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Views of academician examiners on the testing accommodations of the measurement, selection and placement center for disabled test takers

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Abstract: The Measurement, Selection and Placement Center–MSPC (original acronym: Ölçme, Seçme ve Yerleştirme Merkezi–ÖSYM) administers many of the high-stake examinations applied in Türkiye. In order to support equality of opportunity in education and create a fair evaluation system, MSPC actualizes various testing accommodations by adjusting the standardization protocol for disabled test takers. In this research, we examined the views of academicians who served in the halls where disabled candidates take the test in the examinations held by MSPC about the testing accommodations for the disabled. The study design was in the basic qualitative research model. The participants consisted of 12 academicians working at a state university in Türkiye, who had served at least three times in the examination halls reserved for disabled test takers by MSPC. We collected the data via an interview form which included four items and administered it to the participants according to the drop-off and pick-up later method. The research results revealed that academician examiners have various positive opinions about MSPC's testing accommodations for disabled test takers. However, the participants also expressed that current accommodations have certain limitations that should be revised.

1. INTRODUCTION

Educational placement and admissions to institutions such as identification of personnel to be employed in the public sector and selection of students for certain types of high schools (e.g., science high schools) and universities are made through high-stake examinations in Türkiye as in many other countries of the world. The main issue in high-stake tests, which are a common part of educational systems, is to standardize the administration procedures as much as possible (Engelhard et al., 2010). Standardization refers to the administration and scoring of tests under uniform conditions for all examinees (Geisinger, 1994). However, some aspects of standardization make the administration of these tests unfair to certain groups, especially to individuals with disabilities (Sireci et al. 2005). More clearly, for some subgroups the validity of inferences from standardized test results may be doubtful because certain characteristics of

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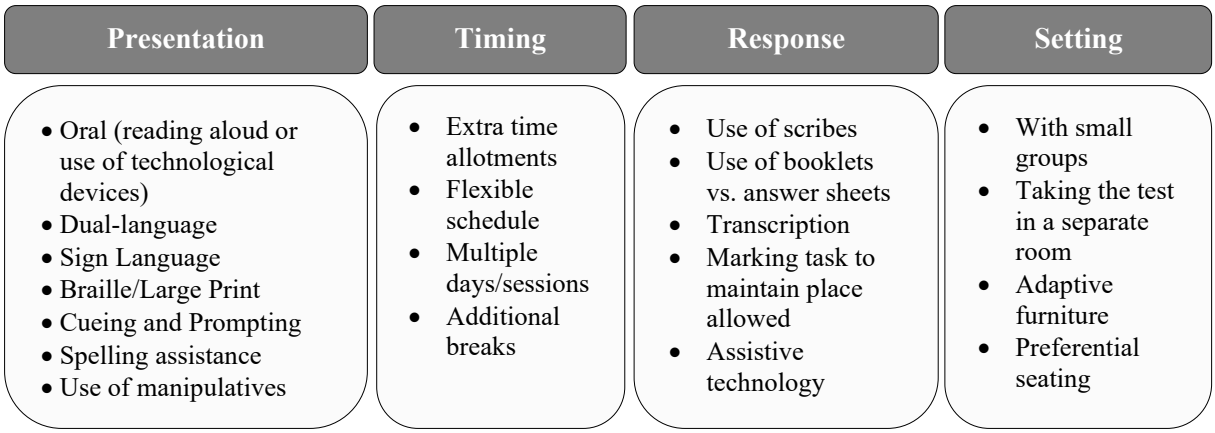
the individuals in these groups can impede their performance on the test and the scores do not correctly reflect the outcomes that the test purports to measure (Elliott et al., 2001; Schulte, et al., 2001). As a matter of fact, Sireci (2008) noted that strict standardization brought along a lack of fairness in the measurement process for certain test takers, which derived a favorable ground for construct-irrelevant variance to disseminate. Therefore, fairness as a fundamental validity issue requires attention in high-stake tests.

According to *Standards for Educational and Psychological Testing* published by American Educational Research Association (AERA), American Psychological Association (APA), and National Council on Measurement in Education (NCME) the broad target of fairness in testing is assuring equality of opportunity in the society. From a psychometric perspective the objective of fairness is maximizing, to the extent possible, the opportunity for examinees to demonstrate what they know on the trait the test is intended to measure and also minimizing the situations that are likely generate advantages or disadvantages for some test takers due to the characteristics irrelevant to the intended construct (AERA, APA & NCME, 2014). In this sense, test administration conditions must be regulated for disadvantaged subgroups by eliminating construct-irrelevant obstacles in order to establish fairness. In particular, as various disabilities may compromise examinees' opportunity to fully display their knowledge and skills in areas measured by the test, and thus unfairly disadvantage these individuals, assessment accommodations must be enabled for disabled test takers (Saka et al., 2022).

