Available online at: https://specedjournal.aspu.am/index.php/se

CHALLENGES EXPERIENCED BY LEARNERS WITH VISUAL IMPAIRMENT ON HIGH-STAKE ASSESSMENT

DOI: 10.24234/se.v6i1.306

AUTHORS' DATA

Setseetso Matobako, Ph.D. in Curriculum Studies, Curriculum Specialist,

National Curriculum Development Centre, P. O. Box 1126, Maseru 100, Lesotho

Contacts: setseetso@gmail.com

Maretsepile Molahloe (Doctoral student)

The University of the Free State, South Africa, Republic of South Africa

Contacts:matsepimolahloe@gmail.com

ABSTRACT

Recent studies show that there is a very low enrolment rate of learners with special educational needs (LSEN) in institutions of higher learning locally. This might be because most LSEN attain low achievement scores in the terminal examinations which make them not meet the admission requirements of such institutions. Consequently, the number of professionals with disabilities would then be very meagre. There might be a wide range of contributing factors that turn out to be realized at the terminal examinations stage even though the root causes could have been identified and dealt with at the earlier grades. The extreme manifestation of this challenge occurred when the 2017 cohort of learners with visual impairment in one regular school attained a 100% fail rate in Junior Certificate examinations. This definitely calls for investigating the reasons that led to this unfavourable outcome. The paper aims at presenting the facts from the perspective of learners due to their direct involvement in this issue. Data was generated from the interviews conducted with three visually impaired learners. Data were analysed using social justice education theories and capability framework. There are two main findings revealed in this study. Firstly, learners were not involved in deciding on the format of the question paper they preferred. Secondly, it was indicated that the terminal examination did not align with both instructional practice and formative assessment. This article recommends that learners should be involved in decision-making concerning their welfare. Apart from that, summative assessment should be aligned with instructional practice.

Keywords: inclusive education, assessment, visual impairment, limited opportunities for inclusion.

INTRODUCTION

The provision of education for learners with disabilities has been at the top of the agenda in international conventions and protocols which many countries approved (UNESCO, 1994; United Nations, 2006; Rieser, 2012). This issue also dominates debates in studies interested in inclusive education (Committee on the Rights of Persons with Disabilities, 2012; De Beco, 2014; Broderick and Quinlivan, 2017). Most arguments of recent studies seem to be centred around giving access to learners with disabilities in mainstream institutions. Mosia and Phasha (2018) reveal that there is a low enrolment rate of learners with disabilities in local institutions of higher learning. There could be a wide range of contributing factors to that. For example, the findings of a survey conducted by Porter and Lacey (2008: 60) uncovered that "the schools provided limited opportunities for inclusion." Their study established that the schools lacked the capacity to provide the support that could enable learners with disabilities to access the curriculum. Additionally, the findings of a study conducted by Gray (2009) revealed that there was a small number of visually impaired learners in higher-level examination classes in Northern Ireland. This according to Gray (op cit.), could be a result of some restrictions imposed on visually impaired learners for accessing certain curricular subjects due to health and safety reasons among other issues. One of the limitations identified in this study was its failure to take the views of learners into consideration.

Results of a recent study focusing on learners with visual impairment show that irrespective of learners' gender differences their learning achievement was generally satisfactory (Shakir, Shafiq & Khalid, 2021). This suggests that learners with visual impairment have the potential to perform well academically. Another study revealed that the verbal reasoning abilities of learners with visual impairment do differ (Heled, et al., 2022). Taking this into consideration could be helpful before developing any intervention strategies. This suggests that accommodations for visually impaired learners should be provided in accordance with individual needs. However, these studies did not address challenges linked to assessment that learners with visual impairment are confronted with in their academic journey. A study that dealt with this issue only focused on challenges experienced by learners with visual impairment regarding teaching and learning mathematics. Most of the challenges reported emanated from the method of instruction, the assessment used and the inadequate provision of instructional materials (Oyebanji & Idiong, 2021).

Hence this study seeks to find out how learners with visual impairment in one inclusive high school attained 100% fail rate in Junior Certificate (J.C.) examinations from their own perspective. The article commences with a literature review which particularly discusses possible factors that might affect learners with special education, especially those with visual impairment to access education. It then outlines the theoretical underpinnings of this study followed by a brief explanation of the methodological

approach. The paper subsequently presents results, after which the discussion of findings follows. It provides the concluding remarks and recommendations towards the end.

