Seeing the Invisible: A Retrospective Examination of Education during COVID-19

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Article Info	Abstract
	In this article, we examined the impact of the COVID-19 pandemic on education. We combined collaborative inquiry and photo-eliciting methods to examine education with a reflective lens and understand changes that occurred during the pandemic. A principal and a vice principal working in different public schools adopted the dual roles of being researchers and participants. The main data source was the conversation that emerged as we reviewed classroom and school photos taken by the participant researchers. The central theme that emerged from the analysis was that the COVID-19 pandemic made the invisible visible, along with two sub-themes: a) The teacher's source of motivation is the student, while the student's source of motivation is the teacher and b) Students care and grow when they can be a part of the history, culture, and story of their school. The pandemic made the importance of human connection in education evident. The findings of the study offer solutions and recommendations informing future education.

Introduction

The COVID-19 pandemic occurred unexpectedly and caught societies unprepared. While the pandemic had the most urgent impact on the health system, it also affected all sectors of society from economy to education (Karakaş, 2020). At the time this manuscript was written, we were still experiencing the effects of COVID-19 even after the development of vaccines. To minimize the impact of the pandemic, nations and local governments had to take measures such as sheltering in place and school closures. With the interruption of education, millions of children, youths, and adults could not attend schools and universities. According to Balcı (2020), pandemics and epidemics such as Spanish Flu, Ebola, and SARS created great disruptions in societies resulting in major changes in people's lives.

Similarly, the impact of the COVID-19 pandemic is likely to be long-standing with large-scale effects across the globe. While the pandemic resulted in similar experiences and challenges across the world, there are also likely to be unique and contextualized issues that need to be understood. In this study, we examined the impact of the pandemic on education by taking a qualitative and retrospective perspective with a focus on Turkish public school education.

Education and Research during COVID-19

One critical impact of the pandemic has been on education (Balcı, 2020). The unpredictability of the spread made forward-planning difficult. With densely-populated classrooms, the spread was likely to speed up in Turkish schools. Hence, it was necessary to transition to distance education to prevent the spread. Historically, distance education has been practiced in Turkey since 1927 but started to be used more widely after 1956 (Bozkurt, 2017; Özbay, 2015). These early efforts used postal mail as the delivery method and focused on increasing literacy and promoting continuing education. According to Özyürek et al. (2016), the distance education application created an important learning opportunity for those who could not directly benefit from formal education systems. Although the number of institutions that offer distance education and the number of students who benefit from distance education increased over time (Can, 2020), the wide and quick transformation necessitated by the COVID-19 pandemic was difficult to make.

The quick switch from in-person education to distance education was challenging for educators. Teachers had to quickly learn to develop new methods with limited resources. The lack of a robust infrastructure (e.g., reliable Internet) necessary for distance education was one challenge (Sarı & Nayir, 2020). Another challenge for some educators was technological literacy and self-efficacy needed to engage in distance education (Can & Köroğlu, 2020). Moreover, teachers had to adjust to teaching synchronous lessons from their homes while taking care of their own children and maintaining their homes (Can & Köroğlu, 2020). These transitions caused anxiety and burnout among teachers (Sarıkaya, 2021). Undoubtedly, the rapid changes in education caused an inequality of opportunity for students as well (Giannini & Lewis, 2020; Can, 2020). The lack of access to the Internet and information technologies caused short-term as well as long-term problems (Balcı, 2020; Yıldız & Akar Vural, 2020). Educational inequality became evident on student groups from low socio-economic families (Özdoğan & Berkant, 2020). In this process, students in disadvantaged student groups experienced difficulties at the intersection of three situations:

    a) Technological tools of the family (impacting homes without Internet access and families without smartphones, computers/tablets)

    b) Economic situation of the family (impacting agricultural workers, day laborers, working families and families with limited financial means)

    c) Household structure (impacting families with multiple children and children who do not have their own rooms)

