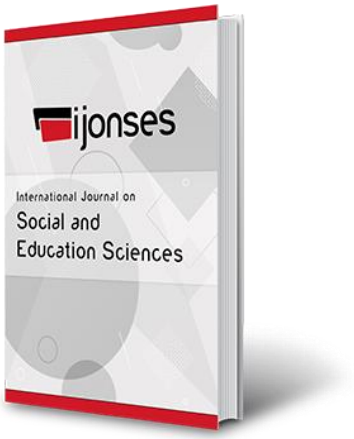

www.ijonses.net

Exploring Experiences of Visually Impaired Youths in Tertiary Education

Khadga Niraula
Nepal Open University, Nepal

To cite this article:

Niraula, K. (2024). Exploring experiences of visually impaired youths in tertiary education. *International Journal on Social and Education Sciences (IJonSES)*, *6*(2), 239-252. https://doi.org/10.46328/ijonses.619

International Journal on Social and Education Sciences
2024, Vol. 6, No. 2, 239-252 https://doi.org/10.46328/ijonses.619

Exploring Experiences of Visually Impaired Youths in Tertiary Education

Khadga Niraula

Article Info

Article History

Received:
17 August 2023
Accepted:
02 December 2023

Keywords

Experiences
Inclusive
Higher education
Visual impairment

Abstract

Several conventions worldwide have recognized impartial access to formal and high-quality education as a core human right for all youths, regardless of their disability. The study aims to explore the perception of visually impaired university students (VIs) in Nepal and determine their strengths and challenges to make recommendations for policy making and practice. Face-to-face and focus group interviews were conducted with 10 non-probability samplings: purposive and snowball VIs selected from various semi-urban settings. The interview content was transcribed, translated and a descriptive thematic analysis was done. Findings revealed that the majority of participants relied on their sighted peers in academics and other everyday activities, and that they received limited incentives from the government. They also faced significant challenges during their higher education including inaccessible supportive programs, unfavorable physical and instructional environments, inflexibility in coursework and examination, financial crises, inadequate learning resources and limited support. It is recommended that educators take part in disability-specific training programs, VIs have access to adequate academic resources and receive necessary assistance to improve instruction in inclusive settings.

Introduction

This study was performed in accordance with research ethics. Before executing an observation or an interview, consent was achieved from both the subjects and the institution's management. To assure participant's preparedness and contribution, the study's objective, methodology and data process was clarified. The voluntarily participated respondents were aware that they wouldn't be abused or forced into providing information before, during or after the research. Before involvement, the subjects were guaranteed that the study would keep their identity private. The researcher employed Merriam and Simpson's (1995) guidelines to authenticate the study.

Visual impairment has become a significant personal, social and economic issue all over the world (Bourne et al., 2021; Soto-Perez-de-Celis et al., 2018). 285 million individuals globally, including 39 million blind people have some form of vision impairment according to The World Health Organization (WHO) report in 2010 (Stevens et al., 2013). *The United Nations Educational, Scientific and Cultural Organization* (UNESCO) has suggested in the 1970s that developing countries pursue inclusive education as a cost-effective alternative for students with special academic requirements sparking interest in learning (Lamichhane, 2015).However, higher education institutions provide students who are visually impaired with food, housing, and learning resources, as well as

additional time for exams and partner help (Otyola et al., 2017). Comparing VIs to sighted students, there are significant similarities and differences regarding instructional methods, including as the accurate verbalization of formulas, the use of straightforward instruments and practice (Spindler & applications, 2006). In Nigerian higher institutions VIs suffered a number of educational problems, including insufficient facilities, a scarcity of resources for learning, a hostile atmosphere, and a lack of qualified personnel (Okoye & Adirika, 2019). This may imply that disability and poverty are tightly correlated as both the causes and consequences of one another (Braithwaite & Mont, 2009).Thus, the experiences made by young individuals with visual impairments in higher education have emerged as a significant subject that requires prompt examination to address the issue. Access to higher schooling for people with disabilities has been promoted as an important component of efforts to alleviate poverty and improve their professional and career engagement in society (Maroto et al., 2019).

Additionally, the underlying idea of inclusive education seems to be existing as normal tutoring systems, cultures, programs and practices and which should be modified to provide quality education respecting and appreciating students' diverse conditions (Ainscow et al., 2006). Despite numerous international agreements and achievements equal and accessible education for those with disabilities continues to be a goal, especially in developing nations like Nepal. Although having Nepal's constitution's requirements for gender equality and disability inclusion, there are still persisting gaps in the treatment of people with disabilities (Wilbur et al., 2021). Whether regular university teachers can meet the specific requirements of these students is one of the major problems with regard to access and continuity in complete and excellent learning environment for graduates with disabilities (Spinczyk et al., 2019). In this context, existing study investigates VIs' academic achievement in inclusive setting and attempts to address the targeted research questions. Thus, the study employed qualitative approach to gather grounded data from individual and focus group interviews, conducted on semi-urban's university campuses in Nepal.

