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RESEARCH PAPER

Adaptation in Instruction for the Visually Impaired Students in Inclusive Setting

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ABSTRACT

This study aimed to identify instructional adaptations for students with visual impairments in inclusive settings, specifically examining differences based on teachers age groups in Lahore and Vehari. Inclusive education requires effective instructional strategies for visually impaired students. However, many teachers lack the necessary training and resources, hindering the implementation of suitable adaptations. A quantitative research design was used. The sample consisted of 160 teachers from inclusive schools in Lahore and Vehari, selected through non-probability sampling. Data were collected using a self-developed checklist. An independent sample t-test was applied to analyze differences in instructional adaptation based on teachers age. Instructional adaptation was the core variable under investigation. The findings indicated no significant difference in instructional adaptations based on age groups. A major issue identified was insufficient training, which affected teachers capacity to address the needs of visually impaired students. It is recommended to organize regular teacher training programs, provide necessary teaching aids, and ensure appropriate facilities for effective inclusive education.

Keywords: Instructional Adaptation, Inclusive Settings, Visual Impairments, Teacher Age Groups

Introduction

In Pakistan, learning in regular classrooms and compulsory education are the two national movements that work as a vital anchor to understand the growth of inclusive education. In 1886 the law of compulsory education was approved and according to this law, 9 years of free public education needed to be given to all the children after the age of 6 regardless of "gender, ethnicity, race, religious beliefs and family social economic status" (National People's Congress, 1986). In the list, the word disability is not involved that outlining all children. According to the history of Pakistan, education rights had not allowed disabling children (Chen, 1996; McCabe, 2003). Through specialized schools the attendance was possible and it was a truth mainly for the children with minor/modest education requirements. Even Underdeveloped and especially in rural areas the specialized schools were not choice always for their children such that these schools' programs did not afford by them. LRC initiative was launched to recognize the limited special setting availability. The importance of LRC was scheduled not to support inclusion but relatively provide guidance to disable children about educational services with a restricted approach to specialized schools (McCabe, 2003).

Literature Review

Education is the most important factor which is responsible for the growth as well as the authorization of the peoples, and inclusive education, regardless of socioeconomic differences or differences in 'abilities' as well as 'disabilities' (Praisner, 2003), definitely strengthens these foundations (Ahmad, 2014). An education system that emphasizes

education for everyone should guarantee that each student has the right to a quality education depending upon the skills and needs of each individual (Johnson, 2002). Inclusive education is based on recognizing and conquering all barriers to optional, constant, and quality inclusion of all in learning (Ahmad, 2015), as well as supplying an LRE which is termed as least restrictive environment, so that to adequately aboard disabled kids holistic learning beneath, alongside others, in an accessional environment. (ICF, 2001). Visually challenged pupils have difficulties accessing visual information in written form or on a screen, but conventional keyboards can help use Braille input devices, with Braille key labels aiding with keyboard use. Users with visual impairments can use OBR (Optical Braille Recognition) software to read a specific type of document known as the Braille documents on a normal scanner, scan all of the Braille documents, analyses the doted structure, translation the words, and show it on the screen attached to the computer. Braille displays that are also refreshable will help in providing line by line interpretation of the onscreen text into the Braille that can aid in fine-tuning.

Students with visual impairments might benefit from auditory resources such as talking books and audio cassettes of recorded courses. Advanced audio equipment, such as CD players, cassette players as well as machines that record, could be utilized to track courses, textbooks, as well as other learning materials, allowing users to submit their projects in audio format. The descriptive service of the video, which includes a narrative vocal explanation of the visual elements presented, allows disabled students to immediately being able to hear the explanations of visual aspects, allowing visually impaired students to socialize and gain information. (Petty, 2012). Attitudinal obstacles are seen to be the foundation of all other impediments, and they may be very tough to overcome. (Williams and Algozine, 1977;Pivik et al., 2002). It results in misunderstandings, conventionalize, labeling, the anxiety of the strange, conflict, and mistake of people' privileges and possibilities, which leads to increased isolation of children with incapacities (Heyne, 2003; Gal et al., 2010; Parsarum, 2006; Odom, 2000). Educators play a vital character in helping inclusion, and their attitude has proven to be a critical variable in the achievement of inclusion strategies. It has been observed that, whether intentionally or unintentionally, teaching staff themselves sometimes can demonstrate to be hurdles in trying to implement technological aids, when they see technology as a simple option to pass, or if being unable when there are differences. Students with learning impairments may resist change and find it difficult to rely on assistive means of technology, whereas kids with sensitive problems may withdraw from another, restrict interaction, restriction with activity enactment, and contribution to a negative image of the one-self (Casey-Black and Knoblock, 1989).

