Opinions of disabled university students on the distance education process

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Abstract

The purpose of this research is to evaluate the views of university students with disabilities, regarding the distance education process. The data collection tool of this qualitative research carried out in a phenomenological design is a semi-structured interview form developed by the researcher, which aims to get the opinions of the disabled students studying at the university on the distance education process. The study group of the research consists of 30 students with visual, hearing and orthopedic disabilities who are studying at various universities in the cities of Almaty, Nur-Sultan, Aktobe and Karaganda in Kazakhstan, and have agreed to participate in the research voluntarily. As a result of the research, it was revealed that university students with disabilities found distance education inadequate in terms of teacher-learner, learner-learner, learner-content and learner-technology relations in line with the answers they gave in the semi-structured interview form. Improving teacher and peer relations in the distance education process of disabled university students, reorganizing the educational content and creating the technological infrastructure suitable for their needs are among the important tasks of the education approach of contemporary higher education.

Keywords: Distance education, hearing impaired students, higher education. orthopedically impaired students, visually impaired students

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1. Introduction

The Republic of Kazakhstan adopts an education approach that allows disabled people to have equal access to education and to meet their vocational needs after education (Stambekova, Schmidt, & Erzhanova, 2021). The laws "On Education", "On Social Protection of Persons with Disabilities" and "Social, Medical and Pedagogical Correction Support for Children with Disabilities", developed with a contemporary understanding, reveal a high-quality education policy for individuals with disabilities.

In addition, the State Program for the Development of Education and Science of the Republic of Kazakhstan for 2020-2025 offers specific initiatives on higher education of people with disabilities. Despite all these structures, there are obstacles in front of disabled people's access to higher education programs, and removing these obstacles depends on detailing the problems and producing innovative solutions for each problem (Stambekova, Schmidt, & Erzhanova, 2021).

1.1. Theoretical and conceptual framework

The concept of disability is a complex, dynamic, multidimensional and controversial concept. The World Health Organization defines disability as a limitation or inability in the process of performing any activity within the limits considered normal. The state of being disabled; It is defined as the restriction or inability to fulfill the expected roles of the individual based on age, gender, social and cultural factors due to a disability (WHO, 2011).

It is an important social responsibility within the framework of human rights that disabled people have equal rights with other members of society in many areas that require their integration into society such as education, health and employment. Inclusive education, which was put forward to ensure this and is becoming increasingly widespread all over the world, aims to remove the barriers to the full participation of students with disabilities in education. Although many countries are subject to the United Nations convention on the rights of the disabled, they still have not been able to produce clear solutions to the curriculum, structural and systematic-based problems experienced by the disabled in the education process. While the right to education of students with disabilities is generally evaluated at the primary and secondary education level, the needs of the disabled cannot be fully met at the higher education level. Higher education programs need curriculum reforms in line with the needs of students with disabilities (Podzo and Chipika, 2019). The success of studying at the university depends on the psychological readiness of students with disabilities for educational and professional activities (Godovnikova et al., 2019).

Education is among the fundamental rights of every child and adult. Giving the right to education is possible by giving every individual an opportunity to learn at an acceptable level. All individuals, with or without disabilities, have the right to receive at least a basic level of education in order to achieve a decent standard of living. For this reason, the right to education is considered among the basic human rights today (Demirtas, 2018).

It is extremely important to inform disabled individuals and their families about their right to education, to explain that this right is one of their fundamental rights, and to emphasize that they can benefit from education opportunities as much as other individuals in the society. Saricam, Deveci and Ahmetoglu, 2020). Education for disabled people as well as all individuals in society means making the difference between a socially satisfying, intellectually stimulating and economically productive life and the future. In addition, education is the only process where disabled people can highlight their own abilities, an important tool for managing chronic health problems, and a unique factor that can improve their children's quality of life (Aron & Loprest, 2012; Cevik & Uredi, 2016). Although the rights of the disabled have been frequently mentioned in the media from past to present, it is thought to be

insufficient, and it is known that media awareness has a great impact on the visibility of the rights of the disabled (Davulcu and Tezer, 2020).

