



Influence of Gender, Self-Efficacy and Motivation on Students' Achievement in Physical and Health Education in Bichi Educational Zone

Alairu Aminat

Federal College of Education (T) Bichi P.M.B. 3734, Physical and Health Education Department FCE (T) Bichi, Kano State, Nigeria.

Abstract

This study examined the influence of gender, self-efficacy and motivation on students' achievement in Physical and health education. Three research questions were raised to guide the study, the researcher employed a survey research descriptive design. The population for the study consists of **major government or state owned both male and female schools within Bichi educational zone in Kano State**. 5518 students in the junior secondary schools in the zone were targeted. The sample size for this study was five hundred and fifty-one (551) students in ten junior secondary schools offering physical and health education at JSS level sampling by balloting methods. The instrument used was a structured questionnaire with 5point Likert scale whose reliability was 0.729. Mean, standard deviation and t-test techniques were used to analyze the data. The findings showed that the female students had higher achievement scores than the male students but there was **no significant difference** in the obtained mean scores. The influence of motivation helped **boys to** work harder in both field, track and some indoor games than the girls when they have creative teachers with **positive** influence on self-efficacy. It was recommended that teachers should use improve method of teaching that motivate students in their rate of assimilation. Government should **provide** infrastructural facilities for field, tracks and other indoor games with forth filed furniture's, books and laboratory equipment. Schools **should publish** annual reports of academic achievements of outstanding performance of students according to their level.

Key Words: Gender, Self-efficacy, Students' Achievement, Physical and health Education

Introduction

Regular participation in physical education has been observed to help children and young children to build and maintain healthy bones, muscles and joints, help to control body weight, reduce the fat and develop efficient function of the heart and lungs world health Organization, (2016) state that physical education contributes to the development of movement and coordination and help prevent and control feelings anxiety and depression among younger children. It has also been found that children who involved more physical education activities perform better academically with intrinsic motivation and promote self-esteem among the youth. Participation in play, games and other physical activities, give the young one's opportunities for self-expression, building self-confidence, feeling achievement, social interaction and integration. This positive effect helps to counteract the risks and harms caused by the demanding, competitive, stressful and sedentary way of life that is so common in young people's life today. Participating in properly guided physical education can also foster the adoption of other healthy behavior which includes the avoidance of alcohol, drug use and violent behavior.

The influence of gender on student's achievement in Nigeria has for a long been a concern to educational researchers. Surprisingly, no consistent result has been obtained. There is

different view on the influences of gender on academic achievement and misconception. While some reported that gender had no effect on achievement in science (Agbejaye and Adegbola, 2017; Matazu & Kamar, (2018). Others explained that female subjects were significantly better than the male subject Olagunju, & Babayemi, (2014). Other opined that male performed better than female counterparts in physical and health education, therefor contrary to the view expressed above, some other researchers reported that male subjects were superior over their female counterparts in science achievement. (Taiwo & Emeke, 2014).

Academic achievement is an important parameter in measuring success of students. Observations and reports have shown that success or high academic achievement has become a herculean task to accomplish by students in recent times. Poor academic achievement is recorded both at the secondary and tertiary levels of education in Nigeria (Gana, Ugwuanyi & Ageda, 2019). Academic performance in school is evaluated in a number of ways in order for the students to demonstrate their knowledge by taking written and oral tests, performing presentations, submission of homework and participating in class activities and discussion. Kipngeno, (2018); Saputro, Irwanto, Atun & Wilujeng, (2019) opined that teacher evaluate in the form of

assignment, test and examination to describe how well a student has done. Without any doubt, these factors affect the educational attainments of students but important as well are certain factors such as the gender of the students, self-efficacy factors of the students and motivation of the students toward learning.

