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Including Students with Visual Difficulty within Higher Education: Necessary Steps

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ABSTRACT
The aim of this research study was to investigate the inclusion of students with disabilities studying in Turkish universities. Students with visual difficulty were selected as a case from 24 different universities. A survey with seven dimensions was administered to 73 students, and 12 students were interviewed. Survey and interview findings revealed both progress and, to a larger extent, dissatisfaction with (i) the physical and psychosocial environment of universities; (ii) the way diversity and disability were viewed; (iii) the way support was planned and delivered; (iv) the level and quality of communication and collaboration; (v) the teaching and learning processes; and (vi) the way higher education policy was made and implemented. Findings highlight the need for prioritizing university cultures that are inclusive of students with diverse backgrounds and translation of the inclusiveness into effective practice of providing pedagogical and material support to these students.

Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015a) has recently reported that commitment to the idea of inclusion is increasing, and the implementation of inclusion has become a priority for most developing countries and a part of their educational policy. This idea is more than simply integration, in which the child is expected to fit in; it assumes that wherever possible, children living with disability should receive equitable education of good quality in inclusive educational settings, with added support in terms of health care and learning (Long, Wood, Littleton, & Passenger, 2011; UNESCO, 2015a). Around the world, although greater emphasis has been placed on planning and implementation at the primary and secondary levels, what happens at the higher level is rather less known (Strnadová, Hájková, & Květoňová, 2015). The aim of this study, therefore, is to investigate the way inclusion is experienced in universities, with a focus on students with visual difficulty in Turkey as an illustrative case.

Ensuring access of students with disabilities to mainstream education and their progress throughout educational levels has increased their chances of accessing higher education (Barnard-Brak, Lechtengerger, & Lan, 2010; Gibson, 2015). In countries where the idea of inclusive education is developed, several developments in higher education were made to improve provision for students with disabilities. Around the world, the major incentive behind this change in emphasis has been the legislation to increase attendance and participation in higher education (Adams & Brown, 2006; Morina, 2017). This has generally considered the need to increase access of groups of students who have traditionally been out of higher education, and improve the quality and quantity of services offered to them (Adams & Brown, 2006).

Despite imprecise information regarding the number of young adults with a disability registered at universities, data from several countries (e.g. Ireland, Chile, Norway, Japan, United States, Czech Republic)

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indicate an increasing number of students in higher education (Organisation for Economic Cooperation and Development; OECD, 2011). However, access to higher education is still very difficult for young adults with disabilities compared to their peers without disabilities. The increasing schooling ratio at secondary education has made possession of a secondary education diploma a rule in many countries in recent decades, which is a prerequisite for transition to higher education (OECD, 2011). However, this is not the case for young adults with disabilities because only a small percentage of them can complete secondary education. UNESCO (2015a) reported that students with disabilities are among the student groups who fare worst in education and that dropout rates in primary and secondary education are still very high.

In an era where transition issues are still a concern for young adults with disabilities, access to higher education is undoubtedly a positive step; however, inclusion goes beyond a shared learning space and timetable (Morina, Cortes, & Melero, 2014; Redpath et al., 2013), and requires that "wherever possible, children living with disability should … receive education in inclusive schools, with added support in terms of health care and learning" (UNESCO, 2015a, p. 58). Higher education is a critical level because participation in higher education enables young adults with disabilities to gain qualifications needed to be active in the labor market, especially in a period when the unemployment rate of the young rises faster than that of the workforce as a whole. In addition, their inclusion in higher education enhances their opportunities to join international exchanges or in their chances to combine courses with a professional activity (OECD, 2011). However, failing to include young adults with disabilities in higher education contradicts with the principles of inclusive education such as continuous learning and development, participation, curriculum diversification, and the creation of opportunities to join the labor market. Sometimes it may lead to poverty, crime, and extreme marginalization (Dewson, Aston, Bates, Ritchie, & Dyson, 2004; Wagner, Newman, Cameto, Garza, & Levine, 2005).

Inclusion in higher education in Turkey

Education in Turkey, at the primary, lower secondary and upper secondary levels is managed by the Ministry of National Education (Turkish: Milli Eğitim Bakanlığı [MEB]) in a centralized manner. Education at the higher level is managed centrally by an autonomous institution, the Council of Higher Education (Turkish: Yükseköğretim Kurumu [YÖK]), which is more flexible than MEB in terms of the level of centralization. YÖK is responsible for the planning, coordination, and governance of higher education in Turkey in accordance with the Turkish Constitution and the Higher Education Laws. Turkish universities offer associate's degree programs, bachelor's degree programs, graduate programs, and postgraduate programs.

In Turkey, according to YÖK (2016), there are 13.536 students with disabilities and 3.933 students with visual difficulty in Turkish universities by the end of the educational year 2015–2016. Out of the total number of students with visual difficulty, 2.615 are males and 1.318 are females. However, it should be noted that 2.750 students with visual difficulty are registered in Anadolu University, which is highly popular for the open and distant off-campus education it provides. Considering the total number of on-campus students in this university, which is 31.153 (Anadolu University, 2015), it can be argued that the majority of the 2.750 students with visual difficulty receive off-campus education.