A much-discussed result of the access issues mentioned above is the educational loss. Even in countries such as Netherlands, where efforts for equitable education were in place, learning losses were reported (Engzell, Frey, & Verhagen, 2021). To minimize the learning losses of students who do not have access to the Internet and technological opportunities, the Turkish Ministry of Education started broadcasting lessons on television as an alternative solution. Given most households in Turkey have a television, the broadcasting method had the benefit of broad access. However, challenges still existed for families with multiple children (Çakın & Külekçi Akyavuz, 2021; TEDMEM, 2020). There were also pedagogical limitations such as the delivery of the curriculum not being engaging and not providing the opportunity for questions and answers (Özdoğan &

Berkant, 2020). For students, even when the technological barriers were absent, motivation to attend virtual classes for extended periods of time was difficult. Another issue is the impact of the pandemic on research. As the pandemic was ongoing it was difficult to study its effects, especially with classical research methods. However, these challenges also paved the way for innovative solutions. We decided to conduct a research study to investigate the effects of the COVID-19 pandemic on education using the collaborative inquiry method. The focus of this qualitative study was to gain insights from school administrators from two Turkish public schools.

Method

Integrating Collaborative Inquiry with Photo-Eliciting

We integrated elements of collaborative inquiry with photo-eliciting. Collaborative inquiry is a method that brings together different experts such as educators and scientists with a purpose of shared learning about an issue or topic (Nelson, 2005; Donohoo, 2013). This approach allowed combining the roles of the researcher and the educator, with a planned, deliberate, and purposeful communication and dialogue. During the COVID-19 pandemic, collaborative research methods have become widespread in an effort to better understand social change (Roy & Uekusa, 2020). We followed Donohoo (2013)'s four stages for collaborative inquiry: framing the problem; collecting evidence; analyzing evidence; and documenting, celebrating, and sharing. The second essential element of the study was the photo-eliciting method (Collier & Collier, 1986; Richard & Lahman, 2015). Although the students and their teachers continued their education remotely, the principals continued their administrative duties on school campuses. One of the main data sources of this study was a collection of photographs of the school garden, corridors, and classrooms taken by the principals. These photographs helped facilitate our conversations over Zoom and served as an anchor for our inquiry.

Research Participants

Our aim was to examine and understand the observations of two school leaders in collaboration with an educational researcher. Veli Atak (the first author) is the school principal of a medium-sized, combined elementary and middle school (Grades 1 through 8) located in the city center. He started his teaching profession in 1996, worked as a classroom teacher for four years and has been an administrator for twenty-one years. Hasan Yaşar (the second author) is an assistant principal at another public school, a rural middle school located thirty minutes away from the city center. He started his teaching career in 1996. He has been a classroom teacher for eighteen years, a social studies teacher for three years, and an administrator for three years. An academic (the third author) was also a part of the research. Şenay Purzer completed her K-12 and undergraduate education in Turkey and has been a faculty member at a public university in the United States for eleven years.

Data Collection and Analysis

We, the three authors, met over Zoom at regular intervals throughout 2021. In these meetings, we shared our ideas, thoughts, and findings. At the same time, we aimed to reflect on our assumptions and prejudices. We held eight meetings between April 2021 and July 2021. Each of these meetings lasted about two to three hours. We

framed the problem and identified our research questions in April, generated and collected data starting in May, analyzed the data in June, and documented our results in July. We used a thematic analysis method to reveal themes that emerged from the discussions (Braun & Clarke, 2008). We continued to refine our results and document our findings. We presented our initial findings at the International Conference on Studies in Education and Social Sciences (ICSES) on November 14, 2021, which led to the development of this article.