Material and Methods

In this section, the analysis presents the exploration structure of this study; research approach, population, sample, sampling technique and test of this study, what kind of instrument will be utilized for this consider and disclose how to build up their instrument, how to investigate information, constraint furthermore, and delimitation.

Research design

A quantitative research design was utilized for the assessment of the study. Researcher have a reason to utilize the quantitative technique research way to deal with explore instruction approach utilize the best possible route in the comprehensive study hall for the externally incapacitated substitute. The quantitative research approach is utilized when a more comprehension of exploration issue can be increased at that point utilizing each approach alone and gains verification and comprehension through quantitative the two kinds of exploration and information. (Parasite &Onwuegbuzie, 2009) Quantitative technique for research that was connected and appropriate for this study and the goal of this examination and incorporate both observational approval and study. For this reason, to

research and get top to bottom data about the guidance used for the externally held up in the comprehensive study hall. (Parasite &Onwuegbuzie, 2009).

Instrument

Research instruments provide information in detail on the approval and use of research instruments, similarly, the checklist is the best tool in quantitative research to collect the responses from the respondents in the form of quantitative data which can easily be coded numerically for analysis and interpretation. It can include structured responses where different levels of measurements are used; nominal, ordinal, interval and ratio level of measurement. The checklist can also include unstructured responses which can be quantified by providing them quantitative values. Both closed-ended questions can be asked in the checklist. All the variables in the questionnaire have at least one level of measurement. The checklist can be divided into different parts and sections. The demographic section is the first part of a checklist. Different indicators are defined in the checklist which has well-defined connotations (Lavrakas, 2008).

Sample and Sampling Technique

The population of this study all visually impaired students in an inclusive school. The sample of the study consisted of 160 teachers in inclusive schools from Lahore and Vehari. The Purposive sampling technique was used.

Data collection

After the development and validation of the checklist, the researcher contacted the inclusive setting and requested data collection. Written permission has been taken from the heads of inclusive schools. The researcher visited the selected inclusive schools. The heads of the selected inclusive schools were very cooperative in facilitating the process of data collection. The data was collected in a favorable environment where the respondents have time to fulfil the checklist.

Data Analysis

Collected data was precisely calculated and thoroughly organized to enable it for analysis. SPSS was used for analysis. In pilot testing researcher fined the reliability that was determined by Cronbach's alpha method. The value of Cronbach's alpha was 0.813. The value from 0 to 1 where the values above 0.7 are considered good. As the value of more than 0.7 shows that a reliable instrument that has an internal consistency acceptable to the research and reliable to conduct the research. Collected data was precisely calculated and thoroughly organized to enable it for analysis. SPSS was used for analysis. The demographic variables were analyzed using Frequency distribution. Inferential statistics was also applied to data.

Result and Discussion

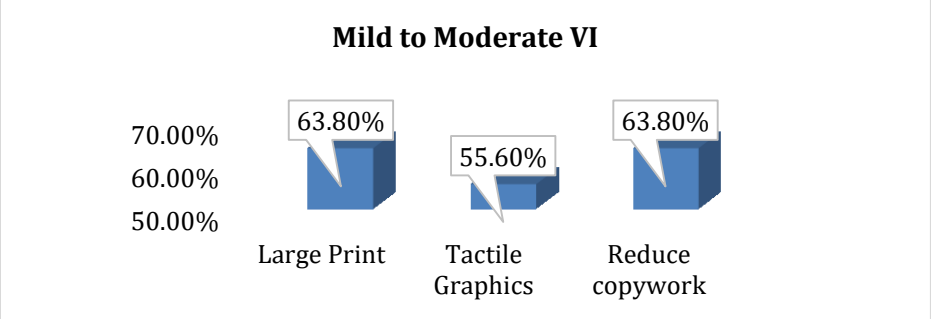


Figure 1 Most commonly used Instructional material for students with Mild to moderate VI According to the figure majority of teachers (63.8%) use large print while teaching students with mild to moderate visual impairment. It was also found that most of the teachers (68.8%) reduced the copy work for these students.