Gender is the range of physical, biological, mental and behavioral characteristics pertaining to and differentiating between masculinity and femineity. Olagunju & Babayemi, (2014) and Matazu & Kamar, (2018). Depending on the context, the term may refer to biological sex (i.e. the state of being male, female or intersex), sex based social structure (including gender roles and other social roles or gender identity (Agbejaye and Adegbola, 2017). Gender issues are currently the main focus of discussion and research all over the world, Nigeria inclusive. Oludipe (2012) reported that in Nigeria as in many African societies, there is gender bias, a situation in which cultural beliefs and structural arrangement favour men over women. This can be witnessed in most of elective positions contestable by man and woman. People always see women as not fit to govern or rule since men are involved. The idea that female should be under and submissive to men have created negative influence in the life women folk. Differences in academic achievement of the two genders are likely to contribute disparities in the allocation of cognitive roles in the world of work. Numerous studies on sex differences in cognitive achievement have been reported. Tavakoli & Koosha, (2016); Nnoli, & Okafor, (2017); Ezema, Ugwuanyi, Okeke, & Orji, (2022) asserted that males have larger average brain sizes than females and therefore, would be expected to have higher average Intelligent Quotient (IQ).

Gender differences in achievement have been examined for some time resulting in a substantial body of literature, Oyuga, Raburu & Aloka (2019), Some of these researchers pointed out that there is no significant gender difference in students-academic achievement and retention in various subjects while others found significant difference with either the boys or the girls performing better. Gender is the range of physical, biological, mental and behavioral characteristics pertaining to and differentiating between masculinity and feminity (Unity and Igbudu, 2015). Depending on the context, the term may refer to biological sex (i.e. the state of being male, female or intersex), sex based social structure (including gender roles and other social roles) or gender identity (Agbejaye and Adegbola, 2017).

Academic self-efficacy has been defined as personal judgments of one's capabilities to organize and execute causes of action to attain designated type of educational performance' Osenweugwor (2018). Academic self-efficacy has been reported to promote academic performance directly and indirectly by increasing aspirations and pro-social behavior (Kapucu 2017 and Kandil, & Işıksal-Bostan, 2018). Many researchers have reported a direct positive relationship between academic self-efficacy

and academic performance (e.g van, Jansen & van de Grift (2017); However Wahyudiati, Rohaeti, Irwanto & Sumardi (2020) reported a research conducted by Arslan (2012) in which a model explaining the impact of 220 high school students' perceptions of classroom structures on their academic self-efficacy, instrumentality and academic performance was tested. Self-efficacy was reported to have a direct positive relationship demonstrating the importance of self-efficacy for successful learning. Bailey, Lombardi, Cordova & Sinatra, (2017) they found that prior grade point average is a better predictor of performance than academic self-efficacy, while Alhadabi & Karpinski (2019) have found self-efficacy to have a small positive effect on end of year results especially for high achieving students above and beyond the variance explained by prior academic performance. Meanwhile, Hüseyin, Yıldız & Mehmet (2018) argued that perceived self-efficacy is often a better predictor under variable conditions than past performance, because according to him efficacy judgment encompasses more information than just the executed action. Fitriani, Zubaidah,, Susilo & Al Muhdhar (2020). also posited that self-efficacy beliefs not only involve the exercise of control over action but also the self-regulation of various personal determinants of learning, such as thought processes and motivation. Most of the available literature reviewed here revealed that self-efficacy grossly influenced students' performance. Students who have high self-efficacy are more likely to perform better than those with low self-efficacy.

Motivation, like other attitudinal behaviors, encompasses many aspects and one of such aspects is motivational orientation. According to Suprpto, Chang, & Ku, (2017) motivational orientation act as a driving force that encourages a person to engage in a task. Motivational orientation consists of several constructs and among these are intrinsic motivation, extrinsic motivation, personal relevance, self-efficacy, self-determination, and assessment anxiety. Intrinsic motivation is an inner force that motivates students to engage in academic activities, because they are interested in learning and they enjoy the learning process as well. Suprpto, *e tal* (2017) explained that intrinsic motivation is the true drive-in human nature, which drives individuals to search for and to face new challenges. Their abilities are put to the test and they are eager to learn even when there are no external rewards to be won.