Unfortunately, Nepal appears unable to effectively manage disability populations particularly, lacking indicators and standards for defining disability status and tracking students' participation with impairments (Wilbur et al., 2021).Despite their skills, physically challenged people do not have enough access to employment opportunities because of poor accommodations (Lamichhane, 2012).Furthermore, there are no sufficient statistics on visually impaired graduates having unfavorable college experience, which could have been caused by transportation challenges, institutional constraints or insufficient accommodations. However, according to several South Asian research, handicapped graduates appear to be less likely to attend higher education than non-disabled classmates which should be viewed with care (Maudslay, 2014). The problems associated with the issues could be with the instructional strategies educators apply in integrated mainstream settings, teachers' connections with students, or the limitations that youth face in inclusive learning environments. Hence, the study concentrates on VIs' experiences in higher education at traditional institutions, encountered unique challenges, impact on academics and possible ways to mitigate.

Hence, the purpose of this paper is to discuss current situations and explore challenges and opportunities to inclusive higher schooling from the perspective of visually impaired students in Nepal. The study aims to increase public awareness, inspire local authorities and government policymakers to create meaningful future participation by showcasing the engagement and experiences of VIs in university level in Nepal. Multiple ways to resolve the

concerns practiced previously have been documented in the literature and discussed in the subsequent sections.

The Research Questions

- How are the experiences of visually impaired students in higher education in Nepal?
- What factors adversely influence visually challenged students' enrolment in institutions of higher education?

Literature Review

Perspective on Learning Resources

The availability of resources in academic institutions can help improve the learning experience of students with disability (Bunbury, 2020; Chow, 2022; Joosten & Cusatis, 2020).However, a survey(Kwafoa, 2019) in African setting confirmed that the majority of academic library facilities weren't accessible to people with disabilities. Consequently, VIs were forced to ask their sighted colleagues for assistance to approach the building. So, they advised university examine the library's infrastructures to provide additional funding to make it reachable to individuals with disabilities, yet there seemed no significant result. In a similar context,Odame, Opoku, et al. (2021) shared that students in their coursework and other everyday activities were dependent on their sighted counterparts. During their higher education, they faced considerable obstacles like inaccessible programs, inhospitable physical conditions, financial difficulties, limited learning resources and unsupportive attitudes from tutors. However, a survey (Atanga et al., 2020) earlier identified that the main obstacles to implementing assistive technology were not being appropriately prepared by their institution and also the lack of financial support. Despite this, university educators were enthusiastic about using technology in college premises.

Further, concerning the issues, a study (Omede, 2015) in Nigeria stated that the demands of visually impaired students included computer applications, optical assistance, Braille writing materials, library resources, staff availability and adequate physical infrastructure. Also, Ackah-Jnr and Danso (2019)in Ghana underlined the necessity of good architectural designs to enable efficient natural and artificial lighting in classrooms including alteration of facilities, redesign of the physical setting of schools to encourage accessibility regardless of their impairment. In his report, Thapaliya (2016)earlier communicated that according to *Nepal's 1982 Disabled and Welfare Act, Regulation No. 5,* there should be no discrimination against the disabled based on their physical condition and they need to have equal access to public services, political participation, employment and additional amenities. However, in his study, Lamichhane (2012) confirmed that when organizing classes, administering examinations or transferring information through visuals, teachers and students were facing adverse concerns due to less existing institutional supporting structure, educational materials and resources.

Educational Constraints and Resolutions

A range of obstacles linked to written materials, videotapes, televised presentations, overhead transparencies and other visual elements may have hindered the academic performance of VIs in formal university courses. The

majority of the students (65%), according to Singal et al. (2021), skipped traditional anatomy classes like those that involved dissections of organism in-person lectures. The participants reported that there was a lack of confidence and complications with the topics that were being studied and encouraged for interaction during teaching. Nevertheless, Haegele et al. (2018) examined incidences of critical peer interactions from an intersectional viewpoint and also strangely discovered many of the participants were bullied largely by male peers. In a similar context,Sankhi and Sandnes (2020) reported that most youths used screen readers on donated cell phones and surprisingly, none of the participants had received official training in using digital tools. They lacked fundamental and crucial operational knowledge of devices which prevented them from academic participation. However, an analysis of the interview data from a study (Opoku et al., 2019) in west Africa indicated themes linked to hardship, poverty, limited access to education and underemployment. This revealed the lives of persons with disabilities were underdeveloped and constrained. Differently, in a study Seale et al. (2021) have recommended that students with disabilities themselves should take part in talks on the precisely designed solutions and needed to improve these procedures.

