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A Critical View to Educational Technologies in the Context of Social Inequalities

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Abstract

Equality of opportunity in education refers to the right of students to access compulsory education and to have equal opportunities in the process of education. In addition to offering many solutions to ensure equality of opportunity in education, there are also many obstacles. As a matter of fact, educational technologies are considered as an option in terms of having an effect on individuals having equal opportunities in the education process. Educational technologies can be seen as a solution to existing inequalities in order to provide equality of opportunity in education. From this point of view, in this study, it is aimed to determine the thoughts on the use of educational technologies in the education-teaching process in the context of social inequalities. In the study, the qualitative research design of phenomenology was used and ten teachers working in different branches in private and public schools were interviewed. Semi-structured interview technique was used as the data collection method and the interviews were conducted online with the teachers. Deductive analysis method was used to analyze the data. In the study, first of all, literature review was made in the context of social inequalities and themes were determined within the framework of the literature. The themes revealed were discussed as gender, socioeconomic level, parental education level, technology use proficiency of teachers and students with special needs. Within the scope of the themes obtained, teachers' opinions and suggestions regarding the impact of educational technologies within the framework of the concept of equality of opportunity in education were included.

Keywords

social inequality, equal opportunity in education, educational technologies, teachers' views, phenomenology

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Introduction

The education that begins in family life continues in a planned and programmed manner and within the scope of certain goals and achievements in the pre-school period and the following academy steps. The educational and instructional knowledge and skills gained can affect the lifelong education process in various contexts. Individuals are more likely to be closer to the goals and opportunities they want to have owing to the education they receive. In addition, they can influence the society by socializing within the framework of the education they have received (Meyer, 1977). Individuals need to know the rights they should have in order to take an active role in their social lives and live in harmony with the society. The right to education is at the forefront of these rights. One of these rights, the right to education, is very important in terms of knowing and using other rights (Akgül, 2019; Robyns, 2006). Education, which is also the main key of economic, social and cultural life, is one of the fundamental rights of the individual as a humanization process according to the egalitarian view (Bajaj, 2011; Ömür et al., 2017). As a matter of fact, as the quality of education, which determines the living conditions of the individual, increases, the benefits obtained increase and healthier social conditions can be provided (Mercik, 2015; Nowak, 2001). Although education is a human right in itself, it is seen as an indispensable element of realizing other human rights (Singh, 2014) and a necessity to unlock other basic human rights (Broderic, 2018).

It is necessary to provide equal educational opportunities and equal opportunities to all members of a society without discrimination. The concept of equality of opportunity is defined as the equality of access to or utilization of resources (Akgül, 2019), the same chances for all types of members to achieve goals (Roemer & Trannoy, 2013), equal conditions and opportunities among participants in an initiative or an election in any field (Polat & Özdan, 2020), and the ability to achieve equal results even among students from different social backgrounds (Gamoran & Long, 2007). The concept of equality can generally be considered as equality of opportunity and possibility (Tabak, 2019). Equality, which is the basic concept of equality of opportunity in education, is not about all students being at a high level of success, but about providing equal opportunities for all students to reach a high level of success (YeğiTek, 2012). Providing students with the opportunity to have a good education regardless of the economic, social and cultural situation they are in is the essence of the concept of equality in PISA. Mercik (2015) stated that equality does not mean "providing one and the same education to everyone" in a qualitative sense, what is meant here is the provision of qualified education services that will enable each individual to reach their development potential at a level where they can achieve the life conditions they want. However, equality in education includes both equality of opportunity and the concept of equality of opportunity, which can be considered the source of inequality, and these two forms of equality cannot be considered independently of each other (Canbay & Çuhadar, 2020).

Bourdieu, one of the main thinkers of the 20th century, is one of the important names that comes to mind when the concepts of equality of opportunity or equal opportunity in education are expressed. Bourdieu (1986) emphasized equality of opportunity in



education with his Capital Theory study. Bourdieu, "The Theory of Capital" defines it as social environment and social relations (social capital), accumulation based on education and family experience (cultural capital), and transformable assets owned (economic capital). Cultural capital is generally defined as the competencies acquired in the family and school, and indicates that school education is based on cultural capital acquired from the family. Therefore, it bases the issues of equal opportunity or inequality in education on cultural capital. However, the issue of equality and/or inequality in education has been considered as one of the most important issues in the sociology of education (Dekker, 2007). Regarding the concept of inequality in education, Colemon et al. (1966) stated that the differences in average resources between schools were not as large as expected and the effect of school resources on student achievement remained in the background compared to the importance of students' family backgrounds. However, Çelikkol and Avcı (2017) emphasized that the problem of inequality in education should be addressed in the context of "equality of opportunity" and "equality of possibility" in education in general, and commented that inequality of opportunity and opportunity in education causes inequality among members of society in terms of access to economic and social opportunities. In addition, while the majority of the debate on equality in education focuses on how to equalize the access and participation of different social groups in formal education, a more holistic and integrated approach may be needed to ensure equality in education in order to make schools egalitarian institutions (Lynch & Baker, 2005). In his book Sociology of Education, Tezcan (1985) describes the situations that cause inequality of opportunity in education as follows; economic factors (family income and occupation, economic power of the state), geographical factors (settlement pattern, regional differentiation), social factors (gender discrimination, religious discrimination, language factor, racial factor, population factor), educational imbalances (adequate teacher profile), political factors (education policies changing according to the governments), functional factors (differences arising from intelligence and abilities) and free boarding, scholarship and aid support (the possibility of boarding in some schools). Gamoran and Long (2007) commented on the importance of providing equal opportunity to individuals within the scope of the right to education, and noted that decades of research have been conducted on school effects, the impact of socioeconomic status on achievement, and racial and ethnic disparities in academic achievement in terms of equal opportunity in education. Equal opportunities to compete should be offered to everyone, regardless of their social origin or other attributes attributed to them (Hallinan, 1988). However, in today's society, various factors such as the socioeconomic and cultural characteristics and educational levels of families, as well as the perspectives and competencies of teachers regarding the use of educational technologies can make the situation more unsolvable in the context of inequalities rather than equality of opportunity.