1.1. Testing Accommodations

The Standards for Educational and Psychological Testing uses the term accommodations to specify the changes to the presentation and/or format of the test and the way of administration or response procedures that maintain the nature of the target construct and result in scores comparable to those on the original test (AERA, APA & NCME, 2014). Bolt and Thurlow (2004) pointed out that although the terms of *test modifications* and *test accommodations* are often used interchangeably, these terms actually have different meanings. While modification remarks the alterations that change the test construct in some way, accommodation denotes the changes that aid in the measurement of a given construct. That is to say, testing accommodation implies altering established standardization protocol and test administration procedure without modifying test construct for curtailing the effect of the examinee's disability on his/her test result (Huynh & Barton, 2006; Sireci et al., 2003). The relevant changes could be related to how the test will be presented, how it will be responded, how the responses will be recorded, where the test will be administered, the type of equipment that will be allowed, and timing or scheduling of the test (Thurlow et al., 1993). Figure 1 summarizes the principal testing accommodations for disabled examinees in high-stake tests.

Figure 1. *Principal testing accommodations in high-stake tests (Fuchs et al. 2005; Prater, 2018; Sireci et al., 2003; Thurlow et al. 1993; Weis et al., 2014).*



From Figure 1 we see that the assistive technologies can be utilized both in the presentation of the test and in recording the responses. Oral accommodation can be performed as the presentation of the test direction and items by reading aloud or by means of technological devices such audiotape, videotape, and screen-reading software. Similarly, the responses can be dictated to a scribe by examinees or recorded through the speech-to-text software. Besides, examinees may take the advantage of technological devices (e.g., calculator, magnifier, zoomtext software) while answering the test items. In the relevant literature it has been reported that granting extended time is the most common test accommodation (Wightman, 1993). Reading a test aloud to the examinee, provision of a scribe to note the examinee's oral responses, presenting large print or braille booklets, and administering the test in a separate room are other test accommodations most frequently authorized (Bolt & Thurlow, 2004). Examinees might or might not consider the test as easier or more pleasant with listed accommodations, but either way the accommodations should spark off more accurate estimates of test takers' levels of target skills (Lovett & Leja, 2013).

1.2. Testing Accommodations in Türkiye

In Türkiye, various legal arrangements were adopted in order to accommodate the measurement and assessment practice to the disabled individuals' special needs. In Official Gazette of the Republic of Türkiye dated 2018 and numbered 30472, the following items were included regarding the measurement and evaluation processes of the individuals with disabilities: *(i)* students with visual impairment can be tested with other questions equivalent to these questions instead of questions containing pictures, figures and graphics, *(ii)* students with motor skills deficiency can be exempted from the applied parts of the courses requiring motor skills, and *(iii)* students with hearing impairment, intellectual disability or autism can also be exempted from foreign language exams. Such accommodations are considered in both classroom assessments and high-stake tests. Accordingly, not only teachers but also institutions conducting high-stake tests implement different accommodation policies according to the test takers' special needs in their examinations. In this direction, the Measurement, Selection and Placement Center–MSPC (original acronym: Ölçme Seçme ve Yerleştirme Merkezi–ÖSYM), which conducts most parts of the high-stake tests in Türkiye, executes certain testing accommodations for disabled examinees. MSPC published a special edict in 2018 and explained the accommodations provided to test takers with disabilities as follows: (on the condition that the examinee submits the petition stating his/her disability status, a certified copy of his/her health board report, completed health/disability information form, and a copy of the examinee application registration information to MSPC):

- Depending on the disability/health condition (Cerebral palsy patients who cannot control their body movements because the motor system mechanism in their bodies is not sufficiently developed, those who are visually impaired, those with pervasive developmental disorders, and those with specific learning difficulties), the examinee is provided with marker and/or reader assistance. While reader reads the direction and items to the examinee aloud and verbatim, marker transcribes response to the answer sheet once examinee completes an item. Two proctors in the same examination hall serve alternately as readers and markers.
- These test takers are allowed additional time to a predetermined extent according to the exam duration and the number of questions in the exam.
- Questions containing complex expressions and/or visual data such as figures, graphics, tables, pictures are not asked to the visually impaired examinees who request reader assistance.
- Additional time is given to examinees who can read the questions themselves (not requesting readers) but have special needs and vision impairment above 25%.
- Examinees with low vision but can read the questions by themselves are given a question booklet written in 9 or 14 font sizes upon their request, and marker assistance is provided.

- Examinees with pervasive developmental disorder in the unclassifiable group, mental retardation, specific learning difficulties, and those with deaf/mutes/hearing impaired making involuntary sounds can take the test in single-person halls if they wish, even if they do not receive reader and marker assistance.
- In electronic exams (e–exam), visually impaired examinees can take the test with screen reader software or screen magnifier software upon their request.
- Examinees with physical disabilities are assigned to the examination halls suitable for their status (to the exam buildings with working elevators or to the examination halls on the ground floors of the buildings) taking into account the information they provide in the health status/disability information form (can climb stairs, has difficulty in climbing stairs and cannot climb stairs).
- Examinees are allowed to bring drugs, equipment, devices, and materials related to their current disability/health status to the exam hall. According to this;
    - Examinees with hearing impairment who use hearing aids/bionic ears and whose condition is written in their exam entry documents are taken to the exam buildings with the relevant devices. However, these examinees should leave these devices at the place indicated by staff who serve in the hall to receive them after the exam is completed. Examinees who want to wear the aforementioned devices during the test should mark the relevant field in the health status/disability information form. Examinees who fill in the related form are taken to the test with their relevant devices in the examination halls prepared by MSPC, where all wired/wireless communication is cut off.
    - Examinees with diabetes are allowed to bring insulin pump, glucometer, supplementary food, etc. to the examination hall.
    - Examinees taking drug due to a chronic illness are allowed to bring the drug with them.
    - Examinees with temporary health problems or special conditions such as pregnancy are tolerated to meet their needs such as additional food and toilet. In addition, these examinees are permitted to bring the materials (drug, bandage, crutch, walking stick, neck brace, plaster, seat squab, etc.) they need for their health problems to the examination hall. These test takers are provided with marker assistance in line with their requests by applying the normal test duration.

