

Assessment of Learning Disabilities for Future Implications of Physical Education Students

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Abstract

The present study aimed to assess the learning disabilities of physical education students and to suggest future implications. The study population comprised all the students of sports sciences and physical education (SSPE), University of the Punjab, Lahore, Pakistan. Thus, three hundred students were taken as samples using available sampling techniques. For the collection of data, a Likert-type scale comprised of questions about four different learning disabilities, i.e. dysgraphia, dyscalculia, dyspraxia and dyslexia. The gathered data were administered through the statistical package for social sciences (SPSS, version-26); thus, pertinent statistical tools were used for analysis. After data analysis, the researcher concluded that dyscalculia as learning was the most common learning problem among the students. Based on the conclusion, the researcher recommended that sports sciences and physical education students need special attention in mathematical activities compared to all other academic subjects.

Keywords: Learning disabilities, Physical education, Future implications, Students

Introduction

Learning is a lifelong process from birth until the end of life. In other words, we can say that learning is the process of gaining new skills, techniques, knowledge and information (Jarvis, 2012). Learning may be formal and maybe informal. Formal learning takes place in a specific location, time, area and outline, while informal learning needs no particular place, time, area or outline. It takes place anytime, anywhere and from anyone (Souto, 2021).

Learning disability is a neurological condition affecting basic academic activities such as reading, writing, listening, speaking, numerical problem-solving, and thinking soundly. In addition, it affects the brain's ability to send, receive, and take in information. Students with learning disabilities always experiences many problems, such as being unmotivated during activity, a slower rate of gaining knowledge, a lack of gaining skills, poor memory, and difficulty reading, writing, speaking, listening, and solving fundamental mathematical problems. Learning disabilities are considered linked with basic psychological activities. Similarly, results from minimum brain obliteration and dysfunction in the central nervous system due to evolving. Neurological lag resulting in awkwardness, agitation and inattentiveness. Thus, due to the close connection of brain and body activities, learning problems may result in poor learning skills (Shaywitz et al., 1995). Students face many problems connected to their learning activities, such as dyslexia (decoding and reading comprehension difficulties, dyscalculia (difficulty in numerical problems), dysgraphia

(problem of writing) and dyspraxia (problems of coordination). These problems effect negatively the academic activities of children (Snowling & Hulme, 2011).

Learning disabilities affect children's intellectual abilities and create hurdles in routine matters (Graham et al., 2001; Heiman, 2002). Due to learning disabilities, students remain unable to learn new skills, understand complicated information, and interact with others (Snowling & Hulme, 2011). Many students due to learning disabilities left their academic activities and adopted other professions (Gartland & Strosnider, 2005). Many strategies are used for effective learning of students with learning disabilities, such as dividing the teaching materials into small parts, using diagrams, and pictures, trying to have patience and never utilizing a student's work as an example of poor outcome.

Several factors contribute to learning disabilities among children (Swanson, 1994; De Bildt et al., 2005). These factors include a low level of intelligence, visual impairment, motor handicaps and learning difficulties. According to National Joint Committee for Learning Disabilities, learning is a generic term referring to various disorders that are obvious by considerable problems in the achievement and use of listening, speaking, reading, writing, reasoning, or mathematical abilities (Fletcher et al., 2002; Assouline et al., 2010).

Factors causative to learning disabilities among the students may be internal factors (factors within the learners or individuals such as interest, attention, motivation, and learning habits) and may be external (external factors that cause learning problems are factors that exist outside individual or students) (Utama, 2013). Family history and genetics, prenatal and neonatal risks, psychological trauma, and environmental exposure are those factors that caused learning disabilities among students. Due to learning disabilities, students face many problems, such as lacking skills, difficulty understanding, trouble remembering things, lack of coordination, etc (Mayo Clinic.ND).

After critically analyzing the previous literature, the researcher formulated and tested the hypotheses below through descriptive and inferential statistical analysis techniques.

- Learning disabilities (dyslexia, dysgraphia, dyscalculia, and dyspraxia) effect the learning outcomes of students.
- Students need more attention on part of their teachers, especially in those academic areas (reading, writing, calculating and coordination) which leads to learning disabilities.

Materials and Methods

The researcher adopted the below procedures for reaching specific findings and conclusions.

Population

The study population comprised all the students of Sports Sciences and Physical Education, University of the Punjab, Lahore, Pakistan University.

Sample & Sampling

The total number of enrolled students in different programs, i.e., Bachelor, Associate Degree Program and MPhil and PhD are 509. Thus, three hundred students were taken as samples using simple random sampling technique.

Tools for Data Collection

For the assortment of relevant data, a Likert-type scale comprised of questions about four different learning disabilities, i.e. dysgraphia, dyscalculia, dyspraxia and dyslexia.

Validity & Reliability

The 1st draft of the self-made questionnaire was sent to field experts for the process of validity and reliability; thus, the final draft of the questionnaire comprised 20 questions. The reliability measures were measured through Cronbach's Alpha and found to be .875, which was highly significant.

