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Problems, transformations, application examples and detections for gifted students in the Polish education system in the Covid-19 process

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Abstract

Poland, as a member state of the European Union, made various adjustments to the education system during the coronavirus pandemic. In this process, as in many countries, distance learning came to the fore. In Poland, the positive and negative aspects of the distance learning process, the relationships between students, teachers and teaching activities have become the subject of various studies. In the first stage, these studies were carried out through official institutions in order to obtain feedback about the process. The purpose of this research is to reveal the problems, changes and application samples in the Polish education system, and to examine the impact of remote learning on gifted students. This paper was designed with a case study, which is one of the qualitative research methods. The data obtained was analyzed using content analysis. The impacts of the Covid-19 pandemic on the education system are addressed by thematic groups. It has been observed that the changes implemented as a response to the pandemic have had various effects on teachers, students, parents, technological opportunities, motivation and teaching activities. It has been determined that the pandemic has seriously affected the identification and education of gifted students. Additionally, it was observed that students gained the ability to recognize and work with a new learning-teaching process through distance learning.

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Introduction

The pandemic has forced the entire educational process to be reinvented. This process brought different points of view. The Covid-19 outbreak that occurred in Wuhan, the capital of China's Hubei region in December, rapidly began to spread to other parts of the world – the World Health Organization (WHO) ultimately declared a pandemic on 11 March. With the advent of the Covid-19 virus, humanity faced a crisis. Normality was disrupted, and no known arrangement functioned properly. This new virus can be transmitted in mere minutes through droplets or even by touching metal surfaces or other materials which have been contaminated by an infected individual. Even though the elderly and very young children are the most vulnerable, no one is immune to this new infectious disease once it hits the body, so everyone is susceptible to its devastating effects (Bender, 2020; Meng, Hua, & Bian, 2020). Countries almost cut themselves off from one another. At this point, systems that existed in many areas, from trade to tourism, from health to education started to be questioned. With the closure of schools all over the world, education became one of the most pressing issues.

In addition to the adaptation of the students to the world during Covid-19, the pandemic brought with itself different perspectives in the world of education. It changed the perspective on - and approach to - education. Most importantly, the Covid-19 outbreak revealed that all the people of the world were interconnected. It showed that no behavior or action we have carried out so far is individual, and that these actions can affect the whole world (Smahel et al. 2020). In this context, the concept of the individual lost its importance and the concepts of humanity and unity

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came to the fore (Pyżalski, 2020). Therefore, it is thought that the definition of success will change greatly in the coming years, and a period will be formed in which people who understand mutual relations, strengthen differences and work in a global collaborative manner can be considered successful (Doucet et al. 2020).

By reconstructing the definitions we know, Covid-19 enabled people to re-define the role of the educator by assigning them new tasks. The understanding of teachers as a source of information and the understanding, and the idea that every individual who is knowledgeable is an educator now seems to lose its validity in 21st century education systems. Almost all of the students, who are 'Generation Z', are now able to use their phones, tablets and computers to access information and even gain or learn a technical skill. Nowadays they can access classes, trainings and conferences in just a few clicks (Pyżalski, 2020). Therefore, our concepts such as classroom, school and teacher should be reshaped and restructured completely according to the needs of these students. This highlights the role of the educator in helping the development of young people as members who contribute to society. For educators, flexibility and adaptability seem to be crucial at this point (Cortesi et al. 2020).

The Covid-19 outbreak led educational institutions to plan distance learning activities for students, to create content in this direction, and forced institutions to use existing technological tools. Educators around the world have experienced new things, did things differently and with more flexibility. This has provided potential benefits in accessibility to education for students all over the world. Although the doors of online education, which may be a new model in education, have been opened, the positive and negative aspects of this model have also started to be evaluated. Considering all these, a period has started to redefine many concepts related to education, such as school, teacher, student, and activity. It has become apparent that flexible educators with creativity, collective consciousness and vision will play an important role in the education system and world of the future.

