

Challenges with creating accessible and usable learning environments for visually impaired students' language education

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Abstract— Nowadays, more educational institutions in countries worldwide move towards inclusive education that ensures visually impaired students equal opportunities with their sighted peers “for success in mastery of course material ... without compromising the content, quality or level of instruction” (Optimizing, 2014, p.3) [1]; the Sultanate of Oman is no exception. This paper reports the findings of a study that sought to examine the specific challenges teachers in Oman face with creating accessible and usable learning environment for visually impaired students taking English language courses at tertiary education level. Data was collected during a one semester period at the Centre for Preparatory Studies at Sultan Qaboos University using face-to-face interviews with language teachers. The researchers looked into the teachers’ views on challenging aspects related to technological and pedagogical support given to visually impaired students for them to meet learning outcomes and standards of competency in English, and successfully integrate into the mainstream English language programs. The study revealed that in-service targeted professional development aimed at teacher training in using assistive technologies and developing accessible teaching materials and curricula can have a significant positive impact on constructing effective language learning environment specific for visually impaired students and beneficial for facilitating their learning experience.

Keywords— accessible and usable learning environment, visually impaired students, Sultan Qaboos University, Oman

I. INTRODUCTION

The idea of “teaching students with disabilities in their neighbourhood school within the regular classroom with their peers without disabilities” [2], or inclusive education, has recently received a lot of attention and support across the globe. Many governments and educational institutions have made commitments to inclusive education. Such a move undoubtedly requires immense preparations in terms of providing facilities, materials, resources, training, as well as “teachers’ beliefs and acceptance of the policy and philosophy of inclusive education” [3]. There have been many successful cases of inclusive programs in many countries due to the longstanding policies, commitment and actions aimed at

redesigning and restructuring of general education classrooms so “that they more closely resembled special education: low student-to-staff ratio, intensive and prescribed basic skills instruction, performance monitoring, and the opportunity for intensive, one-to-one instruction” [4], and effective integration of components appropriate to technology-based learning environments [5]. However, this is not necessarily the same in other parts of the world where teaching students with disabilities together with regular students is still rather new. This applies to the Sultanate of Oman, and indeed to most of the countries in the Arabian Gulf.

In 2008, the Oman’s government passed a law to protect the rights of people with disabilities [6]. The law stipulates many rights that people with disabilities enjoy, one of which is the right to free educational services commensurate with their sensory, physical and mental capabilities. Enacting such legislations obviously requires enormous efforts, as well as specific considerations related to designing and implementing learning environments that ensure appropriateness and accessibility for people with physical disabilities [5]. Recently, the Ministry of Education in the Sultanate of Oman started integrating students with mild disabilities into the mainstream basic and post-basic learning environments, thus supporting “different and diverse students learning side by side in the same classroom” [7]. Some Oman’s higher education institutions have also followed this suit. For example, Sultan Qaboos University has started accepting visually impaired students among other students with disabilities and taking practical steps to construct an environment that can be specific for these students, and easily accessible and usable by them. The steps have included providing necessary facilities and resources and setting up assistive technologies.

II. STUDY

This study sought to examine the specific challenges educators in Oman face with creating accessible and usable learning environment for visually impaired students taking English language courses at tertiary education level. Data was collected during a one-year period at the Centre for Preparatory Studies at Sultan Qaboos University. The study

utilized a mixed method methodology which involved face-to-face interviews and discussions with five English language teachers. All teachers had a substantial and diverse experience of teaching in different contexts and educational settings. One of the participants was visually impaired and was responsible for assistive technology support.

III. DISCUSSION

All teachers who participated in the study understood their social and professional responsibility for meeting educational and future employability needs of visually impaired students and mitigating their language and study challenges. Also, all of them had a very positive disposition to teaching visually impaired students in their classrooms. When asked about the specific challenges in teaching visually impaired students, all participants mentioned both technological and pedagogical challenges. In more detail, they reported challenges related to insufficient training in techniques, methods and approaches to teaching visually impaired students, as well as limited number and range of teaching aids and resources developed in-house specifically for vision impaired English language learners. They also noted some challenging aspects related to assistive technologies. To illustrate, in response to the question about the challenges with assistive technologies, one of the respondents focused on such particularly challenging aspect of assistive technologies' implementation as focus on hearing. According to this respondent, "... traditional Braille enables use of tactile sense, and ... listening can and does shut out if their mind wanders. The respondent was also not quite sure "how much accent, voice and pronunciation is a hindrance in listening. Braille takes away all those hindrances; yes, they are bulky, but I have proof that they are in constant 'touch' of the shape of the spellings, and know that they are actually reading. It also enables them to read aloud! This is a completely new use of the Braille copy". In view of another respondent, the biggest challenge with integrating assistive technology is still "lack of materials in accessible formats". Also, the participants of the study felt that they were not either psychologically or methodologically prepared to teaching visually impaired students. One of the participants commented, for example, that "it would have been beneficial to have been told that I would have visually-impaired student in my class and what things to look out for and how to organize the class and materials to my students' advantage".

Indeed, all participants reported doing work "on best effort basis". However, all of them noted the importance of in-service professional development. For example, according to Helen, she unfortunately "had no training in dealing with this situation", "knew nothing about the technologies", and she "might have dealt with the situation differently", if she had had some. The importance of training in implementing successful inclusive learning environment and formation of positive attitudes towards inclusive education was supported by the findings of a number of studies. These studies, first and foremost, highlight the role of experienced teachers eager "to serve as resource persons, to prepare special materials, as required, and to provide special instruction in those skills peculiar to blindness such as Braille reading and writing, use

of reader services, auditory perceptual training and orientation and mobility" [8].

IV. CONCLUSIONS

Visually impaired students face unique challenges because not only they have to access and comprehend written text but they also have to interact in a learning environment that is inherently visual in nature, as for example, is the case in language classrooms. Indeed, assistive technologies are a very important component for constructing an effective language learning environment for visually impaired students. However, their educational value is not so much dependent on their availability and abundance but on the teachers' familiarity with such aids [9]. Therefore, an in-service targeted professional development is gaining even more importance, especially "in a time when quality of teaching has been found to most influence learner achievement" [10]. Such professional development should be aimed at teacher training in using assistive technologies and developing accessible teaching materials and curricula can have a significant positive impact on constructing such an environment and be beneficial for facilitating learning experience of visually impaired students.

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