Awareness of Special Teachers Regarding use of ICT for Visually Impaired Children in Relation to Gender, Age & their Locality

Dr. Rajesh Kumar
Assistant Professor, Dept. of Education
D.C.M.S., Raipur (C.G.)

Introduction:

Visually Impaired children also get benefit from information and communication technology. Information and Communication Technology has made a revolutionary impact on the education of Visually Impaired persons. Accessing information at school level and university level through the computers has put Visually Impaired children at parity with his sighted counterpart. The Royal National Institute for the Blind (1998) in the U. K. stated that "the Internet is one of the most significant developments since the invention of Braille... [Because] for the first time ever many blind and partially sighted people have access to the same wealth of information as sighted people and on the same terms." The inventor of the World Wide Web, Tim Berners-Lee, argued that "The power of the Web is in its universality. Access by everyone regardless of disability is an essential part".

Most of school book are being made available electronic text. Availability of books in Braille script has considerably increased. Bringing out desirable modifications in the desired Braille text has become quick and accurate. Accessing catalogue by the Visually Impaired students themselves has empowered them to get desired books and material for their information.

Introduction of computers into the curriculum of Visually Impaired children at primary level itself has enhanced their cognitive and psychomotor capacities. The technology has provided necessary stimulation with the ones with greater efficiency.

Visually Impaired persons with the skill to use Information and communication Technology to enhance their capacity find themselves with greater opportunities. The technology has opened new avenues of employment like software development, medical transcription, call centre management, computer operation and tour planning. Similarly computers have helped to empower Visually Impaired persons not only to sustain the existing avenues but to find them new and to do more effectively.

Computer can be used as an intelligent interface between the Visually Impaired persons and the sighted is not new for years, Visually Impaired persons have been able to command the user interfaces of computers using screen readers, speech syn-thesis, Braille displays and screen magnification system. Furthermore, the Visually Impaired persons have access the vast majority of all business applications, personal productivity tools, office applications email systems and web-browsers. Using enabling technologies n combination with general purpose computer systems, the Visually Impaired and partially sighted have been able to transform information from formats aimed at the sighted in to formats more suitable to meet the needs of the Visually Impaired people. Enabling technologies for such automatic transformation include Braille translation systems, screen magnification systems and text to speech engines. ICT has recently been helping those in India who are Visually Impaired person. The IT Industry can employ visually challenged persons in various functional responsibilities involving administration, front office, telephone operators, legal as well as medical transcriptionists, E-servicing as well as client servicing with appropriate training, those who are Visually Impaired person can be employed at senior levels. One such training tool, called JAWS, and developed by a group of Visually Impaired persons from the US, is a screen-reading software, i.e. whatever is typed or

appears on the screen is read out orally (in robotic voice and standard accent and pronunciation) to the visually challenged people. JAWS helps Visually Impaired people to learn to type in not more than 10 to 15 days after using the software and obtaining relevant training. Support in Braille is also available. In India "The Indian National Association for the Blind (NAB)" Bangalore has been using JAWS to offer Visually Impaired persons an entry-level program to become familiar with computers. MS-Word, Excel, PowerPoint, email and Internet are offered under the aegis of 180-hour program duration.

Significance of the Study:

Internet and other online facilities are new technologies that open up windows for everyone to participate in the new information age, and that there are particular benefits and potentialities for people with disabilities. There is no doubt that the opportunities for communication and information acquisition by people with disabilities are likely to be significantly expanded through the Internet, and that this is already happening. For people in rural Australia (or in rural areas of other countries), where distance often exacerbates the isolation associated with disability, there can be particular benefits **Wolstenolme & Stanzel, (1997).**

The above studies and quotations very clearly state that ICT has opened new vistas of gaining knowledge and information for Visually Impaired children. With the WWW, blind children can browse information for the first time without requiring assistance in the form of reading on their behalf or the provision of alternative formats, with the subsequent delays that this entails.