Another fact that the Covid-19 outbreak shows us is that we need to acquire life skills that are different from our current life skills for the future, and that our perspective on life is changing. Accordingly, the need to teach young people about the life skills required for the future is born or will arise. In an ever-changing global environment, young people need flexibility and adaptability. Looking ahead, some of the most important skills employers will look for will be empathy and emotional intelligence, as well as creativity, communication and teamwork (Czechowska & Majkowska, 2020).

Poland's educational war with Covid-19 started on 25 March. As in all of Europe, due to the spread and severity of the virus in Poland, schools were temporarily closed and a new learning system was introduced. As ordered by the Ministry of National Education, the core curriculum was implemented remotely. This practice continued with a structure in which students, teachers and parents participated. The government empowered school principals to organize distance learning. It was emphasized that teachers should monitor and check the student's level of knowledge and progress in learning. With the online education process, following the learning processes has gained a special importance.

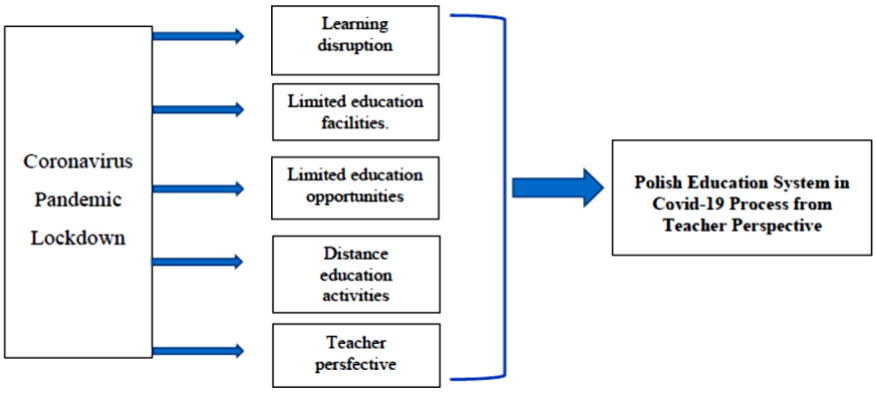

Figure 1.
Conceptual Framework of the Study

In this study the aim was to examine the changes in teaching activities in Poland during the pandemic from the teachers' perspective. For this purpose, the following sub-goals have been determined.

- What were the priority measures of the official authorities for the Covid-19 process in Poland?
- What are the technological difficulties teachers face in online education?

- What is the realization level of the remote learning program?
- What is the impact of the pandemic on the education of gifted students?

Method

Research Model

This study was designed with a case study, which is one of the qualitative research methods. The data of the research were obtained by document analysis. Qualitative research enables detailed comments and observations as studies on texts provide multiple and meaningful information (Denzin and Lincoln, 2005; Guba and Lincoln, 1994). Patton (2000) expresses that the situation can be revealed more clearly without any hypothesis and prejudice in such studies.

Data Collection

The main data of the research includes the steps taken by the Polish Ministry of Education in the educational activities due to Covid-19 in the 2019-2020 academic year and the studies carried out on this subject. Descriptive and classifying analysis was carried out on the regulations and the studies carried out during the pandemic. This made it possible to show the common aspects of the written content and to provide a generalization from the qualitative to the quantitative for the structure and classification of these contents.

The data used in the study was obtained from several sources. The report (Raport Ministra Edukacji Narodowej) published by the Polish Ministry of Education in June 2020 provides important data. The determination of the situation and the measures that can be taken are explained in the study through this report. This report was accessed from the ministry's website on 23.07.2020.

Another source of data is "Biernat, M. (2020). Badanie edukacji zdalnej w czasie pandemii, Badanie zostało zrealizowane przez Centrum Cyfrowe, Centrum Cyfrowe /Creative Commons Uznanie Autorstwa 4.0./ Opracowanie własne" with 1000 teachers in 2020. The data obtained from this study made it possible to examine the pandemic process in Poland from a broad perspective.

In addition, official documents published for gifted students were used. During the pandemic, the selection of gifted students and the applications made during the selection phase were determined.