Though, an Australian study (Tahat et al., 2022) supporting technology adoption stated that YouTube videos and e-Learning have a favorable link with persons with impairment, and argued that film's quality, accessibility and text all contribute to the learning opportunities for people with impairments. In the local context, Wier and Price (2019) generated the idea that students' drive to succeed in school arises from both an internal source and from their parents' or teachers' support and inspiration. They also advocated for increased funding for education for people with disabilities to increase their participation in inclusive platforms and employment. Thus, higher education now experiences a notable increase in the number of VIs (Newman et al., 2021), particularly in the context of a developing nations like Nepal and the challenges associated seem to be remarkably addressed. Current study seeks to identify the real experiences of the VIs in university in the developing regions like Nepal.

Method

Study Participants

The qualitative design was employed to acquire a thorough understanding of higher education VIs in Nepal. To recruit research participants, two non-probabilistic sampling approaches were used: purposive and snowball. Purposive sampling was taken since subjects with VIs were chosen for the study's objective, and participants in the study also nominated other subjects suitable to the target population. Ten participants including two females (bachelors first to master's level) with VIs were recruited from three diverse campuses in the eastern part of Nepal with university experience.

Data Collection and Procedure

The information was gathered over six months using a semi-structured interview guide, designed after reviewing the various literatures (Kallio et al., 2016; McIntosh & Morse, 2015; Rabionet, 2011). The main topics covered were the VIs' experiences inside and outside university, teaching and learning strategies, additional support and interactions with students in depth. The interview guide's open-ended questions allowed the participants to freely

disclose experienced information without definite order. During the data collection, few participants were contacted personally, while the others were reached via phone and online applications. They were informed about the research's objective and asked if they would be willing to participate. Following that, face-to-face and focused interviews with consented participants were scheduled. The study members were communicated for their voluntary service and were mentioned that they would not be compensated.

Data Analysis

Under the permission of interview participations, the transcribed information gathered were grouped and thematically examined. The analysis of the transcribed data was guided by initial concepts, evolving understandings, preliminary research questions and related literature (Ridder, 2014). After becoming acquainted with the contents of the interview transcription, the audio recordings of the interviews were translated into Nepali and thematically organized following the idea of Braun and Clarke (2012). The coding system was created using a grounded theory technique byStrauss and Corbin (1994) and throughout the investigation, data was examined and studied several times to identify the theme based onBraun and Clarke (2006). Finally, Interpretative Phenomenological Analysis (IPA) provided a lens through which to critically assess the qualitative data, allowing for the validation of results and implications.

Results

The findings include despite few favorable conditions, how VIs perceive the challenges they face in an inclusive academic environment, as well as the unfriendly physical environment and pedagogical constraints of the institutions.

Learning Limitations: Teachers' Instructional Practice and Resource Endowments

Visually impaired university students face a range of difficulties when learning from teachers in traditional classrooms. Further, the respondents mentioned ample of experiences they had when studying and attending courses. However, some of the participants were acknowledging the cooperative traits of educators inside and outside institutional settings. For example, one of the female participants Goma said:

> Teachers behave normally; they are close to me outside and inside College and behave similar to sighted friends that delights me. If they acted us differently, we would have the impression that we were not like regular friends.

Her countenance indicates that she is pleased with how the tutors have handled her. It appears that students with disabilities desire to be treated equally to boost their self-esteem. Despite being appreciative of tutors' behavior participants in the focus group discussion shared their dissatisfaction with the classroom instruction strategies and they stated:

> Most of the teachers speak little faster which makes us absorb the information tough…Moreover, they employ lecture methods and write much on the board during the delivery of contents…Sighted friends

> can read the board or PowerPoint presentation that promotes their better comprehension. Listening to lectures and taking notes in Braille is a source of irritation for me. Because we are unable to write quickly…It would be ideal for us to self-study if lecturers could upload their lecture content on the internet.

With the similar understanding, one of the participants, Prabin, shared classroom experience and further said:

> We wanted revision but some teachers are bothered by having to repeat themselves. We only have one mechanism for capturing thoughts, namely listening which limits exposure upon us. Some courses, such as math and physics require visual exercises, while linguistic areas, journalism and law do not require many practical activities, and are simple to comprehend.

