Bu araştırma 2021-2022 Öğretim yılı bahar döneminde Yeditepe Üniversitesi Eğitim Bilimleri Enstitüsü, Eğitim Programları ve Öğretim Yüksek Lisans Programında, Dr. Onur Seçkin'in danışmanlığında, Selin Durgaç tarafından yürütülen “Pandemi Döneminde Ortaokul Öğrencilerinde Ortaya Çıkan Öğrenme Kayıplarının Öğretmen Görüşlerine Göre İncelenmesi” başlıklı bir tez çalışmasıdır.

Araştırma kapsamında öğretmenler ile bire bir görüşmeler yapılmaktadır. Siz değerli öğretmenlerimizin görüşlerinin alınması için bu görüşme onay formu düzenlenmiştir. Bu çalışmanın pandemi sürecinde yaşanan öğrenme kayıplarına ışık tutarak, bu süreçte karşılaşılan sorunlara çözüm bulmada yardımcı olacağı düşünülmektedir.

Araştırmaya katılımınız tamamen gönüllülük esasına dayalıdır ve görüşmede sunduğunuz tüm bilgiler ve aktaracaklarınız gizli tutulacaktır. Paylaşımlarınız sadece bilimsel çalışmalar kapsamında kullanılacak, başka bir kişi veya kurumla hiçbir şekilde paylaşılmayacaktır. Yapılacak olan görüşmelerde veri kaybını önlemek amacıyla onayınızla görüşmeniz ses kaydı ile kayıt altına alınacaktır. Talep etmeniz durumunda, görüşmenin çözümlenen bir kopyası size sunulacaktır. Görüşmeyi dilediğiniz zaman sonlandırabilirsiniz.

Vereceğiniz içten cevaplar ile araştırmaya sağlayacağınız büyük katkılarınız ve desteğiniz için teşekkür ederim.

Selin Durgaç

KİŞİSEL BİLGİLER:**Görüşme tarihi:****Cinsiyet:** Kadın/Erkek**Doğduğu yıl:****Branşı:****Öğretmenlikte deneyim süresi:****Çalıştığı Kurum:** Devlet / Özel**Şu an çalıştığı kurumdaki süre:****Eğitim Durumu:**☐ Ön Lisans☐ Lisans☐ Yüksek Lisans☐ Doktora

GÖRÜŞME SORULARI:

- 1- Pandemi öncesi eğitim durumunu anlatır mısınız?
- 2- Pandemi ile birlikte yaşanan eğitim sürecini anlatır mısınız?
- 3- Bahsettiğiniz pandemi öncesi ve sonrası dönemlerin arasındaki ortaklıklar nelerdir?
- 4- Bahsedilen bu iki dönem arasındaki farklılıklar nelerdir?
- 5- Öğrenme kaybı: “Eğitimdeki kesinti veya pandemi nedeniyle, herhangi bir özel veya akademik bilgi ve beceri kaybı veya akademik dönüşler” şeklinde tanımlanmaktadır. Siz bu çerçevede baktığınızda öğrencilerinizde gözlemlediğiniz öğrenme kayıpları var mı?
- 6- Öğrenme kaybına ilişkin gözlemleriniz varsa bunun nedenlerine ilişkin görüşleriniz nelerdir?
- 7- Öğrenme kaybına ilişkin gözlemleriniz varsa sizce bu kaybın yoğunluğu öğrenciler arasında farklılaşıyor mu? Farklılaşıyorsa bu farklılığı nelerin etkilediğini düşünüyorsunuz?
- 8- Pandemi döneminde öğrenme kayıplarının ortaya çıktığını düşünüyorsanız, sizce bu kayıplar öğretmenlerin eğitim ve öğretim çalışmalarını nasıl etkiledi?
- 9- Yaşanılan öğrenme kayıplarının telafisine ilişkin okulunuzda yapılan çalışmalar var mı?
- 10- Yaşanılan öğrenme kayıplarının telafî edilebilmesi için sizce neler yapılmalı?
- 11- Eklemek istediğiniz başka bir şey var mı?

INTERVIEW CONSENT FORM

Dear participant,

This research was conducted in Yeditepe University Institute of Educational Sciences, Curriculum and Instruction Graduate Program in the spring semester of 2021-2022 academic year, This is a thesis study titled "Investigation of learning losses in middle school students during the pandemic period, according to teachers' views", conducted by Selin Durgaç, under the supervision of Dr. Onur Seçkin.

One-on-one interviews with teachers are undertaken as part of this research. This interview consent form was created in order to solicit feedback from our esteemed teachers. This study is expected to aid in the resolution of difficulties encountered throughout the pandemic phase by putting insight on the learning losses suffered during the pandemic process.