In the past six years in Turkey, YÖK has taken serious steps to accommodate students with disabilities at universities and provide them with inclusive education. In 2010, the *Regulation for Counselling and Coordination in Higher Education Institutions for Individuals with Disabilities* (Official Newspaper No: 27672) was published and it was revised in 2014 (Official Newspaper No: 28913) (YÖK, 2010, 2014). The primary aim of the regulation is to make arrangements and take necessary measures to prepare appropriate academic environment for students with disabilities and ensure their full participation in the teaching and learning processes.

The regulation requires establishment of four units to achieve this aim. First, the *Higher Education Commission of Students with Disabilities* should be established within the YÖK, which includes academics, bureaucrats, and a representative of students with disabilities. The role of this unit is to determine the needs of students with disabilities at higher education, plan administrative arrangement based on these needs, create infrastructural standards, and establish coordination among higher education institutions. Second, the *Students with Disabilities Counselling and Coordination Unit* should be established within YÖK in order to assist the Higher Education Commission of Students with Disabilities and cooperate with universities to create a supportive academic environment for students with disabilities in which necessary resources are in place. Third, the *Students with Disabilities Counselling and Coordination Unit* should be established within the Student Selection and Placement Centre, which conducts the university entrance examination and coordinates placement based on the scores of this assessment. This unit is responsible for evaluating the needs of students with disabilities in relation to examination and placement. Finally, *Higher Education Institutions Students with Disabilities Units* should be established within each university to assess the administrative, environmental and accommodation needs of students with disabilities and carry out necessary studies to respond to these needs. For each unit, the regulation provides specific roles and duties in relation to the education of students with disabilities.

Review of related literature

The amount of literature on the inclusion of students with disabilities in higher education is increasing although the current picture reveals an obvious need to conduct more investigation regarding this subject. Majority of the studies conducted in this area highlight the importance of access by students with disabilities to higher education (UNESCO, 2015b). However, as Thomas (2016) remarked, the focus of these studies is shifting from emphasizing the importance of physical access to how higher education can be an opportunity whereby students with disabilities can be socially included and benefit from a meaningful educational program. Within this line of research, the majority of the available research focuses on the experiences of students with disabilities (e.g., Holloway, 2001), barriers to effective higher education (e.g., Denhart, 2008), and opportunities to improve the current situation (e.g., Gibson, 2015).

Among the studies described, a considerable number of them still emphasize the need to accelerate the access of students with disabilities to higher education. For example, Morina (2017) reported the partial results of a longitudinal study carried out in Spain by a university research team to discover, from listening to the students themselves, overall perception of their higher education experience. Despite the law backing the right to inclusive education in higher education, results indicate difficulties experienced in regard to access mostly due to inflexible assessment and problems experienced in lower levels of education. In addition, Redpath and colleagues (2013) provided an extensive review of 13 in-depth case studies in Northern Ireland and conclude that students with disabilities face barriers to access even when they perform above average in terms of school achievement. In another study conducted in the United Kingdom to investigate experiences of students with disabilities in higher education, Holloway (2001) identified the need for a central policy supporting the philosophy of access for all students. These studies, as well as many others, are in line with UNESCO's (2015b) report, which requires a long way to go to ensure full universal access to higher education by students with disabilities.

A growing body of research focuses on the experiences of students with disabilities at higher education and how support structures in institutions can be built (Clouder, Adefila, Jackson, Opie, & Odedra, 2016). In the study of Holloway (2001), a number of suggestions were made; these contained a stronger initiative to implement policy with practical guidelines to departments, including students with disabilities within the monitoring and evaluation procedures, staff training and awareness, and student advocacy. Another study conducted in a single institution in the United Kingdom showed that inclusive practices vary significantly across departments and individuals (Fuller, Healey, Bradley, & Hall, 2004). Some negative conclusions were also made in some studies. For example, Vickerman and Blundell (2010) have identified little progress in terms of the education of students with disabilities at universities within the course of a decade. Associated suggestions to improve the current situation included an urgent need to improve institutional commitment to develop support services, development of barrier-free educational programs, and participation of students within decision making at universities. These suggestions were echoed by Redpath and colleagues (2013) who emphasized the need to design professional development structures in regard to mental health issues.

Part of the recent research such as Byrne's (2014) study indicated both progress and steps needed to be taken in the inclusion of students with disabilities at higher education in Northern Ireland. The study suggested steps to widen participation while it showed that the discourse around experiences of students with visual or hearing impairments was constructed around ableism. Such discourse was seen to contribute to the construction of negative status of disability and lead to exclusion. Another study conducted by Hanafin, Shevlin, Kenny, and Mc Neela (2006) focused on assessment at universities from the perspective of students with physical disabilities and with dyslexia. The study came up with the finding that assessment practices were fraught with limitations. Researchers suggested that higher education institutions should initiate a process of change through a proactive approach that explicitly links access initiatives for people with disabilities to appropriate supports and equitable assessment procedures.

