International Journal of Indonesian Education and Teaching

International Journal of Indonesian Education and Teaching
http://e-journal.usd.ac.id/index.php/IJIET
Sanata Dharma University, Yogyakarta, Indonesia

# HYPOTHETICAL APPROACHES TO SCAFFOLDING FOR LEARNING OF STUDIO PAINTINGS

#### Michael Olubunmi Odewumi

University of Ilorin, Nigeria agbegilerebunm@yahoo.com https://doi.org/10.24071/ijiet.v4i1.2220 received 20 July 2019; accepted 1 December 2019

#### **Abstract**

Painting is a branch of visual arts discipline in Nigeria education and often traced to Paleolithic age. The study was inspired by the dismal attitude of undergraduate towards painting and painting media this makes it very important for painting instructors to vary both media and method in painting. Therefore, Scaffolding serves as a panacea in filling the existing gap. Quasi-experimental design was used in the study. 60 undergraduate fine arts students of 200 levels of 29 males and 31 females were taken from a Nigeria university. The study presented two research questions and formulated two null hypotheses at 0.05 level of significance. Scaffolding Painting Achievement Test (SPAT) was of 50 items objectives question extract from validated JAMB visual arts examination was the test items. The Data collected were analyzed with ANCOVA and t-test. Study disclosed that undergraduate students taught painting via Scaffolding performed better and no significant difference was recorded between the mean of bothfemale and male arts learners exposed to Scaffolding. It was recommended that Scaffolding should be used for teaching of painting in Nigeria university.

**Keywords**: curriculum of arts, gender, learning, teaching method, studio paintings, scaffolding

### Introduction

Arts is considered as part of the man's experience and expression that features in diverse ways. Arts have its sources from the cave men and develop the learners' imagination and creativity. Arts promotes understand and express of feelings and ideas; assisting the learners to understand and visualize other subjects; helping learners to observe the world and develops value with the world around them (Punzalan, 2018; Odewumi, Omoyajowo, Onojah & Ajala, 2018). The curriculum content of arts in Nigeria senior secondary is divided into creative and performing arts. The creative arts enveloped both fine and applied arts. Applied arts are of graphics, textile, photography etc, while Fine arts is of both handy and premise with the branches as drawing, sculpture, craft and painting (Usman, Odewumi, Obotuke, Apolola & Ogunyinka, 2014).

Paintings a unique stem of fine arts in which the use of either knives or brushes are manipulate to stretch colours on a given surface for beautification and

aesthetic. The term painting has been portrayed by scholars in diverse ways. Painting is an act of applying colour or colours on to a prepared surface with theuse of object. It is also the technique of spreading of colour on the surfaces of sketches and diagrams. In essence, it is the evenly spreading of colour to the existing walls, canvas and drawn objects purposely to change the colour (Odewumi& Okonkwo, 2017; Odewumi & Bello, 2017). The authors further explained the technique in paintings like pointillism, wash, impasto, mix media which are used todepict types of paintings such as still life, nature, figure or life, land and sea etc. Despite the creativity and fun in painting as a course of study, student's performances are very low.

In another dimension, researchers have expressed concerned about the problem militating against the delivery of learning content in 21st century globally. Studies have itemized problem militating against teaching of fine arts which the teaching of painting is a stem. Gambari, Obielodan and Kawu (2017) explicated that traditional method of instruction delivery is archaic and dismal to educational industry. Similarly, Adegoke (2011) reacted that more harms have been done to the system of education in Nigeria through conventional delivery system in the classroom. In reacting to these statements, study have emphasized that content delivery should be diverse to enable the stated educational goal achieved. The teaching methodology should be varied by the instructor to enable them achieved the stated objective.

In achieving aforementioned goals on accusation of paintings skills in Nigeria educational context, diverse pedagogical is put forward for proper teaching and learning of the course content, among them is the scaffolding method of instruction delivery. Therefore, Scaffolding is an avenue for interactional relating to learning and solution to teaching of paintings in the institution of learning. Although, Scaffolding appeared in the context of education in early 60s and it was linked with Social Constructivism Theory (SCT) that emphasizes helping and assistance given in a way of providing adequate solution to learning problem from an expert (Dinh, 2016). Empirical evidences on the definition of Scaffolding is inconclusive. For instance, the study of Wood, Bruner and Ross (1976) explicated scaffolding as a process of solving instructional task which learners can not solve individually. Sawyer (2005) explained that Scaffolding is the assistance provides to learners' during learning process which helps learners to achieve predetermined goal. A study by Mercer and Littleton (2007) expressed that scaffolding as an energetic and sensitive participation of both teachers and students in learning procedural. Similarly, Obikwelu, Read and Sim (2013) articulated that scaffolding is a developmental form of assistance that introduces a bridge to the existing gap created between what the learners has known and what is aspiring to know. Also, School (2017) declared that Scaffolding is a means of providing provisional support to both male and female learners' needs to enable them achieved their learning goal.