The data obtained in this context are classified in terms of their subjects, and the common aspects of the changes in the education system are determined. In each item; thoughts after application and change are given.

Results

As highlighted by other countries, social isolation and the new circumstances have also been affected by other changes, including the impact of Covid-19 in the field of education and inexperience or lack of preparation of teachers and parents to support students or their children in remote or online learning – also influenced by the inadequacy of the methods used for online learning to the individual needs of students (UNESCO, 2020). Of course, different reactions have been developed to this unexpected process. The pandemic process started a process in which the entire educational process was recreated. This process brought different points of view. Poland quickly began taking measures to adapt to this unexpected process. Polish National Education Minister Dariusz Piontkowski published a report on the pandemic process (Rmen, 2020). It was decided that school principals and educational institutions should organize the education process using remote learning methods and techniques. It is stated that teachers should apply the curriculum, conduct the classes with students and evaluate student work. He also added that it is possible to create a flexible education system adapted to the needs of approximately 5 million students. It was emphasized that they had a special period behind the entire educational community, requiring a completely new approach to working differently than normal conditions. This report also includes various action plans. The necessity of ensuring the functioning of the units of the education system has been reported during the Covid-19 outbreak. The process of preparing for and implementing remote education has been presented regarding the prevention of Covid-19 – the counter-measures taken, the struggle of adapting to the new normal, and the gradual re-opening of selected types of schools and institutions.

In another part of the Ministry's statement, projects such as the development of digital competencies, digitization of educational projects and schools for teachers (for example "Active blackboard" program, Polish Education Network or IT Championship Center project) are included (Rmen, 2020).

An important part of the report includes information on the introduction of "epodreczniki.pl", the training offer from TVP and Polish Radio, and the support of television and radio channels to provide computer equipment and internet access for schools, teachers and students. The report provides an overview of activities in the field of online

education in selected European Union countries, as a separate section. Thus, it is possible to compare applications. One of the important parts of the report is the section of "Digitization of the education process – results and plans for other actions" (Rmen, 2020). The results are summarized about other activities that aim to improve the digital competences of students, teachers and management staff and to put more emphasis on the digitization of the entire educational process. The most important activities in this field are determined as follows:

- Improving digital and IT competencies of teachers and students
- Developing the Integrated Education Platform 'www.epodreczniki.pl'
- Expanding public, widely available and proven e-resources and an educational tools database
- Supporting leading institutions in equipping schools with the tools necessary to implement the new educational process (Rmen, 2020).

There are broad ranges of online education tools/platforms that facilitate online education particularly in times of outbreaks like the Coronavirus pandemic (Onyema, 2020). During the coronavirus epidemic, the experience of Polish teachers with online education has been the subject of different studies. In a study conducted by Digital Center in collaboration with Citizenship Education Center and School Foundation, Polish teachers' evaluations about the process were discussed. This study is the first major analysis in Poland during the coronavirus outbreak. The study includes 1000 teachers in Poland. The aim of the research is to identify the problems faced by teachers during online education. According to this research, 47% of the teachers who participated in the research stated that losing teaching time was the main problem. The lack of equipment and students' internet connection is the biggest problem for 32% of teachers. Nineteen percent of the participants stated that they had a problem in creating a work area, and 12% of them stated that they complained about their internet connections, while 10% of them were hindered by a lack of equipment. Although only 19% of teachers see a difference in learning as one of the main problems, 60% of teachers think that these differences are only problematic (Biernat, 2020; Mexhuani, 2015).

For most of the teachers surveyed, the e-learning activity was a challenge they were not prepared for. 85.4% of the teachers who participated in the survey stated that they had no previous experience with remote education. However, 48% of them stated that they had no difficulty using digital tools. On the other hand, problems related to the regulation of working in home office mode were also mentioned (Biernat, 2020). Previous studies confirm the impact of all of these factors on the quality of online learning, learning stimulation, motivation and improvement of teachers' attitudes toward technology, and integration of technology into learning processes (Huang et al. 2020).

