

## LEARNING STYLES AND STUDY HABITS OF VISUALLY IMPAIRED AND ORTHOPEDICALLY CHALLENGED COLLEGE GOING STUDENTS

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### Abstract

The present investigation has been carried out by following the objectives to study the learning styles and study habits of specially abled students viz. visually impaired and orthopedically challenged of college going students. The investigators have selected 200 specially abled students (100 visually impaired and other 100 orthopedically challenged) students from various govt. degree colleges in Kashmir province. The data was collected by using Dunn and Dunn learning style inventory and Palsane Sharma Study habit inventory by following purposive sampling. The collected data was analyzed by using some statistical techniques. Some of the major findings have been drawn from the present study that there is significant difference between visually impaired and orthopedically challenged college going students on their learning styles and study habits.

**Keywords:** visually impaired, orthopedically challenged, learning styles, study habits. College going students.



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The educational panorama in the country of India has endured several transformations over the decade, resulting in better condition of education and healthier educational practices. In 1944 the Central Advisory Board of Education (CABE) drafted a report called the Sargent report on the post-war educational development of the country. As per this report, education is the fundamental right of all children, thus every child should keep in the stream of education for that purpose, report emphasized on education of disabled children should considered part of our society and need to be a make wide-ranging, expanded, educational provision for all types of disabled children such as physically challenged, mentally retarded, learning disabled. According to the directive principles of Indian constitution, education should be impartial without doing any regional or communal unfairness and should make justice with every child more than ever for all marginalized groups including visually, hearing, and crippled. This would help to promote community participation in education at the basic level and would introduce deep-rooted modifications, leading to the empowerment

of learners with special educational needs such as visually, hearing, and crippled. The majority of educators thought that children with physical, sensory or intellectual disabilities were so dissimilar and unusual that they could not take part in the activities of a common school (Advani, 2002). Almost all disabled population is disadvantaged and face complications in accessing necessary health care facilities. This by and large results immobility, loneliness, dependency, discrimination, premature death and enlarged poverty. Inclusive Education Scheme (MHRD, 2003) which highlighted major necessities of learners with disabilities emphasizes on the subsequent categories of disability: visual, hearing, loco motor, speech impairments, together with neurological disorders. The different five years plans emphasized varied provisions for physically challenged children. The First Five-Year Plan recommended training centers for visually impaired children. During 2nd Five-Year Plan a National Advisory Council for the physically handicapped started functioning to provide the better educational services to the handicapped children and 3rd Five-Year Plan mentioned that rural handicapped children should be given due importance with proper guidance and rehabilitation services like job reservations, and provision of work facilities in the home. 4th Five-Year Plan: addressed that preventive majors for people with visual, speech and hearing impairments and national centres for the physically challenged were founded to assist as demonstration projects in innumerable parts of the nation and provide essential guidance services. 6th Five-Year Plan paid attention that national policies were made to identify disabilities and their preventive measures furthermore rehabilitation services should promote economic independence, social integration and comprehensive key health care facilities for physically handicapped children.

The Orthopedically impaired children are those who possess defect as well as deformities in the bones and joints. These children have a malformation, which results a hindrance with the normal functioning of the bones including muscles and other physical organs." According to the Individuals with Disabilities Education Improvement Act (IDEA), crippled/orthopaedic impairment directly affects the educational concerns of orthopedically impaired. The deformities and defects include articulation hips, club feet, spina bifida (an innate deformity of the spinal cord), and children who are sufferers of crippling diseases as polio Osteomyelitis. There are various major causes of orthopaedic injury such as inherited defects, metabolic errors, nutritional deficiencies, infections, physical shock, toxin, poison, gross brain ailment and environmental causes. These children have poor motor control dexterity, are unable to coordinate two or more muscle groups for performing any task. They

walk clumsily or with a limp, display signs of pain during physical movement, trouble in picking and holding things. They fall recurrently, shaking movement in walking, complication in sitting/ standing. They are of many types as: Osteomyelitis is a chronic bacterial bones and joints infection that largely affects the bone and may also influence the other portions of the body. The major signs and symptoms of osteomyelitis are bone infection and pus formation within the bone, resulting in a foul-smelling release. This condition often results severe physical impairment if left untreated.

