British Journal of Psychology Research
Vol.8, No.1, pp. 1-7, February 2020
Published by ***ECRTD-UK***
Print ISSN: 2055-0863(Print), Online ISSN: 2055-0871(Online)

# CORRELATES OF LEARNING DIFFICULTIES AMONG UNDERGRADUATE STUDENTS IN FACULTY OF EDUCATION, CROSS RIVER UNIVERSITY OF TECHNOLOGY CALABAR, NIGERIA

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**ABSTRACT**: *The study investigated correlates of learning difficulties among undergraduate students of Faculty of Education in Cross River University of Technology. Learning difficulty also referred to as a learning disability can be described as an issue with the brains ability to process information. So that individuals who have learning difficulty may not learn in the same way or as quickly as their peers, and they might find certain aspects of learning, such as development of basic skills, to be challenging. The study considered the manifestations of the following types of learning difficulties dyslexia-reading and comprehension problem, Dysgraphia-writing consistency and coherence problem. Dyscalculia–solving and calculating simple arithmetical problems. Attention deficit hyperactivity disorder (ADHD) having problem of in attention sitting still, staying focused and completing assignments. The main purpose of the study was to find out the extent to which these disorders manifest among students and between gender. All the students in Faculty of Education formed the population. The sample was 240 students comprising male and female respondents across the four levels and departments. Two hypotheses were tested. Data collection instrument was a structured questionnaire titled learning difficulty questionnaire LDQ. Result revealed that there were significant manifestations of learning disabilities. The findings also showed that male students significantly manifested dysgraphia, while female students manifested dyscalculia and ADHD. It was recommended that general studies courses involving writing and calculation skill be taken more seriously in the university. More emphasis be placed on group work and presentation by students.*

**KEYWORDS***:* attention deficit disorder, dyscalculia, dysgraphia, dyslexia learning disability

## INTRODUCTION

Success or failure in academic does not soley depend on the student's intelliquence level. Several genetic and environmental factors are involved including learning disorders. Learning disorder otherwise learning disabilities are an umbrella term for a wide variety of learning problems.Kemp, Melinda, Smith and Segal (2017) Learning disability is not a problem with intelligence or motivation, learners with learning disabilities aren't crazy or dumb. In fact most are just as smart as anyone else. Their brains are simply wired differently. This difference affects how they receive and process information. Simply put, children and adults with learning disabilities see, hear and understand things differently. This can lead to trouble with learning new information and skills, and putting them to use. The most common types of learning disabilities involve problems with reading, writing, mathematics, listening and speaking.

Some of the characteristics and symptoms of learning disabilities, by Bordini quoted in Akaude, Olowonirejuaro, Abolarin (2010) include reading disabilities (dyslexia: Problems of

reading and comprehension. Signs reading difficulty include problems with better and word recognition, understanding words and ideas, reading speed and fluency and general vocabulary skills.

Learning disabilities in writing (dysgraphia): learning disabilities in writing can involve the physical act of writing or the mental activity of comprehending and synthesizing information. Basic writing disorder refers to physical difficulty in forming words and letters. The following problems are noticed. Neatness and consistency of writing, accurately copying letters and words, spelling consistency, writing organization and coherence.

Learning disabilities with language (aphasia/dysphasia): Language is also considered an output activity because it requires organizing thoughts in the brain and calling upon the right words to verbally explain something or communicate with someone else. Signs of language base learning disorder involve problems with verbal language skills such as ability to understand the meaning and use of words, parts of speech etc.

Other disorders are: difficulty with maths (dyscalculia) problem doing calculations. Sensory integration disorder (dyspraxia)–problem with hand-eye coordination, balance, manual dexterity.

Another form of disorder which is not strictly considered as a learning difficulty is ADHD (Attention deficit hyperactivity disorder) while not considered a learning disability, can certainly disrupt learning. Children with ADHD often have problems sitting still, staying focused, following instructions, staying organized and completing homework.

Autism – difficulty mastering certain academic skills can stem from pervasive developmental disorders such as autism and asperger's syndrome. Those with this problem have difficulty in learning basic skills and communicating.

A study in Canada by Sauve' (2016) revealed that 75% of students with learning disabilities abandon their post secondary education and 27% of disabilities identified at the post secondary level at Quebec relate to learning disabilities and attention deficit disorder. Another study by MacGregor, Oleson & Jacobson (2016) identified learning disability (LD) as a serious cause of academic set back among youths in the US. LD which denotes a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. Thus, study by (Rave & Lewis, 2011) quoted by MacGregor et al revealed that 31% of all students at the post secondary level nationwide have learning disabilities of all kinds. Learning disability is a hidden disability and, as such, the challenges faced by students with learning disability are often unnoticed or misunderstood (Shaw, 2006) especially at the post secondary level since it requires self disclosure from the student, whereas elementary and secondary schools are mandated to identify students with disabilities, post-secondary schools are not. It is not surprising then, that post secondary students with LD take longer to earn a degree and are more likely to leave post secondary schooling without earning a degree (Newman, Wagner, Knokey, Marder, Nagle, Shaver and Schwarting, 2011).