In Turkey, two reviews were written on the experiences of students with visual difficulty at higher education. First, Emiroglu (2008) highlighted the changes needed to be made in computer technology so that students with visual difficulty can access information more easily and develop capabilities to improve technological skills. Second, Kazak (2008) investigated the library services at higher education from the perspective of students with visual difficulty, concluding that only five universities by then had accessible library services. However, the current situation regarding the quality of accessible information technology and library services in Turkey is not known.

Research gap and the current study

Issues of disability, inclusive education and higher education have recently attracted attention of international scholarship, although the issue still lacks investigation from different perspectives, contexts, and types of disability. In this sense, the study contributes to the limited international literature on the inclusion of students with visual difficulty in higher education institutions. The current research also contributes to literature by presenting findings of the first empirical study in Turkey. Since the publication of the *Regulation for Counselling and Coordination in Higher Education Institutions for Individuals with Disabilities*, there has not been a study conducted on what is happening at universities in Turkey. Therefore, this study is the first to investigate empirically the progress made in Turkey in terms of including students with disabilities, in particular those with visual difficulties. Finally, compared to the majority of studies conducted with a narrower range of sample and a single data collection method, this study employs a rigorous methodology involving multiple methods and sample from a wide range of universities to illustrate the current situation of the context it was conducted.

Method

Research design

This study employed a pragmatic and sequential explanatory research design. In pragmatic design, the research question is more important than either the method they use or the philosophy that underlies the method (Teddlie & Tashakkori, 2009). Sequential explanatory research design is characterized by the collection and analysis of quantitative data followed by the collection and analysis of qualitative data (Creswell, 2009). The two methods are integrated during the interpretation process and qualitative findings assist in explaining and interpreting the quantitative findings. Similarly in this study, a survey was first administered to participants and findings guided construction of interview schedules. Outcomes of both data collection methods were merged during reporting and interpretation. Morse (1991) stated that this research design is effective when the investigated topic is under-researched. The topic under investigation in this study is not researched in Turkey and rarely put under scrutiny around the world.

Participants and sampling

In this study, 73 university students from 24 universities, 12 majors and three educational levels participated in the survey phase of the study while 12 students among from the survey sample participated in the interview phase (Table 1). All students were educated in public universities and there were universities from all regions of Turkey. All students were medically diagnosed with a visual difficulty. The main strategy used for selecting participants was snowball sampling; a strategy involving getting research participants to direct the researcher to other potential participants (Scott & Morrison, 2006). This involved employing students who were known to the researchers and asking them to direct the researchers to other potential participants.

In this study, the main reason for selecting students with visual difficulty was that they are the most represented disability group in Turkish universities. In 2015, the number of students with visual difficulty in higher education was 3933. This number was followed by 3622 students with orthopedic difficulty and 1240 students with hearing difficulty (YÖK, 2016). The high number of students with visual difficulty made it easier to access information about them. On the other hand, they were selected as a case, to give information about how higher education system in Turkey is structured and organized to cater for the learning needs of students with disabilities. Another reason for the selection of students with visual difficulty was that the study had a steady emphasis and was more manageable when it had a focus on a group of disability.

Selecting students with visual difficulty for data collection included three steps. First, students that were known to researchers and their acquaintances in a number of universities were contacted and invited to join the study. Second, they were also requested to invite their own acquaintances that

Table 1. Profile of participants.

	Survey (n)	Survey (%)	Interview (n)	Interview (%)
Total number of participants	73	100	12	100
Gender				
Male	38	52.1	7	58.3
Female	35	47.9	5	41.7
Level and grade				
Bachelor’s	66	90.4	9	75
Grade 1	16	21.9	3	25
Grade 2	24	32.8	3	25
Grade 3	16	21.9	2	16.7
Grade 4	10	13.6	1	8.3
Master’s	5	6.8	2	16.7
PhD	2	2.7	1	8.3
Major				
Education	21	28.7	5	41.7
Psychology	9	12.3	3	25
Sociology	7	9.6	–	–
Law	7	9.6	–	–
Public relations	6	8.2	–	–
Literature	6	8.2	1	8.3
Economics	4	5.5	–	–
Finance	4	5.5	–	–
Management	3	4.1	1	8.3
English	3	4.1	1	8.3
History	2	2.7	1	8.3
Mathematics	1	1.3	–	–

were university students with visual difficulty. Third, and after collecting the survey data, the researchers invited the entire sample to join a subsequent interview. Twelve students among the whole sample agreed to join the interview.

Procedure

In this study, all participants were requested to provide written ethical consent after they were informed about the study aims, the voluntary nature of joining the study, and the freedom to decline the offer to join the study or leave the study without giving any reason. During the entire process of data collection, guidance was received from individuals with visual difficulty in order to make the data collection process as accessible as possible. All participants preferred the online version of the survey rather than the print version, which was prepared in Braille. Before the link to the questionnaire was sent to participants via e-mail, it was tested with five individuals with visual disabilities for technical sophistication and accessibility. The first phase of data collection included administration of the questionnaire, which was designed online for students with visual difficulty to use audio software in order to fill it. After collection and analysis of the survey data, interview schedules were designed and interviews were carried out with 12 voluntary participants among from those who filled the survey. Nine interviews were conducted via telephone while three were face-to-face. The interviews lasted between 25 and 35 minutes.

