

# A Comparative Study of Attitude towards Computer Awareness between Children with Hearing Impairment and Visual Impairment at Secondary Level

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## Abstract

The aim of the paper is to examine the comparative study of attitude towards computer awareness among Children with Hearing Impairment and Visual Impairment at secondary level. Researcher intends to find out how computer awareness plays an important role for children with special needs. A systematic study was conducted by the researcher on 40 children with Hearing Impairment and Visual impairment and assessed their computer attitudes with the help of a standardized test using the tool "computer attitude scale" developed by Dr. TAHIRA KHATOON AND MANIKA SHARMA. Result indicated that Children with Hearing Impairment have less Computer Awareness in lieu of the Children with Visual Impairment. So, the society should raise its bar and join hands in order to nourish these children so as to frame their individual ipseity in the society.

**Keywords:** *Hearing Impairment, Visual Impairment, Computer Awareness.*

## 1.1 Introduction

Man is a social animal and society shapes man all around. Society Is nothing but fellow-beings. Therefore, it's the responsibility of the society to nurture all its members. A reality in the context of social situation is that each individual has different capacity and different talents: those who are superior in one domain engage the cooperation or employ of others for their eventual mutual benefit. As every individual of the society have its own needs, talents, aptitude and behavioural patterns. Some are able to develop their talents by utilizing the opportunities available in the society but some are differentially abled. They need help to live respectably in this society. As citizens of the civilized society, it is the right of such children to

lead their lives with respect and dignity. Society needs to give their special needs special treatment.

## What do we mean when we say "children with special needs"?

"Special Needs" is an umbrella underneath which a staggering array of diagnoses can be wedged. Children with special needs require extra help because of a medical, emotional or learning problem.

## "Every child is gifted. They just unwrap their packages at different times"

Hearing and Visual Impairment are examples of these:

Gifted and disabled children have something in common. Life can be extra challenging for a kid with special need. It might be harder to do normal stuff- like learning, to read or, if a person has physical handicaps, just getting around schools. Now a days, Computer Technology can be used to help the children with impairment in getting access to education in many a ways. Children with learning difficulties, hearing or visual impairments, developmental delays or physical challenges might face complexity in operating computer. But these days special computer programmes and software's are available for visual and hearing impairment children to assist them in getting education. To be able to use such type of computer programmes, its essential for these special children to be aware about computers, as children with special needs face barriers of various types in their day to day life. So as to overcome this different hardware and software programmes available are:

**For Visual Impairment:** Braille translation software and equipment, Braille printer, Screen reader, Optical Character Reader(OCR), Electronic Braille Writer, Talking calculators, Close Circuit Televisions(CCTV), Magnifiers.

**For Hearing Impairment:** Amplification technology, Hearing Aids, TTY Machine (teletypewriter or text telephone), Cochlear Implant, Sound Field FM Equipment on free field amplification, Hard-Wired devices.

Hence, the researcher felt a need to study attitude towards computer awareness of children with hearing impairment and visual impairment. It may be very much significant in expansion and development of computer education for special children. As computers are being used in every field the proposed research is expected to open new venues for providing more help to the hearing impairment and visual impairment children in many educational ways.

## 1.2 Statement of the Problem

A Comparative Study of Attitude towards Computer Awareness between Children with Hearing Impairment and Visual Impairment at Secondary Level.

## 1.3 Operational Definition of the Used Terms

### 1.3.1 Hearing Impairment

It is an absolute or partial loss of the capacity to hear out of one or both ears.

### 1.3.2 Visual Impairment

Children who suffer from total loss of sight or considerable reduction of sight.

### 1.3.3 Computer Awareness

It means being aware of how a computer looks and functions. This does not mean just what program you can load onto a computer but also the parts that make a computer on the inside.

### 1.3.4 Secondary Level

Secondary Level of education is one of the cone stone of development. It is the the stage of education following primary education.

## 1.4 Objectives of the Study:

**1.4.1** To study and compare the attitude of children with Hearing Impairment and Visually Impairment in relation to their Computer Awareness.

**1.4.2** To examine and compare the attitude of children with Hearing Impairment and Visual Impairment in relation to their gender towards Computer Awareness.

## 1.5 Hypotheses of the Study:

**HO1** "There is no significant difference between Children with Hearing Impairment and Visual Impairment in relation to their Computer Awareness."

**HO2** "There is no significant difference between Children with Female Hearing Impairment and Female Visual Impairment in relation to their computer awareness.

**HO3** "There is no significant difference between Children with Male Hearing Impairment and Male Visual Impairment in relation to their Computer Awareness.

## 1.6 Delimitations of the Study

Keeping in view the limited resources, time and facilities available at the disposal of the investigator, present study is confined to the following parameters-

The Study was adopted only the area National Capital Region (NCR).

Only Visual Impairment and Hearing Impairment were included in the study.

It was focused only on Secondary level students' not primary and higher level.

## 2.0 Methodology

### 2.1 Research Design

In the present study the **Descriptive Survey Method** of research was used.

### 2.2 Population

Population of present study consist all Hearing and Visual Impairment children at Secondary level in N.C.R

### 2.3 Sample

A sample of 40 students (19 Visually Impaired and 21 Hearing Impaired) was selected by the researcher, using stratified sampling technique.

## 2.4 Statistical Technique Used

Mean, Standard deviation and 't'- test were used in the present study.

## 2.5 Tool Employed

Computer Attitude Scale is used which was standardized it has 20 statements, 11 positive worded and 9 negative worded, distributed in Five

Areas. Reliability of Computer Attitude Scale was calculated 0.93.

## 3.0 Interpretation and Result

In view of the objective of the study, the Mean and S.D. were calculated from the raw scores. After this 't' value were calculated and tested at the 0.05 and 0.01 level of significance.