Unlike intrinsic motivation, extrinsic motivation drives students to engage in academic tasks for external reasons. Extrinsic motivators include parental expectations, expectations of other trusted role models, earning potential to enroll in a course later and good grades (Tavakoli, & Koosha, 2016) extrinsic motivation promotes effort and performance with rewards serving as positive rein-forcers for the desired behavior. Extrinsic motivation typically produces immediate results and requires less effort in comparison to intrinsic motivation (Stewart, Bachman and Johson, 2010)

Statement of the Problem

The rate at which students are performing in Physical and health education at junior certificate examinations is not as expected thereby calling for urgent attention. Government, parents, teachers and students blame one another for students' poor performance in the schools. Parents blame teachers for lack of dedication to duties. The teachers blame government for poor salaries hence they are poorly motivated, parents also accuse government for not equipping the schools with learning materials, government blame parents for not doing good homework and the students are blamed for lack of discipline and dedication to their studies. In the light of the above issues, the outstanding and relevant question is: how would the gender, self-efficacy and motivation influence the students' academic performance in Physical and health education in secondary schools in bichi educational zone in Kano state, Nigeria.

Purpose of the Study

1. To determine the influence of gender on the students' achievement in Physical and health education in secondary schools in Bichi Educational zone
2. To determine the influence of self-efficacy on the students' achievement in Physical and health education in secondary schools in Bichi Educational zone
3. To determine the influence of motivation on the students' achievement in Physical and health education in secondary schools in Bichi educational zone

Research Questions

1. What influence does gender has on the students' achievement in Physical and health education in secondary school in Bichi educational zone?
2. What influence does self-efficacy has on the students' achievement in Physical and health education in secondary school in Bichie educational zone? ,
3. What influence does motivation has on the students' achievement in Physical and health education in secondary school in Bichi educational zone?

Research Instruments;

The instrument used for data collection was a adapted *structured questionnaire with 5 point Likert in Physical and Health Education Achievement Test (PHEAT)* drawn from previous JSS 3 question papers (questions bank) was used as an instrument The tests items were validated by Senior Lecturers at the department of science education Bichi, Bayero University department of physical and health education Kano and experienced teachers from the two secondary schools that were used for the study. From the 50 test items constructed 40 were accepted based on the valuator's recommendations. Its reliability was obtained by using Cronbachs coefficient alpha that gave reliability value of 0.729 on the fifty (40) items used.

Table1; Physical and Health Education Test Blue Print

CONTENT	Weight s	Knowle dge 30%	Comprehen sion 22%	Applicat ion 17%	Analy sis 12.5%	Synthe sis 10%	Evaluat ion 7.5%	Tot al 100 %
Athletics concept	25%	3	3	1	1	1	1	10
Ball/Game soccer's	20%	3	1	1	1	1	1	8
Aquatic sprints	17%	2	1	2	2	0	0	7
Pathogen/Diseases/pr evention	20%	2	2	1	1	1	1	8
Gymnastic indoor game	17.5%	2	2	2	0	1	0	7
Total		12	9	7	5	4	3	40

Population of the study

The population for the study consists of major government or state owned both male and female junior secondary schools within bichi educational zone in Kano State. While 5518 students in the zone were targeted. The sample size for this study was five hundred and fifty-one (551) respondents sampled through multi-stage proportional sampling procedure, sampling of schools was carried out by balloting methods for both male and female juniors' secondary schools offering physical and health education at JSS level. where ten junior's secondaries were selected five for male and five for females within the zone which includes one hundred and eighty-three, (183) male students and three hundred and sixty-five (368) female students,

Table; 2 Population of JSS 3 schools that offer Physical and Health Education in the Study area.