1.2. Related research

When the researches in the field are examined, it is seen that there are many studies that evaluate the education process of disabled students, the problems they experience in this process, the educational needs of the disabled, technology integration in education and family participation.

Denisova and Lekhanova (2018) evaluated the opportunities provided by inclusive higher education policies to students with disabilities in their research in 2018. In the research, the support stages regarding the orientation of the disabled students were defined, and the necessity of revisions in the education systems was emphasized in order for the disabled to receive a more qualified education.

In their research, Trubaev and Muradyan (2019) focused on the difficulties faced by disabled people studying at higher education institutions in Russia. In addition, the researchers made evaluations about the educational opportunities in higher education institutions and employment problems in the process of obtaining a profession. They made comparative analyzes by basing these evaluations on the life sections of disabled individuals who have problems.

Chebarykova et al. (2019) evaluated the problems of students with disabilities in three periods: pre-university period, university period and post-university period. In these three periods, which can be considered as the professional development process of disabled individuals, it has been pointed out that the barriers that prevent them from having equal rights with normal individuals should be removed.

Kurbangaleeva and Veretennikov (2017) evaluated the availability of people with disabilities in higher education programs by conducting a large-scale study covering the vast majority of state universities in Russia. In the research, the education of the disabled, the views of the disabled students and the parents of the students were evaluated. In the research, while the wide-scale problems of students with disabilities ranging from university education to the difficulties they face in business life were expressed, it was concluded that legal restrictions, difficulties in university admission and the inadequacy of the opportunities provided for students at universities negatively affect their future life.

Hadjikakou, Polycarpou, and Hadjilia (2010) investigated the reflections of the academic and social experiences of students with physical disabilities in higher education institutions. In the research, the experiences of the students with physical disabilities and the impression they got during the learning process; It was concluded that physical access, available facilities, the attitude of non-disabled students towards disabled people and the level of awareness of academic staff. Falanga, Caroli, and Sagone (2020) conducted a study in which they evaluated attitudes towards students with disabilities. The researchers gave a training to improve the positive attitudes of university students towards the disabled and determined that the students' attitudes towards the disabled were more positive as a result of the education. As a result of the research, it was concluded that it is possible for university students to have more positive attitudes towards the disabled as long as they receive qualified education.

Zencir, Kutluturk, and Subasıoglu (2017) stated that one of the most important problems of disabled individuals is that they have the right to receive education in the field and institution they want, just like non-disabled individuals. It is possible for these individuals to receive a qualified education in educational institutions with various legal regulations. It is stated that there is a need for various applications such as the development of course materials suitable for the use and access of individuals

with disabilities, and the suitability of classrooms and campus, in order to offer equal academic opportunities in university education.

1.3. Purpose of the research

The purpose of this research; evaluates the views of disabled university students on the distance education process. In line with this purpose, the following sub-objectives have been created for the multi-faceted evaluation of the distance education process of university students with disabilities.

1. What are the views of disabled university students on the teacher-learner relationship in the distance education process?

2. What are the views of disabled university students on the learner-learner relationship in the distance education process?

3. What are the views of disabled university students on the learner-content relationship in the distance education process?

4. What are the views of disabled university students on the learner-technology relationship in the distance education process?

2. Method and Materials

This section includes information about the research model, participants, data collection tools, data collection process and data analysis.

2.1. Research method

The phenomenology design, which is one of the qualitative research designs, was used in the research. The phenomenological study defines the common meaning of the lived experiences of several people about a phenomenon and concept (Creswell, 2014). In other words, it focuses on how people perceive some phenomena, how they describe it, how they feel about it, how they judge, how they remember, how they make sense of it, and how they talk to others about this phenomenon (Patton, 2014). In this study, it is aimed to describe the experiences of university students with disabilities regarding the distance education process. In this respect, it was deemed appropriate to define the study as a phenomenology study.