Use of ICT had enriched their experiences to a great deal but all their use depends on the guidance that is being given to them by their teachers, i.e. Special Education Teachers. Awareness and expertness of special teachers regarding use of ICT for Visually Impaired children certainly have an impact on the use of ICT by children.

Keeping in mind the researcher consulted the available literature related to the awareness of special teachers regarding use of ICT for Visually Impaired children. The reviews showed that there is not ample amount of knowledge available regarding awareness of special teachers regarding use of ICT for Visually Impaired children. Though the researches have been carried out on the awareness of general or other teachers regarding use of ICT, but no study was found so far by the researcher dealing directly with awareness of special teachers regarding use of ICT for visual impairment. Thus there exist a knowledge gap and to fill the existing knowledge gap and to add to the domain of knowledge the researcher finalized to study the awareness of special teachers regarding use of ICT for Visually Impaired in Indian context.

Research Questions:

1. Is there any significant difference between the awareness of male and female special teachers regarding use of ICT for Visually Impaired children?
2. Is there any significant difference between the awareness of special teachers of below and above the 35 years of age, towards ICT for Visually Impaired children?
3. Is there any significant difference between the awareness of rural and urban special teachers regarding use of ICT for Visually Impaired children?

Statement of the Study: "*Awareness of special teachers regarding use of ICT for visually impaired children in relation to gender, age & their locality*"

Operational Definition of the used term:

(i) Awareness

It refers to the consciousness or knowledge passed regarding a subject or issue. In the Context of present study awareness refers to the knowledge of special teachers regarding use of ICT for Visually Impaired children their education and training.

(ii) Special teachers

It refers to the teachers working in special schools of Varanasi region.

(iii) Information Communication Technology (ICT)

It is extended synonym of Information Communication Technology that stresses the role unified communications and the integration the telecommunication (telephone links and wireless signals) intelligent building management systems and audio-visual systems.

In the context of present study, ICT refers to the use of ICT in the education and training of Visually Impaired children.

(iv) Visually Impaired Children

It refers to a medically verified visual impairment accompanied by limitations in sight that interfere with acquiring information or interaction with the extent that special education instruction and related services may be needed.

Visual impairment means any reduction in central vision or visual accommodation because of malformation, disease, or injury. Any visual impairment can be corrected through prescription, lenses or surgery. When vision is still limited after such interventions, students may need special services to benefit from the educational processes. Such individuals constitute the Visually Impaired population.

Objectives of the Study:

(1) To study the awareness regarding the use of ICT for visually impaired children among special Teachers with respect to their gender.

(2) To study the awareness regarding the use of ICT for visually impaired children among special teachers with respect to their Age group.

(3) To study the awareness regarding the use ICT for visually impaired children among teachers with respect to their place of living.

Hypothesis of the Study:

1) There is significant difference in the awareness of male and female teachers regarding use of ICT for Visually Impaired children.
2) There is significant difference in the awareness of teachers of different Age groups regarding use of ICT for Visually Impaired children.
3) There is significant difference in the awareness of rural and urban teachers regarding use of ICT for Visually Impaired children.

Delimitation of the study:

The area of the proposed study is confined to the Varanasi region only.

The proposed study is limited only to the study of Awareness of Information Communication Technology for Visually Impaired children.

Methodology:

Method of Study

In the present study, Descriptive survey method has been used**.**

Population

The population of the present study was included the entire special teacher working in the Varanasi commissionaire.

Sample and Sampling Technique

Researcher used random sampling technique for selecting the sample that the special teachers in special schools for Visually Impaired children at the first stage out of total population of Varanasi commissionaire. A sample of four districts was selected randomly.

Keeping in view proper representation of both the sexes (male and female), out of the total population of special teachers working in special schools regarding ICT for Visually Impaired children, a sample of 53 special teachers working in special schools for Visually

Impaired children were selected randomly. All the subjects were undergoes a well structure text developed by the researcher with the helping expert in this field. Only 50 special teachers working in special schools for Visually Impaired children returned the Questionnaire and had given complete information.