Mode for Data Collection

The researcher personally visited the whole population and thus distributed the entire questionnaires among the respondents, and similarly, the researcher collected back after getting filled by the respondents.

Statistical Analysis

After the collection of data, the collected data were administered through a statistical package for social sciences (SPSS, Version-26); thus, according to the nature and need of the study, suitable statistical tools were used for analysis.

Results

Table 1 shows the age wise frequency and distribution of respondents. The total number of respondents were 300. Data were expressed through percentage; thus, the total number of respondents aged 15-20 years were 260 (86.66%), and therefore, the respondents aged 20 and above were 40 (13.44%).

Table 1*Age-wise Frequencies of Respondents*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-20 Years	260	86.66	86.66	86.66
	20 & above	40	13.44	13.44	100.0
	Total	300	100.0	100.0	

Table 2 shows the qualification wise frequency and distribution of respondents. The total number of respondents were 300. Data were expressed through percentage; thus, the total number of respondents having B.S qualification were 200(66.66%), and therefore, the respondents with ADP qualification were 52 (17.33%), and the respondents having M.Phil. and PhD qualification were 48 (16).

Table 2*Qualification-wise Frequencies of Respondents*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BS	200	66.66	66.66	66.66
	ADP	52	17.33	17.33	100.0
	M.Phil. & PhD	48	16	16	
	Total	300	100.0	100.0	

Table 3 shows the locality wise frequency and distribution of respondents. The total number of respondents were 300. Data were expressed through percentage; thus, the total number of respondents from urban were 220(73.33%), and therefore, the respondents from rural qualification were 80 (26.22%).

Table 3

Locality-wise Frequencies of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	220	73.33	73.33	73.33
	Rural	80	26.66	26.66	100.0
	Total	300	100.0	100.0	

Table 4 shows the perception of respondents about dyscalculia as a learning disability. The total number of respondents was 300; thus, the data were expressed as mean and standard deviation. The mean and standard deviation were 288.55 ± 8.017 . The minimum range was 280, and the maximum range was 300, and similarly, the variance was 64.28

Table 4

Response of Respondents about Dyscalculia as a learning disability.

Testing Variable	N	Mean	Standard Deviation	Min	Max	Variance
Dyscalculia	300	288.57	8.017	280	300	64.28

Table 5 shows the perception of respondents about dysgraphia as a learning disability. The total number of respondents was 300; thus, the data were expressed as mean and standard deviation. The mean and standard deviation were 277.25 ± 8.1037 . The minimum range was 282, and the maximum range was 285, and similarly, the variance was 10.37.

Table 5

Response of Respondents about Dysgraphia as a learning disability.

Testing Variable	N	Mean	Standard Deviation	Min	Max	Variance
Dysgraphia	300	277.25	10.37	282	285	10.37

Table 6 shows the perception of respondents about dyslexia as a learning disability. The total number of respondents was 300; thus, the data were expressed as mean and standard deviation. The mean and standard deviation were 276.33 ± 13.66 . The minimum range was 250, and the maximum range was 288, and similarly, the variance was 186.66

Table 6

Response of Respondents about Dyslexia as a learning disability.

Testing Variable	N	Mean	Standard Deviation	Min	Max	Variance
Dyslexia	300	276.33	13.66	250	288	186.66

Discussion

The current study's result indicates that most respondents have learning problems such as dysgraphia, dyscalculia, dyspraxia and dyslexia. In line with this finding, the study conducted

by Graham et al. (2002) show that almost all students have problems with writing, spelling, reading and calculation. So to handle the learning problems of the student, it is essential to give proper concentration to students at the gross root level.

In addition, the researcher also concluded that dyscalculia is a significant learning disability among students. Capano et al. (2008) found that learning disabilities such as dyslexia and dyscalculia cause poor academic performance in students. The finding of the study conducted by Eremie and Esther (2018) concluded that auditory processing problems, i.e. dyscalculia and dyslexia, significantly affect the academic achievements of the students. Therefore, early identification of these problems is considered essential. Förster (2009) also maintained that children with learning disabilities tend to experience significant problems in obtaining the essential skills of reading and writing and, thus, bawl in their working memory and central executive functioning.

Conclusion

Based on the significant findings of the current study, the researcher concludes that most students have learning problems such as dysgraphia, dyscalculia, dyspraxia and dyslexia. In addition, the researcher also concluded that dyscalculia is a significant learning disability among students.

Future Research Implications

Based on the conclusion, the researcher recommended that sports sciences and physical education are full-fledged academic disciplines. Thus the students need special attention in mathematical activities compared to all other educational aspects because using advanced statistics and mathematical facts and figures is essential for developing and promoting the sports sciences and physical education field. The researcher also recommended that to avoid learning problems, the student's learning abilities should be quantified at the gross root level. In the same way, according to the need, the students should be helped.

Conflict of Interest

No conflict of interest declared by the authors.

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