Important Factors Affecting Equal Opportunity in Education

In terms of the gender factor, it can be stated that in terms of the meaning attributed to girls in some societies, girls can be left behind in their various educations, professional lives, use of technology and even in the fields of art and sports throughout their upbringing.



It is thought that the gender factor, which is accepted among the criteria of equality (Işık & Bahat, 2021; Subrahmanian, 2005), is an element related to equal opportunity in education and is considered as an obstacle to the implementation of equality of opportunity (Akgül, 2019; Mercik, 2015; Stromquist, 1997). Kabeer (2005) and Tusinska (2020), emphasized that gender equality and education are two interconnected concepts and that this situation is of critical importance for a healthy society and economy. Zeng et al. (2014) commented that gender equality not only contributes to the increase of productivity of the current generation, but also contributes to the improvement of the next generation's results and will allow for improvement in education. In the literature, it has been stated that the gender factor is considered within the scope of causing inequality of opportunity in some studies (Bilgin & Erbuğ, 2021; Canbay & Çuhadar, 2020; Işık & Bahat, 2021; İnan & Demir, 2018; Polat & Özdan, 2020; Subrahmanian, 2005; Tusinska, 2020; Zeng et al., 2014).

In terms of inequality of opportunity, the disability of an individual can also be considered as an important factor (Robeyns, 2006; Terzi, 2005; Toboso, 2011). Bilgin and Erbuğ (2021) drew attention to the access of individuals with disabilities and special needs to qualified education, the change in the perception of the disabled in society, and the preparation of the necessary infrastructure for them, within the scope of every citizen's right to receive education. Terzi (2005) explained that the Warnock Report (DES, 1978) on the education of children and young people with disabilities emphasized the importance of common educational goals for all individuals regardless of their abilities and disabilities and introduced the concept of 'special educational needs' to identify students who face difficulties. Çelik (2017) draws attention to the issue of being able to benefit equally from the opportunities of society without being subjected to any discrimination based on gender, physical disability or any other reason within the scope of existing as equal members of society. Therefore, in the context of social equality, the differences of each individual should cause unity, not discrimination by the society.

The socio-economic level of the family also emerges as a very important factor in the education, lifestyle, social and cultural opportunities of the individual, and even in his plans for the future. The economic resources of parents, especially family income, have been the main focus of educational research (Nam & Huang, 2009). In some studies covering this issue, it is stated that factors such as socio-economic status and cultural characteristics of families play a decisive role in the education of their children (Ferreira & Gignoux, 2010; Master, 1969; Mercik 2015; Nam & Huang, 2009; Tabak, 2019; Tezcan, 1985; Yaşar, 2016; Zhang & Eriksson, 2010). Schulz (2005) emphasized that the socio-economic status of families is considered as an important variable in explaining student achievement and may affect learning outcomes in various ways and mentioned financial support and home resources for individual learning. Similarly, Schuetz et al. (2005) emphasized the diversity of the family's economic income and the opportunities to provide students. Polat and Özdan (2020) made statements that the socio-economic status of families can have negative consequences on the education process, and that there are great differences in terms of equality of opportunity and opportunity with the spread of private schools. On the other hand, Ergün (1994) stated that the socioeconomic status of the individual is related to his educational status, occupation and



income level, and commented that as industrialization and modern society increase, the interdependence of these factors will also increase. As a matter of fact, in order to ensure equality of opportunity in the studies to be carried out, it is necessary to consider the imbalances regarding the socio-economic differences that may arise between the regions (Tezcan, 1985).

Another factor leading to the inequality of opportunity in education is the educational status of the family; it is stated that the child's academic success is closely related to his attitude towards the use of technology and his interest in the educational process (Dinçer & Uysal Kolaşin, 2009; Erten, 2019; Ferreira & Gignoux, 2010; Gamboa & Waltenberg). Family education is accepted as the motivating force that paves the way for the future of the child (Khan, Iqbal, & Tasneem, 2015). Within the scope of the National Evaluation of Educational Progress (NAEP) report, it was observed that students who reported higher parental education levels tended to have higher average scores (Campbell et al., 2000). Khan et al. (2015) emphasized that the higher the parental education level, the higher the academic achievement of the students. It is seen that the level of parental education can also lead to an inequality of opportunity in terms of student academic achievement tendency. As a matter of fact, Ferreira and Gignoux (2010) commented that the low educational level of parents may be an obstacle in terms of inequality of educational opportunities among students.

Another factor in the inequality of opportunity in the social sense is the competence of teachers regarding their knowledge and skills on any subject. Equipping teachers with competencies that will not cause any meaningful difference with respect to each other is of great importance in terms of equality of opportunity to be provided in education in the social sense. The qualifications of teachers and administrators are among the conditions for each student to receive a qualified education regardless of which school they are in (Inan & Demir, 2018). As a matter of fact, Tabak (2019), Gürültü and Alıcı (2020) emphasized the importance of this situation in the process by drawing attention to the element of teacher among the basic qualifications that ensure equality of opportunity in education. Shields, Newman and Satz (2017) mentioned that educational resources such as books, materials, physical facilities and teachers are important in terms of equality of opportunity and that getting training from more qualified teachers will contribute to the success of the individual in the academic and business process.