As can be understood from these listed principles, the number and combination of testing accommodations implemented by MSPC are vast and diverse. The said accommodations are mainly based on altering the way the test is administered (e.g., the duration of the test, altering the format of presentation) without changing the content of it except for the items to which the examinee is exempt. Thus, MSPC intends to obtain a more accurate picture of the abilities of disabled examinees.

1.3. Purpose and Significance of the Research

The institutions that carry out high-stake tests need to pay attention to balance the individual rights of the disabled examinees against the obligation to maintain the integrity of the testing enterprise when planning testing accommodation policies (Phillips, 1994). Furthermore, these institutions should not overlook that there are two sides of the same coin when it comes to testing accommodations. Specifically, testing accommodations have the potential to eliminate construct-irrelevant variance and promote validity by removing barriers that prevent disabled examinees from demonstrating their actual abilities. But the flipside of the coin is that an accommodation may also inadvertently introduce construct-irrelevant variance if it alters the trait tested (Sireci 2008). Therefore, in order to ascertain how well the testing accommodation put in the practice in the pursuit of fairness serves its goal, it is important to reveal the positive and limitation aspects of the existing accommodations. We believe that it is especially important to scrutinize the views of examiners (i.e., the proctors/readers/scribes who serve in the

examination halls where disabled candidates take the test) on the subject, since they can directly observe the effective and limited aspects of the actualized accommodations for disabled test takers. That is to say, academician examiners may introduce important data on how much the accommodations set forth by MSPC are implemented and what kind of problems there are in practice. For example, a vision impairment examinee may not be able to form a view on how accurately the questions he/she is exempted from are determined because he/she cannot see the exam booklet. Nonetheless, the academicians who serve as a reader in the hall where the disabled examinee take the test can see both the booklet and how much the candidate can understand the orally presented items. Correspondingly, they can provide important information about how accurately the items that the candidate is exempted from are determined. In this context, we aimed to investigate the views of academicians who serve as proctors, readers, scribes, etc. in the high-stake tests administered by MSPC for disabled examinees about the testing accommodations implemented in these exams and sought answers to the following research questions:

1. What are the participants' views about the positive aspects of the available testing accommodations of MSPC?
2. What are the participants' views on the limited aspects of current testing accommodations of MSPC?
3. What are the challenges that the participants encounter while serving in the examination halls reserved by MSPC for disabled test takers?
4. What are the participants' suggestions for improving the MSPC's existing testing accommodations?

When we review the related literature, we see that there are studies about the testing accommodations for the disabled examinees in high-stake tests in Türkiye. For example, Şenel (2015) examined the experiences of visually impaired students in the university entrance exam while Tavşancıl et al. (2012) conducted a study to research the problems faced by visually impaired students in the university entrance exam and to offer solutions in this direction. In addition, Karabay (2016) investigated the effect of live reader and computer assisted reading on test score of visually impaired students. Şenel (2017) also tried to determine the suitability of computer adaptive tests for visually impaired students. On the other hand, Ozarkan et al. (2017) tested whether the items in the mathematics subtest administered in the scope of transition from basic education to secondary education in the first semester of 2015–2016 academic year show the differential item function in terms of the examinees' visual impairment status. Furthermore, Çobanoğlu-Aktan et al. (2018) compared the high-stake exams for disabled students in Türkiye and the USA in terms of legal responsibilities, administration methods and validity while Yılmaz (2019) analyzed the central common tests held in order to select students for high schools in terms of item bias according to the disability status of the examinees. In another study Dogus et al. (2020) examined the views of visually impaired students on the accommodations in high stake tests. Şenel (2021), on the other hand, explored the measurement invariance of the central examination applied in order to select students for secondary education institutions in Türkiye according to participants' disability status. However, in the relevant literature, there is no study that investigates the accommodations implemented in high-stake tests for examinees with disabilities directly based on the views of academicians taking office in these examinations. Therefore, the study is thought to contribute to the literature.

2. METHOD

2.1. Research Model

We carried out the study according to the basic qualitative research. Basic qualitative research, most common type of qualitative study found in education and most likely in other fields of

practice, imparts rich descriptive accounts aimed to understanding a phenomenon, an experience or a process from the perspective of the participants (Ary et al., 2019; Meriam, 2009). This specific research focuses on how events, processes, and activities are viewed by those involved in the study and also on purposes to describing recurrent themes or patterns in the data obtained (Ary et al., 2019).