Results and Discussion

We started this study to investigate the effects of the pandemic on education. In our initial meetings, our discussions were on the negative aspects of the changes that were caused by the pandemic. For example, we talked about the difficulties faced by students from disadvantaged groups. We discussed the deficiencies of distance education and the complaints of teachers, parents, and students about these deficiencies. In our early meetings, we also discussed the added challenges of many educators due to technological self-efficacy and literacy. However, as our work progressed, our perspective began to change. We started to discuss our observations with retrospect and reflection, which resulted in a refined definition of education and its purpose. During the three-month study period, we reviewed many photographs and watched short video clips of classrooms and schools. These discussions, especially those around images of empty classrooms and school corridors, enabled the emergence of a strong awareness of the human element. As illustrated in Figure 1, our main finding is that the pandemic made the invisible visible. The two sub-themes help articulate specific elements that became visible and emerged through our collaborative inquiry.
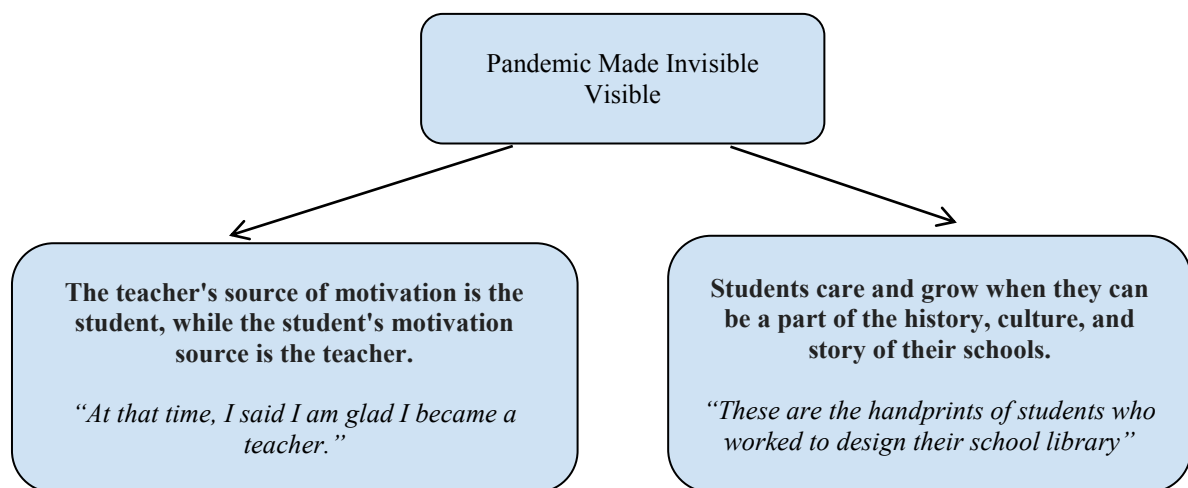
Pandemic Made Invisible Visible

The teacher's source of motivation is the student, while the student's motivation source is the teacher.

"At that time, I said I am glad I became a teacher."

Students care and grow when they can be a part of the history, culture, and story of their schools.

"These are the handprints of students who worked to design their school library"

Figure 1. Main and Sub-themes of the Study

The Teacher's Source of Motivation is the Student, while the Student's Motivation Source is the Teacher

In our third meeting, which took place on May 10, 2021, we discussed the photos shown in Figure 2. As we reviewed the images of these two classrooms, a few similarities emerged. Both classrooms were very tidy, organized, and clean. The classrooms were also equipped with the necessary materials such as papers and books. Except for the first few weeks of the pandemic process, there was no shortage of cleaning supplies in schools. As we further discussed these images, the human element began to come into view. These images made clear

the missing students and teachers. We talked about the importance of teacher-student communication. We discussed the importance of wait time and immediate feedback that naturally occur in the classroom and were difficult to do in distance education.

(a) 30-person Classroom (Urban/City Center)   (b) 12-person Classroom (Rural/Countryside)

Figure 2. Images of Classrooms

We talked about the difficulty of establishing motivation, which is one of the most important elements that arises with distance education. First, there was a contradiction with educators' and parents' previous efforts to reduce screen time and the current efforts expecting children to stay engaged in remote classes for long periods of time to follow live lessons. The expectations were clear, but motivation was hard to maintain. We discussed the importance of the teacher-student communication as well as interactions that go beyond the content but help reveal the hidden assets and talents of the students. Such recognition of students is essential for student motivation and engagement.

