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Assessing Awareness of Assistive Technology Among Prospective School Teachers: A Comparative Analysis by Institution Type and Gender

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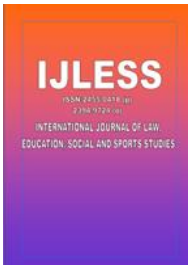


ABSTRACT

Assistive technology can increase the functioning, performance and achievement of children with special needs, which further, help them to be remain in general education setting in spite of a more restrictive setting Parrete et al. (2006). But child with special needs can only be benefited through the use of assistive technology when its selection will be based on the needs of the student. Assistive learning technology can also be a part of inclusive education. This paper is an attempt to spot the light on the awareness of prospective school teachers towards assistive technology. For the present study survey method had used to collect the data from 125 sample. The survey is interpreted through two objectives 1. To study the awareness among Prospective School Teachers about Assistive Technology belongs to Government, Aided and Unaided institution and 2. To study the level of awareness Among Male and female Prospective School Teachers about Assistive Technology. The results shows that there is average level of awareness among the prospective school teachers

Key words: Awareness, Prospective school teachers', Assistive learning technology, Type of institution, Gender.

Introduction

In the present scenario knowledge of Assistive technology will be more important for both pre-service and in-service teachers. Assistive technology can be broadly conceptualised as any technology with the potential to enhance the performance of persons with disability.

A child who cannot speak may need communication device such as a language board or device with a speech synthesizer to participate in class. Additionally, a child with a learning disability may need computer programmes to read. Assistive technology tools help children with learning disabilities, who struggle with listening, mathematics, organization and memory, reading and writing skills. For each skill some of the Assistive Technology Tools are listed below

Language writing Assistive technologies: Spell Checkers, Proofreading, Speech Synthesizers and speech Recognition.

Reading Assistive Technologies: Microsoft Word, Tape Recorders, Speech Synthesis, Optical Character Recognition and Variable Speech Control.

Mathematics Assistive Technologies: Electronic Mathematics worksheets and Talking Calculators.

Listening Assistive Technologies: FM Listening Systems and Tape Recorders

Memory or Organization Assistive Technologies: Personal Data Managers, Free-form databases and prewriting organizers.

Managing children with disabilities pose the challenges to both families and professionals at home and schools(Rufer etal).Continuing to deliver Education and training in the traditional way and using the same tools that have been used for decades is affecting these programs outcomes and making them full far behind the demands. Thus updating school programs with current technological tools and devices for both students with and without disabilities has become necessary. (Ghako Alnahdi).

In the present study the researcher will examine the awareness level of prospective teachers about Assistive Technology.

Review of related literature

Elif Polat et.al (2024): An analysis of the questionnaire showed that most of the participants (63.3%) did not familiarize themselves regularly with the updates in the inclusive education field and more than half of the participants (59.4%) found their knowledge in the field insufficient

Johan Borg, Stig Larsson & Per-Olof(2011): The exercise was carried out as a content analysis, which can be used to systematically and replicably quantify in terms of predetermined categories. Total 25 articles were analysed in detail with respect to five dimensions : assistive technology term, Action, Targeted group, Area of life, and Actor. The study reveals that people with disabilities in general are targeted in the articles 23 and 25 women is having more disability and the assistive technology is more accessed by the womens.

Anjali & Vanitha, 2021: found out that Visual assistive instructional technology is very useful for teaching daily living skills like personal hygiene to students with intellectual disability. So, tailor teaching strategies for the diverse learners will help for their equity in the classroom and thus reduces the functional barriers and improves the learning outcomes of diverse learners as expected . It is also mentioned that low/No use of AT adversely affects the learning outcomes of Intellectually disabled students.

Objectives of the study

- To study the awareness among Prospective School Teachers about Assistive Technology belongs to Government, Aided and Unaided institution.
- To study the level of awareness Among Male and female Prospective School Teachers about Assistive Technology

Methodology

In educational research researcher can go with two methods to collect data, they are quantitative and qualitative methods. For this present study survey method which is quantitative method is used to collect data.

Sample

In the present study prospective teachers' of Bangalore North University are considered who are studying in Government, Unaided, and Aided institutions were selected through stratified random sampling technique 125 samples were selected.

Tool Used

For present study the researcher had constructed and standardised with 20 questions from 5 Dimensions. The Dimensions are General Awareness, Knowledge of Tools and Devices, Implementation in Classroom, Challenges and Barriers, and Policy and Accessibility Awareness

Statistical technique employed

Percentage Analysis

Analysis and interpretation of data:

For interpretation of results, Objective wise interpretation is done.