2.2. Participants

Considering the aim and design of our study, we determined our participants according to convenience and criterion sampling, which are among the purposive sampling methods. We selected the participants from the academicians in our close circle, who we know take office in the examination halls where disabled candidates take the test, and we adhered to the criterion of having served in the examination halls allocated for disabilities at least three times. As such, we were able to reach 15 academicians, 12 of which were participants in our study (The other three academicians, to whom we forwarded the data collection tool, did not get back). We coded the participants as P1, P2,..., P12 within the scope of the study. All of the participants notified that they took office in the examination halls reserved for disabled test takers in the Higher Education Institutions Exam and Disabled Public Personnel Selection Exam. Those participants with codes P1, P4, P5, P10, and P11 reported that they had served in the examination halls reserved for the disabilities also in the Academic Staff and Graduate Education Exam in addition to the aforementioned two exams. The participants' missions in the halls where disabled examinees take the test were as follows: All 12 participants remarked that they served as reader/marker/scribe in the halls where visually impaired examinees take the test. In addition, the participant coded with P11 expressed that he took office as a marker/scribe in the hall where an examinee with cerebral palsy took the test. P2 and P5 coded participants, on the other hand, stated that they had served as a reader and marker in the halls where examinees with a special learning disability take the test.

2.3. Instrument

We collected the study data through an interview form consisting of four items. We prepared the items in the interview form in line with the research problems. Accordingly, we asked the participants to remark their opinions about the positive aspects and limitations of the existing accommodations in the first and second items, respectively. The third item was about the difficulties encountered during the task and the fourth one was regarding the suggestions for improving the current testing accommodations. After we created the draft form for the interview form, we received opinions from two measurement and evaluation experts. We asked the experts to judge the items in the instrument in terms of suitability for the purpose and sub-problems of the research and clarity. The experts stated that the interview form served the purpose of the study and that no changes were necessary. Then, we sought the opinion of a Turkish language expert to review the interview form in terms of spelling and grammar rules. The Turkish language expert stated that the language used in the instrument was understandable, but she made some suggestions in terms of punctuation marks. We made the necessary changes in the form in line with these suggestions related to punctuation marks. Subsequently, we received opinions from two academicians who had previously taken office as a disabled hall staff in the exams by MSPC order to get feedback on the applicability of the interview form. The feedback we received showed that the interview form was ready for administration, thus we started the data collection process.

2.4. Data Collection Process

Before starting the data collection process, we obtained ethics committee approval regarding the compliance of the research with scientific ethics. Following this, we started the data collection process. As known, interview forms can be administered to the participants orally as

well as in written format. In the written format, the data collection tool can be administered in person (i.e., face-to-face), electronically (via mail or internet-based program) or by a researcher dropping off the instrument to intended participants so that they can complete and then return it at a later date (Manchaiah et al., 2022). We adapted dropping-off and pick-up method in our study. In this direction, we left the interview form to the potential participants and gave them instruction about the research purpose and a brief description related to the instrument. Besides, we stated that the participation in the study was on a voluntary basis and emphasized that the data would remain anonymous and would not be shared with any other person or institution. We dropped-off the data collection tool to the participants on the first working day of the week and picked it up on the last working day of the week. We delivered the measurement tool to 15 academicians and 12 of them returned it.

2.5. Data Analysis, Dependability, Credibility, and Transferability

We used content analysis while analyzing the participants' responses. The main purpose of content analysis is to reach the concepts and relationships that can explain the collected data (Yıldırım & Şimşek, 2016); in other words, the major aim is to reveal the patterns hidden in the data. In the study, we first identified four themes, each corresponding to a research question and thus to an item in the instrument. In the second stage, we analyzed the data in line with each theme and detected the words, phrases, and sentences that had close meanings. We created sub-categories based on the words/sentences we determined to have close meanings.