S/N	Bichi Educational Zone	Number schools offer PHE	JSS	Number of PHE Students
1	Bichi	9		1624
2	Danzabuwa	2		169
3	Tsanyawa	2		218
4	Kwandawa	2		142
5	Kabagiwa	2		152
6	Kiyawa	2		187
7	Unguwa-Gyartai	2		149
8	Yandade	3		165
9	Kunchi	3		174
10	Shuwaki	2		168

11	Romo	2	212
12	Baigwi	3	403
14	Badodo	3	306
15	Muji	2	379
16	Badau	3	278
17	Gogori	2	157
18	Daddauda	2	245
19	Gadanya	3	389
Total		49	5,518

Bichi educational zone 2020

Sampling Technic

Table 3 Showing the schools selected and their location with the numbers.

No	Name of school	Types of school	of location	Gender		Total
				Male	female	
1	Government girls' secondary school Bichi	Day	Bichi	63		63
2	Hagagawa government junior secondary school	Day	Bichi	51		51
3	Government girls' secondary school opposite police barrack	Day	Bichi		82	82
4	Government girls' secondary school Dansabuwa	Day	Dansabuwa		73	73
5	Hagagawa girls Junior Secondary school	Day	Bichi		46	46
6	Government day secondary school kabagiwa	Day	Kabagiwa	32		32
7	Bude waje primary/secondary school	Day	Bichi	23	48	71
8	Government secondary school boy Bichi	Boarding	Bichi	53		53
9	Government secondary school boy shuwake	Day	shuwake	24		24
10	Government girl secondary school Gadayan	Day	Gadayan		56	56
Total				183	368	551

Methodology

The descriptive survey design was adopted. Mean, Standard deviation and t-test techniques were employed to analyze the data. The instrument was pilot test in Dala educational zone to test the consistency of the instrument,

Results

Research Question one: What influence does gender has on the students' achievement in physical and health education in secondary school in bichi educational zone?

Table 4 Students performance according to gender

Variable	Gender	N	Mean	Std D	Std Error
Achievement	Male	183	2,63	1.577	0.117
	female	368	2.65	1.414	0.074

From table 4 the mean achievement score of the female students (2.65) was higher than that of the male students (2.63). This implied that the female students have higher achievement scores than the male students in this study.

Table 5 The results of independent samples t-test for the students' responses on the difference in their achievement by gender among secondary school students in Physical and health education T- test for equality of means

Variable	Mean	Sd	Mean D	DF	Std error	t cal	P val	Decision
Achievement	2.63	1.557	-0.018	549	0.018	-0.138	0.890	NS
	2.65	1.414						

From table 5 it was discovered that the p-value 0.890 is greater than alpha 0.05. Therefore, the null hypothesis **that** states that there is no significant difference in the mean score rating of the students' gender and their achievement in the Physical and health education in secondary schools in Bichi Educational zone is retained. Although the female students have higher achievement score (mean 2.65; standard deviation 1.414) than male students (mean= 2.63; standard deviation 1.577) there is no significant difference in the mean scores. Therefore, the null hypothesis is retained.

Research Question Two: What influence does self-efficacy has on the students' achievement in Physical and health education in secondary school in bichi educational zone?

Table 6: Showing the standard deviation and mean rating score of students' responses on the influence of self-efficacy on their achievement in Physical and health education

Variable	Mean (x)	Standard Deviation (SD)	Correlation	Significance
Achievement	2.64	1.471		
Self-actualization	4.00	2.094	-0.017	0.689
Optimism status	3.16	0.816	-0.156	0.000

From the table 6 the Self-actualization have higher mean rating score (4.00) than the mean rating score of the Optimism status (3.16) on the students' achievement in Physical and health education. This shows that the self-efficacy has positive influence on the students' achievement in Physical and health education.

Table 7; Showing the paired sample of the self-efficacy on the students' achievement in Physical and health Education Paired Differences.