Data collection tools

In this study, data were collected via a survey and an interview schedule. A survey including seven dimensions and 33 items was developed as a means of collecting descriptive information about the views of university students with visual difficulty regarding practices, culture, and policy of universities relevant to inclusion. In the survey, each statement had three options to respond to (1) “I agree”; (2) “I am neutral/I have no idea”; and (3) “I disagree.”

The survey was designed thematically (Coles & McGrath, 2010) based on relevant national and international policy (e.g., UNESCO, 2015a; YÖK, 2010, 2014) and literature (e.g., Booth & Ainscow, 2002). First, the themes and questions from relevant sources were adapted to the Turkish education system. In order to construct the survey logically, questions that explored the same or similar issues have been grouped together. The final naming of the themes was made during the process reporting and interpretation (Coles & McGrath, 2010), revealing seven dimensions: (1) a welcoming environment; (2) respecting diversity; (3) planning support; (4) communication and collaboration; (5) learning and participation; (6) teaching; and (7) inclusive policy.

The second data collection tool was a semi-structured interview schedule with 13 questions. In line with the semi-structured nature of the interviews, the researchers had a list of issues to be addressed and questions to be answered. These issues were guided by the conceptual framework and drawn out of a literature survey encompassing international and Turkish literature. The main issues were (a) environment, attitudes, and behaviors; (b) diversity and peer relations; (c) planning and providing support; (d) communication, collaboration, and professionalism; (e) learning, pedagogy, and pupil outcomes; and (f) policy, accountability, and inspection. The schedule was prepared to be flexible in terms of the order in which the topics were considered, and, to allow the interviewee develop ideas and speak widely on the issues raised by the researcher. The content of the questions was similar to that of the survey, with an intention to collect more in-depth information on the issues explored in the survey. The interview schedule covered all survey areas with more emphasis on the areas with which participants were less satisfied.

Data analysis

In line with the exploratory nature of this study, descriptive statistics was used to organize, describe, and summarize the characteristics of the sample and data (Miles & Huberman, 1994). Howell (2011) stated that descriptive statistics are employed when the purpose is merely to describe a set of data. The aim of descriptive statistics in this study was to explore the numbers and percentages of the responses to an individual item given by each group rather than drawing inferences about characteristics of populations from characteristics of samples. Findings are presented for each individual item as well as the dimension which includes related items.

To analyze the qualitative data collected via interview, thematic analysis was used as the primary method. In thematic analysis, field notes, documents, and transcripts are coded selectively by interacting with the research question and considering the prevalence of each pattern. By establishing relationships among codes and exploring relevant literature, broader themes are identified in order to "capture something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set" (Braun & Clarke, 2006, p. 82).

Findings

Findings of the study are presented in ways that merge quantitative and qualitative outcomes. Survey findings are presented in counts and percentages based on dimensions (Table 2) while interview findings are presented in excerpts based on common themes.

Environment, attitudes, and behaviors

In the survey, the first dimension explored the views of students with visual difficulty regarding the physical and psychosocial environment in the higher education institutions they were educated. Ideally, an inclusive environment contains welcoming attitudes, nonproblematic registration at the university, and appropriate physical environment and infrastructure. However, the level of agreement with this statement was less than the sum of those who disagreed or were neutral (N = 118/219, 53.8%).

Participants' statements regarding the dominant attitudes and behaviors at university revealed an effort within the university community to avoid considering students with visual difficulty as equal. A student said:

> They try to preserve their clusters and not to consider you normal. They either marginalize us or elevate us unnecessarily even when it is a minor achievement as if a child has achieved a development milestone. Both imply inequality.

Similar to the student above, another one confirmed the inequality persistent at their university by providing a possible reason:

> They think the labels attached to us are always there, and always prevent us everywhere. They are already surprised with that we are here. But they still think the system did us a favor.

The statements indicate a perceived inability and incapacity toward students with visual difficulty. Such perceptions inevitably influence the peer relations and the way diversity is perceived.

Respecting diversity and peer relations

The second dimension of the survey focused on whether diversity was respected at university. It specifically explored whether there was an effort to eliminate discrimination and barriers toward students and to value everyone equally. Outcomes show that almost two-thirds of the students (N = 139/219, 63.4%) either disagreed with the statement or were neutral.

Table 2. Descriptive statistics including agreement, disagreement and neutrality rates.