BARRIERS TO ACCESSING QUALITY EDUCATION FOR LEARNERS WITH VISUAL IMPAIRMENT

Oka and Nakamura (2005) argue that learners with special educational needs, especially those with visual impairment have been deprived of opportunities for full participation in regular classrooms. This coincides with Diaz, Hoag, Shasteen, Schade, and Larwin (2016) whose study seems to suggest that learners with visual impairment in inclusive classrooms feel neglected to some extent as compared to their sighted counterparts. Oka and Nakamura (2005) argue that a full inclusion setting has some challenges for visually impaired learners because it might not allow them to acquire specific skills required for their type of disability. They point out that the acquisition of such skills is likely to occur in a separate educational setting (op cit., 2005: 547). One of the challenges they brought forth is that of communication for visually impaired learners who they argue should be trained in Braille literacy.

One can challenge their argument by pointing out that it could be beneficial for visually impaired learners, able-bodied colleagues as well as teachers in an inclusive classroom to acquire such skills. This can improve social relations between peers in the classroom and can enable them to help each other when the need arises (Carter, Cushing, Clark, and Kennedy, 2005). This can also help to improve the quality of care given by teachers (Diaz et al., 2016). According to Diaz et al. (op cit.: 87) when learners with visual impairment "feel more cared for in a school, this could improve their grades". We are of the view that this can bridge the existing gap which has been identified in the literature reviewed by these researchers which indicates that the visually impaired learners have for a long time endured adverse circumstances such as academic and social isolation within the general classroom settings.

ALIGNING FORMATIVE AND SUMMATIVE ASSESSMENT FOR THE BENEFIT OF LSEN

Assessment is a very important tool that can be used to measure the level of acquisition of knowledge and skills. It serves the purpose of providing feedback to learners, educators and any other relevant stakeholders. At the classroom level, it provides ongoing information to a teacher and individual learners on the kind of progress the latter make in terms of their understanding of the taught concepts based on the curriculum prescriptions (Heppen, Faria, Thomsen, Sawyer, Townsend, Kutner, Stachel, Lewis & Casserly, 2010). Usually, it could be administered in different ways including but not limited to small-scale tasks, quizzes, assignments and tests. This type of assessment which informs instructional practices is called formative assessment. According to Happen et al. (2010: 7), feedback from formative

assessments can be used in specific contexts such as special education to provide "a basis for the use of regular and systematic assessment to inform instruction". It can be deduced that formative assessment can provide evidence that could be used for devising accommodations for learners with special educational needs, especially in inclusive settings. That could enhance their effective learning and ultimately help them realize improved academic achievement.

The other type of assessment is called summative assessment which usually entails sitting examinations upon completion of a grade or programme. Its main function is for deciding who should proceed to the next level or who should be awarded a certificate depending on their academic accomplishments. It can be argued that inclusive assessment practices should be guided by the individual learner's needs (Florian, Dee & Devecchi, 2008). This suggests that modifications in assessment should be made to meet the demands of individual learners. Effective planning and implementation of equitable instruction that meets the needs of a diversity of learners might require "[some] adjustments to instruction, assignments and assessments that differentiate for those learners who still need extra scaffolding and support" (Eva & Walker, 2010: 19-20). For example, question papers given to learners with disabilities should be made available in an accessible format. Another argument that can be advanced is that there should be some form of alignment between formative and summative assessment when it comes to necessary accommodations. This might be helpful for learners with specific types of disabilities such as visual impairment to perform to their full potential. The next section provides a more detailed discussion of the assessment-related accommodations for learners with visual impairment.

PROVISION OF ACCOMMODATIONS FOR LEARNERS WITH VISUAL IMPAIRMENT

Research has shown that the issue of providing accommodations for learners with the same kind of impairment in assessment might not be homogenous contrary to the expectations of many (Fuchs, Fuchs & Capizzi, 2006). One can argue that even though the collective provision of accommodations for learners with certain impairments could be considered to promote equality, this might result in disregarding a question of fairness. This is because individuals could have different preferences when it comes to accommodations needed. The example these researchers make is that when it comes to visual impairment some learners might prefer the provision of tests in Braille format while others might favour question papers printed in large font. This appears to be similar to the argument raised by Meda (2016: 50) that, "Support should be individualized because two partially sighted students' needs are hardly the same. Some may need braille while others may not."