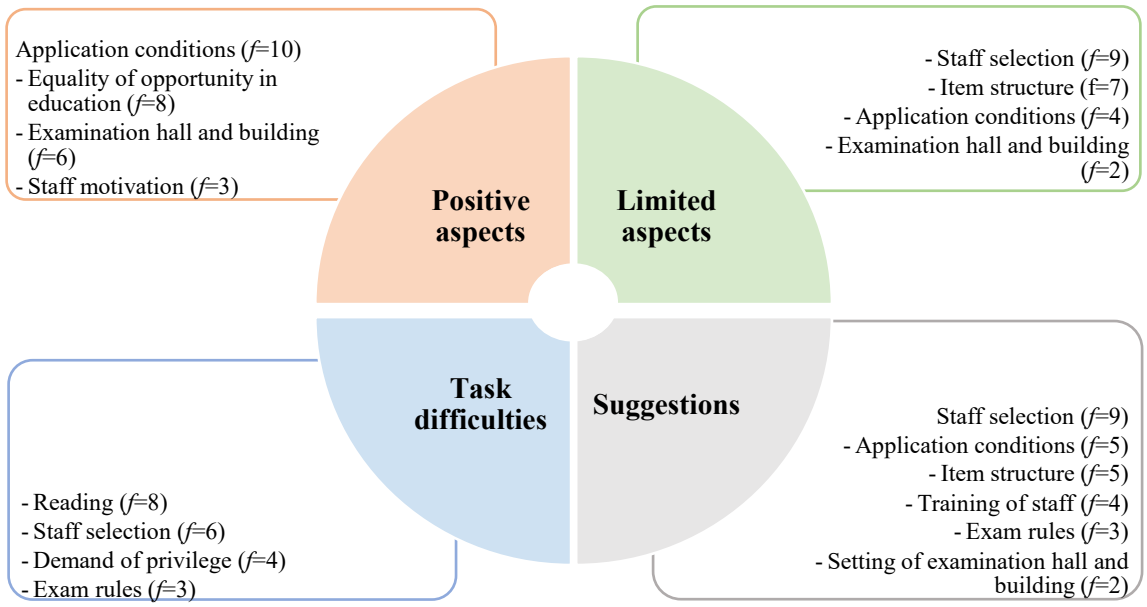
To ensure dependability of the study two independent researchers analyzed the data separately. Then we checked the consistency between the encodings using the formula of *"(number of agreements)/(total number of agreements + disagreements)*" proposed by Miles and Huberman (1994). We calculated the intercoder agreement as .90, .80, 1.00 and .96 for each theme, respectively. Later, in order to discuss differences of opinions among the coders and to achieve complete consistency, we sought the opinion of an assessment and evaluation expert who had previously served in the hall reserved for disabled test takers in the examinations by MSPC, and who was different from the researchers who coded the data. We held a Zoom meeting and got the opinion of the relevant expert about the coding of the data.

Brown and Rodgers (2022) specified that credibility and transferability will be enhanced if the researcher has a clear, complete, and detailed description of the study. Correspondingly, we took every care to describe the whole research process in elaboration for credibility and transferability of our study. We told in detail the steps we followed while collecting the data and explained one by one in which exams the research participants took office in the halls reserved for disabled candidates and their position in these examinations (i.e., reader, marker, etc.). Moreover, we included direct quotations from participants' views when presenting the results. We gave priority to the expressions that best reflected the situation while presenting direct quotations. Another procedure we performed for credibility and transferability was to obtain participant confirmation. Within this framework, after analyzing and reporting the collected data, we presented draft form of the results to the participants along with the instrument they answered, and we received feedback from the participants themselves on how accurately we interpreted their opinions.

3. RESULT

We grouped the participants' views about the testing accommodations for disabled examinees under four themes based on our research questions and the items in our instrument. We present these themes in Figure 2 along with the sub-categories under each theme.

Figure 2. *Themes and categories related to participants' views.*



As seen in Figure 2, the first theme was related to the positive aspects of MSPC's test accommodations for disabled test takers. This theme consisted of the categories of application conditions, equality of opportunity in education, examination hall and building, and staff motivation, respectively, according to the frequencies of occurrence. Table 1 displays direct quotations from the participants' views for each of these categories.

Table 1. *Direct quotations from participants' views for the positive aspects theme.*

Category	Examples of participants' expressions
Administration conditions	• *Preparing a booklet according to the examinee's disability* (P1) • *Additional time is provided, which makes the examinee feel more comfortable* (P3, P4) • *Taking drug or special equipment to the hall with the examinee* (P4)
Equality of opportunity in education	• *Providing some privileges to disabled examinees who cannot take the exam on equal terms* (P2) • *Subject candidates to test in the most appropriate and equal conditions possible* (P6) • *I find the test accommodations of MSPC for disabled examinees positive in the context of equality of opportunity in education* (P7)
Examination hall and building	• *Allotments of single-person classes for examinees with disabilities* (P5) • *Recording it with a camera ensures the reliability of the examination for the test taker* (P3) • *Allowing the exam hall door to be closed when necessary (e.g. when noise occurs due to reading aloud)* (P9) • *In general, all of the disabled examinees take the test in the same building and a dedicated coordinator is sent to these buildings by MSPC* (P9)
Staff motivation	• *Considering that it is more difficult compared to other duties, higher wages are paid to staff serving in examination halls allocated for disabled test takers compared to the proctors taking office in the other examination halls* (P9) • *While being proctor in normal examination halls may be boring, reading the questions in the halls where visually impaired candidates take the exam makes the time pass faster* (P3)

While the participants found MSPC's test accommodations for disabled examinees positive in various aspects, they also expressed that existing accommodations should be advanced in some respects. We named the theme, which includes the participants' opinions on the respects that should be improved in the test accommodations for disabilities, as limited aspects. Under this theme, there were four categories labeled as staff selection, item structure, application

conditions, and examination hall and building. Views were expressed most in the category of staff selection, and the least in the category of examination hall and building (see Figure 2). Table 2 illustrates direct quotations from the participants' views for the categories under the theme of limited aspects.