**Table 3.1**  
**Comparison between Children with Hearing Impairment and Visual Impairment with Reference to their Computer Awareness**

Sr. No.	NAME OF GROUP	N	MEAN	S.D.	d.f.	't'
1.	Children with Hearing Impairment	21	78	4.82	38	7.8**
2.	Children with Visual Impairment	19	85.94	5.36		

\*\*Significant at 0.01 and 0.05 level

**Interpretation:** Table 3.1 reveals that the obtained 't' value is 7.8 which is significant at 0.01 and 0.05 level of significance.

Hence the null hypothesis – "There is no significant difference between Children with Hearing Impairment and Visual Impairment in relation to their Computer Awareness." has been rejected. It means that Children with Hearing Impairment and Visual Impairment have significant difference in relation to their Computer Awareness.

**Table 3.2**  
**Comparison between Children with Female Hearing Impairment and Female Visual Impairment with Reference to their Computer Awareness**

SL NO	NAME OF GROUP	N	MEAN	S.D.	d.f.	't'
1.	Children with Female Hearing Impairment	11	78.72	8.25	38	3.53**
2.	Children with Female Visual Impairment	10	87.5	2.59		

\*\*Significant at 0.01 and 0.05 level

**Interpretation:** Data from table 3.2 depicts that calculated 't' value is 3.53 which is significant at 0.01 and 0.05 level. The 't'- value clearly indicates that both the groups have significant difference in relation to Computer Awareness. Thus on the basis of hypothesis 2<sup>nd</sup> of the study "There is no significant difference between Children

with Female Hearing Impairment and Female Visual Impairment in relation to their computer awareness.” has been rejected .

**Table 3.3**  
**Comparison between Children with Male Hearing Impairment and Male Visual Impairment with Reference to their Computer Awareness**

SL NO	NAME OF GROUP	N	MEAN	S.D.	d.f.	‘t’
1.	Children with Male Hearing Impairment	10	78.4	4.88	38	3.58**
2.	Children with Male Visual Impairment	09	85.78	4.12		

\*\* Significant at 0.01 and 0.05 level

**Interpretation:** Table 3.3 reveals that the calculated ‘t’ value is 3.58 which is significant at 0.05 and 0.01 level.

Hence the hypothesis that "There is no significant difference between Children with Male Hearing Impairment and Male Visual Impairment in relation to their Computer Awareness." has been rejected. It means that Children with Male Visual Impairment is more aware than Children with Male Hearing Impairment.

#### 4.0 Findings of the Study

**HO1** has been rejected and found indicative discrepancy between children with Hearing Impairment and Visual Impairment in relation to their Computer Awareness. Mean value of children with Hearing impairment is lower than the mean value of Visual Impairment, thereby leading to an inference that children with Hearing Impairment have less Computer Awareness rather than the Children with Visual Impairment.

**HO2** has been rejected and found significant divergence between children with Female Hearing Impairment and Female Visual Impairment in relation to their Computer Awareness. Mean value of children with Female Visual impairment is higher than the mean value of children with Female Hearing Impairment. Thus it reveals that Female with Visual Impairment have more Computer Awareness in respect of Female with Hearing Impairment.

**HO3** has been rejected and found eloquent irregularity amid children with Male Hearing Impairment and Male Visual Impairment in relation to their Computer Awareness. So outcomes

reflect a disparity between children with Male Hearing impairment and Children with Male Visual Impairment, thereby leading to a consequence that on comparing these two groups Visual Impairment steps ahead, than Children with Hearing Impairment.

#### 4.1 Conclusion of the Study

In the nutshell, children with visual impairment have more computer awareness in respect of children with Hearing Impairment.

On the other hand, being gender specific outcomes unveiled that children with Female and Male Visual Impairment are extra souped up than Children with Female and Male Hearing Impairment. Furthersome, the former respond more positively and symmetrically towards Computer Awareness than the latter.

Hereby, the researcher bring down the curtain that each individual must help such children to brighten up in life. Moreover schools and colleges all over the world must take special efforts and gear up their system to help these children to boost up in their respective fields, such an effort on behalf of schools and individuals will take the society to a new bend and relinquish these children to a new future.

#### 4.2 Educational Implication of the Study

1. Findings of the present study will serve as a basic data for the further studies related to Hearing and Visual Impairment children at secondary level.
2. Arrangements of proper computer education should be provided in the institutions. Once

their computer awareness is increased, the confidence level may be increased automatically.

3. Principals can also be benefited by the finding of the study in terms of making improvement in computer awareness. By this they can attract the student's devotion and dedication for their content.
4. Also, the present study will provide feedback to authorities concerned with special education that the concept of Computer Awareness is to be applauded not because it is a new concept but because it grabs the soul of what our children need in order to come up with flying colors.

### **References:**

- [1] Mangal S.K. Advance Educational Psychology 2010 Publication, Prentice Hall of India Private Ltd. New Delhi.
- [2] Best John W. Research Education 2010 .Publication, Prentice Hall of India Private Ltd. New Delhi. Published By. Asoke K. Ghosh.
- [3] Lal Raman Behari. Educational Psychology 2005 Published by R. Lal Book Depot Meerut.
- [4] Methodology of Educational Research (IGNOU)
- [5] ALICE M. & Kumari R. Special Education 2008 Publication Discovery Publishing House, New Delhi.
- [6] Aniscow. M. Mel. 1994 Special need in classroom: a teacher education an guide, London: Jessica kingly publishers.
- [7] Jangira, N.K. 1988: survey of research in special education in India, independent study, New Delhi: National Council of Educational Research and Training.
- [8] Mohanty. A.K. (2002) Gifted underachievers perception of family environment. Journal off all India association for educational research, vol14 (3-4), 14-18.