However, one might argue that in the search for appropriate accommodations for individuals with a disability or educational needs, several issues should be taken into consideration. Fuchs, Fuchs and Capizzi (2006) argue that fairness in accommodations can serve to maintain the meaningfulness of

learners' performance scores in tests. According to them, “Valid accommodations help students with disabilities demonstrate their knowledge and produce scores that evaluate the same constructs that are intended with standardized measurement of nondisabled peers" (Fuchs, Fuchs & Capizzi, 2006: 4). Notwithstanding the benefits of provision of accommodations to learners with educational, they are not without challenges. These researchers identified the matter related to the choice of reasonable accommodations as the likelihood of compromising the validity of assessment outcomes. They are also of the view that "nonstandard administration of standardized tests" can negatively impact the validity of scores (Fuchs, Fuchs & Capizzi, 2006) attained by learners in an inclusive setting.

Arguably, some accommodations might as well give an unfair advantage to learners with disability over their able-bodied counterparts in terms of academic scores. These researchers further argue that accommodations that lead to inflating performance scores could be regarded as unfair because they would not be a true reflection of the competences which learners with disabilities might have. They also contend that the viable strategy to accommodate learners with educational needs could be that of easing standardization requirements. Cawthon et al., 2009 provided a number of accommodations that might require changes to the administration of the tests, which entail “extended time, changes to the test items, such as read aloud, or changes to the student’s response, such as the use of a scribe” (Cawthon et al., 2009: 1).

It appears that the agenda advanced by these researchers is that accommodations provided to learners with disabilities should be inherent to compensate for their specific disability types. They, however, seem not to consider time as one of the contributing factors which could obscure learners with other types of disabilities to demonstrate their knowledge and skills with the exception of those with a learning disability. They appear to take no notice of disabilities like visual impairment. According to Meda (2016: 50) some learners with a visual impairment might need additional time to write a test or examination. He further asserts that “Braille readers cannot skim read and may take up to three times as long as other students to read a text.” Fuchs, Fuchs and Capizzi (2006: 5) seem to focus on fairness and validity as arrive at a conclusion that it is pertinent to identify fair and valid testing accommodations based on “the nature and characteristics of disabilities that impact assessment of learners with disabilities”. They seem not to be explicit about the provision of accommodations based on individual needs. The view held in this current study is that reasonable accommodations should be provided depending on the individual’s needs.

THEORETICAL FRAMEWORK

The theoretical underpinning of this study is based on social justice education theories and capabilities framework developed by a political economist called Amartya Sen. According to Mthethwa-

Sommers (2014), social justice education theorists are mainly concerned with learning environments such as schools. Such environments, according to her, should be conducive to the provision of various traits of democracy including appreciation of coexistence in social diversity. This essentially serves to achieve social justice which she maintains is a manifestation of democracy. Bell (2007) as quoted in Mthethwa-Sommers (2014), is of the view that social justice aspires for maintaining the full participation of all the concerned groups in society on an equal basis. It also ensures equitable distribution of resources depending on the needs of those members who are involved. According to Mthethwa-Sommers, the convergence of social justice education theories is that they are mostly interested in finding out the extent to which regulatory frameworks follow tenets of democracy. This seems to suggest that the aim is to work towards transforming any oppressive systems or practices for achieving participation and utilization of human capacities to inclusively drive change. This according to Bell as quoted in the same paper, can help people develop requisite skills like critical thinking which could enable them to counteract manifestations of oppressive patterns and behaviours within institutions and communities.

Sen's (1979: 220) idea of capability framework had been developed by combining different equality models with the intention of achieving one which can "provide a sufficient basis for the equality aspect of morality". This idea has been used by scholars in educational research focussing on learners with disabilities (Terzi, 2014, 2007, 2005; Toson, Burrello & Knollman, 2013; Florian, Dee & Devecchi, 2008). The argument that Dalkilic and Vadeboncoeur (2016: 131) put forward is that this framework "allows for a dynamic assessment of educational practices". Their conception of this theory seems to suggest that reaching absolute inclusion or exclusion might be impracticable. Hence they are of the view that the capabilities of individuals should be expanded through regular evaluation of intervention measures used so that whenever necessary such measures might need some modifications. This theory is not immune to some form of criticism. De Beco (2017) argues that one of the major limitations of this theory is that it does not come clear about the kind of environment where it can be applied. The blame leveled against this theory seems to be unfair. This is because changing the environment might require heavy budget allocation, which might be a challenge in some schools, especially in developing countries. Therefore, capability theory can as well be useful in low-income countries.