The expression reflects that the challenges students face differ as the nature of the subject areas and also the options for them to pursue education have been limited. Particularly practical-based subjects bring challenges for them in learning. However, the problem shared by Binod was different from the others, who, during the conversation stated:

> Teachers encourage us to perform self-study at home, which causes problems because we do not have Braille books. Moreover, the use of power presentations causes us missing content in the class. Though teachers explain in detail, due to writing problems we miss the note to take and it becomes tough to follow tutors sometimes.

Some of the participants expressed their dissatisfaction with the lesson and their comments clearly demonstrated adverse scenarios that the inclusive learning environment in university courses geared. Concerning the idea one of the participants, Hritesh said:

> When professors are busy teaching us, the noise friends make makes it harder to pay attention. When this happens, we need friends' assistance to note down the information. Without further help, it might be difficult to grasp the information, and there won't be much to repeat in subsequent studies.

According to the comment, classroom engagement has become a problem for VIs. If teachers in colleges, desire to include and share VIs in inclusive environments it appears that they lack the knowledge of management. It is also obvious that constraints on classroom learning have harmed materials presentation and conduction. They are needed to alert each lecturer about their needs for the extra time and assistants adequately.

Similar to the aforementioned concerns, it was revealed that VIs were experiencing unpleasant outcomes due to a lack of innovative and up-to-date learning resources available at campus library, despite their favorable expectations to support academic environment and encourage intellectual achievements. For example, Sima commented:

> The given textbooks in the library, in traditional script are partially useful for me and require friend to read for me. They do, however, serve as the greatest alternative materials… I've heard that libraries can be made visually challenged-friendly. They might be digitalized where we could discover printed texts simpler if they were available in print form to copy on a laptop and listen to them. However, audio books

> in large volumes cannot be as user-friendly as others meant to be simply handled, where we may scan, scroll and locate things important to us, saving our time.

With similar experiences next participant Hrittesh stated:

> We receive the books from the library but they are out of our reach until friends help us. Since not all colleges have electronic libraries and VIs-friendly resources, we are unable to use them as reference materials either. However, some lecturers and friends can assist us by providing the study materials.

Shom, another participant, suffered a disabled unfriendly library at his campus and complained:

> Many times I have missed the way to reach the correct building. They are not appropriately built. In the library, due to the lack of e-books, normal books are hard to read as references. Moreover, locating textbooks becomes additional problem because of the lack of digital and advanced libraries. Our studies would be more productive if there were the provision of digital library equipped with audio tools and a digital learning environment.

Importantly, it appears that online resource materials and library book search services are still inaccessible to VIs in higher education in the existing context. Because of the limited access to information, VIs have had adverse experiences in university libraries and around and they showed willingness to have innovative and more accessible resources in the future.

Physical Setting and Companionship

University VIs have had to deal with terrible things because of the environment and unfavorable infrastructure. However, some of the students valued their friends' support during their academic and practical college involvement, as well as the campus's current physical surroundings. Himal sharing his college experiences said:

> Walking around college has become smoother because of the sidebar. We couldn't have guessed the path to take if it hadn't been there. However, due to the dispersed nature of the classes, we must rely on the assistance of friends sometimes. We need to change classrooms for each subject, and owing to roadway fluctuations, we have challenges. Additionally, we are unable to enroll in some college events as sighted friends, which gave me some unpleasant experiences.

This communicated ideas displays that due to scattered classrooms over several buildings in the university, they had to leave one class and go to another building to access lessons. It might be difficult for the VIs to reach the following classroom in time. According to them, moving classes is a challenge, yet it occurs often in institutions. Though one of the female participants shared that despite having impairment, her academic and musical performances were satisfactory. However, concerning a sensitive issue another female participant, Sima said:

> The change in routine presents issues since we are unable to follow the notice board. We require assistance in filling out forms for administration, offices and canteen access…The use of restrooms, unfortunately, for females is unsanitary and its building model presents an issue.

Above comment reflects that females are facing particularly unpleasant experiences during their college hours. Apart from sidewalk barriers, unfriendly classrooms, particularly lecture tables and classroom placement were reported to have caused substantial challenges for students. In addition, VIs expressed their dissatisfaction with the locations of infrastructure, road's poor construction and deterioration, particularly during the rainy seasons. Also, participants highlighted the disorganized college furniture and its unplanned installation contributing unpleasant classroom experiences. For example, Dhiraj said:

> Furniture positioned in an unfriendly location occasionally creates problems, particularly when they are attached. Once I had fallen and my friend helped to balance me…Many times we communicated the issues to the authority, however, it was not addressed.