Variable	Mean	Sd	DF	Std error	t cal	P val	Decision
Self -efficacy	1.355	2.580	551	0.110	12.342	0.000	
Achievement.	0.518	1.790	551	0.074	6.800	0.000	NS

From table 7 it was discovered that the P values are 0.000 and 0.000 which are lesser than alpha 0.05. This confirmed that the null hypothesis that there is no significant difference in the mean score of the self-efficacy and the students' achievement in Physical and health education is retained. Research Questions three: What influence does motivation has on the students' achievement in Physical and health education in secondary school in bichi educational zone?

Table 8; Showing the standard deviation and mean rating score of students' responses on the influence of motivation on achievement

S/N	STATEMENT	X	SD	Remark
1	Girls often take down note while been taught in field, track, indoor games and classroom activities than the boys	3.10	1.408	Agreed
2	Boys perform excellently in field and track activities than the girls	2.81	1.306	Agreed
3	Girls tends to be reserved then the boys during tracks and field activities or during practical class.	2.98	1.258	Agreed
4	Boys pay more attention to tracks, field, swimming with indoor game than the girls	2.77	1.354	Agreed
5	Girls always take the lead position in class works activities than the boys	3.43	1.456	Agreed
6	Girls always have higher score than boys in test and examination assessment	3.35	1.402	Agreed
7	Boys are more intelligent than girls when involved in field and track activities.	2.83	1.375	Agreed
8	Girls speak fluently than boys but have difficulty in writing down note	3.02	1.340	Agreed

9	Girls perform excellently in oral test than boys in a written test	3.12	1.337	Agreed
10	Boys work very hard in their weak subjects when they have creative teachers than girls	3.37	1.477	Agreed

From the table 5 at mean score rating above 2.50, it was discovered that girls often take down note while been taught in class than the boys; boys perform excellently in field, swimming and endurance activities than the girls in bichi educational zone in Kano. Girls tends to be reserved then the boys during field and tracks activities; boys pay more attention to practical class than the girls; girls always take the lead position in class work activities than the boys; girls always have higher score than the boys in test and examination assessment; boys are more intelligent than girls when answering questions; boys speak fluently than girls but have difficulty in writing note; girls perform excellently in oral test than boys in a written test and boys work very hard in their weak subjects when they have creative teachers than girls

Discussion of Results

The mean achievement score of the female students (2.65) was higher than that of the male students' mean achievement score (2.63). This implied that the female students have higher achievement score than the male students in this study. It was discovered that the p- values 0.890 and 0.894 are greater than alpha 0.05. Therefore, the null hypothesis was accepted. Although the female students have higher achievement score (mean= 2.65.; Standard deviation 1.414) than male students (mean 2.63; standard deviation 1.577) there is no significant statistical difference in these averages. This agreed with the study carried out by Babajide (2010) and Aminat, (2022) which has diverse observation carried out was that female schools in bichi educational zone often equipped more than male schools in the zone, in term of structure and other facilities female schools has more than male canter path this help in influence female higher achievement than male fork in this educational zone.

The self-actualization has higher mean rating score (4.00) effects than the mean rating score of the optimism status (3.16) on the students' achievement in Physical and health education. This shows that the self-efficacy has positive influence on the students' achievement in Physical and health education. The P value of self-actualization was 0.689 though greater than 0.05 while the P value of the optimism status was 0,000 lesser than 0.05 showing that the self-actualization has significant effect on the students' achievement in Physical and health education. This was in in agreement with Adeoye and Abimbola, (2018) that stated that the academic achievement of a child is also largely determined by the self-efficacy self-determination.