**For the present study the following objectives have been formulated.**

1. To find out specially abled students viz. visually impaired and orthopedically challenged college going students in Kashmir province.
2. To study learning styles and study habits of visually impaired and orthopedically challenged college going students.
3. To compare visually impaired and orthopedically challenged students on their learning styles.
4. To compare visually impaired and orthopedically challenged students on their study habits.

**Hypotheses**

The following hypotheses have been formulated for the present investigation

1. Visually impaired and orthopedically challenged college going students do not differ on their learning styles.
2. Visually impaired and hearing impaired college going students do not differ on their study habits.

**Methods and procedures**

Any piece of research is incomplete without a proper plan of action. A research is designed to enable the researcher to arrive at a valid, objective and accurate solution of the given problem as possible. Research design is thus, a detailed plan of how the goals of research will be achieved.

**Sample**

The investigators have selected 200 specially abled students (100 visually impaired and 100 orthopedically challenged college going students from various govt. degree colleges in Kashmir province. The data was collected by using purposive sampling.

**Tools**

For the present study the investigators have used Dunn and Dunn learning style inventory and sagarm and Sharma self concept inventory for collection of data.

**Statistical analysis**

The collected data has been analyzed by using some statistical techniques such as

**Mean, S.D, t-value.**

**Analysis and interpretation of data :**

In order to test the hypotheses formulated for the present study, the data collated through the administration of the selected tool was statistically analyzed by employing t-test. As a result of this the visually impaired and hearing impaired students were compared on personality adjustment and self concept.

**Table 1.1: Showing the mean comparison between visually impaired and orthopedically challenged on various dimensions of Learning Styles**

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Sig.
Environmental Stimulus	Visual Impaired	100	49.41	8.118	3.026	Sig. at 0.01 level
	Orthopedically Challenged	100	53.23	9.671		
Emotional Stimulus	Visual Impaired	100	49.34	11.631	2.740	Sig. at 0.01 level
	Orthopedically Challenged	100	53.45	9.654		
Sociological Stimulus	Visual Impaired	100	63.13	14.044	3.209	Sig. at 0.01 level
	Orthopedically Challenged	100	68.14	12.112		
Physical Stimulus	Visual Impaired	100	67.93	17.712	2.142	Sig. at 0.05 level
	Orthopedically Challenged	100	72.80	14.256		

Table 1.1: showing the mean comparison of visually impaired and orthopedically challenged college going students on environmental stimulus, emotional stimulus, sociological stimulus and physical stimulus dimensions of learning style. The results of the table reveal that significant mean difference was found at .01 level between visually impaired and orthopedically challenged college going students on **environmental stimulus** dimension of learning style. The mean score favours orthopedically challenged students which means that orthopedically challenges students show good response towards sound, light, temperature and seating design. Orthopedically challenged students prefer to learn even if there is sound and need a normal light in a room. The temperature hardly affects their learning style and prefers to learn either in well arranged seating design or informal seating arrangement. While as visually impaired students show less response towards sound, light , temperature and seating

design. The visual acuity of visually impaired students restricts their learning styles and gets easily irritated and disturbed by high sound and dark light. They prefer to learn in pin drop silence and bright rooms with normal temperature. They also prefer to learn in well seating design.