When the factors that cause inequality of opportunity are examined, it can be seen that these factors have/may have an important effect on ensuring equality of opportunity in the educational process. In addition, educational technologies can be accepted as another element in order to provide equality of opportunity in education for making the course more effective and efficient in the education process, enable students to actively participate in the process, concretize learning and realize many other applications easily and quickly. As a matter of fact, one of the basic concepts for more effective, efficient and qualified processing of education is educational technologies. Educational technologies are one of the most basic tools for students and teachers in structuring and concretizing information, in easy access to information without the concept of time and space, in interaction, creativity and innovation. It has been an important requirement



for students to access the right to education, especially during the pandemic period. However, rather than the technology itself, the qualifications of the individuals who will use this technology are also very important in the effect of educational technologies on ensuring equality of opportunity. In some cases, these qualifications cause the use of educational technologies in the process to lead to equality of opportunity, while in other cases, the use of these technologies may cause inequality of opportunity. As a matter of fact, in such cases, educational technologies cannot fulfill the constructive function expected from them. Moreover, it can become an implicit way of perpetuating existing inequalities. This situation, which was expressed during the pandemic process, has become even more evident. In pandemic conditions where educational technologies are used intensively and sometimes only distance education is realized, the educational opportunities that children will receive can be determined by the socioeconomic level of the family, the educational level of the family, the gender of the child, the disability status of the child and the teacher's competencies in educational technologies. Regarding this issue, Erten (2019) emphasized that the income level and education level of families can have a positive effect on students' attitudes towards digital technology in his study to determine the attitudes of generation z towards digital technologies. Isik and Bahat (2021) stated that some students and teachers do not have or cannot use the necessary technologies, resulting in inequality of opportunity.

In addition to emphasising the importance of educational technologies, Yıldız and Akar Vural (2020) emphasised that with the increase in educational technologies, a division that can also be expressed as a "digital divide" has emerged between those who can access information and communication technologies and those who cannot access them. As a matter of fact, the inability of individuals to access such technologies, which causes this digital divide, can be a major obstacle in terms of equality of opportunity among individuals. Comments that these factors may have an effect on causing inequality of opportunity in the effective use of educational technologies in the process can also be seen in some literature studies (For example; Akgül, 2019; Bourdieu, 1986; Canbay & Çuhadar, 2020; Colemon et al., 1966; Çelikkol & Avcı, 2017; Ferreira & Gignoux, 2010; Işık & Bahat, 2021; Ömür et al., 2017; Polat & Özdan, 2020; Yaşar, 2016). Therefore, within the framework of this view, the use of educational technologies in the context of social inequalities has been examined in this study. In this context, within the scope of the study, it is aimed to determine the opinions of teachers about the possibility of using educational technologies to provide equality of opportunity in the society or to cause/ may cause inequality of opportunity.

Method

Research Method and Data Collection Tool

In the context of social inequalities, this study, in which teachers' thoughts on the use of educational technologies in the process are tried to be determined, was designed appropriately by using phenomenology, one of the qualitative research designs. Phenomenology focuses on phenomena that we are aware of but do not have an indepth and detailed understanding of. Facts can occur in various forms such as lived



events, experiences, orientations, perceptions, concepts and situations (Yıldırım & Şimşek, 2011). Semi-structured interview technique was used as a data collection tool. In this context, an interview form developed by the researchers was prepared. In order to ensure the content validity of the questions to be included in the interview form, the relevant literature was examined and a draft interview form was prepared. In the evaluation of the open-ended questions in the draft interview form, the opinions of the field experts working in the Department of Computer and Instructional Technologies Education and working in the Department of Turkish Language Teaching were obtained, and necessary updates were made on the questions. After the updates, interviews were conducted with the participants in the online environment and recorded with the permission of the participant.

Study Group

The participants of this study consisted of ten teachers working in different branches in private or public schools and attending a master's programme at a university. The branch of one of these teachers is Preschool Education, four of them are English Education, one of them is Special Education, one is Classroom Education, one is Mathematics Education, one is Physical Education and one is Industrial Technology Education. Information Technologies teachers were not included among the participants. Since Information Technologies teachers are educated in a field related to technology and have the necessary knowledge and skills in the use of technology, it is aimed to reveal the perspective of teachers from different branches on the subject. Eight of the participants work in state schools, while the others work in private schools. Two of the participants who worked in a state school also worked in a private school before. The professional experience of these teachers ranges from 2 to 14 years. Among the participants, four teachers have school administration experience. In addition, all participants received training on educational technologies both within the scope of the FATIH Project and within the scope of professional development. The demographic information of the participants is presented in Table 1.



Table 1

Demographic Information of Participants

Participant	Branch	Tenure of Office	Type of School	Technology Education	Administrative Duty
P1	Industrial Technology Education	11 years	State school	Yes	Yes
P2	English Language Education	8 years (6P+2S)	State school	Yes	No
P3	Physical Education	5 years	Private school	Yes	No
P4	Classroom Teaching	2 years	State school	Yes	No
P5	Math Teaching	5 years	Private school	Yes	No
P6	Special Education Teaching	14 years	State school	Yes	Yes
P7	English Teacher	10 years	State school	Yes	Yes
P8	English Teacher	16 years	State school	Yes	No
P9	English Teacher	9 years (4P+5S)	State school	Yes	No
P10	Pre-school Teaching	13 years	State school	Yes	Yes

P: Private school S: State school

Participants of the study were determined on a voluntary basis. Before the interview, the participants signed the consent form and were informed about the purpose of the research. Assurance has been provided that the collected data will be used for scientific purposes and will not be accessible by other people. While presenting the data and findings in this research report, pseudonyms were used instead of the real names of the participants.