Tools: To measure the awareness of Information Communication Technology (ICT) for Visually Impaired children, among special teachers, a questionnaire named **Awareness Questionnaires** was constructed with the help of expert in this field.

Dimensions of the tool:

There are six dimensions in the tool. They are -

1) Knowledge of Information and Communication Technology (ICT) for Visually Impaired Children
2) Application of ICT for Visually Impaired Children.
3) Feasibility of ICT for Visually Impaired Children
4) Availability of ICT for Visually Impaired children
5) Teacher's attitude towards ITC for Visually Impaired children.
6) Economic Constraints of ICT for Visually Impaired children.

Scoring:

Depending upon the nature of statements of items, every rights response was given score of +1. The statements whose response was 'Yes' were given +1 score. In the last scores given against each item were total. The total score represented the response score of an individual respondent. The scores of an individual were express in terms of Yes Response/total numbers of items. The score obtain were then liable to be subject to statistical treatment.

Data Collection:

Data collection was done by personal visit to special schools for Visually Impaired children in Varanasi commissionaire. First of all, the researcher made contact to Head of schools/organizations and taken permission for data collection and then proceeds for further progress. In case of special schools for Visually Impaired children had been responded over the scale individually. The researcher called special teachers one by one in a room for administrating test. A total of 50 teachers were selected randomly from the list of special teachers working in various special schools of Varanasi Commissionaire.

Used Statistical Techniques:

To analyses the obtained data mean, standard deviation and t-test were used.

DATA ANALYSIS AND INTERPRETATION:

Ho1: There is significant difference in the awareness of male and female teachers regarding use of ICT for Visually Impaired children.

There is significant difference in the awareness of male and female teacher regarding use of ICT for Visually Impaired children.

To find out the awareness between male and female Teachers working in different Special schools of Varanasi Commissionaire, 't' test was administrated on their scores the result were as-

Table No. 01: Male and Female Teachers

Gender	N	Mean	S.D.	't' ratio
Male	38	32	5.84	0.79**
Female	12	30.66	4.83	

***Not Significant at.05 level*

From the sample of N= 50 teachers, the scores of 38 male & 12 female teachers were tabulated in table no. 01.

The Mean of 'male' and 'female teachers were 32 and 30.66 respectively. The calculated 't' value comes out to be 0.79, which is much less than the table value of 't' at 0.05 level of significance. Hence null hypothesis Ho1 is rejected. There is no significant difference between awareness of 'male' and 'female' special teachers towards ICT for Visually Impaired children.

Ho2: There is significant difference in the awareness of teachers of different Age groups regarding use of ICT for Visually Impaired children.

There is significant difference in the awareness of teachers of different Age groups regarding use of ICT for Visually Impaired children.

To find out the awareness of teachers of different Age groups teachers working in different Special schools of Varanasi Commissionaire 't' test was administrated on their scores the result were as-

Table No. 02: Age group of Teachers

Age group	N	Mean	S.D.	't' ratio
Below 35 years	24	29.91	5.23	2.16*
Above 35 years	26	33.30	5.55	

** Significant at .05 level*

From the sample of N= 50, the scores of 24 below 35 years of age and 26 above 35 years of age, teachers were tabulated in table no. 02.

The Mean of 'Below 35 years of age' and 'Above 35 years of age' teachers were 29.91 and 33.30 respectively. The calculated 't' value comes out to be 2.16, which was higher than the table value of 't' at 0.05 level of significance. Hence null hypothesis Ho2 is accepted. There is significant difference between the awareness of 'Below 35 years of age' and 'Above 35 years of age' special teachers towards ICT for Visually Impaired children.

Ho3: There is significant difference in the awareness of rural and urban teachers regarding use of ICT for Visually Impaired children.