> Mr. Yasar: There was a Syrian student at the school where I worked. This student would fight with a friend at every recess, and we would receive complaints from other students. So, I directed him to the school counselor. During the talks, the counselor noticed the child's ability to draw, bought painting materials for the child, shared a picture on his computer, and asked if he could draw this picture on the wall of his room. The child drew that picture (see Figure 3). After that the student's attitudes changed completely. No complaints were received from his friends.

Figure 3. A Picture drawn on the School Building by a Refugee Student

Following our conversations on what motivates students, we pursued a little deeper and asked the question of what motivates the teacher. We asked, "what are the motivators of teachers?" The following excerpts answer this question,

> Mr. Yasar: There are two events that make me the happiest, but there are many more examples of times when I said, "I'm glad I became a teacher." Two years ago, I was appointed as the vice principal of my prior school. One day two young people visited my office. Both were my former students when I worked as a teacher at the same school. Both were now going to college. I noticed that one of the students was holding food wrapping in her hand, and I asked why she was carrying it. She said, "You taught us not to litter." That is when I said, "I'm glad I became a teacher." In the second incident, I was working at another school as an elementary school teacher. A letter came from the higher administration. These kinds of letters tend to be complaint letters; hence, I was concerned. But when I read the letter, happiness replaced my concern. The letter was from a former student from the school when I first started teaching. This appreciation letter stated that my former student also became a teacher and was thankful for the education and care he received from me. At that moment I said, "I am glad that I became a teacher."

> Mr. Atak: I started my first job in December of 1996. I was a first-grade teacher in Istanbul and I had no prior experience. The class size was exceptionally large. I had 84 students in my class. The classroom was very crowded and also included children from immigrant families. The teacher turnover was also high as these students had several other teachers in a brief period before I started. The first month of the academic year, I spent time establishing rules, norms, and the general classroom order. After about a month, students started to follow the classroom rules. Next, students' interest in the lesson and the school increased. As the year progressed, half of my class began to read, and gradually they all began to read at the desired level. I saw this transformation. I think teaching is the art of leaving an effect on the student. No matter how hopeless it was at the start, I saw the transformation. Those students that graduated from that period are working in many different professions today. Those students became lawyers and teachers.

These conversations lead to the finding that motivation is critical for both students and teachers. A key factor that motivates educators is seeing their students learn and grow. In particular, educators are motivated to see the positive impact their efforts had on their students. According to Lortie (2020) teachers are motivated when they see the success of their students and are disappointed when their students are not successful. Similarly, the teacher also has a significant role in motivating their students. According to Yilmaz Bodur et al. (2021), adults can promote a sense of responsibility among adolescents by seeing them as individuals. Moreover, they found that personal responsibility and academic motivation are correlated. The teachers' care, interest, and recognition are essential in supporting students' motivation and success. Students are not only affected by the statements of their teachers but also by their teachers' behaviors (Pektaş, 1989). Once the student builds a sense of responsibility, it translates into collaboration and positive relationships in the classroom (Helker & Wosnitza, 2014). A positive teacher-student relationship based on trust and care is beneficial for both teachers and their students (Roy & Sengupta, 2015).

Students Care and Grow When They Can Be a Part of the History, Culture, and Story of the School

The photos of images drawn on school walls, which are shown in Figure 4, simulated conversations on the school culture and the students' agency in shaping this culture. Both images included creative works by the students in the form of projects that were led by the facilitation of their teachers. These images had associated stories about how these project ideas emerged, how these projects were implemented, and how these projects resulted in a long-term connection between the students and their school.