Broderick (2018) also identified some gaps in the capability framework especially for guiding inclusion. She however appears to be aware of the importance of this theory, when she asserts that "this […] framework is nonetheless useful in guiding educational processes, policies and institutions towards a more holistic definition of equal opportunities". She also realized that there is an alignment between this framework and Article 24 of the United Nations Convention on the Rights of Persons with Disabilities (CRPD). She then argues that their joint application can bring positive outcomes in terms of understanding how individuals can be capacitated "towards ensuring [their] full and equal participation

in education for persons with disabilities" (Broderick, 2018: 37). In this paper the theories discussed above have been useful to establish why a selected group of learners

METHODOLOGICAL APPROACH

Cooper and White (2011) argue that it is important to carefully select the paradigm within which the study operates before deciding on the methodologies researchers intend to use. The most fitting research paradigm under which this particular study operates is interpretivism owing to the phenomenon under investigation and also taking into consideration the context in which it occurs (Cooper and White, 2011). This study is situated in inclusive education and follows a qualitative approach.

The research sample used here comprises three learners with visual impairment purposively selected from one regular high school in Lesotho. These participants have been selected from a larger group of learners who sat terminal examinations for Junior Certificate (J.C.) in 2017. Before conducting interviews with them in April 2018, the researchers sought permission from the district education office and school principal. The researchers also got the consent of participants and their parents considering the vulnerability of this group of learners. All the interviews were conducted within the school premises during working hours. There is no mention of participants' names throughout this article in order to conceal their identities.

PRESENTATION OF FINDINGS

It has been established that all visually impaired learners failed Form C and this study sought to investigate factors that might have contributed to that. Analysis of information gathered from the interviews conducted with three respondents has resulted in the emergence of four major assessment-related themes, which are: Lack of consultation; the challenge of reading a question paper presented in braille format; misalignment of instruction and assessment and ineffective accommodation.

Lack of consultation

The evidence suggests that there were no consultations regarding the format of question papers which these participants preferred. This emanates from the first participant's narrative on this issue which goes as follows:

We could have been asked what kind of question papers we would want to use, because we use two papers, sighted and brailed. Those who can see could use the sighted question paper while those who are blind could use the brailed papers. But that was not the case. To our surprise a couple of days preceding exams, we were informed that the personnel from the

Ministry of Education said that we were all going to use brailed question papers. We wonder why our teachers had agreed to that.

This is consistent with the view held by the second participant. When asked whether he was ever given an opportunity to choose a format of question paper in terms of large print or braille, the second participant said: "No, we were only told that time distribution differs when one is given a question paper in braille format as opposed to large print." The statement of the third participant coincides with those of his other colleagues. When asked how the decision of writing examinations using a question paper in braille format was arrived at, he said "shortly before sitting for exams, we were told that all learners with visual impairment will be given the brailed question papers." He explained the process of declaring one's condition of impairment and preference for a question paper format, this way, "We were given forms to fill in as partially sighted and blind learners. Our teacher filled in forms for all of us." This is in agreement with the first respondent's assertion that:

There is a form that should be filled in for providing information on the number of learners with visual impairment and their preferred type of question papers. But last year it was not completed. Unfortunately, we were all given the question papers in braille format in the final examination.

The evidence suggests that the participants were not involved in decision-making regarding the choice of the preferred question paper format. The statements of these respondents seem to shoulder all the blame to those who took decisions for them without any consultation.

Misalignment of instructional practices and summative assessment

Another issue that emerged from the data is that there had been some misalignment of instructional practice and summative assessment. The participants appear to have been filled with dismay by this as evidenced by the statements they make. The first participant states:

One of our teachers knew quite well that he always printed materials for us before class. He printed things like poems and notes for us. He was aware that out of five visually impaired in our class, three used sighted papers and two strictly used brailed papers. I was surprised as he knew very well that when we write tests we used large print papers, not brailed ones. It is his responsibility to transcribe question papers from other teachers into braille format or change them to large print for us. We expected him to know our preferences in terms of the format of question papers each one of us needed. We were given question papers that we were not used to when writing tests in the course of the year.