The teachers who were surveyed pointed out that one of the biggest problems is organizational chaos. In this way, their thinking shows that distance learning was introduced overnight without specific solutions and teaching guidance (Biernat, 2020).

It is seen as an important problem that the way of working and organization did not follow standard principles. Some schools introduced a platform for distance learning and provided specific guidelines, while others used different practices.

Although students belong to a generation that is familiar with digital platforms, many have had problems motivating themselves to use the required programs, since students' interests were limited to web page activities, playing games and browsing social networking sites. During distance learning, students also faced various challenges. Some students lacked the necessary equipment. 36% of the teachers stated that this lack of equipment was a problem. There are several sources of these shortcomings:

- Parents working home must use electronic devices for work.
- In families with many children, the computer is shared among several students.
- Some poor or disadvantaged families do not own a computer (Biernat, 2020). Lurvnik (2020) and Yokozeki (2020) have reached similar findings.

These restrictions are resolved through external assistance or self-organization of parents. Only 10% of teachers cited the lack of equipment in their own homes as the main problem in the implementation of distance learning. Some teachers ordered their equipment at their own expense, while others complained about the quality of the internet connection. It was found that equipment deficiencies affect students more than teachers (Biernat, 2020; Perez, 2020; Wu, 2020) have reached a similar conclusion. The biggest problem arises from the connectivity problems experienced by students during the lesson.

According to some teachers, it is difficult to meet the expectations of students and parents simultaneously. Parents show that they have a problem determining how much time their child spends in front of the computer to play or

learn online. There are allegations about parents' assessment of how much time their children spend studying. For example, some claim that their child worked all day in front of the computer and received a bad grade," while the truth was that the child did not complete any set tasks. Similarly, in studies conducted with computers, it was observed that there was a tendency towards procrastination (Arënliu et al. 2020).

It is stated that using electronic programs and resources is not a problem for Polish teachers. They already had experience with these programs. 71% of the respondents stated that they were successful in this regard. According to them, they experienced problems using the programs and resources not due to their lack of competence, but because of the overload of portals (Pyżalski, 2020).

Whether students will have to revise the curriculum is one of the important issues. The teachers answered the question as to whether the students should revise their materials after the distance education period and before returning to school as follows:

- 23% of teachers do not think that the students should revise the curriculum that has been covered
- 30% of teachers think that the materials should be revised, but only partially
- 17% of teachers believe that there will be a significant amount of material to be revised
- 30% of the teachers reported that they were undecided about this issue. (Biernat, 2020).

What do parents think about distance education in the age of coronavirus? Parents' views on remote learning are not clear. A large group believes that the teacher has more cons than the pros. In the current situation, there is a certain impression that there are parents who take on the burden of educating children. Online lessons for parents is only a problem waiting for parents after class. It has been stated that parents need to spend long hours in order to do the tasks, exercises and other additional things directed by the children.

However, there are also parental opinions that see other sides of the situation and emphasize that distance learning is a significant challenge, but also a chance to develop (Blakemore, 2019). These views point out that online teaching is an important step in digitizing Polish education. However, it has been stated that the teacher's duties involve more creativity through distance education tools (Biernat, 2020).

Despite the problems, teachers see many benefits and opportunities in distance education. They agree that online learning is beneficial (Plebańska, 2019). It is thought that the implementation of the distance education system among professionals will be beneficial in the future, for example for students who do not attend classes or in the implementation of individual learning. Teachers also believe that this formula is a good solution, for example, where students cannot always attend the lesson (Biernat, 2020; Plebańska, 2019). Many teachers also welcome online meetings and mutual learning with other teachers (Biernat, 2020). It was emphasized that it is important to further develop e-learning tools and skills in this field.

The pandemic seriously affected the education of gifted students, like all educational institutions. This effect can be examined in two groups as positive and negative. It can be easily said that the negativities are more in terms of the effects of the pandemic. For example, it made it impossible to run the programs intended for gifted students.