Table 1.1 also reveals that there is significant mean difference at .01 level between visually impaired and orthopedically challenged students on **emotional dimension** of learning style. The results of the table reveal that mean score favors orthopedically challenged students which means that their emotional stimulus of learning style is better than visually impaired students. They are always enthusiastic, interested and motivated to learn and sustain their attention for long time and indicate their high level of persistence. Table 1.1 again depicts that there is significant mean difference between visually impaired and orthopedically challenged students on **sociological dimension** of learning style and the difference is significant at .01 level. The mean score favors orthopedically challenged students which mean that they show good response towards sociological stimulus of learning style. They prefer to learn with peer groups and interacts with their class mats which helps them to concentrate while learn any school activity. While as visually impaired students show less response towards sociological stimulus of learning style. Table 1.1 reveals that there is significant mean difference between visually impaired and orthopedically challenged college going students on **physical dimension** of learning style at .05 level of significance. The mean scores favors orthopedically challenged students which means that they shows good response towards physical stimulus of learning style. They show good perceptual preferences and having ability to use auditory and visual senses effectively while learning any activity. They prefer to use tactile mode of learning and using sense of touch and bodily movements. Whereas visually impaired students shows low level of physical stimulus of learning styles. They fail to use the perceptual preferences such as visual sense effectively because their visual acuity restricts them to learn through sense to vision and impedes their tactile mode of learning. The results seem to be justified on the ground that visually impaired students are suffering from disability of vision which affects them in their learning styles. As sense of vision is the important gateway of learning and the students having visual impairment and their visual acuity restricts them to learn easily and fairly in an unfavorable conditions and situations which results in them poor learning styles. Whereas orthopedics is having low intensity of disability and the students having such type of disability shows t good response to

various situations to learn as they have good sense of vision and perceptual strength which results in them good learning styles

**Table 1.2: Showing the mean comparison between visually impaired and orthopedically challenged on various dimensions of Study Habits**

Dimension	Group	N	Mean	Std. Deviation	t-value	Level of Sig.
Budgeting	Visual Impaired	100	5.52	1.894	4.493	Sig. at 0.01 level
	Orthopedically Challenged	100	6.66	1.689		
Physical	Visual Impaired	100	5.31	1.686	6.434	Sig. at 0.01 level
	Orthopedically Challenged	100	6.63	1.169		
Reading	Visual Impaired	100	8.72	2.015	3.331	Sig. at 0.01 level
	Orthopedically Challenged	100	9.64	1.888		
Note	Visual Impaired	100	3.37	1.284	2.691	Sig. at 0.01 level
	Orthopedically Challenged	100	3.81	1.012		
Learning	Visual Impaired	100	6.55	1.877	2.232	Sig. at 0.05 level
	Orthopedically Challenged	100	7.15	1.925		
Memory	Visual Impaired	100	3.77	1.663	3.763	Sig. at 0.01 level
	Orthopedically Challenged	100	4.56	1.282		
Taking Exam	Visual Impaired	100	9.93	2.976	0.025	Insignificant
	Orthopedically Challenged	100	9.94	2.558		
Health	Visual Impaired	100	3.11	1.171	3.930	Sig. at 0.01 level
	Orthopedically Challenged	100	3.79	1.274		

Table 1.2: showing the mean comparison of visually impaired and orthopedically challenged college students on various dimensions of study habits viz. budgeting time, physical condition, reading ability, note taking, learning motivation, memory and health dimensions of study habits. While comparing both visually impaired and orthopedically challenged college going students on **budgeting time dimension** significant mean difference was found at .01 level. The mean score favors orthopedically challenged students which means that they shows good response and are aware about time management and manages the time properly for study purpose whereas visually impaired students fail to manage the time properly. The results of the table also reveal that there is significant mean difference between visually impaired and orthopedically challenged students on **physical condition dimension** and the