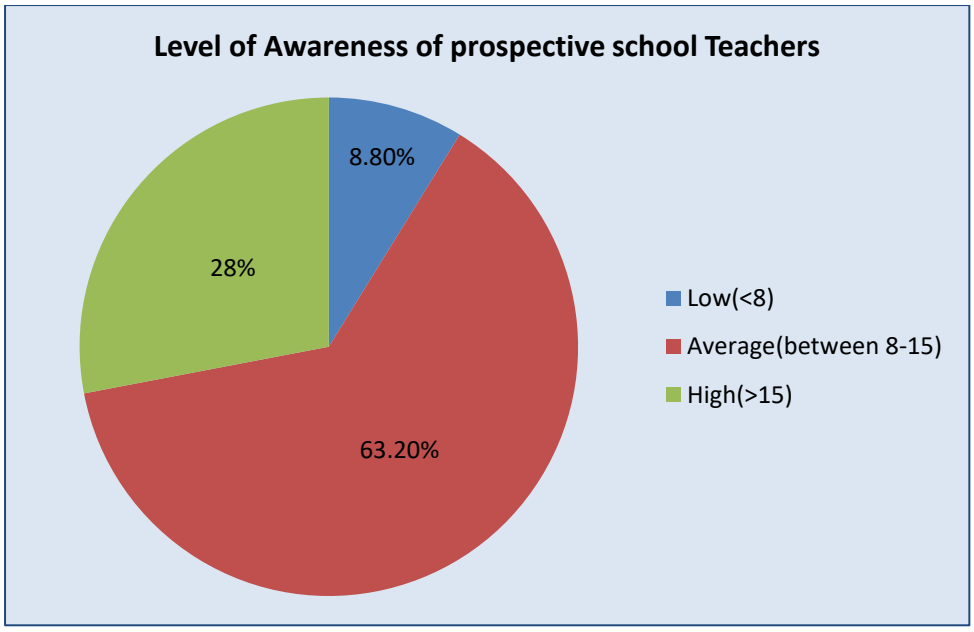
Objective-1

- **To study the level of awareness Among Prospective School Teachers about Assistive Technology belongs to Government, Aided and Unaided institutions.**

The level of awareness of prospective teachers towards assistive technology (AT) are classified into three categories, namely: low awareness, average awareness and high awareness. Based on awareness scores are these three levels were calculated as: Low < 8, Average (Between 8 - 15), High > 15 and total number of participants from Government Aided and Unaided are 125. In the below table the level of awareness among the group are given according to percentage of participants obtained from awareness among prospective teachers towards the assistive technology. The data is further classified into categories: Government, Aided and Unaided institution

Table 1: Table showing the percentage of prospective school Teachers' awareness of assistive technology belongs to Government, Aided and Unaided (N=125)

Level of Awareness	**Frequency**			**Percentage**
	Govt.	Aided	Unaided	
Low <8	2	3	6	8.8%
Average (Between8-15)	19	18	42	63.2%
High >15	10	12	13	28%
Total (N=125)	31	33	61	100%



Pie-chart 1: Level of Awareness among Prospective School Teachers towards Assistive technology in Government, Aided and Unaided

Results

As shown in the table and figure 1 above 28% of the sampled 125 prospective school teachers are having high level of awareness, 63.2% of them are having average level of awareness where as 8.8% of the sample is having low level of awareness about Assistive Technology. Among 33 Government prospective school teachers 10(30.30%), among 31 Aided prospective school teachers 12(38.70%) and among 61 Unaided prospective school teachers 13(21%) are having high level of awareness. Among 33 Government prospective school teachers 19(57%), among 31 Aided prospective school teachers 18(58.06%)and among 61 Unaided prospective school teachers42(68%) are posses average level of awareness. Among 33 Government prospective school teachers 2(6.06%), among 31 Aided prospective school teachers 3(9.07%) and among 61 Unaided prospective school teachers 6(9.83%) are possessing low level of awareness.

Objective- 2

To study the level of awareness Among Male and female Prospective School Teachers about Assistive Technology

The level of awareness of prospective teachers towards assistive technology (AT) are classified into three categories, namely: low awareness, average awareness and high awareness. Based on awareness scores are these three levels were calculated as: Low < 8, Average (Between 8 - 15), High > 15 and total number of participants from Government Aided and Unaided are 125. In the below table the level of awareness among the group are given according to percentage of participants obtained from awareness among prospective teachers towards the assistive technology. The data is further classified into categories: Male and Female.

Table 2: Table showing the percentage of male and female prospective school Teachers' awareness of assistive technology.

Level of Awareness	**Frequency**		**Percentage**
	Male	Female	
Low <8	5	6	8.8%
Average (Between8-15)	17	62	63.2%
High >15	8	27	28%
Total (N=125)	30	95	100%

Results

As shown in the table 2 above 28% of the sampled 125 prospective school teachers are having high level of awareness, 63.2% of them are having average level of awareness where as 8.8% of the sample is having low level of awareness about Assistive Technology. Among 30 male prospective school teachers 8(26.6%) and among 95 female 27(28.42%) are having high level of awareness. Among 30 male prospective school teachers 17(56.6%) and among 95 female 62(65.26%) are possessing average level of awareness. Among 30 male prospective school teachers 5(16.66%) and among 95 female (6.31%) are posses low level of awareness

Limitations

- In this research researcher has only tested the awareness level among Prospective School Teachers.
- Researcher had taken sample from institutions belongs to Bangalore North university.

Suggestions

- Further research can undertake for other sample like inclusive school teachers, secondary school teachers and etc.,

Conclusion

From above analysis and interpretation of the results have revealed that the awareness level of Prospective School Teachers is showing average level of awareness about Assistive Technology. It concludes that knowledge of Assistive technology is more essential for Prospective School Teachers. Introducing the concept of Assistive Technology in the curriculum of Prospective School Teachers will help them in the future profession, Because if Prospective School Teachers step in to Inclusive schools its necessary to learn about Assistive Technology.

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