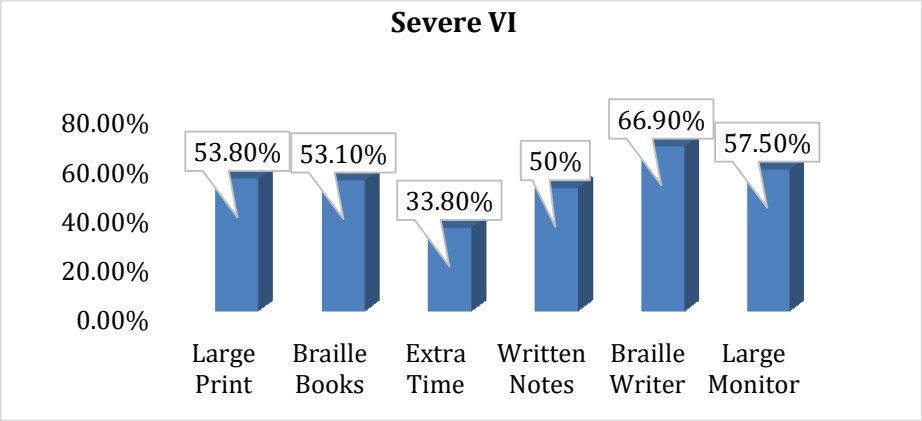


Figure 2 Most commonly used Instructional material for students with severe VI

Figure shows that while teaching students with severe visual impairment, the majority of teachers (66.9%) used braille writer, followed by larger monitors (57.5%). 53% of teachers reported that they use large prints and braille books while teaching these students. Only 33.8% said that they give students extra time to complete any task.

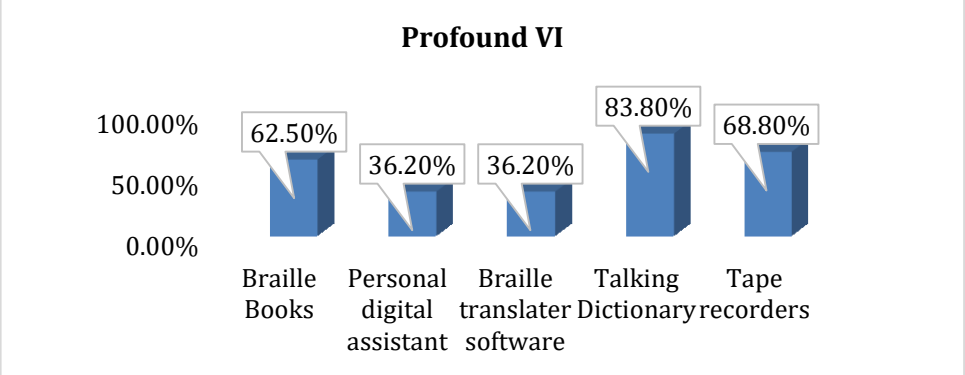


Figure 3 Most commonly used Instructional material for students with profound VI

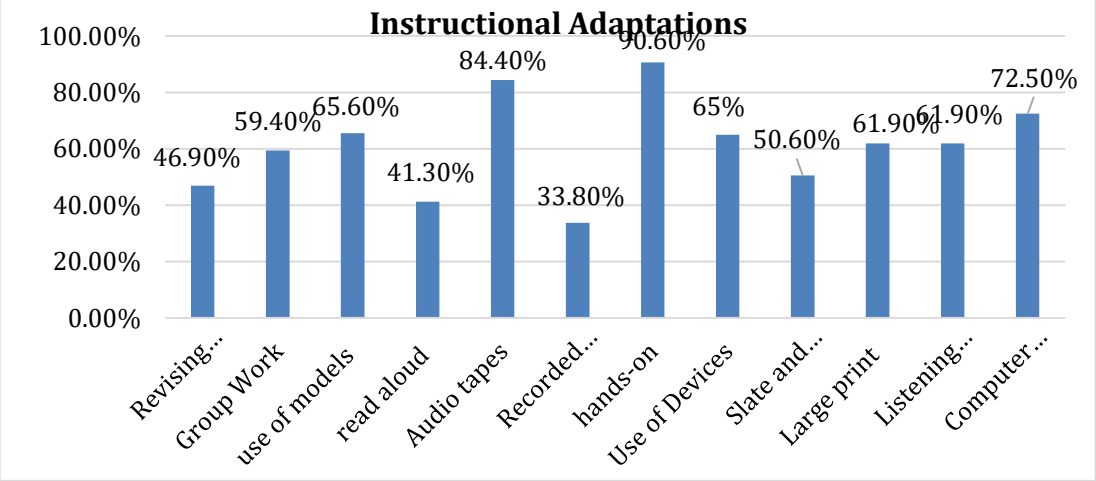
In Figure 9, the teacher's responses are presented when they teach students with profound visual impairment. The majority of teachers (88.8%) reported that they use taking dictionary when teaching students with profound visual impairment. 68.8% of teachers shared that they use recorded lectures when teaching these students. Only 36.2% of teachers reported that they use braille translator software and personal digital assistants while teaching students with profound visual impairment.

Table 1
Mean and Standard Deviation of Physical environment for VI

Sr#	Statement	M	SD
1	Proper light for visually impaired students	.46	.500
2	Supplementary light source (e.g., desk lamp)	.55	.499
3	Sun visor or light shield to reduce glare	.78	.415
4	Classroom setting arrangement according to students of the visually impaired.	.66	.474
5	Provision of comfortable chairs	.68	.467

6	Have students sit closer to see the board, videos, demonstrations, etc.	.52	.501

It shows that the majority of teachers (m=.78) reported that appropriate light shields are being used in the classroom to reduce glare that can create disturbance in the visual field. Teachers also shared that the classroom physical setting is up to the mark, having comfortable and all required arrangements for students with visual impairment.