It was discovered that girls often take down note during lesson in the class and tracks activities than the boys; boys perform excellently in field, tracks events and practical class/activities than the girls; girls tends to be reserved then the boys during field activities; boys pay more attention to practical activities in the field than the girls; girls always take the lead position in written examination and class activities than the boys; girls always have higher score than the boys in test and examination assessment; boys are more intelligent than girls when answering questions; boys speak fluently than girls but have difficulty in writing note; girls perform excellently in oral test than boys in a written test and boys work harder in their weak subjects when they have creative teachers than girls. This agreed with the study carried out by Babajide (2010).

Implication of the study

The implication of this study is that parents, teachers, the school authorities and policy makers are expected to work together in order to promote students' achievement in Physical and health education through provision of adequate motivational environment, understanding of the role of self-efficacy and students' gender in enhancing their achievement.

Conclusion

This study concludes that students' gender, self-efficacy and motivation have a way to boost students' achievement in physical and health education geared toward teaching and practicing in education which aid in providing the skills needed to inculcate the value of practical skills into the students.

Recommendations

Based on the findings of this study, the following recommendations are made:

- > Teachers should avoid being gender biased in their appraisal of students' achievement in Physical and health education so as to encourage them to acquire the needed skill through **the** schools.
- > School administrators and heads of department should encourage both male and female students by providing needed learning materials as these will promote students' learning in the secondary schools, thereby promoting skill acquisition in the schools.
- > Parents should treat their children equally irrespectively of their gender for positive learning at school.
- > Teachers should inform the students that their self-efficacy determine their altitude, they must develop good self-efficacy toward their education in order to excel in life which determine their level of motivation.

Reference

- Adeoye, G.A & Abimbola, (2018) Effects of senior school students use of demo kit on their achievement in biology in Omu-Aran, Nigeria, *Electronic Journal of Science Education* 20 (8),188-202
- Agbejeye S.i., & Adegola .I. (2017) Gender and Workshop facilities as determinant of student performance in technical education in Tertiary Institution for sustainable Economic recovery in Nigeria 30th National Annual Conference of NATT at Bauchi 23th-26th October , 2017
- Alhadabi, A. & Karpinski, A. C. (2019). Arı, Demet & Sadi, Özlem (2019). Effectiveness of cooperative learning on students' achievement in genetics, self-efficacy and conceptions of learning biology. *Inquiry in education*, 11(2). 11-19
- Aminat (2022), Innovative teaching strategies with improved ecological resources on academic achievement for value re-orientation for quality education in bichi educational zone, kano state Nigeria *Journal of Education Research ad Library Practice* 26 (8) 87-100
- Bailey, J. M., Lombardi, D., Cordova, J. R. & Sinatra C. M. (2017). Meeting students halfway: increasing self-efficacy and promoting knowledge change in astronomy. *Physical Review Physics Education Research*, 13.
- Çapri, B. (2013). Investigating university students' attitude towards physics lesson, their self-efficacy beliefs and burnout levels for the prediction of their academic success in physics lessons. *Educational Research and Reviews*, 8(10), 646-652.
- Ezema, M. J., Ugwuanyi, C. S., Okeke, C. I. & Orji, E. I. (2022). Influence of cognitive ability on students' conceptual change in particulate nature of matter in physics. *Journal of Turkish Science Education*, 19(1), 194-217.
- Fitriani, A., Zubaidah, S., Susilo, H., & Al Muhdhar, M. H. I. (2020). The effects of integrated problem-based learning, predict, observe, explain on problem-solving skills and self-efficacy. *Eurasian Journal of Educational Research*, 85, 45–64.
- Gana, C.S., Ugwuanyi, C.S. & Ageda, T.A. (2019). Students' psychological predictors of academic achievement in physics. *International Journal of Research and Innovation in Social Science*, 3(9).
- Hüseyin, A., Yıldız, B.D & Mehmet, Ü. (2018). The relationships between positive and negative perfectionisms, self-handicapping, self-efficacy and academic achievement. *European Journal of Contemporary Education*, 7(1), 7-20.
- Kandil, S. & Işıksal-Bostan, M. (2018). Effect of inquiry-based instruction enriched with origami activities on achievement and self- efficacy in geometry. *International Journal of Mathematical Education in Science and Technology*, 5211.