Data Analysis

The data obtained in the research were analyzed using qualitative data analysis approaches. According to the literature, there are different approaches in qualitative data analysis, and although the definitions of these types of approaches are the same, it is seen that they are named differently according to different researchers. In this study, the deductive approach according to the definition of Creswell (2013) and the descriptive analysis approach according to Yıldırım and Şimşek (2011) were used. According to Creswell (2013), in deductive analysis, researchers check whether there is enough data



on existing themes. Yıldırım and Şimşek (2011), on the other hand, define descriptive analysis as summarizing and interpreting the data obtained in a similar way according to predetermined themes. In addition, Yıldırım and Şimşek (2011) stated that "the data can be organized according to the themes revealed by the research questions, or it can be presented by considering the questions or dimensions used in the observation and interview pr ocesses". Within the scope of this study, themes were obtained as a result of the literature review on inequality of opportunity. For qualitative data analysis, the interviews were transcribed and the researchers checked the correct transfer of the data and organised the data. The researchers analysed the transcribed data and interpreted the themes and tried to include direct quotations related to the themes. The findings were obtained by interpreting the themes. Explanation, association and interpretation of the findings obtained from the interviews were carried out in line with the purpose of the research. Maxqda22 program was used in the analysis of qualitative data. In the study, in order to ensure validity and reliability, inter-coder consensus calculation was used by the researchers to calculate reliability. As a result of the inter-coder consensus calculation formula, the reliability coefficient was found to be .94 and as a result of this value, it was accepted that the coding was reliable (Miles & Huberman, 1994). Finally, the findings were reported and presented in the findings section of the study.

Results

In the light of the literature studies on the effect of educational technologies on equality of opportunity/inequality and the findings obtained, the themes of gender, disability status, socio-economic level, family education level and teacher competence regarding equality of opportunity in education were formed (Figure 1) In the study, the opinions expressed on each theme were evaluated in general and direct quotations were given for the participant opinions.

Figure 1

Themes Related to Equal Opportunity in Education





Investigation of the Use of Educational Technologies in the Context of Equal Opportunity

The general views of the participants on the effect of using educational technologies on reducing or increasing inequality of opportunity were examined. Some participants expressed the view that the use of technology in education would provide equality of opportunity, in other words, it would reduce existing inequalities. some participants, on the other hand, expressed the view that in addition to the emergence of inequality of opportunity for some students, it could be very beneficial for students with opportunities. The striking finding here is that while the participants argued that it would reduce inequality of opportunity, they also expressed the fact that it would create inequality in many cases. Regarding the fact that using educational technologies provides equal opportunity and its use is beneficial, P9 said that; "educational technologies add a plus to each individual in that environment. It helps one to close the gap between one and the other, in short, to close the gap between them. In other words, using technology in education definitely supports the educational process, supports it in every sense". The following words from the participants directly that it is an undeniable fact that the use of P6 educational technologies reduces inequalities, but on the other hand, it will create new problems: "Necessarily. I would say it reduces inequalities in my branch. Because in this way, we benefit students who cannot access technology. I think it reduces inequalities in English. As much as I apply it in my classes, I think it reduces inequality of opportunity. But on the other hand, it can be accepted as an undeniable fact that it can create new problems", P10 expressed his views on the fact that the concept of inequality of opportunity is already a fact of life, and that the use of educational technologies can cause inequality of opportunity, as well as providing great benefits to those who have the opportunity.

Educational technology, I mean, I think it provides equal opportunity for both the family and the child. It is beneficial in many ways. On the other hand, some get more while others don't get any. I mean, this is really a fact of the world. Life is already unfair for people living in difficult conditions. We also see this.

Two of the participants argued that the use of educational technologies would further increase the inequality of opportunity between individuals. P7 thought "*I mean, as I said, I find the use of technology useful for my own branch. I mean, I find it very useful in terms of teaching in order to teach more enjoyable lessons, but I wish everyone had equal opportunities, then it would be better. I mean, it is a fact that it creates and/or magnifies inequality*". While expressing these thoughts, he stated that he could see that he had this view more clearly through the questions asked in the interview. P8 expressed his thoughts as follows:

Unfortunately, I also experienced this situation. The child was not in a good economic situation. I provided the child with a computer, but of course not everyone could afford a computer. There are many students without computers. Even if they have a computer or a tablet, they may not have internet access. What about internet access? What about equal opportunity? So there are many elements that need to be balanced. Equality cannot be achieved just by giving tablets. Unfortunately, it doesn't, I wish it did, but it doesn't.



Two of the participants did not give a definite opinion on whether the use of educational technologies would increase or decrease inequalities. Both participants stated that they could not make a complete decision and that the use of technology would serve both situations. Both participants firstly stated that educational technologies will provide equality of opportunity considering the opportunities offered by educational technologies, on the other hand, they stated that educational technologies may also cause inequality of opportunity when they consider that individuals with low socio-economic status cannot have many technological opportunities.

Investigation of the Use of Educational Technologies in the Context of Gender

The opinions of the participants regarding the ability of individuals to benefit from educational technologies according to their gender are divided into three. Three participants stated that there was no difference between men and women, one participant stated that the difference was in favor of women and six participants stated that the difference was in favor of men.