On gender and scaffoldings, the study by Bahador, Zand-Moghadam, Fanaie (2017) examined the role of gender through scaffolding mechanism in learning, the findings show that female-female pairs manifested more struggling than their pairs. In the same vein, Dawkins, Hedgeland and Jordan (2017) stressed that scaffolding

aids exhibited bias in favour of male learners than female. Also, Wood, Petkovski, De Pasquale, Gottardo, Evans and Savage (2016) stressed that scaffolding technology among the young male learners through parental assistance is positive. Also, Azih and Nwosu (2011) established that gender had no significant interaction in the teaching of Financial Accounting through Scaffolding instruction.

Since, scaffolding is a supportive instructional devices given to the learners towards a new conceptual and theoretical task that tailored the learners towards achieving a specified goal through the preliminary stages of learners' exposures to series of directions. Belland (2014) submitted that for scaffolding to take proper shape in teaching, instructor need to provide adequate supports to learners' ability and responses. If the support yields positive in term of understanding and competence in the earlier stage, the instructor should fade their supportive aid and also equip the learners with responsibility to move advanced independently to the next. Previous studies have revealed the efficacy of Scaffold on learners' acquisition of knowledge. Studies recommended that a well designed Scaffolding systematic delivery of instruction, combine to accommodate learners' different stages of knowledge acquisition and ability (Alibali, 2006), Studies have stressed the effectiveness and relevance of Scaffold for learning in different stages of educational development. For example, van Driel, Slot and Bakker (2018) established that scaffolding is positive in teaching the primary school Scientific Language Development. Also, the study by Slam Khan am, Fatima, Akba, Muhammad (2017) acknowledged Scaffold as effective in handling Post Graduate student's studies. More so, the effectiveness of scaffolding is well pronounced in different discipline. For example, Gibbons (2002) affirmed the usefulness and positive of scaffolding in teaching of language. Similarly, Reynolds and Goodwin (2016) suggested that scaffolding benefits the low readers in learning. Whereas, Chen and Law (2016) emphasised that scaffolding brings positive influence on students learning and acquisition of Writing skills.

In relating to the above statement, several studies have stressed the relevance of scaffolding for learning. For example, Miller, Russell, Cheng and Skarbek (2015) examined efficacy of writing competence and ability to reason clearly among the nursing in training. The authors recommended scaffold method of instruction to improve nursing writing skills. van de Pol, Volman, Oort and Beishuizen (2015) conducted a study on the effectiveness of scaffolding on the students independent in relating to time, task effort and achievement. The study concluded with Scaffolding not unequivocally but depends on the aforementioned variables. More so, Slam Khan am, Fatima, Akba, Muhammad (2017) researched the impact of Scaffold instructions on post graduate students learning. The study concluded that scaffolding assists to clarify concepts in postgraduate level of complex courses. In another study of Hasan (2018) on the effectiveness of scaffolding on the development of creative thinking on the academic writing skills of students in university education system, the findings revealed that both teachers and learners are of the same patterns in scaffolding technique of acquisition in creative writing skills. Also, Ismail, Ismail and Aun (2015) worked on Scaffoldingin the context of problem solving among learners. The studies considered

scaffolding as a determinant and a links between scaffolding pedagogical and learners' problem solving skills which was emphasized by the study of Vygotsky.

Although, this study focused on the acquisition of studio painting skills for secondary school creative arts students. The study therefore is aligned with the major theme of theoretical framework of Vygotsky's that is based on social interaction. This plays a fundamental role in the development of cognition skills. Vygotsky (1978) declared that a specific function in a child's immediate development features twice on both social level and individual level, although, most of the theory of cognitive were done on language learning among the children. Piaget's (1959) argued that children must development before precede learning. Whereas, Vygotsky stressed that learning is crucial and universal for process the development of culture. Never the less, scaffolding as a teaching pedagogical originates from Vygotsky's socio-cultural theory centre around the learners, in that what the child can do and also assist to perform before the next learning to achieve with aid or tip from the competent hand (Raymond, 2000). The study by Chang, Sung and Chen (2002) reflected on the scaffolding as teaching method that provides support based on individualized learning. In essence, scaffolding is a role play by teachers in supporting the learner's improvement and given assistance to support actions to attain the next stage or level.