2.2. Participants

The sampling method, which is widely used among the sampling methods used in qualitative research, is the purposive sampling method. The reason for the widespread use of purposive sampling in qualitative research is the identification and selection of information-rich cases for the effective use of limited resources. This sampling method involves identifying and selecting individuals or groups who are knowledgeable and experienced about the subject of interest (Palinkas et al., 2015).

The study group of the research was selected through purposeful sampling. The research was carried out with a total of 30 students with visual, hearing and orthopedic disabilities who were studying at various universities in Almaty, Nur-Sultan, Aktobe and Karaganda cities of Kazakhstan and voluntarily agreed to participate in the research. Demographic information about the participants of the study is given in Table 1 and Table 2 in the results section.

2.3. Data collection tools

In the research conducted in the phenomenological design, data were collected through a semi-structured interview form prepared by the researcher. The questions in the semi-structured interview form were prepared as a result of the literature review by the researchers and were shared with three faculty members working in the field of special education in order to get expert opinion. In line with the opinions of the experts, the final form was created by making adjustments to the form. In the semi-structured interview form, there are questions about the demographic characteristics of the students and 4 questions about the distance education process. The questions in the semi-structured interview form are given below.

1. Evaluate the teacher-learner relationship in distance education with its justifications in one of the categories I find it sufficient, I find it partially sufficient, and I find it insufficient.

2. Evaluate the learner-learner relationship in distance education with its justifications in one of the categories I find it sufficient, I find it partially sufficient, and I find it insufficient.

3. Evaluate the learner-content relationship in distance education with its justifications in one of the categories of "I find it sufficient, I find it partially sufficient, and I find it insufficient."

4. Evaluate the learner-technology relationship in distance education in one of the categories; I find it sufficient; I find it partially sufficient, and I find it insufficient, with justifications.

2.4. Data collection process

Considering that it would not be healthy to conduct face-to-face interviews during the Covid-19 epidemic, semi-structured interview forms were sent to some of the research participants via e-mail, while others were asked to fill in by hand. When there was any part of the forms that was not understood, they were asked to call the researchers. In addition, a semi-structured interview form and an explanatory text on the research information and confidentiality of personal data were sent to each of the participants. Research data were collected over a three-month period in April-June 2021.

2.5. Data collection analysis

Content analysis technique was used in the interpretation of the research data. Content analysis is based on coding and transforming all kinds of materials into data (Berg & Lune, 2015). As many researchers deal with the data, it first includes the preparation and organization of the data, followed by coding the data and reducing the coded data to themes, and finally analyzing the data by presenting it in the form of figures, tables or discussions (Creswell, 2014). The answers given by the disabled students to the questions in the semi-structured interview form were categorized by content analysis technique and presented in tables. In addition, the answers of the visually impaired students participating in the research are V-1, V-2, V-3, the answers of the hearing-impaired students are H-1, H-2, H-3, the answers of the orthopedically disabled students are O-1, O-2, O-3 coded and given below the tables.

3. Results

In this section, the views of university students with disabilities regarding the distance education process were evaluated in line with the themes and sub-themes using the content analysis method.

Then, under the tables in which the themes and sub-themes are included, quotations containing the direct statements of the disabled students are included.

Table 1 and Table 2 provide information on the demographic distribution of university students with disabilities participating in the research.

Table 1: *Distribution of disabled university students by disability type and gender*

Type of Disability	Gender		Sum
	Female	Male	
Visually impaired	4	6	10
Hearing impaired	7	3	10
Orthopedically disabled	2	8	10
Sum	13	17	30

In Table 1, disability types and gender distributions of disabled university students participating in the research are given. It is seen that 13 of the disabled university students participating in the research are girls and 17 are boys. A total of 30 university students, including 10 visually impaired, 10 hearing impaired and 10 orthopedically disabled, participated in the research.

Table 2 shows the distribution of university students with disabilities regarding the type of program they study.