Dimensions and items	N	M SD	Agreement f %	Disagreement f %	Neutrality f %
A welcoming environment					
1. Students with visual difficulty and their families are welcomed by the	73	3.71	44	4	25
university		0.80	60.2	5.5	34.2
2. The physical environment and infrastructure of the university is suitable	73	2.61	24	35	14
for the education of students with visual difficulty		1.27	32.9	47.9	19.2
3. Once students are qualified after the central examination, they are	73	3.00	33	24	16
admitted to the university regardless of their ability levels		1.08	45.2	32.8	21.9
Total dimension scores	219	3.11	101	63	55
		1.05	46.1	28.7	25.1
Respecting diversity					
4. All students at the university are valued equally and their background is	73	2.90	19	27	27
respected		0.91	26.0	36.9	37.0
5. All staff at the university work effectively to remove the barriers to the	73	2.93	35	32	6
participation and learning of students with visual difficulty		1.12	47.9	43.9	8.2
6. There is a high effort to prevent discrimination at the university	73	3.10	26	19	28
		0.85	35.6	26.1	38.4
Total dimension scores	219	2.98	80	78	61
		0.96	36.5	35.6	27.8
Planning support					
7. The support to be given to students with visual difficulty is planned and	73	2.80	24	38	11
coordinated well at university		0.90	32.9	52.1	15.1
8. Students with visual difficulty are satisfied with the support services	73	3.08	26	19	28
provided in and out of the classes		0.81	35.6	26.1	38.4
9. Necessary materials such as software and assistants are provided for	73	2.34	8	43	22
students to read, write and learn better		0.90	11.0	58.9	30.1
10. Students with visual difficulty can benefit from psychosocial and	73	2.97	27	29	17
medical services as they need		0.88	37.0	39.7	23.3
Total dimension scores	292	2.79	85	129	78
		0.87	29.1	44.1	26.7
Communication and collaboration					
11. Students with visual difficulty and their peers support each other inside	73	3.01	32	14	27
and outside the classes		1.07	43.8	19.2	37.0
12. University staff cooperate effectively in meeting the individual and	73	3.02	24	26	23
educational needs of students with visual difficulty		0.83	32.9	35.6	31.5
13. University staff, families and students cooperate effectively in meeting	73	3.07	30	17	26
the educational and individual needs of students with visual difficulty		0.99	41.1	23.3	35.6
14. The academic staff can communicate easily with students with visual	73	2.97	23	26	24
difficulty		0.98	31.5	35.6	32.9
15. The administrative and technical staff at university can communicate	73	2.97	28	24	21
easily with students with visual difficulty		0.98	38.4	32.9	28.8
16. Students at the university can communicate easily with students with	73	3.08	22	21	30
visual difficulty		0.89	30.1	28.8	41.1
Total dimension scores	438	3.02	159	128	151
		0.95	36.3	29.2	34.4
Learning and participation					
17. The educational expectations from students with visual difficulties aim	73	3.23	40	21	12
to enhance their learning potential		1.02	54.8	28.8	16.4
18. Students with visual difficulty participate in their own learning	73	2.87	22	25	26
processes		1.14	30.1	34.3	35.6
19. Students with visual difficulty and their peers learn cooperatively in	73	2.91	19	24	30
groups		0.79	26.0	32.9	41.1
20. Students with visual difficulties participate in academic and social	73	2.94	25	27	21
activities		0.89	34.2	36.9	28.8
Total dimension scores	292	2.98	106	97	89
		0.96	36.3	33.2	30.4
Teaching					
21. The education at the university is planned in ways that target maximum	73	2.79	24	32	17
learning of students with visual difficulty		1.09	32.8	43.8	23.3
22. Course units are planned and implemented in ways that encourage	73	2.83	21	31	21
participation of students with visual difficulty		0.88	28.8	42.4	28.8

(*Continued*)

Table 2. (Continued).

Dimensions and items	N	*M* *SD*	Agreement *f* %	Disagreement *f* %	Neutrality *f* %
23. Academic staff plan, implement and evaluate teaching in cooperation with students, families and other staff groups	73	3.09 0.81	28 38.4	21 28.8	24 32.9
24. Homework is planned in ways that promote learning of students with visual difficulties and considers their needs and strengths	73	3.00 0.88	27 37.0	26 35.6	20 27.4
25. Additional teaching materials are used as needed for students with visual difficulties	73	2.82 1.17	24 32.8	32 43.8	17 23.3
26. Lessons are carried out in ways that target maximum learning of all students	73	2.86 0.80	18 24.7	27 37.0	28 38.4
27. The physical arrangement in the classrooms is done by thinking the needs of all students	73	2.65 0.93	19 26.0	40 54.8	14 19.2
28. Diverse assessment procedures for students with visual difficulties can be applied as needed	73	2.60 1.06	18 24.7	33 45.2	22 30.1
Total dimension scores	584	2.83 0.95	179 30.6	242 41.4	163 27.9
Inclusive policy					
29. The university has clear policy and regulations for the inclusion and education of students with visual difficulty	73	2.82 1.18	30 41.1	34 46.6	9 12.3
30. The central policy and regulations by the Ministry regarding inclusion are well understood and implemented at the university	73	3.01 0.84	19 26.0	20 27.4	34 46.6
31. The policy and regulations of the university regarding inclusion are well understood and implemented by the university staff	73	2.80 0.90	19 26.0	28 38.3	26 35.6
32. The university has clear regulations to provide educational and individual needs for those students with visual difficulty who need them	73	2.91 0.87	21 28.7	29 39.7	23 31.5
33. The policy and regulations at the university aim to ban discrimination	73	2.69 0.96	17 23.3	30 41.1	26 35.6
Total dimension scores	365	2.84 0.95	106 29.0	141 38.6	118 32.3

In an environment where attitudes towards students with visual difficulty are based on inequality and perceived inability, expecting constructive interaction is difficult. This case was exemplified by the following student:

> In terms of relationships, there is a tiny impact students with visual difficulty have on close friends. But this turns back to us as isolative behavior in crowded groups and big classes.