According to the interviewees' remark, VIs face physical barriers on their university campus including pathways and classroom access. The unsupportive physical environment created problems inside and outside the classroom. With his dissatisfaction, he claimed that despite reporting the issue to the authority, it was not responded promptly. It can be said, to assist and enhance the disabled in higher education, the physical and infrastructural conditions need to be addressed and upgraded. According to the comments of VIs, the university's physical environment has become unfriendly, and lives remained influenced while on campus. Further, the interviews indicated a disappointed tone, lacking the capacity to persuade their faculties or institutions of favorable change. Some of the participants had different experiences associated with a sighted friend and shared collaborative experiences they gained. For example, Joshi said:

> We do several combined studies. I listen to my friends reading the texts for me. That has improved my understanding of the course. During test time, I use an assistant writer after my teacher, with better and clear handwriting and who is speedier. Fortunately, I have had the assistance of an honest writer up to this point. I've heard, some writers respond the opposite, which we don't know about, and they deceive us.

His statement not only reflects his gratitude for the assistance but also some terrible experiences in his exam where the writer could have deceived him in writing. Although the data obtained indicated that VIs had physical barriers to overcome, however, their interactive friendship proved to be beneficial in reducing stress.

Discussion

This study looks at university VIs' experiences in Nepal. The examination explored that participants encountered several issues, including inaccessible academic programs, insufficient governmental funding, the lack of learning resources, unfavorable physical environments, and excessive dependence on peers. The results suggest that institutions in Nepal needs to step up efforts to successfully facilitate the participation of VIs who want to pursue further studies and guarantee strong employability.

The study indicates that VIs were eager to have the same academic standing as sighted classmates, and the majority of them appeared pleased with tutors' behaviors within and outside university premises. However, an early study by Singal et al. (2021)confirmed the current survey that students appeared dissatisfied with the approaches of

instructors inclusively employed in classroom to disseminate subject. In line with the finding of Kwafoa (2019),participants in the current study had adverse experiences, so they encouraged the college library to provide Braille resources and audio-friendly learning tools to promote interactive learning for VIs. Most participants, however, seemed frustrated by the limitations of knowledge with conventional approach to instruction and are eager to adopt innovative style parallel to the finding of Australian study (Tahat et al., 2022).Their research supports technology and suggests that e-Learning and YouTube videos can have a beneficial impact with people with disabilities. Further, they needed adequate instructional exercises, assessments and accessible authentic learning resources for systematic scholarship.

However, Seale et al. (2021) argued in their study that students with impairments should be involved in conversations about the precise design solutions needed to enhance these procedures. Importantly, VIs in current research indicated greater enthusiasm for linguistics and literacy related courses to have than those requiring graphic displays for teaching and learning, which verifies the literature of Lamichhane (2016). Additionally, most students experienced complications accomplishing the projects assigned by instructors owing to the nature of courses and lack of resources. However, most participants in the discussion favored assignments that required online support being accessible and quicker to search and accomplish the project. Other complained inclusive programs being disruptive and where sighted peers were reported to have been less attentive to the tutors' explanation.

VIs encountered range of additional issues throughout the learning process, such as concerns with reading, writing, inability to comprehend Braille, delayed dictation, board writing visibility issues, and occasional inadequate timeframe allocated for examinations. These problems contrast with the results of Wong and Cohen (2011),who contended that assistive technology topic competence among Singapore teachers was insufficient, resulting in inconsistencies and shortcomings throughout training. Further issues persist like less specialized teachers as resources to create unique learning environment to deliver specialized education, blindness-specific skills, using readers' services, auditory perceptual training, orientation to concerned and mobility for resources. However, Odame et al's research (2021) in African setting established that graduates with visual impairments benefited from their university training in terms of developing work-related competencies including time management, interpersonal and collaborative skills. Also, inclusiveness has been the program to enable learners, with or without disabilities to engage and work in mainstream settings to enhance better learning. However, a previous survey (Ravenscroft et al., 2019) in Turkey concluded that there is a need for greater post-qualification training to enable teachers to use various assistive ways to integrate VIs and increase scholarship. To outfit learning needs they advised a friendly, accessible and well-equipped library to promote autonomous learning culture.

Similar to the ideas of Ackah-Jnr and Danso (2019), participants in the study confronted incredibly severe problems due to the institution's structure and layout like unexpected administrative constructions, inaccessible notice boards, jumbled and connected furniture and fewer services for females. These findings are compatible with the observation of Lamichhane (2016) in the similar context earlier. Surprisingly, despite their appeal and demand for rectification, the administration seemed unnoticed and was indifference to the VIs' issues. Students, however, received peers' assistance during study hours, writing exams for them which strengthens the early

research of Odame, Opoku, et al. (2021). In their research, they discovered that students relied on their sighted classmates for support with everyday tasks and assignments. Likewise, supporting the ideas of Niraula (2023) the participants in existing research appeared getting benefited from technology who utilized currently available cell phone applications, accessed YouTube and online interactive learning resources as educational tools and demonstrated technological awareness. The research aims to explore the perceptions of VIs in higher education in Nepal.