Table 2: *Distribution of students regarding the type of program they are studying*

Type of Disability	Gender				Sum
	Associate Degree	Bachelors' degree	Master degree	PhD degree	
Visually impaired	1	8	1	-	10
Hearing impaired	2	7	1	-	10
Orthopedically disabled	2	7	-	1	10
Sum	5	22	2	1	30

Table 2 shows the distribution of disabled university students participating in the research according to the type of program they are studying. Of the students participating in the research, 5 of them are at the associate degree, 22 at the undergraduate level, 2 at the master's level and 1 at the doctoral level. Here, it is seen that the majority of the disabled students participating in the study received education at the undergraduate level.

3.1. The teacher-learner relationship in distance education

Table 3 shows the views of university students with disabilities who participated in the research on the teacher-learner relationship in distance education.

Table 3: *Opinions of disabled students about the teacher-learner relationship*

Theme	Type of Disability	Sub-themes			Sum
		I find enough	I find it quite enough	I find it insufficient	
Teacher-	Visually impaired	2	3	5	10
learner	Hearing impaired	1	2	7	10
relationship	Orthopedically disabled	4	4	2	10
Sum		7	9	14	30

7 of the students participating in the research found the teacher-learner relationship in distance education sufficient, 9 partially sufficient and 14 insufficient. When the answers given by the students participating in the research are evaluated according to the types of disability, it is seen that the hearing impaired find the teacher-learner relationship inadequate, followed by the visually impaired. The students with orthopedic disabilities who participated in the study found the teacher-learner relationship sufficient in the distance education process compared to the visually and hearing-impaired students.

The views of some disabled students participating in the research on the teacher-learner relationship in distance education are given below.

V-2: I do not find the relationship I have with the teachers sufficient. The main reason for this is that they have not received a full education about my disability and they do not know exactly how to behave in in-class communication with me. They all mean well, but that's not enough.

H-6: Not enough unfortunately. I have to lip-read in class. It is not easy to understand the teacher. It is not possible for the teacher to be personally interested in me during the lesson. I think that I lag behind other students in communication.

O-3: We maintain a partially adequate communication. I think this also applies to my other non-disabled friends. I don't think there is much difference between them and me at this point. Of course, it is not like the classroom environment, but it is partially sufficient.

3.2. The learner-learner relationship in distance education

Table 4 shows the views of university students with disabilities who participated in the research on the learner-learner relationship in distance education.

Table 4: *Opinions of students with disabilities about the learner-learner relationship*

	Sub-themes

Theme	Type of Disability	I find enough	I find it quite enough	I find it insufficient	Sum
Learner-learner relationship	Visually impaired	3	2	5	10
	Hearing impaired	2	2	6	10
	Orthopedically disabled	3	3	4	10
Sum		8	7	15	30

Eight of the students participating in the research found the learner-learner relationship in distance education sufficient, 7 partially sufficient and 15 insufficient. When the answers given by the students to the learner-learner relationship are evaluated according to the disability types, it is seen that the hearing impaired are more negative than the visually impaired and the visually impaired are more negative than the orthopedically disabled.

The views of some disabled students participating in the research on the learner-learner relationship in distance education are given below.

V-4: Unfortunately, there is no strong communication between me and my friends. They see life differently than I do. I can't say that we have completely broken relationships. I'd say it's pretty good. But I wish I could make stronger friendships.

H-1: We are good at communicating in written form, but they do not know sign language. That's why we are weak in visual communication. That's why I find my relationship with my friends partially sufficient.

O-10: In my opinion, distance education is not a very healthy education model in terms of both the quality of education and human relations. I do not communicate with my friends as much as in the school environment. It is partially sufficient, but this is due to the fact that we have already met during the face-to-face training process. If I had started my university education online, this wouldn't even have happened.

3.3. The learner-content relationship in distance education

Table 5 shows the views of university students with disabilities who participated in the research about the learner-content relationship in distance education.