Your participation in the research is completely voluntary and all the information you provide in the interview and what you convey will be kept confidential. Your feedback will only be used within the scope of scientific studies and will not be shared with any other person or institution in any way. In order to prevent data loss, your conversation will be recorded with a voice recording with your approval. On request, a decoded copy of the interview will be made accessible to you.

I would like to thank you for your sincere answers, as well as your significant contributions and support to the research.

Selin Durgaç

PERSONAL INFORMATION:**Interview date:****Gender:** Female / Male**Year of Birth:****Branch:****Experience in teaching:****Employed Institution:** State / Private**Time spent at the current institution:****Education Status:**☐ Associate Degree☐ Bachelor's Degree☐ Master's Degree☐ Doctoral Degree

INTERVIEW QUESTIONS:

1. Could you tell us about the pre-pandemic education situation?
2. Could you tell us about the education experienced with the pandemic?
3. What are the similarities between the pre-pandemic and post-pandemic education periods?
4. What are the differences between these two periods mentioned?
5. Learning loss: It is defined as “any loss of special or academic knowledge and skills or academic returns due to interruption in education or a pandemic”. When you look at it in this context, are there any learning losses that you observed in your students?
6. If you have observations about learning loss, what are the reasons for these learning losses?
7. If you have observations about learning loss, do you think the intensity of this loss differs among students? If the learning losses differ among students, what are the reasons for this difference?
8. If you think that learning losses have emerged during the pandemic period, how do you think these losses have affected the education and training activities of teachers?
9. Are there any studies carried out in your school regarding the compensation of learning losses experienced?
10. What do you think should be done to compensate for the learning losses experienced?
11. Is there anything else you would like to add?

APPENDIX B: INTERVIEW RESEARCH PERMIT



T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü

GÜNLÜDÜR

Sayı : E-59090411-44-46940468
Konu : Anket ve Araştırma İzni (Selin DURGAÇ)

01.04.2022

YEDİTEPE ÜNİVERSİTESİ REKTÖRLÜĞÜNE
(Eğitim Bilimleri Enstitüsü Müdürlüğü)

İlgi : a) Yenilik ve Eğitim Teknolojileri Genel Müdürlüğünün 21.02.2020 tarihli ve 2020/2 sayılı genelgesi.
b) Valilik Makamının 31.03.2022 tarihli ve 46877017 sayılı oluru.

Valilik Makamının Anket ve Araştırma İzni konulu ilgi (b) oluru ve kullanılması uygun görülen ölçme araçlarının Müdürlüğümüzce mühürlenmiş örnekleri ekte gönderilmiştir.

İlgi (a) genelgenin 28. maddesinde; "Araştırma uygulama izni alan kamu kurum ve kuruluşları, uluslararası kuruluşlar, üniversiteler, sivil toplum kuruluşları ve araştırmacılar tamamladıkları bilimsel araştırma ile ilgili sonuç raporlarını, izni aldıkları ilgili birime çalışma bitiminden itibaren 30 gün içerisinde göndereceklerdir." ifadesi yer almaktadır.

Olur gereğince işlem yapılması ve araştırma sonuç raporunun ekte sunulan örneğe göre Müdürlüğümüz Strateji Geliştirme Şubesine gönderilmesi hususlarında gereğini arz ederim.

Abdurrahman ENSARİ
İl Millî Eğitim Müdürü a.
Şube Müdürü

Ek:
1- Valilik Oluru (1 Sayfa)
2- Rapor Örneği
3- Ölçekler

APPENDIX C: ETHICS COMMITTEE APPROVAL

T.C.
YEDİTEPE ÜNİVERSİTESİ REKTÖRLÜĞÜ

10.05.2022

Sayı : E.50532705-302.14.01-1245
Konu : Selin Durgaç Kurul Onayı

İLGİLİ MAKAMA

Üniversitemiz Eğitim Bilimleri Enstitüsü Eğitim Programları ve Öğretim Yüksek Lisans Öğrencilerinden Selin Durgaç'ın, Dr. Öğr. Üyesi Onur Seçkin danışmanlığında gerçekleştireceği "Pandemi Döneminde Ortaokul Öğrencilerinde, Ortaya Çıkan Öğrenme Kayıplarının Öğretmen Görüşlerine Göre İncelenmesi" başlıklı araştırmasının Beşeri Bilimler etik standartlarına uygunluğuna ilişkin Yeditepe Üniversitesi Beşeri ve Sosyal Araştırmalar Etik Kurulu Onayı ekte sunulmuştur.

Gerekli iznin verilmesi hususunu bilgilerinize arz ve rica ederim.

İmza
Prof. Dr. Fatma Yeşim EKİNCİ
Rektör a.
Rektör Yardımcısı

Ek: Etik Kurul Onayı.pdf