Limitations and Directions for Future Research

The study employed a limited sample of qualitative research with VIs from three locations, whose viewpoints may not accurately represent the students with visual impairment. Furthermore, the study ignored the perspectives of stakeholders, instructors and administrators. As a result, further research is required to fully appreciate the academic system currently being performed. Despite these limitations, it has been expected; the data presented will add to the extensive investigation of challenges VIs experience in higher education in developing region like Nepal.

Conclusion

The study investigated the experiences of visually impaired higher education students in Nepal. The findings reported that VIs faced a range of experiences. Despite being gratitude for the peers' assistance, some adverse situations like inaccessible academic programs, insufficient educational resources, inaccessible physical environments and an over-dependence on peers were found. The themes created for distinct perspectives to identify VIs' insights reported having little involvement in physical activities in an inclusive environment. Throughout the lessons and while using the learning resource, the students expressed some critical thoughts about their physical condition, fellow students and educators. Hence, higher institutions in Nepal need to do more to successfully enable the inclusion of students with VIs, aspiring to pursue tertiary education. Additionally, university campuses need to guarantee that students are in pleasant learning spaces resolving adverse conditions and establishing an optimized academic environment. To address multiple hurdles, governments, non-governmental organizations and private donors need collaboration to devise solutions and meet their academic expectations. Academic institutions and relevant authorities can endeavor to prevent disability-based discrimination in college graduates by enforcing limits or providing necessary measures to improve student's educational experiences.

Acknowledgments

I would like to thank everyone for taking part in the survey and focus group discussions, especially the students. I also want to express my gratitude to the university administration for permitting me to conduct the survey and interviews. Pratima Bohora assisted me in drafting my paper, so I'd also like to thank her. Khadga Angdembe deserves a special mention for the recommendations he provided which facilitated writing the manuscript easier for me. Last but not least, I wish to thank my university colleagues for their valuable comments on my work.

References

Ackah-Jnr, F. R., & Danso, J. B. (2019). Examining the physical environment of Ghanaian inclusive schools: how accessible, suitable and appropriate is such environment for inclusive education? *International journal of inclusive education*, *23*(2), 188-208. https://doi.org/https://doi.org/10.1080/13603116.2018.1427808

Ainscow, M., Booth, T., & Dyson, A. (2006). *Improving schools, developing inclusion*. Routledge. https://doi.org/https://doi.org/10.4324/9780203967157

Atanga, C., Jones, B. A., Krueger, L. E., & Lu, S. (2020). Teachers of students with learning disabilities: Assistive technology knowledge, perceptions, interests, and barriers. *Journal of Special Education Technology*, *35*(4), 236-248. https://doi.org/https://doi.org/10.1177%2F0162643419864858

Bourne, R., Steinmetz, J. D., Flaxman, S., Briant, P. S., Taylor, H. R., Resnikoff, S., . . . Afshin, A. (2021). Trends in prevalence of blindness and distance and near vision impairment over 30 years: an analysis for the Global Burden of Disease Study. *The Lancet global health*, *9*(2), e130-e143. https://doi.org/https://doi.org/10.1016/S2214-109X(20)30425-3

Braithwaite, J., & Mont, D. (2009). Disability and poverty: a survey of World Bank poverty assessments and implications. *Alter*, *3*(3), 219-232. https://doi.org/https://doi.org/10.1016/j.alter.2008.10.002

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. https://www.tandfonline.com/doi/abs/10.1191/1478088706QP063OA

Braun, V., & Clarke, V. (2012). *Thematic analysis.* American Psychological Association. https://psycnet.apa.org/record/2011-23864-004

Bunbury, S. (2020). Disability in higher education–do reasonable adjustments contribute to an inclusive curriculum? *International journal of inclusive education*, *24*(9), 964-979. https://doi.org/https://doi.org/10.1080/13603116.2018.1503347

Chow, J. C. (2022). Collaboration to support language and learning outcomes for students with disabilities. *Intervention in School and Clinic*, 10534512221081263. https://doi.org/https://doi.org/10.1177%2F10534512221081263

Haegele, J. A., Yessick, A., & Zhu, X. (2018). Females with visual impairments in physical education: Exploring the intersection between disability and gender identities. *Research quarterly for exercise and sport*, *89*(3), 298-308. https://doi.org/https://doi.org/10.1080/02701367.2018.1484067