The presented considerations on working with a gifted student show that the key role of the school in supporting the development of students' abilities in many cases fails. As noted by Zbyszko Melosik (2008), "Polish education - at the primary and secondary level - is the education of" lost talents "overwhelmed by the inevitable" mediating". Therefore, it seems necessary to develop a systemic program of work with a gifted student, taking many elements into account. The proper preparation of teachers to work and care for gifted students is of particular importance. In many European countries (including France, Austria, Slovakia, Denmark and Scandinavian countries), the issue of giftedness and forms of support for a gifted student has been included as a compulsory module in the teacher education program (Gwiazdowska-Stańczak & Sękowski 2018). Meanwhile, in Poland, these modules are taken on an optional basis, and decisions to conduct classes on the subject of skills as part of a separate module lie with the institutions organizing teacher education. The research results presented in the paper also indicate the need to motivate teachers to become more involved in working with a gifted student and help improve them in this area. It seems that it would be worthwhile to develop an offer of training, workshops, courses or postgraduate studies covering issues related to the methods of identifying gifted children and youth, developing competences needed in didactic and educational activities aimed at gifted students (Biernat, 2020).

For gifted students, the time of remote education was an opportunity to learn a new work technique. They learned about independence, structuring and planning work, carrying out tasks and finding time to rest. Through systematic contact with the teacher, a new "work rhythm" was created, which helped to structure the day and week. Students

were introduced to independence and responsibility for the individual stages of the projects and the final result. It was also an opportunity to deepen digital competences, including the efficient use of various communication channels, and cooperation with the use of ICT tools.

For gifted students, crisis remote education involves reorganizing their time, giving up many attractive and important activities and consultations, and leaving groups that implement extended education programs, e.g. preparing for competitions. In the face of certain characteristics specific to many gifted students, such as: increased mental excitability, sensitivity, perfectionism, asynchronous development, anxiety, one must take into account that what for some was a playful benefit of remote education, e.g. the possibility of carrying out lessons in pajamas just after getting up, for others it became the beginning of depression. Many gifted students in relation to the discussed situation may have problems with emotional stability, deepen their low self-esteem, increased difficulties in adapting to the high level of teachers' requirements, while having problems mastering digital skills. Another problem for students is the postponing of important exams, such as the eight-year exam or the matura exam, as well as moving away from the possibility of carrying out various forms of competition (Łukasiewicz-Wieleba, 2020, Rmen, 2002). Uncertainty related to arranging further educational plans and building a portfolio of extracurricular achievements, prolonged stress and entering into activities that compete with the field of abilities (here: media, new technologies) may lead to a reduction in motivation, the belief that there is no sense in one's own activity, disregard for achievements and resignation from effort (Bochniarz and Grabowiec, 2019).

In education, this concept of educational loss is acknowledged and recognized – that is, a noticeable decrease in the level of students' knowledge and skills. This happens especially after the summer holidays, when students spend this time completely detached from learning. The difficulties with remote education for gifted students include losses in educational progress. It can be assumed that they are more pronounced in the case of those students who associated specific development plans with a specific period (Gajderowicz, 2020). It affects students who were preparing for competitions and Olympics in schools and had to give it up or postpone it for the future. This also applies to the suspension of sports clubs, community centers and dance schools, and the cancellation of competitions and tournaments (Łukasiewicz-Wieleba, 2020).

Research has shown that there are teachers who say they don't have gifted students, or that they haven't worked with them at all. For some, remote education has no advantages, only disadvantages, because it will not replace the traditional method of learning, but can only be supplemental. And in the case of gifted students it does not work, because in the virtual world there is insufficient access to specialist literature (Bochniarz and Grabowiec, 2019).

An important element of the education of gifted students are extracurricular activities, carried out, inter alia, through a number of additional classes, often aimed at participation in competitions. However, it is difficult to hold teachers accountable for not doing extra-curricular activities with their students via the Internet. First of all, schools gave up such classes, recognizing that the most important thing is to maintain the continuity of the curriculum implementation. For the first time, a significant number of teachers faced the necessity to use remote education. They didn't have developed materials in their resources, they had neither experience nor ideas how to do it well. They used their own resources to buy the necessary equipment and pay for internet connections. In addition, even the preparation of materials for students for asynchronous education (the criticized instructions for independent work) could be very time-consuming, both due to the need to select the content and to clearly describe the recommendations for students. Instructions are given orally differently than when they are in writing (Łukasiewicz-Wieleba, 2020).