The third participant alluded to the same issue when asked about what might have contributed to his unsatisfactory overall performance in examinations, he said:

We were always using printed papers in large font in all our classroom activities. But when writing exams, we used brailed papers. We also encountered a challenge when writing subjects like commercial arithmetic, you would find that some signs looked strange in the question paper as the embosser produced things we couldn't understand.

The first participant was adamant that there were no other contributing factors that could be linked to his poor performance in examinations except the type of question papers that were at his disposal. His recollection about what transpired for other groups of learners who sat for terminal examination before, he stated:

Previously, learners were asked to decide on their preferred format of question papers well ahead of time. […] All the partially sighted members of the 2016 group opted for a large print. I consider it very important to use a format that enables you to access information written on the question paper easily. This can help for a better understanding of what the question requires you to do. It is a very challenging task to read a brailed paper with eyes already having problems, especially when written on both sides of a page.

When asked why he reads braille with eyes, he said: "I am not conversant with reading braille using fingers. As I am able to see, I think it's likely to make mistakes when trying to read with fingers." The extract seems to suggest that the second participant's preferred choice of question paper resembled what he had always been using during instructional practice. This emerged when he said, "I chose the sighted question paper because it is the one I had always been using in class. I am not comfortable with the brailed paper." The participant strongly believed that the provided format of question papers contributed immensely to his unsatisfactory performance in the examination. Answering a question inquired why didn't he opt for papers written in an accessible format, he said: "when we were writing commercial arithmetic, we were only told that a printed copy was only available for the invigilator. She appeared to be very busy during the exam and I waited for far too long to get help from her. Unfortunately, time was not on my side."

Ineffective accommodation

All three participants were aware that the choice of a question paper in a certain format had implications on the provision of time for writing such a paper. The first respondent explained this situation as follows: "The practice is that when using a question paper in braille format, you get 100% additional time. This means when a paper is allocated an hour, for those using a brailed question paper there would be two hours given during the exam." In response to a question that sought clarification on how the time is distributed for each of the two mentioned formats, the second respondent stated:

We were told that if we use braille the time given for writing a paper will be increased by 100%. I usually use the sighted papers but we have not been given a chance to decide on how we would like to write the exams. We only became aware of the format decided for us a few days before sitting final exams.

The third respondent also confirmed this issue of 100% additional time. In addressing a question that sought clarification why there is additional time when one gets brailled paper, he explained, “I don’t know, but it takes time to read a paper written in braille as opposed to large print.” This extract demonstrates that an increment of time did not always work in favour of learners, as reading a brailled paper could be more demanding. Accommodation of time increments is not unique to this study. Ofiesh and Hughes (2002) indicate that accommodation related to time increment for learners with visual impairment could range from 50% up to 100%.

Furthermore, he confirmed that all partially sighted learners received question papers in braille format. He also made an assertion that “all partially sighted learners did not manage to finish writing all the papers they sat for the exam." When asked why they did not manage to finish writing the papers they sat for in the examination, he said, "we were always provided with papers in large print, especially when writing monthly tests. So, we were not used to the brailed paper. That’s why we ran out of time.” The other issue which emerged from the evidence is that it was binding to write using Perkins brailler regardless of the question paper format one accessed. In his words, he said, "You always have to write with the Perkins brailler.”

DISCUSSION

The evidence demonstrates that learners were not involved in the decision-making on the format of question papers they had to use. Fuchs, Fuchs and Capizzi (2006) and Meda (2016) are in agreement that accommodations should be individualized as learners with the same type of visual impairment might have different preferences. It can be argued that it would be possible to know about their preferences if ever consultations were made. One can assume that those who were involved in making decisions might have thought they were acting in favour of the learners, as it has emerged that the use of question paper goes along with additional time in exams.

