



## Gender Difference in Learning Approaches Among Education Students of Sule Lamido University Kafin Hausa, Jigawa State, North-West, Nigeria

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### Abstract

This study investigated gender difference in learning approaches among education students of Sule Lamido University Kafin Hausa, Jigawa State, North-West, Nigeria. Ex-post facto design was used. The study used 101 students as samples drawn from the university. The Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) was adopted to measure learning approaches. Cronbach Alpha, Pearson Product Moment Correlation Coefficient values of Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) were .77, and .62 respectively. The statistic used to analyze the data was t-test for independent sample. One hypothesis was formulated and tested. The study did not find any significant difference in learning approaches between female learners and male learners was not significant ( $p>0.05$ ). It was recommended that teachers should orient their students about learning approaches to studies as well as use of essay and objective test items as assessment tools throughout their programme.

**Keywords:** Learning approaches, gender, revised two-factor study process questionnaire (R-SPQ-2F).

### Introduction

There is lot disparity among university students which determines how they approach their studies. Psychologists have enlightened us on how these differences make or mar our individual success in life. There are differences in intelligence; attitude; anxiety; personality etc. to mention but a few. It is a known fact that Marton and Säljö (1976) were the first to introduce the concept of learning approach in the field of cognitive psychology. These men worked on how and why students engage in learning at the University of Gotenburg, Sweden, and came to discover that there were two categories of approaches these students adopt in their studies, namely, *deep* approach and *surface* approach. That is to say, Marton and Säljö (1976a & 1976b) came up with this idea of “approach to learning”, which became the point of departure and there for the emerging conceptual framework known generically as “student approaches to learning” (SAL) theory (Biggs, 1993a; Entwistle & Waterston, 1988). SAL theory has in fact become a meta-theory for conceptualizing teaching and learning, which has gone in two major directions: phenomenography (Marton, 1981; Prosser & Trigwell, 1998) and constructivism and systems theory (Biggs, 1999; Dart & Boulton-Lewis, 1998). It was on these concepts many higher



education researchers built on in their studies. Several scholars have established that the learning approach adopted by a student is related to the quality of his learning outcome (Subasinghe and Wanniachchi, 2013 and Valadas, 2013).

Negash, Eshete and Hanago (2022) stated that, learning approaches are strategies applied to learning that are critical to success, considered essential for acquiring good grades, and useful for learning throughout one's life. According to Mel (2021), deep learning is a committed approach to learning where the learner uses higher-order cognitive skills to master academic content, work collaboratively and think and interact critically and actively with the content being learned. While surface learning is more concern with passing the course with little effort, and many times engage in memorization of learning material. Sagar (2020) put forth that, the deep learning approach encourages learners to think critically, understand meaning and can apply what they learn to new situations and contexts. In addition, Amadi and Ironanya (2020) also stated that the essence of deep learning understands true knowing. However, for surface learning, learners tend to avoid the hard work and instead rely on single source of information, and as a result, they learn only what is required but nothing more (Biggs in Mel, 2021), (Hussin, Hamed and Jam 2017). Furthermore, the surface learning is a rather passive approach to learning where students scraping the surface of the material being studied and concentrating only on the assessment requirements without getting into the details, with the only intention of passing the exams or test (Mel, 2021). Meanwhile, Pute, Abdul-Latif, Mansor and Halid (2018) also stated that a student using a surface approach only intended to capture contents in total, rather than understand it thoroughly.

Harputlu (2011) found gender difference in academic performance on deep and surface learning approaches among Turkish university students. His studies revealed that female Turkish university students adopt surface approach score low in academic achievement compared to their male counter parts. While, male university students who score higher on deep approach did better than female students in academic performance. The surface approach is totally in distinction with the deep approach. Therefore, it is important for the educators to understand the different ways how the students learn and interpret. Understanding the learner types among our students is very important in helping and guiding them in their more meaningful learning process. This is because of the learning approaches will influence the academic attainment. According to Cetin and Mart (2016), the massive gaps between deep and surface approaches have been consistently established across a large variety of qualitative and quantitative studies in numerous countries and study fields through diverse testing methods. Learning approaches have been linked to the performance of students' learning outcomes, which may depend to the evaluation approach used. Desierto, Maio, Rourke and Edith (2019) put forth that, in moving from surface to deep learning strategies, students can alternate between both learning approaches depending on their academic tasks or when struggling with their workloads.