Another student pointed to the competitive climate which added to the individualism at university negatively:

> It [university] is high-ranking and this makes education challenging and isolates people from each other. Spending more time with more people gets difficult. We are already disadvantaged.

Difficulties in planning and providing support

In the third dimension of the survey, participants were asked to provide their views regarding whether or how support was planned and given to them. Specifically, this included coordination of educational, psychosocial, and individual support. Outcomes show that the overall level of agreement with this dimension was less than that of disagreement and less than one-thirds of the total respondents.

The majority of the interview participants were not satisfied with the planning and provision of support services. A negative view was remarked by the following student:

> There is no planning or coordination. Only when there is a high demand or crisis something is done. For example, when the number of complaints increases or when we have a bad accident in the campus.

This situation indicates a piecemeal way of planning and providing support. One reason for this was lack of constructive communication, collaboration, and professionalism at universities.

Communication, collaboration, and professionalism

Previous statements indicated limited interaction between students with visual difficulty and their peers. The fourth dimension of the survey focused on issues regarding communication and collaboration among students, academics, and other staff. Less than half of the participants agreed with this statement and almost two-thirds of them (N = 279/438, 63.6%) either disagreed or were neutral.

When it comes to the communication with academic and administrative staff, students mostly reported negative statements such as the following one:

> They view us as an extra burden to them. They keep very basic communication as a requirement of their job; but when they do something for us, they do it unwillingly and make us feel that.

As stated before, the YÖK requires universities to plan and provide services for students with disabilities and different needs. Although universities have established units to address this aim, many students, such as the following one, reported that these units worked in an individualistic manner often based on personal, rather than professional, motivation:

> There is no one who works consciously and professionally. For example, in this university there is a focus on students with hearing difficulty because the administrator's child has this difficulty, or you may see an academic who is more prone to help because they have a relative with disability. They work under the impact created by such relations. When these people go, all support goes.

Another student specifically addressed lack of collaboration among university staff:

> There is not an understanding that views difference as richness. People just say "this task is given to us so we have to do it." However in reality, you see they refer the issue to one another. No one wants to do it.

The statements presented above also relate to academic staff and are exemplified in the following theme which focuses on pedagogical practices.

Learning, pedagogy, and pupil outcomes

The fifth and sixth dimensions of the survey focused on learning, participation, and teaching at university. The fifth dimension specifically explored educational expectations, the level of cooperative and participatory learning, and the level of participation in academic and social activities. The level of agreement was slightly more than one-thirds of the sample. The dimension of teaching focused on the planning and practice of teaching relevant to the learning of students with visual difficulty, arrangement, and coordination of teaching activities and assessment. The level of agreement remained less than one-thirds of the participants while other participants (N = 405/584, 69.3%) either disagreed or were neutral.

In the interviews, participants were asked to evaluate the pedagogical practices at their universities. A dominant majority referred to their own efforts to accommodate to the way pedagogical practices are delivered. The following student illustrated this:

> Actually we do not expect them to do something extra for us because we can read, write and do the basic stuff. However, what some of them does prevent us from the class. Many of them use slides as the main method of teaching, put pictures etc.

In addition to the teaching practice mentioned, applied projects also tended to ignore students with visual difficulty. A student mentioned their experience:

> A student with visual difficulty was not included to a project which had to include everyone. In the rationale for this act the student said that a student with visual difficulty was excluded from the project because they were thought to slow down the project. . . .Yes, this project was accepted and is still in the archives.

When it comes to assessment of learning, students resented to the unrealistic practices of their academics. For example, the following student said:

> Their expectations are very low at the beginning. They give us minor tasks. However, when we achieve something they exaggerate this and expect us to do everything. There is no balance.

Policy, accountability, and inspection

The final dimension of the survey focused on policy and explored the preparation and implementation of local and central policy and its role in the learning and participation of students with visual difficulty. The level of agreement with this dimension was less than one-thirds of the participants. Other participants (N = 259/365, 71.0%) either disagreed or remained neutral.

When interviewed about policy, students referred to major differences among universities in their practices. The following student said:

> I have been at three universities to study and work. Some of them are too behind whereas some of them can be considered better. I was welcomed very well in my first university; but here the disability unit is still not established.

This statement was partly related to the nature of the policy, which the following student speculates on:

> In theory, decentralized policy making by universities is useful and ideal. However in here, no one inspects whether these are done or not. When there is not a central accountability regime, nothing useful is done.

In addition to the way policy is made and evaluated, the content of the policy was under scrutiny as well. The following student said:

> They take instantaneous decisions when something happens, and these are mostly for individual students. We should be there and we want broader decisions like how accessibility can be improved or we can easily reach support.

Discussion

The approach of "education for all" has increased access of students with disabilities to all educational levels, including higher education (UNESCO, 2015a). Efforts of higher education institutions have mostly focused on supporting students to succeed in their studies and to help them adapt to the university environment (OECD, 2011). In this study, survey results and interview findings, to a larger extent, indicated dissatisfaction with different aspects of their educational experiences. These are discussed in the following subsections.