difference is significant at .01 level. The mean score favours orthopedically challenged students which means that they prefer to study in good and favourable physical environment, like good seating arrangement, normal light and are not gets easily disturbed by surroundings whereas visually impaired students hardly matters for good physical conditions . Table 1.2 also depicts that there is significant mean difference between visually impaired and orthopedically challenged students on their **reading ability dimension** and the mean score favours orthopedically challenged students which means that they read the lesson carefully and to check the mistakes done by them, consult and read the books in library and at home every day whereas visually impaired students show poor response to read the lesson carefully and checking mistakes. The results of the table also reveal that there is significant mean difference between visually impaired and orthopedically challenged students on **note taking dimension** and the difference is significant at .01 level. The mean score favours orthopedically challenged students which describes that they show good response in considering print material for learning in a suitable manner and takes down the notes during class room and compare with the notebooks at home carefully as compared to visually impaired students. Table 1.2 depicts that there is significant mean difference between visually impaired and orthopedically challenged students on **learning motivation dimension** and the difference is significant at .05 level. The mean score favors orthopedically challenged students which means that they show good motivation to learn and study the material in groups with the help of other students and prepares the lesson at home and read the books when ever gets time. The results of the table also reveal that significant mean difference was found between visually impaired and orthopedically challenged students on **memory dimension** at .01 level. The mean score favors orthopedically challenged students which means that they show good response in recalling the content whatever they read in classroom and have better memory to recapitulate and retention as compared to visually impaired. Table 1.2 also reveal that there is no significant difference between visually impaired and Orthopedically challenged students and the mean score fails to reach .05 level of significance which mean both shows similar response to **taking examination dimension**. Both feel tense at the time of examination and are preparing notes for exams and manage the time given for exams. The results of the table also reveal that there is significant mean difference between visually impaired and orthopedically challenged students on **health dimension** of study habits. The mean score favours orthopedically challenged students which means that they are

well aware about their health conditions and are desirous for regular checkups for their health as compared to visually impaired students.

**Table 1.3. showing the mean comparison of visually impaired and hearing impaired college going students on composite score of study habits.**

Study Habits	group	N	Mean	Std. Deviation	t-value	Level of significance
Composite Score	Visual Impaired	100	51.25	7.464	0.466	Insignificant
	Hearing Impaired	100	50.78	6.770		

Table 1.3: reflects the mean comparison of visually impaired and orthopedically challenged college going students on composite score of study habits. The table reveals that the higher mean score (51.25) favours orthopedically challenged college going students which is significant at .01 level. The results of the table describe that orthopedically challenged students shows better study habits as compared to visually impaired college going students which means that they show good response to time management and manage the time properly for their studies. Prefer good environment like good temperature, suitable light, good sound and well seating arrangements. They show good interest in taking exams consults books and other printed material for recapitulation and retention, try to memories the lesson properly and always prefer a better health conditions. The results seems to be justified on the grounds that visually impaired students are facing sever disability as compared to orthopedically challenged students as sense of sight is more important which strengths the perceptual power of a person. The visual acuity of a student restricts their participation in various school activities and fails to read the study material properly and fairly

**Major findings**

1. It was found that there is significant mean difference between visually impaired and orthopedically challenged students on environmental stimulus dimension of learning style. Orthopedically challenged students show better response towards pin drop silence and better light, suitable temperature, well seating design, learning alone or with peer groups, and learning in different ways while learning the study material. While as visually impaired students shows poor response towards environmental conditions for learning any activity.
2. Significant mean difference was found between visually impaired and orthopedically challenged students on emotional stimulus dimension of learning style. orthopedically challenged students show better emotional stability and persistence and responsibility



while learning any school activity. While as visually impaired students show less emotional stability and gets easily irritated and disturbed.

3. It has been again found that there is significant mean difference between visually impaired and orthopedically challenged students on sociological stimulus dimension of learning style. Orthopedically challenged student's shows better response towards sociological stimulus dimension of learning style. They like and prefer to learn with peer groups and participate in group activities and like to learn with the help of other friends and class mats. While as visually impaired students show poor response towards sociological stimulus.
4. Significant mean difference was found between visually impaired and orthopedically challenged student on physical stimulus dimension of learning style. orthopedically challenged students show good response toward physical stimulus dimension of learning style and like perceptual preferences, sense of hearing and vision, tactile mode of learning, particular timing of learning and change of posture and location while learning any activity as compared to visually impaired students
5. Significant mean difference has been found between visually impaired and orthopedically challenged students on various dimensions and on composite score of their study habits. Orthopedically challenged students show better response towards time management, good physical conditions, reading abilities, consultation of notes and books, motivation towards learning, memory for recapitulation and retention, awareness and preparations for examination and good health and hygiene.
6. It has been found that visually impaired students show poor response towards time management, memory, motivation to learn, awareness about preparation of examination, consultation of books and notes and good health and hygiene.

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