Joosten, T., & Cusatis, R. (2020). Online learning readiness. *American Journal of Distance Education*, *34*(3), 180-193. https://doi.org/https://doi.org/10.1080/08923647.2020.1726167

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, *72*(12), 2954-2965. https://doi.org/https://doi.org/10.1111/jan.13031

Kwafoa, P. (2019). VISUALLY IMPAIRED ACCESS TO LIBRARY SERVICES: THE ROLE OF LIBRARY INFRASTRUCTURE. *Library Philosophy and Practice*, NA-NA. https://core.ac.uk/download/pdf/286730413.pdf

Lamichhane, K. (2012). Employment situation and life changes for people with disabilities: Evidence from Nepal. *Disability & Society*, *27*(4), 471-485. https://doi.org/https://doi.org/10.1080/09687599.2012.659462

Lamichhane, K. (2015). Social inclusion of people with disabilities: a case from Nepal's decade-long civil war.

Scandinavian Journal of Disability Research, *17*(4), 287-299. https://doi.org/https://doi.org/10.1080/15017419.2013.861866

Lamichhane, K. (2016). Individuals with visual impairments teaching in Nepal's mainstream schools: a model for inclusion. *International journal of inclusive education*, *20*(1), 16-31. https://doi.org/https://doi.org/10.1080/13603116.2015.1073374

Maroto, M., Pettinicchio, D., & Patterson, A. C. (2019). Hierarchies of categorical disadvantage: economic insecurity at the intersection of disability, gender, and race. *Gender & Society*, *33*(1), 64-93. https://doi.org/https://doi.org/10.1177%2F0891243218794648

Maudslay, L. (2014). Inclusive education in Nepal: Assumptions and reality. *Childhood*, *21*(3), 418-424. https://doi.org/https://doi.org/10.1177%2F0907568213514778

McIntosh, M. J., & Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global qualitative nursing research*, *2*, 2333393615597674. https://doi.org/https://doi.org/10.1177%2F2333393615597674

Merriam, S. B., & Simpson, E. L. (1995). *A guide to research for educators and trainers of adults*. ERIC.

Newman, L. A., Madaus, J. W., Lalor, A. R., & Javitz, H. S. (2021). Effect of accessing supports on higher education persistence of students with disabilities. *Journal of Diversity in Higher Education, 14*(3), 353. https://doi.org/https://psycnet.apa.org/doi/10.1037/dhe0000170

Niraula, K. B. B., Pratima (2023). College students' utilization of social networking sites. *International Journal of Technology in Education and Science*, *7*(3), 274-289. https://doi.org/https://doi.org/10.46328/ijtes.472

Odame, L., Opoku, M. P., Nketsia, W., & Nanor, B. (2021). University experiences of graduates with visual impairments in Ghana. *International Journal of Disability, Development and Education*, *68*(3), 332-346. https://doi.org/https://doi.org/10.1080/1034912X.2019.1681375

Odame, L., Osei-Hwedie, B., Nketsia, W., Opoku, M. P., & Nanor Arthur, B. (2021). University preparation and the work capabilities of visually impaired graduates in Ghana: a tracer study. *International journal of inclusive education*, *25*(11), 1287-1304. https://doi.org/https://doi.org/10.1080/13603116.2019.1609102

Okoye, F. O., & Adirika, B. N. (2019). The challenges of implementing inclusive education for visually impaired undergraduates in Nigerian tertiary institutions. *European journal of education studies*. https://oapub.org/edu/index.php/ejes/article/view/2435

Omede, A. A. (2015). The Challenges of Educating the Visually Impaired and Quality Assurance in Tertiary Institutions of Learning in Nigeria. *International journal of educational administration and policy studies*, *7*(7), 129-133. https://eric.ed.gov/?id=EJ1077784

Opoku, M. P., Swabey, K., Pullen, D., & Dowden, T. (2019). Poverty alleviation among persons with disabilities via United Nations' sustainable development goals in Ghana: Voices of stakeholders with disabilities. *Sustainable Development*, *27*(1), 175-182. https://doi.org/https://doi.org/10.1002/sd.1899

Otyola, W. R., Kibanja, G. M., & Mugagga, A. M. J. M. J. o. H. E. (2017). Challenges faced by visually impaired students at Makerere and Kyambogo Universities. *9*(1), 75-86. https://doi.org/https://doi.org/10.4314/majohe.v9i1.6

Rabionet, S. E. (2011). How I learned to design and conduct semi-structured interviews: an ongoing and continuous journey. *Qualitative Report*, *16*(2), 563-566. https://eric.ed.gov/?id=EJ926305