Instructional strategies for visual impairment students in an inclusive setting.

This shows all the instructional adaptations used by teachers to teach students with visual impairment. The most commonly used strategy is hands-on activity (90.60%) followed by audio tapes (84.4%). More than (50%) of teachers reported that they have used group work, models, devices, slate and stylus, and large print to adapt the instructions for students with visual impairment. They have also shared that they do listening adjustments by using computers to facilitate the students' learning.

Table 2
Percentages of teachers about the material they use in class

Sr#	Statement	Yes	No
1	Provision of Braille books	53	47
2	Provision of large paints book	75	26
3	Provision of adaptive content	78	22
4	Give student copies of teacher notes	75	25
5	Provision of enlarge books, worksheets	48	53
6	Soft lead pencils	50	50
7	Provision of Braille writer	50	51

The table shows that the majority of teachers (78%) provided adapted content, large prints (75%), and written notes (75%) to students with visual impairment during classroom teaching. More than (50%) of teachers claimed that they provide Braille books, soft led pencil, and Braille writers to students with visual impairment.

Findings

The obtained result after analyzing the data presented as follows:

1. Majority of teachers (63.8%) use large print while teaching students with mild to moderate visual impairment. It was also found that most of the teachers (68.8%) reduce the copy work for these students.

2. Students with severe visual impairment, majority of teachers (66.9%) used braille writer, followed by larger monitor (57.5%). There were 53% teachers who reported

that they use large prints and braille books while teaching theses students. Only 33.8% said that they gives students extra time to complete any task.

3. Students with profound visual impairment. Majority of teachers (88.8%) reported that they use talking dictionary when teaching students with profound visual impairment. There were 68.8% teachers who shared that they use recorded lectures when teaching these students. Only 36.2% teachers reported that they use braille translator software and personal digital assistant during teaching students with profound visual impairment.

4. Majority of teachers (m=.78) reported that appropriate light shield is being used in the classroom to reduce glare that can create disturbance in visual field. Teachers also shared that the classroom physical settings is up to the mark, having comfortable and all required arrangement for students with visual impairment.

Discussion

(Baraka Michael Mwakyeja, 2013) inclusive education means provide all facilities for the special students and normal students in the same classroom. All over the world focus on inclusive education. Inclusive means modifying the curriculum, physical activities and extra-curricular activities according to the student's needs. According to my finding in Pakistan inclusive education tries to introduce the different areas. Setting administrative tries to provide the facilities according to budget and resources (Mastropieri& Scruggs, 2010; Spungin, 2002) teacher and parents' cooperation is very important for the students. Setting demand important things for the students like large print books, Braille books, magnifying glasses and Braille papers. In Pakistan majority of parents show no interest in student studies. They cannot cooperate with the teachers; they have faced many finical issues sometimes they cannot support in education.

When teachers deal with students they know about the many things, they can share with parents which are important for your child. Which field is best for the students but parents cannot provide the quality education. They know about how to develop your child in the social, physical, behavioral and emotional. (Garner & Davies, 2001; Johnsen, 2001; Smidt, 2009)

Also, the modest knowledge teachers have, is contribute by the lack of definite policies and plan immediately for the whole procedure of inclusive education. Require policies and strategies of how inclusive education should be implementing; affect the general process of prepare encouraging environments for inclusive practice, such as guidance of teachers (Gronlund, Lim & Larsson, 2010).

The need for co-teaching then means the education needs of students is not right met. it was also created that, cooperation between general teachers and parents of students with visual impairments is deficient because, these parents are live outer the area, so they cannot handle to come every time they are required. Parents are important in the condition of information for the education of their students. This in order helps in the training of IEP. It is through this IEP that a general teacher will be able to plan their education in an inclusive classroom (Garner & Davies, 2001; Spungin, 2002; Webster & Roe, 1998).

The teacher will understand the student's required needs and then adopt the specific strategies in the inclusive classroom. Teachers deliver the lecture loudly in the classroom and arrange the group activities. Using the different tactile models, cards, and real objects in the classroom, the teacher read the loud while writing on the board, and arranges the tape recovered in the classroom (Abosi, 2000; Zindi, 1997).

Recommendations

The following recommendations are given below such as:

1. There was a lack of guidance and counseling in the inclusive schools. Counselors provide the proper guidance about the new adaptation for the visual impairment.

2. Lack of instructional material in inclusive schools according to the student's needs.

3. Lack of teacher training in inclusive schools. The majority of teachers cannot understand the student's problems; the teacher should be trained according to the student's required needs then the teacher deal with the students according to special requirements.

4. The electronic media promoted inclusive education.

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