The evidence showed that 100% additional time paid no dividend for the visually impaired learners under investigation; as it has been alleged that they did not manage to finish writing their exams within the stipulated time. The findings of this study seem to refute the view held by some studies which seem to be in favour of extended time for learners with significant impairments in assessments. Lewandowski, Lovett and Rogers (2008) argue that extended time might allow learners with a disability to attempt as many questions as they possibly can, and that could be difficult to achieve under standard time

conditions. Clearly, the issue of context should be taken into consideration, as extended time could not remedy cases where learners might have difficulty accessing information from the given question papers. Based on this, Lovett (2010) raises questions about the appropriateness of extended-time accommodation. It can be argued that access to academic content should be prioritized (Spenceley & Wheeler 2016) instead of providing unnecessary accommodations which could not benefit learners.

In that vein, the results also suggest that partially sighted learners were given papers in braille format. This happened despite the fact that they used to be given papers in print format throughout the year. Especially, when provided with either prepared notes or when writing tests in the classroom. This shows that instructional practices and assessments had not been synchronized. On the contrary, Christensen, Carver, VanDeZande and Lazarus (2011) are of the view that the preferred choice of accommodations should be used consistently for both instructional practices and assessment.

CONCLUSION AND RECOMMENDATIONS

The findings of this study seem to be consistent with those of past research. It appears that the main reason that negatively affected the performance of visually impaired learners in high stake assessments might not be the nature of their vision, but the lack of appropriate accommodations that could help them realize their full potential (Meda, 2016). In circumstances that learners with visual impairment are not provided with question papers in an accessible format, expecting high-performance scores from them would be unfair. We contend that learners with impairment could be hindered to perform to their best capabilities when the aspect of diversity is not considered in the assessment. Consideration of diversity is the component of inclusive practice advocated for in inclusive schools. In this study, learners' needs were not catered for, they were all considered as a group of learners with visual impairment in need of braille to go through the assessment process. The capability framework regards this as an oppressive practice as those who are directly affected are not involved in decision-making. The recommendation of this article is that learners should be involved in decision-making concerning their welfare. More so, summative assessment should be aligned with instructional practice.

REFERENCES

1. Broderick, A. & Quinlivan, S. 2017. The right to education: Article 24 of the CRPD. In C. O' Mahony, & G. Quinn (Eds.), The UN Convention on the Rights of Persons with Disabilities: Comparative, regional and thematic perspectives (pp. 293-208) Dublin: Clarus Press.

2. Broderick, A. 2018. Equality of What? The Capability Approach and the Right to Education for Persons with Disabilities. Social Inclusion, 6(1): 29-39.

3. Carter, E.W., Cushing, L.S., Clark, N.M. & Kennedy, C.H. 2005. Effects of peer support interventions on students' access to the general curriculum and social interactions. Research and practice for persons with severe disabilities, 30(1): 15-25.

4. Cawthon, S.W., Ho, E., Patel, P.G., Potvin, D.C. & Trundt, K.M. 2009. Multiple constructs and effects of accommodations on accommodated test scores for students with disabilities. Practical Assessment, Research & Evaluation, 14(18): 2-9.

5. Christensen, L., Carver, W., VanDeZande, J. & Lazarus, S. 2011. Accommodations manual: how to select, administer, and evaluate the use of accommodations for instruction and assessment of students with disabilities (3rd ed.). Washington, DC: Assessing Special Education.

6. Committee on the Rights of Persons with Disabilities. 2016. General Comment 4, UN Doc. CRPD/C/GC/4.

7. Cooper, K. & White, R.E. 2011. Qualitative research in the post-modern era: contexts of qualitative research. London: Springer Science & Business Media.

8. Dalkilic, M. & Vadeboncoeur, J. A. 2016. Re-framing inclusive education through the capability approach: An elaboration of the model of relational inclusion. Global Education Review, 3(3): 122-137.

9. De Beco, G. 2014. The right to inclusive education according to Article 24 of the UN convention on the rights of persons with disabilities: background, requirements and (remaining) questions. Netherlands Quarterly of Human Rights, 32(3): 263-287.

10. Diaz, M., Hoag, L., Shasteen, B., Schade, B.P. & Larwin, K.H. 2016. Perspectives of the educational experiences of students with visual impairments. European Journal of Special Education Research, 1(2): 80-89.

11. Eva, A.L. & Walker, B. 2010. Leveling the playing field: preparing teachers for equitable instruction in diverse, inclusive classrooms. AILACTE Journal, 7(1): 15-32.

12. Florian, L., Dee, L. & Devecchi, C. 2008. How can the capability approach contribute to understanding provision for people with learning difficulties? Prospero, 14(1): 24-33.