In Cross River University of Technology, Calabar, Nigeria, Faculty of Education in particular, many students find it difficult to acquire knowledge or skills in the same ways as their counterparts. This means they struggle to learn and therefore find themselves indulging in various forms of malpractices, and impersonation to succeed in assessments, tests and exams. Many students manifest problem of learning disability in their inability to carryout independent work, poor construction and coordination of ideas, spelling and grammatical problem, low level of concentration and general poor performance in course subjects.

The level of academic performance in Cross River University of Technology Calabar and of course in other Universities in Nigeria has become worrisome. One may want to ask if the students deliberately don't want to study, could it be the problem of one learning disability or the other? What are the learning problems common among students in Faculty of Education CRUTECH, Calabar?

**Purpose of the study**

The study aimed at investigating the manifestation of learning difficulties among undergraduate students in faculty of education, Cross River University of Technology Calabar. The following were the specific objectives for this research.

1. To determine the manifestation of learning difficulties among undergraduate students in Faculty of Education, CRUTECH, Calabar.
2. To find out if there is a difference in the manifestation of learning difficulties between male and female students.

**Research questions**

1. To what extend do undergraduate students in faculty of education manifest learning disorders?
2. What is the difference in the manifestation of learning difficulties between male and female students in faculty of education, CRUTECH, Calabar?

**Research hypotheses**

1. There is no significant manifestation of learning disorder among undergraduate students in faculty of education, CRUTECH Calabar.
2. Male and female undergraduate students in faculty of education do not significantly differ in manifestation of learning disorders.

## METHODOLOGY

The research design adopted for this study was the descriptive survey and expost facto method. This is because the study basically described the trend of learning disorder among undergraduate students and the variables were not inherently manipulated by the researcher. The study also allowed for sampling from which generalizations were made to the population. Thus the population of the present study comprised all the undergraduate students in faculty of education, Cross River University of Technology Calabar, in 2017/2018 academic session. Stratified random sampling technique was adopted to ascertain adequate representation of students from each stratum. A total of 240 undergraduate students formed the sample, 60 students drawn from each of the four levels. By gender, there were 125(52.10%) males and

115 (47.9%) females. In terms of academic departments, 112 (46.7%) were from Curriculum and Instructional Technology and 128 (53.3%) from Educational Foundations and Administration.

The data collection instrument was a facts finding questionnaire designed by the researcher titled learning disorder questionnaire LDQ. The instrument was validated by giving it to test experts in the faculty for correction and its reliability was ascertained through trail testing of the instrument against a sample not part of the target population of this study. Thus reliability coefficient of 0.92 was found through cronbanch Alpha.

## RESULTS AND INTERPRETATION

The descriptive statistics mean, standard deviation, standard error of the mean, minimum and maximum were computed using SPSS version 22. The results obtained are given in Table 1 below.

**Table 1: Descriptive statistics of learning difficulty variables**

| Learning difficulty variable | Mean | Std. dev. | Std. error | Minimum | Maximum |
|---|---|---|---|---|---|
| Dyslexia | 9.179 | 2.485 | .160 | 6 | 18 |
| Dysgraphia | 17.004 | 3.043 | .196 | 10 | 27 |
| Dyscalculia | 6.325 | 1.442 | .093 | 3 | 9 |
| ADHA | 9.638 | 2.314 | .149 | 6 | 16 |

The results in Table 1 show that these learning difficulties exist among the students. However no comparison can be made because these scores are raw and any such comparison of the computed statistics will be mis leading.

To test the hypothesis that there is no significant manifestation of learning disorder among undergraduate students in the Faculty of Education, CRUTECH, Calabar, the one sample population t-test was applied. This involved the comparison of the observed means against corresponding expected values. The results are shown in Table 2.

**Table 2: One sample population t-test for significance of manifestation of learning disorders**

| Learning disorder | Mean | Std. dev. | Std. error | Expected mean | t-value | p-value |
|---|---|---|---|---|---|---|
| Dyslexia | 9.179 | 2.485 | .160 | 9.000 | 1.117 | .265 |
| Dysgraphia | 17.004 | 3.043 | .196 | 15.000 | 10.203* | .000 |
| Dyscalculia | 6.325 | 1.442 | .093 | 4.5 | 19.613* | .000 |
| ADHD | 9.638 | 2.314 | .149 | 9.0 | 4.268* | .000 |

* Significant at .05 level. P<.05, df=239

The results in Table 2 show that the manifestation of dyslexia is higher (X = 9.179) than the expected level (M = 9.0) but the difference is not significant. For dysgraphia, dyscalculia and

ADHD, the observed mean manifestations (X=17.004, 6.325 & 9.638) are higher than their expected mean levels (M=15.0, 4.5 & 9.0) respectively and these differences are significant. Thus for these learning disorders, the null hypothesis was rejected. This means that there is significant manifestation of dysgraphia, dyscalculia and ADHD among the students of the Faculty of Education, CRUTECH, Calabar.