Negash, Eshete and Hanago (2022) conducted a research on Students' learning approaches as a factor of academic achievement at selected public universities: A cross-sectional study a cross-sectional study was conducted on 123 anesthesia students. All 3rd- and 4th-year students were recruited for the study. Study Skills Inventory for Students (ASSIST) was used to assess students' learning approaches. An independent *t*-test was used to determine the presence



of a difference in academic achievement across learning approaches. Bivariate and multivariable linear regressions were fitted to assess the association of students' characteristics and learning approaches with their academic achievement. A *P*-value of less than 0.05 was used to declare the statistical significance.

In another study, Donald and Jackling (2007) did not find any significant difference between male and female Chinese and Australian university students on deep and surface learning approaches. Chan (2003) conducted a similar study on Hong Kong education students and did not observe any significant gender difference in the learning approaches of these students. In earlier study, Lim (2004) found a slight difference among National University of Singapore students in academic performance. Male were slightly higher than female students on deep learning strategies. This was also the case on surface learning strategies.

Gurjiya (2021) conducted an investigation on gender disparity in learning approaches and academic performance among Colleges of Education students in Katsina state. The researcher used 333 students drawn from three tertiary institutions. The study did not find any significant difference in the academic performance of male deep learners and female deep learners approach. So also the study did not find any significant difference in the academic performance of male surface learners and female surface learners. Roslandb and Abdullah (2021) examined students' intention to engage in deep learning with the aim to understand them better. Their findings revealed that majority of students practice surface learning approach. They used Theory of Planned Behavior, where they related the components of the theory with main quest of students' intention to engage in deep learning, where the attainable predictors are students' attitude, subjective norm, and perceived behavioral control. Online survey was conducted and analyzed both statistically and descriptively, revealed that students are deep learners. The model was also found significant, with all three predictors were positive and significantly contributing to students' intention to engage in deep learning. Nonetheless, detailed analysis suggests that none of the predictors appeared to have a stronger effect over the others. The findings from their study confirm the applicability of the Theory of Planned Behavior in explaining students' intention to engage in deep learning. Harputlu (2011) found gender difference in academic performance on deep and surface learning approaches among Turkish university students. His studies revealed that female Turkish university students adopt surface approach score low in academic achievement compared to their male counter parts. While, male university students who score higher on deep approach did better than female students in academic performance.

In another study by Senemoglu (2011) did found significant gender difference between Turkish and American college of education students. The study revealed that male students were higher on deep approach, while female students were found to be higher on surface approach. Samosa (2021) investigated on Cooperative Learning Approach as Innovation to Improve Students' Academic Achievement and Attitude in Teaching Biology. The study sought to determine the effectiveness of cooperative learning approach against conventional teaching. The study employed the experimental type of research. The design compared the result obtained from researcher – made - achievement test and attitude survey in biology in experimental sample which is cooperative learning approach with the control sample exposed to Direct Instruction. The study revealed that the gained scores of the experimental group gained 41.86 % from the





pre- and post-achievement test greater than the controlled group gained score of 36.49 %. Furthermore, in the attitude survey showed that the experimental group gained 81.90 % from the pre- and post-attitude survey which greater than the control group gained 81.69%. Using t- test of significance in both control group and experimental group showed that there is no significance difference between pre – achievement test and post – achievement test at probability level of greater than 0.05. Mel (2021) conducted study on Deep versus Surface Learning: A Study among DTP3 Thermodynamics Students in Politeknik Kuching Sarawak, Malaysia. The study showed that deep learning approach was the most dominant learning approach used by the students. Then, the study also showed that the deep learning approach had positive correlation with academic attainment while the surface learning approach was inversely proportional with academic attainment. Therefore, students are encouraging to become a deep learner rather than surface learner. Furthermore, the study also revealed that the significant of educators to teach awareness to the students on the different approaches in their learning. Thus, by promoting or inducing the deep learning approach among students, it is hope that the surface approach to learning can be minimized. Educators also need to be aware that their teaching practices can affect the intention of the students to learning too.

The two broad learning approaches, deep and surface have consistently emerged through research in this area. Students' learning approaches are particularly important to teachers because they are not fixed traits and are susceptible to outside influences, especially the learning environment, teaching methods and assessment tools. With knowledge of strategies, which encourage deep learning and surface learning by teachers, students' learning at higher level of education will be improved. This paper investigated the learning approaches (deep and surface) of students of Sule Lamido University, Kafin Hausa, Jigawa State, North West, Nigeria.

## Objectives of the Study

The objective of this study is to find out if there is sex difference in learning approaches among Education students of Sule Lamido University, Kafin Hausa, Jigawa State.