- Kapucu, S. (2017). Predicting physics achievement: attitude towards physics, self-efficacy of learning physics, and mathematics achievement. *Asia-Pacific Forum on Science Learning and Teaching*, 18, 1,
- Kipngeno, L. (2018). *Teacher factors influencing academic performance of secondary school students in physics: A study of secondary schools in Bureti sub county, Kericho county-Kenya*. (Unpublished Master Thesis), Department of Curriculum Instruction and Educational Media in the School of Education, Moi University, Eldoret, Kenya.
- Matazu, S.S. & Kamar, Y.M. (2018). Bridging Gender Disparity in Academic Attainment Using Activity Based Instruction and Demonstration Method in Basic Science among Pupils in Katsina State, Nigeria. *British Journal of Education (BJE)*. 6 (6). 1089-1093.
- Nnoli, J.N. & Okafor, C.U. (2017). Enhancing Students' Academic Achievement and Retention of Knowledge through the use of Chemistry Instructional Materials: Implication for STEM Education in our Society. 60th Anniversary Conference Proceedings of STAN
- Olagunju, A.M. & Babayemi, J.O. (2014) Effects of enhanced explicit teaching strategy and gender on students' attitude to basic science. *Journal of Education and Leadership Development*, 6(2), 150-165
- Oludipe, D.I. (2012). Gender difference in Nigerian junior secondary students' academic achievement in basic science. *Journal of Educational and Social Research*, 2(1), 93-99.
- Osenwegwor, N.A. (2018). Self-efficacy and emotional intelligence among Nigerian adolescents in single-sex and co-educational secondary schools. *Journal of Education and Practice*, 9 (11).
- Oyuga, P.A., Raburu, P.A. & Aloka, P.J.O. (2019). Relationship between self-efficacy and academic performance among orphaned secondary school students in Kenya. *International Journal of Psychology and Behavioral Sciences*, 9(3), 39-46.
- Saputro, A. D., Irwanto, Atun, S. & Wilujeng, I. (2019). The impact of problem-solving instruction on academic achievement and science process skills among prospective elementary teachers. *Elementary Education Online*, 18(2), 496-507.
- Suprpto, N., Chang, T. & Ku, C. (2017). Conception of learning physics and self-efficacy among Indonesian university students. *Journal of Baltic Science Education*, 16(1), 7-19
- Stewart, C., Bachman C., & Johnson, R. (2010) Students Characteristics and the motivation orientation for online and traditional degree programs. *Journal of online learning and Teaching* 6 (2) 367-379
- Taiwo, S.K. & Emeke, E.A. (2014). Relationship among learning style preference, gender, age and students' achievement in senior secondary school biology. *West African journal of Education*.4(2) 76-88

- Tavakoli, H. & Koosha, M. (2016). The effect of explicit metacognitive strategy instruction on reading comprehension and self-efficacy beliefs: The case of Iranian university EFL students. *Porta Linguarum*; 25(1) 119-133
- van Rooij, E.C.M., Jansen, E. P. W. A. & van de Grift, W. J. C. M. (2017). Factors that contribute to secondary school students' self-efficacy in being a successful university student. *Research in Post-Compulsory Education*, 22(4), 535–555.
- Wahyudiati, D., Rohaeti, E., Irwanto, Wiyarsi, A. & Sumardi, L. (2020). Attitudes toward chemistry, self-efficacy, and learning experiences of pre-service chemistry teachers: Grade level and gender differences. *International Journal of Instruction*, 13(1), 235-254.
- World health organisation (2016): An Awareness of Wellness through Sports. *Proceeding of the Nigeria Association of Sport Science and Medicine (NASSM)* Edited by Amus.L.O. Femisayo Commercial Press. Ibadan