Culture at universities

Findings in this study showed that some students were satisfied with how they were welcomed at university and the physical environment surrounding it. However, the majority were not happy with the current situation, especially the inappropriateness of the physical environment and the negative attitudes toward them. This finding proves the existence of a "culture of difference," a concept mentioned by Slee and Cook (1999, p. 272) and referring to the divide that exists within education when it comes to the matter of disability. A number of studies in the literature, such as Morina (2017), gave voice to students remarking that university cultures were surrounded by negative attitudes when it came to disability. In order to cope with this issue, Gibson (2012) argued, academics need to be encouraged to engage with cultures of difference in relation to students with disability, to take a more critical look at their students' overall experiences, and to understand their different values, attitudes and knowledge.

According to Dee (2006), cultural problems in the transition process stem from failure to mobilize members of the education system, encourage them to be open to their environment, and establish linkages among the different stakeholders. Despite the progress made, the current picture in Turkey shows that awareness has not yet been fully enhanced and the universities have not been designed or re-designed inclusively. Finnan and Swanson (2000) believed that the primary aim in an educational setting is to recognize and accept student differences. Unless this happens, most educators feel overwhelmed by the diverse needs of students, and therefore, they lack the skills to create learning environments in which students of all ability levels can achieve their potentials.

Stereotyping students with disabilities and viewing them as patient or troublesome is a barrier to inclusive university cultures. However, an important aspect of the arrangements made at universities is whether the system creates educational environments that are sufficiently flexible to adapt to the diversity of educational needs. A progressive view assumes that the restriction of activity may be caused by the organization of institutions, which takes no or little account of people who have difficulties and exclude them from participation in the mainstream of social activities (Union of the Physically Impaired Against Segregation, 1976). Therefore, higher education institutions and their members need to passionately seek change in universities, as a whole unit, to accommodate the needs of all students.

Establishing inclusive cultures requires establishment of channels of communication and collaboration with students with disabilities and their families to remove barriers to their participation. Fell and Wray (2006) thought that outcomes for disabled students can be enhanced by effective planning, communication, and negotiation between the involved parties. To ensure that inclusion is effective the whole educational process need to be supported by collaboration between staff (Mamlin, 1999).

Planning and providing support

Establishment of an inclusive university culture is related to the translation of positive attitudes into effective practice of providing support to students with disabilities and meeting their needs (Tjernberg & Mattson, 2014). In addition to recognizing the social and institutional barriers, universities need to consider the needs of students that may be associated with their difficulties. Students with visual difficulty in this study, to a very large extent, complained about the way support is planned and given in their universities. Findings are in line with reports of previous studies conducted in different contexts. For example, Hadjikakou and Hartas (2008) investigated support and provision in Cypriot higher education from the perspective of students with disabilities. Similar to the case in Turkey, despite a number of regulations, they found problems in human resources, financial support, learning support, infrastructural support, and counseling services. Similarly, Seale, Georgeson, Mamas, and Swain (2014) employed a digital capital framework to explore the relationship between students with disabilities and their technologies. Researchers found that while students had access to social and cultural resources; these resources were rarely appropriate or effective (e.g., school-based ICT qualifications) or they were not drawing on all the possible resources available to them (e.g., noninstitutional based support).

In this study, students with disabilities resented the lack of initiative by their educators and other professionals to support them in classrooms and facilitate provision towards their needs. Some studies documented the procedures of provision and support in cooperation between students with disabilities and their educators. For example, Lancaster, Mellard, and Hoffman (2001) investigated provision for students with disabilities in higher education institutions in the United States and explored that students with disabilities and their tutors negotiated teaching modifications and concessions with assignments and exams, and use of adaptive equipment and technology (e.g., spell-checkers, voice-input software, electronic reading machines, talking calculators, computer-screen readers, specialized keyboards, and tape recorders). The basic idea behind this practice was that necessary accommodations and modifications need to be made if the aim is to help students become as successful as they can be.

At each university, the organization and provision of support services depend on the conditions in that university. For example, the requirement of accessibility in some institutions might be conditioned by a specific formal request by individuals with disabilities whereas some institutions make the appropriate accommodations by the team in charge of students' individual needs and plans (Izzo & Lamb, 2002). However, as important as the means is the establishment of mechanisms that view the needs and strengths of students and support them with appropriate planning and do not permit disabling conditions to marginalize them.

One of the keys to inclusion and appropriate education at university is the support to be given to students and the resources available to them (Fernie & Henning, 2006) because material arrangements to ensure their mobility both to and on campus or coordination of support for study are necessary. Support services for students with disabilities at higher education may differ according to the type of difficulty. For example, for students with visual difficulty, information and communication technology in the classroom, in the library, in the field, and at home should offer an opportunity for increased access to education, and can enhance the delivery of teaching to support multiple learning styles. More generally, mobilization of additional technical, financial, and human resources to support students with disabilities through higher education, and special arrangements to facilitate their academic success play an essential role. Allocation of resources in universities depends on the variety of the learning needs identified during pedagogical assessments (OECD, 1999).