Table 2. *Direct quotations from participants' views for the theme of limited aspects.*

Category	Examples of participants' expressions
Staff selection	• *Reading clarity and fluency may differ from one reader to another and these differences can lead to unfairness among visually impaired examinees* (P9) • *It is troublesome for the reader that his/her field does not coincide with the test field he/she reads. This situation is a disadvantage for also examinees. For example, an academician from the verbal field may have problems especially when reading math questions. In one examination, the other personnel in the hall was from the verbal field and he/she read a question about factorial subject in mathematics as "5 with an exclamation point next to it". Unfortunately, such situations can happen. In yet another exam, the staff started the paragraph question by reading the paragraph directly. When the examinee asked her "do you read the item stem first", she replied as "what do you refer with item stem?"* (P9) • *We cannot interfere with the sudden changes in the health status of the disabled examinees who take the test with special equipment. ……. In addition, we are not asked whether we have first aid knowledge in the staff operating system* (P12).
Item structure	• *Sometimes we understand from the operations that visually impaired examinee asks us to write, that he/she is capable of solving a mathematical problem in question. However, we see that he/she could not give the correct answer as he/she could not do the operations required by the question himself/herself using paper-pencil and had to complete it in his/her mind after a point. We cannot provide support to the examinee in calculating the results of mathematical operations in these processes. Hence calculator support can be given at these points* (P9) • *Not exempting examinees from some questions (especially for visually impaired candidates)* (P1) • *In verbal ability questions requiring creating a paragraph by ordering the sentences presented, we usually encounter the examinees' "Let's skip this question" discourse. Examinees avoid answering such questions* (P3) • *The test takers are not exempted from some items that cannot be followed by listening (For instance, an item like "When a meaningful paragraph is formed from the five sentences given, which is the fourth sentence from the beginning?)"* (P9)
Application conditions	• *Conditions such as traffic and passenger density on arrival and departure to the examination buildings force the disabled examinees. That's why, even if it is not possible for candidates to take the exam at their home, it should be possible to take the exam on different dates. If no facilities are available, special services should be available for these examinees. It is not right to force the examinees to come and go to the exam buildings by public transportation or in their own vehicles* (P12) • *It is better to conduct such exams by means of computers than with the staff who will be assigned* (P5)
Examination hall and building	• *Buildings and halls are being tried to be suitable for disabled candidates, but inspections are insufficient* (P12) • *Sometimes halls outside the ground floors are allocated for disabled candidates* (P1)

Another theme that emerged as a result of the content analysis of the participants' views was about the difficulties experienced by the staff in the examination halls where disabled examinees take the test. So, we labelled this theme as task difficulties. There are four categories under this theme. These categories are respectively "reading, staff selection, demand of privilege, and exam rules", according to the frequency of expression by the participants. Table 3 exhibits direct quotations from the participants' views for each of the listed categories.

Table 3. *Direct quotations from participants' views for the theme of difficulties faced by examiners.*

Category	Examples of participants' expressions
Reading	• *Since the test duration is long, we sometimes have a sore throat while reading the questions* (P4) • *Although I did not encounter much challenges, there were times when I had difficulty reading the paragraph questions to the examinee* (P1) • *It is a big problem to read the questions in the booklets in a way that examinees can understand because a common language structure may not be ensured while reading the formulas, abbreviations etc. in some questions* (P12)
Staff selection	• *As a result of the assignment of staff not related to the test content that the examinee is responsible for, I had to carry out the task alone (The other staff in the examination hall did not have the mathematical knowledge to read the questions on the math test)* (P11) • *Sometimes the superintendent of the examination building does not have information about the accommodations for disabled candidates* (P9)
Demand of privilege	• *Some examinees ask staff for help in answering the questions* (P3, P4) • *Sometimes the examinee requests for help* (P12)
Exam rules	• *We sometimes have problems because examinees do not have enough knowledge about the exam rules. For example, some examinees think that they can read the questions themselves, even though they request a reader. When we say that MSPC does not allow examinees who request reader assistance to see the booklet, they react* (P9) • *We try not to show the booklet as visually impaired candidates are not allowed to read the questions themselves. But still, we sometimes have concerns like: "Does the examinee see the booklet, does the camera record, will we be punished?"* (P10)

We entitled the last theme that arose as a result of the content analysis as suggestions. This theme includes participants' views on what can be done to reduce the difficulties faced by the hall staff during their duty and to improve the test accommodations for disabled examinees. The suggestions expressed by the participants were grouped under six categories: staff selection, application conditions, item structure, staff training, exam rules, and setting of examination hall and building. Table 4 presents direct quotations from the participants' views for the theme of suggestions.

Table 4. *Direct quotations from participants' views for suggestions theme.*

Category	Examples of participants' expressions
Staff selection	• *The staff in the examination halls (i.e., proctor, scribe and especially reader) should be selected based on their expertise field* (P5) • *In particular, the staff assigned as readers should be put through a trial application at the MSPC centers in the provinces before the exam, and how well/intelligible they can read should be tested. The staff to be assigned should be selected according to the results of this test* (P9) • *Readers need to be given a professional education* (P4) • *The assignments of staff to the examination halls must be made as one female and one male so that they can chaperone the disabled examinee who is allowed to go to the toilet during the test* (P12)
Application conditions	• *Examination systems should be expanded in electronic environment and examinees should be allowed to take the test without leaving home* (P12) • *In order to prevent the effects arising from reader differences, applications for the effectiveness of computer-assisted reading can be considered instead of live readers* (P9) • *Before the examination, recordings can be taken where the questions are read by professional individuals. Thus, the test can be applied in a computer environment and the examinee can progress by pressing simple arrow keys* (P10) • *Examinees with disabilities can be offered a shuttle service to and from the examination building. A health worker must be present in these shuttles* (P12)