13. Fuchs, L. S., Fuchs, D. & Capizzi, A. M. 2006. Identifying appropriate test accommodations for students with learning disabilities. Focus on Exceptional Children, 37(6): 1-8.

14. Gray, C. 2009. A qualitatively different experience: mainstreaming pupils with a visual impairment in Northern Ireland. European Journal of Special Needs Education, 24(2): 169-182.

15. Heled, E., Elul, N., Ptito, M. & Chebat, D.R. 2022. Deductive reasoning and working memory skills in individuals with blindness. Sensors, 22(5). Accessed: https://doi.org/10.3390/s22052062.

16. Heppen, J., Faria, A.M., Thomsen, K., Sawyer, K., Townsend, M., Kutner, M., Stachel, S., Lewis, S. & Casserly, M. 2010. Using Data to Improve Instruction in the Great City Schools: Key Dimensions of Practice. Urban Data Study. Council of the Great City Schools.

17. Lewandowski, L.J., Lovett, B.J. & Rogers, C.L. 2008. Extended time as a testing accommodation for students with reading disabilities: does a rising tide lift all ships? Journal of Psychoeducational Assessment, 26(4): 315-324.

18. Lovett, B.J., 2010. Extended time testing accommodations for students with disabilities: answers to five fundamental questions. Review of Educational Research, 80(4): 611-638.

19. Meda, L., 2016. Are we helping them to pass or setting them up for failure? Assessment-related experiences of partially sighted students. Journal of Communication, 7(1): 43-52.

20. Mthethwa-Sommers, S. (2014). What Is Social Justice Education? Narratives of Social Justice Educators. New York, USA: Springer.

21. Ofiesh, N.S. & Hughes, C.A. 2002. How much time?: A review of the literature on extended test time for postsecondary students with learning disabilities. Journal of Postsecondary Education and Disability, 16(1): 2-16.

22. Oka, N. & Nakamura, M. 2005. Criticisms of full inclusion in the United States by an organization for people who are blind and teachers of students with visual disabilities. The Japanese Journal of Special Education, 42(6): 547-558.

23. Oyebanji, M.S. & Idiong, U.S. 2021. Challenges of teaching mathematics to students with visual impairment. Malikussaleh Journal of Mathematics Learning, 4(1): 1-6.

24. Porter, J. & Lacey, P. 2008. Safeguarding the needs of children with a visual impairment in non-VI special schools. British Journal of Visual Impairment, 26(1): 50-62.

25. Rieser, R. 2012. Implementing inclusive education: a Commonwealth guide to implementing Article 24 of the UN Convention on the Rights of Persons with Disabilities. Commonwealth Secretariat.

26. Shakir, M.A., Shafiq, F. & Khalid, M.N., 2022. Assessment of learning achievement of visually impaired children at primary level. Pakistan Journal of Educational Research and Evaluation, 9(2): 44-52.

27. Spenceley, L.M. & Wheeler, S. 2016. The use of extended time by college students with disabilities. Journal of Postsecondary Education and Disability, 29(2): 141-150.

28. Terzi, L. (2005). Beyond the dilemma of difference: the capability approach to disability and special educational needs. Journal of Philosophy of Education, 39(3): 443-459.

29. Terzi, L. (2007). Capability and educational equality: the just distribution of resources to students with disabilities and special educational needs. Journal of Philosophy of Education, 41(4): 757-773.

30. Terzi, L. (2014). Reframing inclusive education: educational equality as capability equality. Cambridge Journal of Education, 44(4): 479-493.

31. Terzi, L. 2005. Beyond the dilemma of difference: the capability approach to disability and special educational needs. Journal of Philosophy of Education, 39(3): 443-459.

32. Toson, A. L., Burrello, L. C. & Knollman, G. 2013. Educational justice for all: the capability approach and inclusive education leadership. International Journal of Inclusive Education, 17(5): 490-506.

33. UNESCO. 1994. World conference on special needs education: Access and quality. Salamanca, Spain, 7-10 June 1994.

34. United Nations. 2006. Convention on the Rights of Persons with Disabilities and Optional Protocol. United Nations, New York.

Published by Khachatur Abovyan Armenian State Pedagogical University Publication

The article submitted and sent to review: 31.04.2022

Accepted for publication: 30.11.2022