Table 5: *Opinions of students with disabilities about the learner-content relationship*

Theme	Type of Disability	Sub-themes			Sum
		I find enough	I find it quite enough	I find it insufficient	
Learner-content relationship	Visually impaired	-	2	8	10
	Hearing impaired	1	1	8	10
	Orthopedically disabled	2	2	6	10
Sum		3	5	22	30

3 of the students participating in the research found the learner-content relationship in distance education sufficient, 5 partially sufficient and 22 insufficient. While visually impaired and hearing-impaired students found the learner-content relationship equally inadequate, orthopedically impaired students found the learner-content relationship relatively less.

The views of some disabled students participating in the research on the learner-content relationship in distance education are given below.

V-9: Really bad, very inadequate. For example, when visual presentations are used in lessons, I have a hard time lecturing through tables and graphs. Course contents are prepared to meet the needs of other students without disabilities.

H-8: Sign language or subtitles are not used in the course content. This causes me to not understand the lesson to a large extent during the lesson. There is no other deaf student like me in the class. From my point of view, the course content is extremely inadequate.

O-1: I think it is insufficient. I have a disease related to my muscular system. I cannot use my hands. In some lessons, we have to respond by writing, turn the page, or interpret an image in writing. In such cases, I need support.

3.4. The learner-technology relationship in distance education

Table 6 shows the views of university students with disabilities who participated in the research about the learner-technology relationship in distance education.

Table 6: *Opinions of students with disabilities on the learner-technology relationship*

Theme	Type of Disability	Sub-themes			Sum
		I find enough	I find it quite enough	I find it insufficient	
Learner-technology relationship	Visually impaired	1	1	8	10
	Hearing impaired	2	1	7	10
	Orthopedically disabled	1	3	6	10
Sum		4	5	21	30

4 of the students who participated in the research stated that they found the learner-technology relationship in distance education sufficient, 5 partially sufficient and 21 insufficient. The rate of the visually impaired finding the learner-technology relationship in distance education is higher than the hearing impaired, and the hearing impaired finding the learner-technology relationship in distance education is higher than the orthopedically handicapped.

The views of some disabled students participating in the research on the learner-technology relationship in distance education are given below.

V-1: Although I am good at using technology, I cannot make use of it properly because the school's technology infrastructure is not designed in accordance with my needs. The absence of voice commands makes the technological infrastructure completely inadequate for me.

H-5: Very insufficient. It's nice that the replays are uploaded to the system and there is the possibility to watch them again, but there is no sign language interface or subtitles added to the lessons. All this is a big problem for students like me who have a special situation in the distance education system.

O-4: I find it partially sufficient. I am having similar problems with other students. I have ordinary but insurmountable problems that may occur from time to time, such as disconnection, weak internet.

3.5. The relationship between teacher-learner, learner-teacher, learner-content and learner technology in distance education

In Table 7, the evaluations of disabled university students participating in the research on the inadequacies in the relationship between teacher-learner, learner-teacher, learner-content and learner-technology in distance education are given comparatively.

Table 7: *Comparison of the disabled students' views on the inadequacies in the distance education process*

Type of Disability	Visually impaired	Hearing impaired	Orthopedically disabled	Sum	
	F	F	F	F	%
The teacher-learner relationship is insufficient	5	7	2	14	46,6
The learner-learner relationship is insufficient	5	6	4	15	30
The learner-content relationship is insufficient	8	8	6	22	73,3
The learner-technology relationship is insufficient	8	7	6	21	70

Regarding the inadequacies of distance education, 46.6% of the students participating in the research expressed the inadequacies between learner-teacher, 30% learner-learner, 73.3% learner-content and 70% learner-technology. Based on this, it is seen that while the students who participated in the research found the relationship between the learner and the content to be insufficient at a high rate, the least inadequate type of relationship was between the learner and the learner.