## Hypothesis

In carrying out the study, the following hypothesis was formulated:

H<sub>01</sub> There is no significant sex difference in learning approaches among Education students of Sule Lamido University, Kafin Hausa, Jigawa state, North-West, Nigeria.

## Methodology

The population of this study consisted of 432 Education students of Sule Lamido University, Kafin Hausa, Jigawa State. Out of the population, one hundred and one (101) Education students were sampled (Research Advisors, 2006). Simple random sampling technique (hat-and-draw) was adopted in selecting the actual participants of the study. The instrument used in this research was the 20-item Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) developed by Biggs, Keber and Leung (2001) which was adopted. The instrument contains two sections: Section A requires participants to provide personal information, while Section B contains the 20-item 5-point Likert Scale loaded with learning approaches items.. For reliability



the Cronbach Alpha and Pearson Product Moment Correlation Coefficient (PPMC) values of Revised Two-Factor Study Process Questionnaire (R-SPQ-2F) were .77 and .62 respectively. The content validity of the instrument was determined by panel of experts at the Department of Educational Foundations, Yusuf Maitama Sule University, Kano. These experts concluded that the instrument has good content validity. The researcher visited the institution to administer the questionnaire with active help from the lecturer holding lectures at the time of the visit. The subjects were then requested to fill in and submit the questionnaire there and then. The researcher later used t-test statistical tool to analyze the data of male and female learning approaches. The null hypothesis was tested at a 0.05 level of significance. The data collected were at the interval and the hypothesis was tested using t-test for independent sample. T-test was used as the researcher compared two set of data, namely, male learning approach and female learning approach. The null hypothesis was tested at a 0.05 level of significance.

## Results

### H01:

The hypothesis was concerned with establishing whether there was no significant sex difference in learning approaches among Education students of Sule Lamido University, Kafin Hausa, Jigawa state, North-West, Nigeria.

**Table 1: Analysis of Sex Difference Male Learners and Female Learners (N=99)**

Variables	N	Mean	Std Deviation	t-cal	p-value	Decision
Male	76	61.53	12.044	5.96	.552	Accepted
Female	25	63.20	12.590			

Table 1 presents the result of t-test for independent sample analysis on sex differences in learning approach (DLA). Female learners were found to be better than male learners in learning approach. The mean scores of male learners ( $M = 61.53, SD = 12.04$ ) was lower than the mean a female deep learners ( $M = 63.20, SD = 12.59$ ),  $t(99) = 5.96, p = .55$ . This means that female education students used good learning approach strategies more skillfully than male education students. Nevertheless, the t-calculated was higher than t-critical ( $t\text{-cal} > 1.96$ ) and the p-value indicated that the difference in learning approaches between female learners and male learners was not significant ( $p > 0.05$ ). The hypothesis, which stated that there is no significant sex difference learning approaches in education students of Sule Lamido University, Kafin Hausa was retained.

## Discussion of Findings

The study investigated whether there is gender difference in learning approaches among Education students of Sule Lamido University, Kafin Hausa, Jigawa State. The result of the analysis did not find significant sex differences in male students and female students in learning approaches. Even though the result of the study revealed that female students have higher score



than male students in learning approaches. The study was not in agreement with the studies of Lim (2004) and Harputlu (2011) Senemoglu (2011) Chan (2003). These studies conducted did not observe any significant gender difference in the learning approaches of these students. Evidence from the study indicated that female students have demonstrated higher scores than male students. The result had invariably displayed that female students were motivated to adopt deep learning strategies to get higher scores more than the male students. The motivation might lie in the fact that average female students need to prove evidence that they really grasped the meaning of learning material before they can get higher scores. More so, female students in the university in this part of the country are mostly from elite families, who are well-to-do and mostly educated. So, they really know their family expectation of them. Therefore, they adhere strictly to the rule of the game. Anything short of graduating not on time and with high grades is not welcome.

## Conclusion

From the analysis and interpretation of the data collected, the following conclusion could be made about the study. The study had explained that female students used learning strategies more effectively than their male counter parts. This explains why they were better than male learners in learning approaches. Teachers at university should be aware about this and investigate further why female students fair better than their male counter parts.

## Recommendation

Lecturers in the university should ensure that students are made to understand that learning at university is about understanding the several concepts, procedures, principles, skills etc. That learning at this level reward comprehension and application of knowledge taught here. Teachers should adopt strategies which will ensure that even the male students toe the line of their female counter parts in adopting deep learning approach. Teachers should also use assessment tools such as essay and objective test items that support the use of deep learning approach.

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