Three of the participants stated that there is no difference in using educational technologies according to gender. P7, one of these participants, stated that there is no gender difference in the use of technology in the new generation, so both genders benefit from educational technologies equally. While the other two participants argued that there was no difference in the use of educational technologies, they stated that there was social inequality in the use of technology. The participants stated that in the society they live in, male individuals are given more opportunities to use technology, while women are left behind in this regard. However, the participants acknowledged that this difference existed until they started primary school and that they came to school with different readiness, but stated that this difference disappeared when they started school. However, they argued that they benefit equally from the use of educational technologies. P9 expressed this situation with the following expression:

...Therefore, at this point, we can say that the girl child is more disadvantaged than the boy child at the beginning, but in the educational process, that is, if you ask me after that, you know, readiness until the first grade, girls definitely start at a disadvantage in terms of gender, but after they start primary school, come to the classroom and sit at the desk, I think that it is the socioeconomic level that makes the real difference.

Six of the participants stated that there is an inequality in favor of men in the use of educational technologies. All of these participants stated that there is inequality in the use of technology in society, so this inequality continues in the use of educational technologies. One of the participants argues that this difference is innate according to gender, and that men are more interested and predisposed to technology than women. Other participants, who make up the majority, stated that these people are assigned different roles as men and women by the society, that the use of technology is given to boys as a right and they are given more opportunities. P2 said that "*If there is a girl and a boy from the same family, the boy has more technology knowledge than the girl. Because the male child is usually prioritized in the family.*" expressed in this way. P6 stated that girls are more shy in using technology in education with the following words:



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For example, there are some activities on the smart board, such as writing words, and the ones who are willing to come more, in short, the ones who participate more are male students. I try to make it compulsory for female students to participate in the lesson. I feel that female students hesitate because they think that they will encounter some problems on the smart board and cannot solve them.

Therefore, it has been concluded that men and women are in different readiness in educational environments and due to this difference, they experience inequality in benefiting from educational technologies. Only one of the participants expressed an opinion in favor of girls in benefiting from educational technologies. While expressing his opinion, this participant stated that boys have more interest and skills in using technology, but girls benefit more when using educational technologies. In this case, it is seen that the use of educational technology does not create a privilege in favor of girls in providing equality of opportunity, but rather the situation of benefiting according to the purpose of use.

Investigation of the Use of Educational Technologies in the Context of Disability Status

All participants stated that individuals with special needs face inequalities in the use of educational technologies. Participants agreed that individuals with special needs do not benefit from educational technologies at the same rate as individuals without special needs. The opinion of P9 from the participants was "Absolutely they could not be injured. So at that point, I can say with confidence that they certainly did not benefit from it. Because they tried to offer the same environment for people with disabilities. That didn't go very well either." expressed as. P10 said, "So when we use technology, we can't include them too much in the classroom environment. In other words, it is obvious that they are not benefiting from it. This is a fact", he made statements regarding this situation. One of the participants, P5, said, "It's like they can be more emotionally sensitive. They can also be a little bit more backward in terms of having things. The approach in the classroom is very important." and emphasized that even the perspective of the classroom environment for disabled students can lead to inequality of opportunity in the use of educational technologies by the individual concerned. As a matter of fact, in line with the findings, it can be stated that in educational environments where individuals with special needs and individuals with normal development are together and in many situations where educational technologies are used, individuals with special needs cannot benefit equally from the benefits offered to other individuals. Therefore, it can be concluded that there is a need to be more careful in such environments in terms of ensuring that individuals with special needs receive education at an equal rate and competence in the education process.

Investigation of the Use of Educational Technologies in the Context of Socioeconomic Status

Participants think that the status of benefiting from educational technologies varies according to the socioeconomic status of the individuals' families. It has been stated



that individuals with families with low socioeconomic status have less technological opportunities than others and have to cope with many impossibilities. However, it is thought that they are introduced to such technologies later than individuals with a better socioeconomic level. Therefore, it was stated by all the participants that there is an inequality of opportunity in this regard. The following statement of the participant P3 exemplifies this situation:

If I compare a child who goes to a public school with a child who goes to a private school, the child who goes to a private school has an iPad in his/her hand, there is a smart board in the classroom, the teacher uses technology as much as possible and the child can do everything there easily. It will not be enough, when the lesson is over, he will come home and repeat it on the ipad. Most children who go to public school don't have an iPad. Yes they don't. What will the child do? He has a chance, either he will learn there or he will lose the chance to practice when he comes home.

P4, on the other hand, expressed the situation that the use of educational technologies in socio-economic terms may create inequality of opportunity with the following words.

There is a big difference. For example, a child from a rich family can easily use a technological tool such as a computer at home since they were born, and they can use it properly. But those with a slightly poor socioeconomic status are not like that. Some of them don't have a computer at home or those who have one can't use it for some reasons. For this reason, the difference is as noticeable as possible.

Therefore, in these explanations, it is seen that children from families with low socioeconomic status do not benefit equally when educational technologies are used in schools. However, the participants who mentioned such a difference between individuals studying in public schools also stated that the main difference is between individuals studying in public schools and individuals studying in private schools. P10 expressed this situation as "*When we look at the difference between private schools and public schools, it is then that an inequality of opportunity emerges*". Participants also stated that private schools have more technological infrastructure and equipment than public schools. The following statement of P2 best exemplifies this situation.

We only have smart boards in our schools. In private schools there are projections, there are smart boards. Again, the curtain is a very important factor. I know this very well. They have dark curtains. In us, in public schools, there is only one smart board. And when you try to turn on the smart board, there are situations like viruses etc. Private schools don't waste time with these things. Yes, they don't waste time. For example, they expose the child to many factors. For example, they can make them listen to a video or animation, or they can make them watch something with visual animation. In our public school, we have a lot of trouble until we turn on the animation. For example, there will be no light to see the screen, it will be dark.