Teachers who decided to use the conference form of remote work also had to have time to test the possibilities and decide on their accuracy in relation to the diverse educational needs of students. In addition, the work performed by students was checked - sent in different formats and quality, at different times of the day and night. In such a multitude of technological and methodological innovations, it is difficult to find time to work with gifted students. Hence, many teachers, overwhelmed by the new responsibilities related to distance education, gave up their systematic care for gifted students (Łukasiewicz-Wieleba, 2020). Even if earlier, in the traditional way, they conducted additional classes, prepared students for competitions, provided psychological and pedagogical care, in the new conditions there was not enough time and opportunities for this. Some teachers decided that their subject could not be taught remotely. Even in sports schools, physical education lessons were limited to making presentations by students or discussing theoretical aspects of sport.

Conclusion

The increasing use of technology in education has modified teachers' methods from the traditional approach that often place them as dispensers of knowledge to a more flexible approach where they act more as facilitators, mentors and motivators to inspire students to participate and learn (Barr & Miller, 2013; Onyema & Deborah, 2019; Kumar, 2020). The primary steps of official authorities in Poland were to improve the digital and IT competencies of teachers and students during the pandemic, to develop the Integrated Education Platform, to prepare public and widely available scientific e-resources, to expand the educational tools and database, and to support leading institutions in equipping schools with the necessary equipment to implement the educational process. The Ministry of National Education has carried out various projects to prepare online education environments and make them available to teachers. Online education platforms, TV and radio channels, as well as the use of the internet stands out here. It is stated that using electronic programs and resources is not a problem for Polish teachers. According to them, they experienced problems using the programs and resources not due to their lack of competence, but because of the overload of portals.

Many teachers stated that losing teaching time was the biggest problem with distance learning. A lack of equipment and internet connection are among the main issues for students and teachers. Many findings indicate that access to the internet and technological tools is the biggest problem they encountered during online learning. (Houlden & Veletsianos, 2020; Morris, 2020; Perez, 2020; Wu, 2020; Zhong, 2020).

For most teachers, e-learning activity is a challenge they were not prepared for. Almost half of the teachers stated that although they had no previous experience with distance learning, almost half of them did not have difficulty using digital tools. Educators face difficulties in using technological tools. Especially many studies show that these problems are more prominent during the pandemic process (Geuna, 2020; Lau, Yang, & Dasgupta, 2020; Leung, & Sharma 2020; Ramadan, 2020).

It has been determined that educators who have recently adapted to distance education are failing to achieve the aims of the program (Barnes & Buring, 2012; Farrington, 2020; Obana, 2020; Olivier, 2020; Patrinos & Shmis, 2020). A similar situation is observed in the Polish example. 23% of the teachers stated that the students would not need to revise the curriculum after returning to school; 30% stated that parts of it should be revised, and 17% believed that a significant portion of the curriciulum needed to be revised.

Despite many difficulties, teachers think that distance education is beneficial. It is thought that the implementation of the distance learning system among professionals will be useful in the future, for example for students who do not attend classes, or in the implementation of individual learning. It was emphasized that it is important to further develop e-learning tools and skills in this field.

The pandemic made it impossible for gifted students to participate in activities that would reveal their true potential. Supportive training in line with the individual needs of the students could only be provided to a limited extent. This situation caused students to stay away from activities that could improve their abilities.
Competitions for gifted individuals could not be held due to the pandemic. Therefore, the number of applications submitted to such educational institutions was lower than in previous years.

Limitations of Study

The research is limited to addressing the changes that started with the Covid-19 process in the 2019-2020 academic year in terms of teachers. However, additional data was taken from the Ministry of Education, school reports, and remote learning study reports carried out during that time.

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