The aim of the tree, shown in Figure 4a, was to encourage students to use words in their correct meanings. The tree included words such as homonyms that are commonly misused or misspelled in everyday discourse. The Turkish language teacher and the art teacher worked together with their students to create this project. Given the image was located in the hallway, it received much attention during recess as students passed by the image. The tree was a reminder about the correct use of everyday words. Figure 4b illustrates the handprints and names of each student who helped design their school library. This project was done in 2016 and was initiated by the students' request for a library. The students completed the interior design of the classroom and painted the walls with the support of their art teacher. The students who participated in this study have graduated; however, when they come to visit the school, they always go to the library first to see their handprints. The wall reflects the hard work and creations of the children, and the images illustrate how these children contributed to the culture and history of their school.

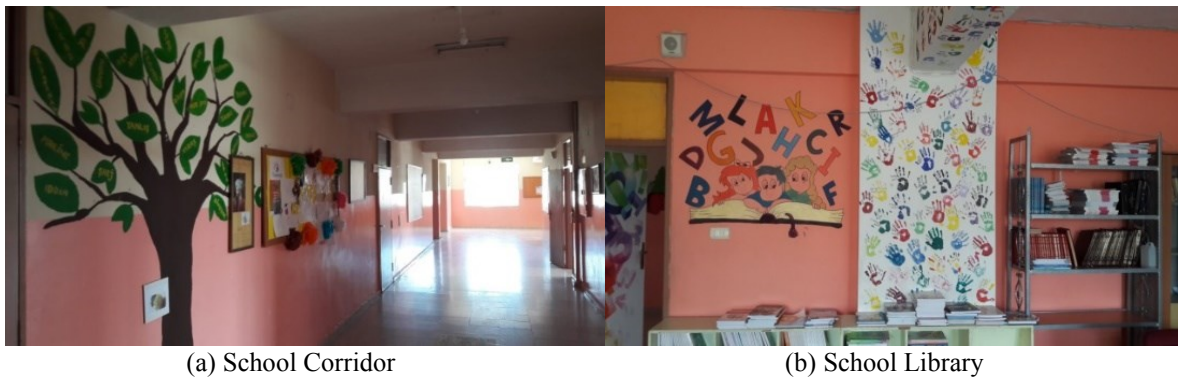(a) School Corridor   (b) School Library

Figure 4. School Corridors and Walls

During the discussion of these photographs, we realized how important it is for students to be a part of the school's history. However, while the work is carried out by the students, the initiation and planning are the outcome of teacher collaboration. These projects are designed by teachers who recognize a need or a problem through their observations and informal conversations and develop means for students to take part in the solution-making. We noticed that projects with long-term results emerged during informal conversations (e.g., while having tea at the school canteen). Because of this context-based emergence of these projects, these projects are powerful in strengthening a sense of belonging to the school.

Often parents are also involved in such collaboration. The importance of such collaborations is acknowledged by Roy and Sengupta (2015), who argue that all collaborators (administrators, teachers, students, and parents)

have a place in the creation of positive effects of education. They further add that schools should create operational and emotional spaces for teachers and students to establish a relationship of trust while creating a sense of belonging. In our conversations, many examples of the student being a part of the school culture emerged.

> Mr. Yasar: The students at the school where I formerly worked were a bit distressed. They were constantly damaging the school's furniture. We were planting trees in the garden, and the next day the trees were being uprooted. The school administration and teachers came together and decided to build a fence to protect the trees. Some colleagues said that students will break these fences too. Our physical education teacher said that he would involve his students in the process. He brought bamboo poles and worked with his students to build the fences. A week passed and we saw that the fences were intact. We were surprised. I asked a student why students were breaking everything in this school, but the fences were still intact after a week. The student said, "we spent a week trying to build those fences, should our efforts go to waste?" The students did not want to harm the things they worked for.

Novel and meaningful projects often emerged during casual conversations with the students and among the teachers. These projects that emerge from informal conversations point to the presence of a collective participation within the school organization decisions and represent elements of a decentralized school management model described by Cornito (2021).