Participants also stated that private schools have teachers who have the competence and desire to use these technologies. P8 stated that teachers who can teach courses such as robotic coding are recruited to private schools, while P10 stated that teachers receive continuous on-the-job training. In addition, P3 and P2 stated that the class sizes in private schools are not as crowded as in public schools, and that more qualified education is received in classes with fewer class sizes. In addition, it was stated that students come from families with a certain socioeconomic level and therefore they are a



homogeneous group with a certain level of readiness. For these reasons, it is concluded that students studying in private schools benefit from educational technologies much more than those studying in other schools and that the inequality of opportunity between them and individuals studying in public schools can reach great dimensions. As a matter of fact, P5's opinion also supports this situation.

I can definitely say that there is a difference. For example, I used to work in a vocational high school where there were smart boards in only a few classrooms and I was very happy. For example, when I saw the smart board there, I thought that the students here could try what it was like and how to use it. I wanted to turn on the smart board, but the students told me "it won't work". I asked them "why doesn't it work?" and they told me "because there is no update". We could never use the smart board, the smart boards had these rails on them. We always used only the board with the rail on it. I mean, I definitely could not benefit from the smart boards during the time I was working.

Investigation of the Use of Educational Technologies in the Context of Family Education Status

All of the participants defended the view that there is an inequality of opportunity between individuals with high educational status and technology-conscious families and others. P6, one of the participants, stated that the children of families who are conscious about the use of technology are more fortunate. This situation means that " *A conscious family is perhaps most important because it can set certain rules and control the use of technology. In short, it means that they will be able to set certain limits or a certain framework for where the child uses technology, what they use it for, or how long they use it."* exemplified as. n the other hand, P1 participant expressed the view that parents' profession and attitude towards technology are very important in the child's learning and development with technologies. P1 emphasized that the education level and profession of the family have an impact on the child's ability to use technology correctly and stated that:

The occupation of the parents affects the student's use of technology. A child of a farming mother or father has a very poor use of technology. I say this because I work as a teacher in a village. This opportunity is not provided to the student. "I am not saying that the student has no talent. In fact, these children have talent, but they are very unfamiliar with technology. On the other hand, while their classmates are three or four levels ahead of them, these children are just at the beginning of technology."

P10, on the other hand, emphasized the awareness of the family's level of education and the use of technology and stated that the children of these families use technology for education and training purposes. In line with this statement, the idea that there is a significant inequality of opportunity between children from families with high levels of education and other children was dominant. The statements of P10 best exemplify this situation.

A child who does not know how to count, for example a five or six year old child. They are not kindergarten students, they are five-six year olds in the kindergarten classes of primary education. Children come to these classes without knowing numbers. For example, we used to start teaching them at once, but children whose parents are conscious have learned concepts and numbers with



technology. So their readiness is incredibly different. For example, a three-year-old child knows colors in English. I don't know what to say, he also knows numbers. So their readiness, perception and learning capacities are also more advanced. In short, children of families who use technology more appropriately and efficiently are more advanced.

Investigation of the Use of Educational Technologies in the Context of Teacher Knowledge/Skills Competence

All of the participants stated that teachers with high technology proficiency and who employ educational technologies in teaching environments also make a difference on students. They stated that there is an inequality of opportunity between the individual who receives training from a teacher with this qualification and the individual who does not. P4, one of the participants, stated this situation as the students of teachers who never use educational technologies or can not use them well are unlucky. As a matter of fact, P5 stated that a teacher with high technology competence will make his/her students active in the lesson and will be more competent. P10, on the other hand, stated that this was one of the reasons why he worked as an administrator in kindergarten:

The reason why I wanted to work as a kindergarten administrator was to support the use of technology in education. Because when I was teaching in primary school, I always saw the difference caused by the use or non-use of technology. My conscience was not comfortable with this difference for the students. While I was using technology in my classroom and seeing the happiness of the children, it was a sad situation that the children in the other class could not experience this happiness and went to their classrooms with a sad face, turning their necks. For example, these are the bitter situations that I experienced inside me, stated as.

Participants agreed that there is no equality of opportunity in terms of utilizing educational technologies within the scope of teacher training, and that even if the classrooms or schools are equipped with similar technologies, the fact that they are not used effectively in the process can lead to inequality. P7 stated this situation as follows.

In other words, of course, the competence of teachers to use information and communication technologies also creates a great inequality. You know, equipping the classrooms with the same technology is not enough in this respect. When we look at schools, all classrooms have smart boards. There is internet. But you know, on one side, maybe the smart board is never turned on all day long. It is not used at all, or it is only left for children to use. We also observe these. But on the other hand, the teacher who uses the right technology, who chooses the right resources for the lesson, will definitely benefit.

P9 talked about what a teacher with high technology competence and an interest in the use of technology can do and exemplified the inequality of opportunity as follows.

For example, in disadvantaged schools, although the parents are in a bad socio-economic situation, you look at what the class teacher has done. For example, we usually make school visits. Sometimes I see that some teachers have provided many opportunities to the class. I ask the teacher "how did you provide these facilities, teacher?" The teacher says "I bought two tablets from the mayor of the city, two tablets from the chamber of commerce". The teacher goes and asks for these tablets from many institutions. He provides facilities for his class. In fact, the teacher subconsciously has the need to access this technology and offer it to his/her students. The teacher demands this. They provide the technology to their classrooms, but teachers who do not experience this poverty or do not demand this technology do not demand it. They don't want to learn either. The teacher does



not develop himself/herself at this point. As in the classical education model, he says "I go to class and teach". Does the teacher explain the lesson "yes". There is no problem in terms of legislation. But isn't the student in the other class more advantageous because of the use of technology, while the student receiving education within the scope of the classical education model is more disadvantaged? It would not be very fair to say that they are not, that's for sure.