Item structure	• *In tests such as Turkish, History, and Geography, paragraph questions should be kept a little shorter for disabled examinees… It is difficult to keep in mind by listening to the paragraph items that take up almost half of the page with their answer options. Such long items create a situation to the detriment of disabled candidates* (P6) • *Since mentally handicapped examinees don't understand most of the items and they usually answer randomly, the items administered to these examinees should be different from the items of other disabled examinees* (P3) • *Visually impaired candidates should be exempted not only from questions containing figures/graphics, but also from lengthy questions that cannot be answered by listening* (P9)
Training of staff	• *Staff assigned to these examinations should receive a training, albeit a short one, before the exam* (P9) • *Individuals who want to serve in the examinations of disabled examinees should have at least one training/seminar on the sensitivities of disabled person* (P8)
Exam rules	• *We cannot take phones to the exam hall. An emergency response button should be sent to each hall in order to notify the superintendent of the exam building for emergency health problems* (P12) • *Examination staff chaperon the candidates in the exam building. It will be better if the chaperonage services are provided by the candidate's relative* (P12)
Setting of examination hall and building	• *A standard desk-table may not be the solution. There should be special exam centers where physically disabled people can easily take tests* (P10) • *Many details such as washbasins, emergency exits, routing tapes on the floor, elevators, and ramps need to be examined meticulously in the examination buildings* (P12) • *Ground floors should be allocated for disabled examinees or elevators should be working* (P1) • *There should be an appropriate desk for the physically disabled examinees who can read the questions themselves and solve them with pen and paper* (P10)

4. DISCUSSION and CONCLUSION

The present study was designed to set out the views of the academician examiners about the testing accommodations of MSPC for disabled test takers. Academicians expressed various positive aspects such as the application conditions, equality of opportunity in education, examination hall/building, and staff motivation for the accommodations of MSPC. Preparing a booklet suitable for the disability of the examinee, provision of additional time to the examinee, exempting the examinee from certain questions according to her/his disability, offering the examinee the facility to take the test in a single person-hall depending on the his/her disability, and paying higher wages to the staff served in the halls allocated for the disabled are among the academicians' positive views related to these categories. Providing constant conditions for all examinees taking the tests is not enough to ensure fairness and to get valid measurements. In order to increase validity and talk about fairness in the real sense, it is necessary to accept that disabled examinees differ from other candidates due to their special conditions and to offer positive privileges to these examinees. From this point of view, testing accommodations are required because standard assessment formats and procedures can present obstacles to disabled students, which means they may not be able to display their abilities under normal assessment conditions (Douglas et al., 2015). Briefly, it is not enough that the rules of the game are equal. Fundamentally, the game must be fair (Şişman, 2014) and the playing field must be leveled for all players (Jarvis, 1996; Sireci, 2008). As a matter of fact, National Council on Measurement in Education (NCME) states establishing a fair and equitable assessment system as one of the basic principles of measurement and evaluation (https://www.ncme.org/home). The views expressed by the participants reflect that MSPC is trying to provide fairness in the examinations for all individuals with the accommodations it offers for disabled examinees.

As a result of the research, we detected that the academicians' views on the limited aspects of MSPC's testing accommodations for disabled examinees were collected in the staff selection, item structure, application conditions, and examination hall and building categories. It was

among the opinions expressed in the category of staff selection that the reader differences can cause unjustness among the visually impaired candidates and that the reader may be insufficient in reading some test items due to his/her field. These views are in line with the results obtained in the study of Şenel (2015) and Doğuş et al. (2020). Şenel (2015) analyzed the experiences of visually impaired students in university entrance exam and in this study, the participants stated that some readers had difficulties in reading especially mathematics questions due to their branches. Doğuş et al. (2020) investigated the opinions of individuals with visual impairment on the exam accommodations in high-stakes tests and reported that disabled test takers have problems in the exams due to the reading characteristics of the readers (such as diction, pronunciation, spelling, and intonation) and their lack of sufficient field knowledge. Similarly, in the study by Tavşancıl et al. (2012), visually impaired test takers who took the university entrance exam remarked reader related problems as one of the factors that cause difficulties for them in the examination.

In the item structure category, another category under the theme of limited aspects, the participants of our study emphasized that the examinees should have the opportunity to utilize a calculator in the questions that require four operations that cannot be done mentally. In addition, they drew attention to the fact that visually impaired candidates are not exempt from long questions that they cannot answer by listening. In parallel with this result, in the research conducted by Şenel (2015), visually impaired students stated that they experienced concentration problems in long questions (items with long paragraphs), and that it is debatable how the items they were exempted from were determined. Actually, MSPC (2018) exempts disabled test takers who request reader assistance in their examinations from the items containing tables, graphics, figures, and complex expressions. However, when the views of the participants are considered together with the results of the existing studies in the literature, it is understood that it is not sufficient to exempt the disabled candidates from the questions containing only visuals or complex expressions. Thus, we can allege that the items to which the test takers will be exempted should be determined as a result of a more detailed expert examination.