Our conversations revealed that these projects carried long-term effects when they allowed students to be a part of the history and story of the school. The soccer field, pictured in Figure 5, is an example of a project that emerged from a request by the students. Students wanted a grass soccer field on the school yard. The school administration and teachers collaborated and worked with the students to seed the grass. The outcome resulted in a green field as well as a reduced absenteeism among some students, who started to attend school just to be able to play on this field.

The educators' noticing of student needs and interests played a key role in the support of student engagement. These types of projects are evidence of teachers' ability to notice needs and build empathy with their students. According to Sarı and Özgök (2014), such teacher engagement strengthens a sense of belonging and contributes to the academic, social, and psychological development of the students.

Such engagement of teachers and students, who are typically in the lower organization levels of the school, in autonomously identifying problems, developing ideas, and implementing solutions is an example of collective participation. What is unique about these examples is that they exemplify the effectiveness of teacher-led efforts within a centralized education system. The decentralization strategies with top-down school-based management models are challenging especially at the early stages of adoption and these efforts continue to struggle when the attention of the schools is diverted away from student learning outcomes as a metric of quality (Caldwell, 2005).

Figure 5. Grass Soccer Field

Conclusions

This study, designed to understand the impact of COVID-19 on education, emerged from collaboration between two school principals and an educational researcher. Through a collaborative inquiry, we had the opportunity to deeply examine our perspective on education. Additionally, we used photographs of classrooms and school buildings to facilitate our discussions that took place over video conferencing. While we started to question the effects of the invisible COVID-19 virus on education, we discovered ways the pandemic made the invisible visible. Other scholars have also highlighted that the many negative aspects of the pandemic also created new opportunities such as rethinking the function of schools and creating alternative education structures with a renewed definition of education (Sarı & Nayır, 2020). Through this study, we uncovered the critical role of human connection on education and the important role of schools and educators on society. The pandemic disturbed education and resulted in losses in student learning outcomes. Yet, the value of face-to-face education was rooted in its social and psychological contributions.

Our examination of the empty classrooms and school corridors as well as our reflections and retrospection, revealed two key elements necessary for future education. First, we argue that motivation is the key for learning and engagement for both teachers and students. The source of a teachers' motivation is seeing the growth of their students and the positive influence they had on them. The source of a students' motivation is being seen and the recognition they receive from their teachers. Second, we argue that students should be able to be a part of the history, culture, and story of their schools.

Perhaps one of the most significant challenges of teaching during the COVID-19 pandemic, was the difficulty in establishing and maintaining the teacher-student relationship (Gören et al., 2020) that often takes place in micro and informal interactions. As argued by Demirtaş (2010), the school culture is a key factor that influences the formation of a child's personality as well as learning and academic success. As the child assumes ownership and feel connected, their success would follow. In fact, such efforts empower the student while building their sense of belongingness towards the school (Cornito, 2021).

Schools can reinforce a collaborative school culture with educators and students as partners in shaping their schools. According to Caldwell (2005), the school leaders have an important role in ensuring that the student motivation and learning outcomes remain the central concern of the school community. Our study illustrates that teacher and student motivation are intertwined and provides examples of how positive outcomes can be accomplished with a shared vision even within a centralized education system.

Recommendations

In conclusion, the COVID-19 pandemic made the invisible visible and highlighted the critical roles of schools in support of society. The pandemic also created a longing for school and in-person education. Most notably, the pandemic presented a renewed perspective on education. Given our findings, we present two recommendations in cases with sudden and long-term interruptions to education, such as in the COVID-19 pandemic. First, efforts must be made with a focus on ensuring and strengthening the teacher-student interaction and motivation. Student outcomes should be prioritized ahead of content coverage. Second, curricula and projects should be created to promote a collaborative culture in ways students can contribute to the school's history and story to form a sense of belonging, remembering the larger goal of schools to prepare students to add value to the society. We argue that these recommendations also hold true for the future of education even after we recover from the pandemic.

Note

This study was presented at the International Conference on Studies in Education and Social Sciences (ICSES) on November 14, 2021: www.icses.net.

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