Within the scope of the study, the participants argued that the use of educational technologies would be beneficial in ensuring equality of opportunity in education, and in this direction, they commented that the effect of some social qualities is also very important in the process of using instructional technologies.

Discussion and Conclusion

There are many different opinions on whether the use of technology in education can provide an equal opportunity in terms of the education process or reveal an inequality of opportunity. As a matter of fact, it is also known that the use of educational technologies is very important for both students and teachers in order to teach more effective and efficient lessons in the learning process. On the other hand, the use of educational technology only by itself cannot create an effect, but the various characteristics and possibilities of individuals using these technologies may cause these technologies to be evaluated in the context of equal opportunities or inequality of opportunity. Within the scope of the study, when the teachers' views on the use of educational technologies in the context of social inequalities are examined, some of the teachers stated that the use of technologies in terms of social aspects can be very beneficial for students in the education process. In addition to this, some teachers commented that educational technologies can create equality of opportunity, but may cause inequality, especially for students who do not have socioeconomic opportunities. It is known that the use of such technologies in the process contributes to both the teacher and the learner. For example, Jacob et al. (2016) emphasized that the use of technology can reduce differences in peer groups, have an equalizing effect among teachers, help students achieve academic benefits, and reduce inequalities in resources between schools, while Marrow (2014) emphasized that the implementation of technology in classrooms contributes measurably to students and teachers, and therefore, this technology should provide all schools with the same opportunity and equal opportunities to experience technology in an educational way. The use of educational technologies has benefits not only for education but also for equalizing conditions in many other aspects. In particular, contemporary research emphasizes the leading role of technology in improving social equality and living conditions (Skare & Porada Rochon, 2022). In general terms, the educational and social contribution of the correct, effective and equal use of such technologies cannot be denied. However, the economic situation for owning technology and the negativities and inadequacies in terms of knowledge, skills, attitudes and perspectives for effective use can be seen as major obstacles to the equal opportunity of these technologies.

Regarding gender, teachers think that male students are more advanced in the use of technology than female students, which may even lead to academic differentiation when using educational technologies. In the opinions expressed in terms of the gender



factor, the majority of teachers stated that there is a difference between male and female students in terms of inequality of opportunity and that female students are generally negatively affected by this situation. Because of boys' innate interests which cause their predisposition to these technologies In addition, it can be argued that boys may have more knowledge and skills in the use of technology because they are provided with more opportunities to use educational technologies than girls. However, since different roles are assigned to girls in some segments of society, it has not been possible for them to meet or use technological tools at an early age. As a result, this situation may prevent the development of girls' competencies in the use of technology. In fact, in the teacher opinions expressed in relation to being exposed to inequality in terms of gender factor, this situation was also expressed in terms of keeping female students in the background compared to male students even in terms of receiving education. As a matter of fact, Zeng et al. (2014) stated that gender inequality in access to education exists, especially for rural students. Similarly, Ferreira and Gignoux (2010) emphasize that women are in a more resilient inequality trap than men in relation to inequality of opportunity and that even in economically disadvantaged situations, there is a prevailing belief in society that girls drop out of school earlier than boys. Although gender discrimination in society is considered to be quite rare in today's modern societies, it can still occur in some rural areas and in conservative societies that are not open to innovation.

Regarding another factor in the study, teachers agree that individuals with special needs do not have equal opportunities and that this gap cannot be closed with educational technologies. Participants think that there are inequalities in the use of technological opportunities, and that even if all these conditions are equalized, this situation will separate children in this respect as long as their educational technology competencies are not equalized. On the other hand, there is also the idea that individuals with special needs do not receive the same share of the benefits offered to other individuals. As a matter of fact, due to prejudices and inadequate evaluations of people with disabilities, their access to technological devices has also been an obstacle (Hoppestad, 2007).

However, many individuals with disabilities make great use of technological resources to ensure their quality of life and to function in society (Toboso, 2011). When we look at the developments in educational technologies, there are actually many assistive technologies for the use of individuals with special needs. In the field of special education where individual differences are important, the use of computer and internet technologies in the educational process should not be ignored (Çuhadar, 2010). Kandemir (2014) emphasized the dissemination of distance education applications including information technologies within the scope of studies to be carried out to increase the university education of students with special needs. Therefore, the effective use of these technologies in the process, ensuring that these individuals are active in the process and the trainings to be provided to them are very important for the learning of individuals with special needs.

Opinions were obtained from the teacher participants regarding the important factors that may cause digital divide in the use of educational technologies within the scope



of social inequalities. Considering all the opinions received, the teachers argued that children from families with low socioeconomic status and education level do not benefit equally from the use of educational technologies. In various empirical studies, it has been emphasized that family income is one of the strongest determinants of children's contribution to the educational process (Nam & Huang, 2009). In this regard, Fraillon et al. (2014) emphasized the importance of addressing various factors related to the student's competence in information and communication skills and computer and information literacy. It was stated that the socio-economic status of the family and the educational status of the family were among the important factors addressed. Similarly, Ferreira and Gignoux (2010) drew attention to the low income level of the family and the low level of education of the parents in terms of inequality of opportunity and commented that it should be considered as an important issue. It can be stated that parents' education level and family income are important factors in the education of their children and that there is a direct proportion between them (Masters, 1969). Similarly, in the interviews, teachers emphasized that depending on the socio-economic status of families, the opportunities they provide to their children may also change. It was stated that it is much more difficult for children from families with low socio-economic status to have technological tools than those from families with better socio-economic status. In fact, even if it is not only about having technological tools, it is thought that they struggle with impossibilities in many aspects. Some teachers even emphasized that the main difference regarding inequality of opportunity in education is between private and public schools. The smaller class sizes, more technological and physical facilities in private schools were seen among the reasons for the significant difference. In addition, it was emphasized that private schools have more economically homogenous student groups and students have more opportunities to benefit from technological opportunities (such as robotic coding trainings), which is a situation of inequality of opportunity.