4. Discussion

The research findings reveal that the majority of the hearing-impaired students, half of the visually impaired students and some of the orthopedically disabled students at the university find the relationship between the teacher and the learner insufficient. Mengi (2019) evaluated the difficulties experienced by students with disabilities during the university education process. In the research, it has been determined that the main problems faced by the hearing-impaired students are that the instructors do not know sign language and ignore the hearing-impaired student while teaching the lesson. In addition, the research emphasized the unfairness of students who cannot receive education under equal conditions to attend the same exams as other students.

The research findings reveal that the majority of the hearing-impaired students, half of the visually impaired students and some of the orthopedically disabled students at the university find the relationship between the learner and other learner insufficient. Cook and Semmel (1999) emphasized the importance of disability awareness, caring, social acceptance and communication needs in their study on peer acceptance of students with disabilities. In the research, it was emphasized that the peer relationships established by the disabled in the classroom environment make them feel good and play an important role in meeting their social and academic needs.

Research findings reveal that students with visual and hearing impairments who study at universities find the learner-content relationship insufficient at a high rate. The answers given by the orthopedically handicapped also point to the inadequacies in the learner-content relationship. Zebehazy, Zigmond, and Zimmerman (2012) revealed in their research that students with visual impairments have problems in accessing the information included in the curriculum offered by educational institutions. Lytle and Rovins (1997) also drew attention to the difficulties of applying the contents of general education programs to students with disabilities.

Research findings reveal that visually impaired students find the learner-technology relationship highly inadequate. It is seen that hearing impaired students and orthopedically impaired students also express their opinions about learner-technology inadequacies at a similar rate to visually impaired students. Emiroglu (2008) evaluated the existing opportunities and studies on computer access and informatics studies for visually impaired students in his research on informatics for visually impaired students at universities. As a result of the research, it was emphasized that the technological tools used in the education of the visually impaired should be repaired in a timely manner and the innovative technologies should be integrated into education in an up-to-date manner. Sevinc and Cay (2017) emphasized the importance of utilizing technological developments in overcoming obstacles in their research, in which they evaluated the problems faced by students with orthopedic disabilities during their university education. In the research, it was concluded that the positive attitudes of universities towards the use of new technologies will make an important contribution to minimizing the problems of students with orthopedic disabilities.

5. Conclusion

Although education systems that meet the developmental, sociocultural and individual characteristics of all individuals in the world and in our country have been adopted, it is known that disabled people experience problems in many areas such as education, participation in society, employment and accessibility. While all these problems have not disappeared yet, the fact that online education systems, which made a rapid transition with the Covid-19 pandemic process, were designed in accordance with the needs of the disabled, brought along a separate problem. In this study, the opinions of thirty students with visual, hearing and orthopedic disabilities regarding their university experiences during the online education process were taken. As a result of the research, it has been revealed that students with disabilities find the relationships between teacher-learner, learner-learner, learner-content and learner-technology in distance education insufficient. In addition, as a result of the research, it has emerged that it is necessary to produce solutions to the problems they experience in this process in order to increase the quality of online education and to provide maximum benefit from the education given to disabled students.

6. Recommendations

When the findings obtained from the research were evaluated, it was revealed that students with visual, hearing and orthopedic disabilities have multifaceted problems related to online education. Teaching-learner, learner-learner, learner-content and learner-technology-based approaches should

be brought to the problems experienced by students and solutions should be produced in this direction.

Students evaluated their relationship with teachers in the distance education process as inadequate. In universities, online training should be given at regular intervals to enable academic staff to gain communication skills with students with disabilities.

Students stated that peer relations are insufficient in distance education. In order to change the negative or distant attitude developed against the disabled by displaying a perspective behind the intellectual age we live in, course contents should be placed in education systems to recognize and understand disabled individuals.

Students found the learner-content relationship in distance education insufficient. Considering that students have difficulty in adapting to synchronous lessons, course contents should be arranged in accordance with their physical needs.

Students found the learner-technology relationship in distance education insufficient. Considering that online learning environments do not fully meet the needs of students with disabilities, different model designs created through innovative technologies for each disability group should be included in educational environments.

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