To test the hypothesis that male and female undergraduates differ-in the manifestation of learning disorders, independent sample t-test was applied with students' gender and independent variable and each of the learning disorder manifestation as dependent variable. Table 3 is a summary of the results obtained.

**Table 3: Independent sample t-test comparison of the manifestation of learning disorders by gender**

| Learning disorder | Gender | Mean | Std. dev. | Std. error | Mean difference | t-value | p-value |
|---|---|---|---|---|---|---|---|
| Dyslexia | Male<br>Female | 9.160<br>9.200 | 2.190<br>2.779 | .196<br>.259 | .040 | .122 | .901 |
| Dysgraphia | Male<br>Female | 17.528<br>16.435 | 2.858<br>3.146 | .256<br>.293 | 1.093 | 2.821* | .005 |
| Dyscalculia | Male<br>Female | 6.208<br>6.452 | 1.387<br>1.494 | .124<br>.139 | .244 | 1.313 | .190 |
| ADHD | Male<br>Female | 9.600<br>9.638 | 2.200<br>2.441 | .197<br>.228 | .038 | .261 | .794 |

* Significant at .05 level. P<.05, df=338

The results in Table 3 reveals that for dyslexia, dyscalculia and ADHD, the manifestation in females are higher (x=9.200, 6.422 & 9.678) than males (x=9.160, 6.208 & 9.600) respectively and for dysgraphia, the manifestation in males (x=17.528) is higher than that in females (x=16.435). However, these difference are significant only for dysgraphia (2.821, p=0.005<.05). These results show that the manifestation of learning disorders is significant only for dysgraphia and that there is no significant difference in the other three learning disorders.

The pearson product moment correlation, a measure of relationship, was computed for all possible pairs of learning disorders together with their respective p=value. The results are shown in Table 4.

**Table 4**
**Pearson product moment correlation matrix for the studied learning disorders**

| Learning disorder | Dyslexia | Dysgraphia | Dyscalculia | ADHD |
|---|---|---|---|---|
| Dyslexia | 1.000** | .475 | .083 | .171* |
| Dysgraphia | .000 | 1.000 | .105 | .389* |
| Dyscalculia | .200 | .106 | 1.000 | .168* |
| ADHD | .008 | .000 | .009 | 1.000 |

* Significant at .05 level, P<.05
** Values above main diagonal are correlation coefficients and below it are corresponding p-values.

The results in Table 4 show ADHD correlates positively and significantly with dyslexia (r-.171, p=.008(, dysgraphia (r=.389, p=.000) and dyscalculia (r=.168, p=.009), similarly, dyslexia correlates positively and significantly with dysgraphia (r=.475, p=.000). The other correlations are not significant. These results show that there is significant positive relationship between ADHD, dyslexia, dysgraphia and dyscalculia, and between dyslexia and dysgraphia. These relationships are all positive, meaning that an increase in one is associated with, but may not significantly cause or result in an increase in all the other learning disorders.

## DISCUSSION

The individual's level of intelligence no-doubt influences performance in academics as being widely perceived. However research has shown that various other factors affect learning and performance including learning disabilities ranging from dyslexia (reading and comprehension problem), dysgraphia writing problem) Dyscalculia (involving calculation).

Result of this study show the manifestation of learning difficulties among faculty of education students in Cross River University of Technology. This result corroborates Sauve (2016), study in Canada which revealed the manifestation of learning disabilities in Quebec post secondary schools. In the same vain Mac Gregor, Oleson and Jaobson (2016) identified learning disabilities as a serious cause of academic set back among youths in the US.

Result of the present study also revealed that there is a significant manifestation of Dysgraphia and dyscalculia as shown in table 2. This indicates that students in Faculty of Education, CRUTECH have serious problems with spelling words correctly, organization and coherence in writing, adequate use of vocabulary etc. The result also indicated that they have problems in the area of calculation and solving simple arithmetical problems.

In terms of gender difficulties in the manifestation of learning disabilities, results of this study showed that female students have more problems than males in calculations, attention-sitting still and staying focused for a reasonable period of time, and completing assignment. The males on the other hand manifested the problem of writing in terms of spelling words correctly, organization and coherence in writing. This is evident in table 3. One characteristics of development is that aspects of development are correlated. This seems to be the case with learning disabilities, as the results in table 4 indicates significant positive correlation between

reading and writing problems as well as positive relationships ADHD, dislexian, dysgraphia and dyscalculia.

## CONCLUSION

Learning disability or problem is apparently, a set-back factor in academic performance. It is revealed that learning disability is neither not a problem with intelligence nor with the individual's motivation. Learning new information and skills and putting them in use. Since this study has shown significant manifestations of learning disabilities among students in faculty of Education Cross River University of Technology. It can't be totally ruled out that this factor is highly responsible for poor academic performance of students.

### Recommendation

The following recommendations were proffered

1. General studies courses in the university which are concerned with teaching writing and calculation skills should be taken more seriously.
2. For the achievement of more effective results, student-teacher ratio in those courses should be drastically reduced by employing more capable and qualified hands in those areas.
3. Student should be exposed to tutorials, group assignments and presentation.

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