In general terms, the socio-economic status of the family is very important in terms of meeting the needs of the students and providing the necessary educational materials and/or technological tools. Children's possession of these technological tools may also contribute to the development of their competencies to use these technologies. Having technological tools may also contribute to the formation of their awareness and even increase their academic achievement during the education process. As a matter of fact, Yaşar (2016) emphasized that the income level and cultural capital of the family can be effective on the educational success of the child. However, he also commented that this situation may have an impact on educational achievement and may also affect the issue of equality of opportunity. Tabak (2019) made explanations that sociocultural development in a society brings along economic development and that the resulting economic development affects socio-cultural development. Again regarding socio-economic status, Schleicher (2009), in his study on educational status in PISA exams, stated that the difference in the decline in average performance is due to the performance of socio-economically disadvantaged students. Zhang and Eriksson (2010) stated that parental income is an important factor in causing inequality of opportunity in individuals and that the increase in income inequality largely reflects the increase in inequality of opportunity. In this context, in order to ensure equality of opportunity in education, the quality of education to be provided to individuals should be independent



of the socio-economic status of families and the studies to be carried out to solve the inequality of opportunity arising from this situation are very important.

The educational status of the family is also an important factor in causing inequality of opportunity for students. Gamboa and Waltenberg (2012) commented that parental education is one of the important factors of inequality of opportunity in education, while Ergün (1994) commented that the occupation of the father and mother in the family can affect the future roles of children and even the professions they will choose. Similarly, Gamoran and Long (2007) stated that according to the information in the Coleman report, the differences in average resources between schools were not as large as expected and that the impact of school resources on student achievement was emphasized to be less important compared to the importance of students' family background. Khan et al. (2015) emphasized that there is a fact that children from educated families are more confident, experienced and resourceful than children whose parents are not educated. Considering these statements, it can be stated that students are exposed to inequality of opportunity in the education process due to the educational level of their families. Considering all the opinions received from the teachers, it was commented that the children of families with a high level of education and conscious in the use of technology have awareness in the education process compared to others, and that these children can be more knowledgeable, more controlled and academically more advanced.

Another factor in the inequality of opportunity for the effective use of educational technologies in the context of social inequality is the teacher's competence in the use of technology. In addition to all other factors, this factor can also be considered as an important situation that needs to be addressed. Özabacı (2005) stated that home and family environment ranked first among the reasons for students' school failure, followed by individual characteristics, peer group, school and teacher factors. Equipping teachers with the necessary knowledge and skills to use information and communication technologies in the educational process is very beneficial for effective delivery of educational innovations and easy implementation of educational innovations (Pelgrum, 2001). As a matter of fact, with the inclusion of technology in the learning process, the role of the teacher in the learning process has become critical. In order to increase the quality of learning, it is very important for teachers to ensure the integration of information and communication technologies into the learning process (Arkorful et al., 2021; Başaran et al., 2020; Buza & Mula, 2017; Goh & Sigala, 2020; Malik et al., 2019). Therefore, in order not to expose students to any inequality of opportunity in the education process, it is important to equip each teacher with the knowledge, skills and competencies required by the age. In particular, the competence of teachers in this regard is of great importance in terms of utilizing the equal opportunities offered by educational technologies. Teachers' competence in using information and communication technologies should be considered as one of the main factors that will directly affect the principle of equality in terms of ensuring equality in education (Canbay & Çuhadar, 2020).

As a result, it can be argued that the use of educational technologies today may lead to the continuation of inequalities, since in reality individuals are offered unequal opportunities.



For this reason, the use of educational technologies in the educational process may play a role in deepening the equality and/or differences between individuals within the scope of the characteristics and qualities of individuals, rather than equalizing the educational opportunities of individuals. For this reason, providing the basic conditions that will turn technology into an opportunity for each individual with the right to education and creating a change in this direction should be among the primary goals. In this context, some suggestions can be made:

- In order for individuals to have equal opportunities in terms of equality of opportunity in the education and training process by using educational technologies, it is necessary to offer similar equality to some of their characteristics and qualifications.
- In order to prevent the negative attitude towards gender, which still exists in some societies in terms of gender, efforts can be made to raise awareness of the society in order for parents to ensure that girls have the right to education, that boys are not separated from the various technological opportunities they have, and that they become more effective individuals in society.
- In terms of the education of individuals with special needs, both teachers and families should have knowledge about the assistive technologies that can be used in the education of these students and integrate them into the education process and use them. The educational process should be supported with technological applications appropriate to the special needs of the student.
- In terms of socio-economic level, teachers can provide support from school administration, various public institutions and/or non-governmental organizations for students with low socio-economic status.
- Regarding the educational status of parents, school administration and teachers should inform parents about the importance and benefits of using technology in education. In addition, parents should be trained and made aware of educational applications for the use of technology for educational purposes.
- Teachers should be given importance to have knowledge and skills in terms of effective and efficient use of technology in education. Teachers should be provided with in-service training by the school administration in line with their needs and demands and they should be provided with the necessary competence. Teachers should be encouraged to apply the in-service trainings they have received correctly and effectively in the teaching process.

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