There is significant difference in the awareness of rural and urban teachers regarding use of ICT for Visually Impaired children.

To find out the awareness of teachers of rural and urban job environment working in different Special schools of Varanasi Commissionaire 't' test was administrated on their scores the result were as-

Table No. 03: Job Environment of Teachers

Job Environment of Teachers	N	Mean	S.D.	't' ratio
Rural	09	26.26	1.80	5.46*
Urban	41	32.65	5.71	

**Significant at 0.05 level*

From the sample of N= 50, the scores of 09 teachers working in Rural Job environment and 41 teachers working in Urban job environment, were tabulated in table no. 03.

The Mean of 'Rural Job environment' and 'Urban Job environment' teachers were 26.26 and 32.65 respectively. The calculated 't' value comes out to be 5.46, which higher than the table value of 't' at 0.05 level of significance.

Hence null hypothesis Ho3 is accepted. There is significant difference between the awareness of 'Rural Job environment' and 'Urban Job environment' special teachers towards ICT for Visually Impaired children i.e. The special teachers working in Urban Job environment are more aware towards ICT for Visually Impaired children than the teachers working in Rural Job environment.

Findings

Findings of the study may be summarized as-

- ❖ There is significant difference in the awareness of male and female teachers regarding use of ICT for Visually Impaired children. Male and female special teachers do not significantly in their awareness towards use of ICT for Visually Impaired Children. In this aspect we can say that gender do not play any role in awareness level towards ICT.
- ❖ There is significant deference in the awareness of teachers of different Age group regarding use of ICT for Visually Impaired Children among. The teachers below 35 years less awareness in comparison to the teachers above 35 years of age as the experiences increases in the use of ICT, the awareness level use of ICT, the awareness level also increases.
- ❖ There is significant difference in the awareness of rural and urban teachers regarding use of ICT for Visually Impaired Children. The teachers who working in urban schools get all the necessary arrangement for the training the Visually Impaired children in relationship to the schools which were located in the rural areas. Administration support for the schools situated in urban areas was much more advanced in comparison to the schools of the rural area. These two factors are basically responsible for differences found in the study.

Suggestions/ Recommendations:

✓ The results of the study will be helpful regarding curriculum planning for training of special teachers.

✓ It will help special schools to initiate establishment of ICT equipments in their premises and plan training on them for their teachers.

✓ The proposed study in itself will help spreading awareness regarding use of ICT for Visually Impaired children.

References:

1. Ahluwalia, H.P.S. & Singh, J.P. (2004). Summit of mind *All India cross Disability Convention.* New Delhi: Rehabilitation Council of India, in Association with New Delhi: Kanishka publishers & Distributors.
2. Bingamals, K.A. (2009). Barriers to the Successful Integration of ICT in Teaching and Learning Environments: A Review of the Literature, *Eurasia Journal of Mathematics, science & Technology*, 5(3), 235- 245.
3. Clavive, O. (2004). *Doing Educational Research*. New Delhi: Visitor Publication.
4. Isave, M., Uplane, M. & Isave, S. (2011). Teacher's awareness about the availability and use of technology for Visually Impaired: A Study. *International Journal of Scientific & Engineering Research, 3(2).*
5. Kaul. L. (1997). *Methodology of Educational Research.* New Delhi: Vikash Publishing House.
6. Ramchandram. M. (2000). *Statistical methods in Psychological and Educational Research*. New Delhi: Concept Publication Company.
7. Robert, O. (2011). Information and communication technology awareness among technical college teachers in Benue State. *International Journal of Vocational and Technical Education*, 3(6)1, 75-80.
8. Sing J.P. (2003). *Technology for the Blind concept and Context*. New Delhi: Kanishka Publishers & Distributors.
9. The Royal National Institute for the Blind. (1998). Retrieved on September 29, 2011, from http://www.w3.org/WAI .