Ravenscroft, J., Davis, J., Bilgin, M., & Wazni, K. (2019). Factors that influence elementary school teachers'

attitudes towards inclusion of visually impaired children in Turkey. *Disability & Society*, *34*(4), 629-656. https://doi.org/https://doi.org/10.1080/09687599.2018.1561355

Ridder, H.-G. (2014). *Book Review: Qualitative data analysis. A methods sourcebook* (Vol. 28). Sage publications Sage UK: London, England. https://doi.org/https://doi.org/10.1177%2F239700221402800402

Sankhi, P., & Sandnes, F. E. (2020). A glimpse into smartphone screen reader use among blind teenagers in rural Nepal. *Disability and Rehabilitation: Assistive Technology*, 1-7. https://doi.org/https://doi.org/10.1080/17483107.2020.1818298

Seale, J., Colwell, C., Coughlan, T., Heiman, T., Kaspi-Tsahor, D., & Olenik-Shemesh, D. (2021). 'Dreaming in colour': disabled higher education students' perspectives on improving design practices that would enable them to benefit from their use of technologies. *Education and Information Technologies*, *26*(2), 1687-1719. https://doi.org/https://doi.org/10.1007/s10639-020-10329-7

Singal, A., Bansal, A., Chaudhary, P., Singh, H., & Patra, A. (2021). Anatomy education of medical and dental students during COVID-19 pandemic: a reality check. *Surgical and Radiologic Anatomy*, *43*(4), 515-521. https://doi.org/https://doi.org/10.1007/s00276-020-02615-3

Soto-Perez-de-Celis, E., Sun, C. L., Tew, W. P., Mohile, S. G., Gajra, A., Klepin, H. D., . . . Lichtman, S. M. (2018). Association between patient-reported hearing and visual impairments and functional, psychological, and cognitive status among older adults with cancer. *Cancer*, *124*(15), 3249-3256. https://doi.org/https://doi.org/10.1002/cncr.31540

Spinczyk, D., Maćkowski, M., Kempa, W., & Rojewska, K. (2019). Factors influencing the process of learning mathematics among visually impaired and blind people. *Computers in biology and medicine*, *104*, 1-9. https://doi.org/https://doi.org/10.1016/j.compbiomed.2018.10.025

Spindler, R. J. T. M., & applications, i. (2006). Teaching mathematics to a student who is blind. *25*(3), 120-126. https://doi.org/https://doi.org/10.1093/teamat/hri028

Stevens, G. A., White, R. A., Flaxman, S. R., Price, H., Jonas, J. B., Keeffe, J., . . . Resnikoff, S. (2013). Global prevalence of vision impairment and blindness: magnitude and temporal trends, 1990–2010. *Ophthalmology*, *120*(12), 2377-2384. https://doi.org/https://doi.org/10.1016/j.ophtha.2013.05.025

Strauss, A., & Corbin, J. (1994). Grounded theory methodology: An overview. https://psycnet.apa.org/record/1994-98625-016

Tahat, K. M., Al-Sarayrah, W., Salloum, S. A., Habes, M., & Ali, S. (2022). The influence of YouTube videos on the learning experience of disabled people during the COVID-19 outbreak. In *Advances in Data Science and Intelligent Data Communication Technologies for COVID-19* (pp. 239-252). Springer. https://doi.org/https://doi.org/10.1007/978-3-030-77302-1_13

Thapaliya, M. P. (2016). A report on disability in Nepal. *Australian Himalayan Foundation: Sydney, Australia*. https://doi.org/https://www.australianhimalayanfoundation.org.au/wp-content/uploads/2017/08/2016_Nepal_Disability_Report.pdf

Wier, S. E., & Price, M. F. (2019). Identifying Paths to Successful Higher Education for Girls in the Solukhumbu District, Nepal. *Mountain Research and Development*, *39*(3). https://doi.org/10.1659/MRD-JOURNAL-D-19-00030.1

Wilbur, J., Scherer, N., Mactaggart, I., Shrestha, G., Mahon, T., Torondel, B., . . . Kuper, H. (2021). Are Nepal's water, sanitation and hygiene and menstrual hygiene policies and supporting documents inclusive of

disability? A policy analysis. *International journal for equity in health*, *20*(1), 1-14. https://doi.org/https://link.springer.com/article/10.1186/s12939-021-01463-w

Wong, M. E., & Cohen, L. (2011). School, family and other influences on assistive technology use: Access and challenges for students with visual impairment in Singapore. *British Journal of Visual Impairment*, *29*(2), 130-144. https://doi.org/https://doi.org/10.1177%2F0264619611402759

Author Information

Khadga Niraula

https://orcid.org/0000-0003-0658-8485

Nepal Open University

Lalitpur

Nepal

Contact e-mail: *gniraula877@gmail.com*