The third category under the theme of limited aspects was related to the application conditions of the exam. In this category, opinions were expressed that disabled examinees had difficulties in transportation to the exam building. Furthermore, it was stated that it would be better if the examinations for disabled individuals were computer-based instead of live readers/markers. This view regarding the tests for disabled examinees with the help of computers is supported by the study results of Çobanoğlu-Aktan et al. (2018). Çobanoglu-Aktan et al. (2018) sought the opinions of assessment and evaluation experts, and personnel specialized in visually impaired individuals on what can be done to improve the exams accommodations for disabled people. Experts stated that it would be more appropriate to conduct the tests in a computer environment and present the items to the examinees in the form of pre-recorded audio files. In the same vein, in Şenel's (2015) research, some of the visually impaired examinees stated that if they made a choice, they would prefer to take the test with computerized technologies instead of live readers.

The fourth and last category under the theme of limited aspects was related to the characteristics of the examination hall and building. The participants worded that efforts are shown to make the buildings suitable for the candidates with disabilities, but inspections are insufficient. Indeed, Tavşancıl et al. (2012) explored the problems faced by visually impaired students in the university entrance exam and found that some of the problems experienced were related to the hall in which the examination was held. Essentially, in the report published by MSPC (2018) on the subject, a framework has been drawn for disabled examinees to take the test in halls suitable for their special circumstances. However, the opinions expressed by the academicians

about the examination buildings signal that there are some problems in the practice of envisaged accommodations.

Another remarkable point about the limited aspects theme is the absence of a category related to the timing of the test, or put it another way, the research participants did not express any negative opinions regarding MSPC's accommodations of test timing. In the studies in the literature, it is stated that the most common practice among the test accommodations for the disabled examinees is the provision of extra time (Gregg & Nelson, 2015; Lovett, 2010). Therefore, we can say that MSPC effectively operates this accommodation, which is the most frequently fulfilled testing accommodation for disabled examinees in different countries.

The third theme that surfaced when we analyzed participants' opinions was the task difficulties. Participants stated that they sometimes had difficulties during their tasks due to such reasons as examinees' lack of knowledge about the exam rules and demanding privileges, the selection of readers who are not compatible with the test content, the lack of knowledge of some staff about the exam rules, and the wearying reading questions. When we probed these views, the following point draws our attention: Only the selection of the readers from these opinions is the responsibility of MSPC. Other opinions expressed are related to the staff/examinees not reading the exam rules well enough before the test and the examinees' manner during the test. To put it more clearly, a significant part of the difficulties experienced by exam staff during their task is pertinent to the other staff and examinees rather than the accommodations of MSPC.

When we look at the suggestions of the participants for the improvements of MSPC's test accommodations for disabled examinees, there appeared opinions such as more careful selection of the exam staff, providing training to disabled hall staff before their duty, using computer-assisted reading instead of employing live readers, determining the items to which the examinees will be exempted from a more detailed perusal, providing shuttle vehicle to the disabled examinees, and even switching to electronic tests where examinees can take tests at their home. These views generally overlap with the results obtained in the current studies in the literature. We can summarize this overlap as follows: In the study conducted by Çobanoğlu-Aktan et al. (2018), experts suggested that the tests for disabled examinees should be carried out on the computer environment. The suggestion of transferring the tests for disabled examinees to electronic environment was also expressed in the research by Tavşancıl et al. (2012) and Şenel (2015). Şenel (2015) also mentioned that the items to be exempted from the examinees should be determined more carefully based on expert opinions. Additionally, participants' views on the more careful selection of staff to be employed in halls for the disabled examinees and the provision of training to these personnel are in line with the results reported and recommendations made in the study of Doğuş et al. (2020).

To summarize, the academicians in the study group found the accommodations implemented by MSPC for disabled candidates positive in various aspects. Nevertheless, they expressed their opinions that the current accommodations are limited in some aspects, and therefore, the testing accommodations for disabled people should be developed by taking these limited aspects into account. It was stated that there is a need for precautions to reduce the limitations of existing accommodations, especially in terms of technology assistance, selection, and training of proctor/reader/scribe and setting of examination halls and buildings. The findings we have reached are analogous with such results obtained in previous studies on the subject. We anticipate that the conclusions we report will be beneficial for MSPC and the Ministry of National Education in their further accommodations to improve the examination practices for disabled individuals. Nonetheless, as the participants of this study were mostly academicians serving in the examination halls where visually impaired candidates take the test, the results obtained were able to provide limited information about what revisions should be made in the test accommodations for candidates in different disability groups. Thereby, we can recommend

carrying out similar studies with the people who serve in the examination halls where candidates from different disability groups take the test.

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The authors declare no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the authors. **Ethics Committee and Protocol No:** Dicle University Social and Humanities Sciences Ethics Committee, Approval letter dated 18.03.2020 and numbered 34061.

Authorship Contribution Statement

Mustafa Ilhan: Investigation, creating of the instrument, data collection and analysis, resources, visualization, and writing-original draft. **Melek Gulsah Sahin**: Methodology, resources, data analysis, and writing-original draft. **Bayram Cetin:** Investigation, creating of the instrument, supervision, writing the original draft.

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