Pedagogy

Making the higher education system pedagogically accessible and inclusive depends on the pedagogical arrangement to facilitate academic progress and success. Despite the progress reported by a few, the majority of the participants in this study reported dissatisfaction with the planning of pedagogical arrangements, delivery of instruction, project work and homework, and assessment of their learning and progress. In Thomas' (2016) evaluation of related studies, the role of pedagogy is seen as crucial in contributing to improve the outcomes gained by students with disabilities at higher education. The most needed pedagogical practices are stated as student-centered learning and teaching which considers the abilities and needs of each student, while designing programs that contain universal approaches and techniques for teaching and learning. Similarly, pedagogical issues regarding teaching, learning, and assessment are reported as important and in need of extensive focus around the world (e.g., Georg, 2009; Kift, Nelson, & Clarke, 2009).

In this study, the problems experienced in relation to pedagogy, seemed to stem from standardized planning, inflexible teaching, and failure to provide young adults with disabilities with the same knowledge and skills to the full extent possible as other young adults. This conclusion is in line with Gibson's (2015) argument regarding the crucial role of flexible, representative, and meaningful pedagogy. However, this imbalance could be resolved by designing each course unit with a learning design based on educational theory and pedagogical principles of inclusive pedagogical design (Pearson & Koppi, 2006). For example, in Turkey, the disability unit at each university can act collaboratively with program directors and students with disabilities in order to design what is needed pedagogically and how the content can be delivered.

Another important task at universities for developing an inclusive system is to focus on the learning experiences of students with disabilities, improve their academic outcomes and enhance their functional and cognitive aptitudes by encouraging collaboration between them and their peers (Chapman & Carlisle, 2006). This can be achieved by encouraging departments and faculties to determine the success of each individual student as their goal and follow students more closely during their course of study and take necessary measures (group work, accessible technology, less testing, addressing appropriate learning modality) to improve their chances of success (OECD, 2011).

Policy

The policymaking at Turkish universities is less centralized than those at primary and secondary schools. Despite the local nature of many regulations made at the university or even departmental level, the majority of the participants reported issues about designing inclusive policy and regulations, making these known to students, implementing them effectively, and evaluating them. The issue of ineffective policy, as well as the disparity between policy and implementation, is experienced around the world as well as in Turkey. For example, Hanafin and colleagues (2006) and Redpath and associates (2013) outlined the problems experienced in Ireland and Northern Ireland in converting policy of access and provision in higher education into effective practice. Similarly, problems in formulating effective higher education policy based on inclusive education and the following superficial practice of implementing it are documented by Gibson (2015).

According to Hurst (2006), policy at higher education need to focus on the quality of the content, how it ensures provision, and the process of evaluation. While doing this, the policymakers need to adopt an educational approach to disability, which focuses on the enabling or disabling effect of policies and practices and promote a legislative framework that prohibits all forms of discrimination, because provision without an inclusive ideology might lead to wasted resources and unsatisfied individuals (Dyson, Millward, & Skidmore, 1994). Ahmed (2012) further argued that the problem of ineffective policy requires a solution based on seeing the current failure of policymaking activities to embrace inclusion's epistemological nature, deconstruct cultures of difference, and combat reductive educational practices.

Inclusive education in higher education requires universities to be accountable. In some countries, central mechanisms have established tools (such as indicators, statistical data for analysis, and evaluation to monitor performance of higher education institutions) for tracking the performance of institutions (EOCD, 2011). In doing so, policymakers need to analyze, understand, and respond to local contexts of each university by not allowing any group to be excluded or overlooked in this process (Dyson, Goldrick, Jones, & Kerr, 2010).

Limitations, implications for future research, and conclusion

Despite a number of measures to conduct a rigorous research, there were some limitations in this study. First, students with visual difficulty constituted the sample group in order to illustrate the case of students with disabilities at universities. However, studies conducted with different disability groups can yield different findings. Therefore, future studies may address different disability groups and investigate their experiences, opinions, and beliefs. Second, this study aimed to investigate the experiences of students with visual difficulty from a first-hand experience gathered through survey and interview. However, in order to learn better whether or how the higher education system is prepared to provide effective education and meaningful experiences for students with disabilities, in-depth case studies that involve naturalistic observations should be carried out in future studies.

In conclusion, the competitive secondary education system in Turkey and its associated examination system have historically favored the most able students to enter universities (Diker & Türkün, 2013). Despite the progress made, individuals with disabilities need to spend a lot of effort to have access to universities and receive education there. Still, a very high percentage of students with disabilities either drop out during primary and secondary education or outperformed in national examinations by their more "able rivals." Currently, conflicting paradigms such as those promoting inclusion, segregated education and competition at the same time co-exist in the education system. However, in order to make the Turkish higher education system inclusive of all learners, the legislative and practical attempts need to be based on ideas of pluralism, inclusion, and cooperation, rather than competition and standardization.

Notes

This manuscript has not been published elsewhere, and it has not been submitted simultaneously for publication in another outlet. Authors confirm that they have complied with the American Psychological Association ethical standards in the treatment of their samples.

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