Obliviously, Scaffolding has been successful method of studies sciences, languages, readings, etc., but there are no studies known so far on scaffoldings and creative studio paintings. Despite, the rapid increase in the pedagogical use of scaffolding globally as a supportive measure and use in teaching learning tasks. It is clear that Scaffolding method of instruction in Nigeria secondary education is underused and lagging. Moreover, the need for scaffolding and its dully integration for acquisition of knowledge by promoting positive learning is imperative in teaching of creative and visual arts in Nigeria schools and colleges is imperative. Although, Scaffolding have the innate to expose and integrate learners to facts through guidance from experts. The extent to which the instructors perceived the usefulness of scaffolding in Nigeria educational context is still unknown. Therefore, based on this aforementioned statement, the current study examined the learning of creative painting skill in the arts studio through scaffolding aid in Nigeria University. However, the present study was put up to fillexisting gaps created by the previous studies, by examine the effectiveness of scaffolding aid on the studio painting skills acquired in the fine arts studio by the undergraduate fine arts students in Nigeria university.

#### Method

The study employed quasi- experimental design method of pre and post-test. The 200 level undergraduate students were the targeted population. The students were involved based on individual consent. It was only the students whose responded positively and showed interest that were chosen to take active part in the study.

## Participants/sample

The study engaged sixty (60) undergraduate 200 level fine arts students and they were purposively selected. The criteria used to picked the University for study were; fine and applied arts has been accredited and taught in the university for the past five years, there were qualified instructors teaching different courses in paintings, availability of a painting studio which is stocked with paintings materials like donkey chairs and easels for holding of paintings, and lastly, the university has graduates with the degree of Bachelor of Technology (B.Tech) specializing in fine and applied arts and major in Painting. The selected undergraduate students were randomly grouped into control group and experimental groups of twenty nine female and thirty one male with the total of number of sixty visual arts students.

# Study instruments.

The instruments of study were:

- 1. The teaching content from extracted syllabus provided by the department which has been in used for accreditation by the Nigeria University Commission and for teaching the painting courses for the past five years (Course Code: FAA 201 and course title: Introduction to Paintings)
- 2. Lesson Notes: six weeks comprehensive lesson plan written checked and signed by the Heads of Department of the department of fine and applied arts.
- 3. Materials; (i) Non Human Resources: easel, donkey chairs, postal and oil paints, pastels and colour crayons, canvas and cardboards, drawing pins, bladeetc are provided. (ii). Human Resources: Two instructors with minimum of Bachelor of Education specialised in fine arts and major in paintings.
- 4. Test items or questions named Scaffolding Painting Achievement Test (SPAT), was extracted from the validated JAMB question from year 2013 to 2018.
- 5. Marking guides: The solution to the test items.

### Experimental Procedure

The methods and instructions guiding the study were stated in the manual given to both instructor and learners. The Scaffolding Painting Achievement Test(SPAT) was first administered by the researchers to the students.

**Table 1.** The t-test showing the equality of the undergraduate students before the

Variable	N	Mean	Std. Deviation	t	df	sig
Experimental	2	37.5	9.0	2.342	57	.004
group	9					
Conventional	3	30.1	13.0			
group	0					

The table shows that the significant value of .004 is lesser than 0.05 alpha level which indicates no different between the experimental and conventional groups. In essence, the groups has the same entry behaviour.

More so, in line with the experiment, the two experienced instructors used were certified Bachelor of Fine Education Degree specialist in painting from a reputable institutions with additional qualifications in fine arts. They were designated to handles the treatment (experimental group) followings scaffolding procedures. The four stages in paintings were vividly explained along with the practical. The students were guided to followed the demonstrations (practical) of the instructor with each stage of (a) Drawing of the object. (b) Glazing with light and colours, (c) Application of paints to bring out tones and (d) Finishing. The instructors allowed the learners to proceed after satisfied with each stage till the last stage in sequence for six weeks.

The conventional group were also taught with the topics by the instructors of the same qualification of Bachelor of Fine Education Degree specialist in paintings from another reputable institution with additional qualifications on fine arts, with suitable teaching resources. After which the learners were gathered in a big hall to write Scaffolding Painting Achievement Test (SPAT) with paper and pencil. The test instruments Scaffolding Painting Achievement Test (SPAT), consisted of 50 objective test items with option 'A' to 'E' as the likely answer to the given question and the learners answers were scored on obtainable 100 marks which has been re arranged.

### Collection of Data

The data gathered from the test instruments were analyzed with mean and standard deviation and the hypotheses is tested at 0.05 level of significance.

### Testing of Hypotheses

Ho<sub>1</sub>. There is no significant difference in the achievement of undergraduate students taught with studio painting skills through scaffolding.

To test this hypothesis, the pre-test mean scores and post-test mean scores of undergraduate learners exposed to Scaffolding were analyzed with t-test, this is shown in e 1.

**Table 2.** t-test of the pre and post test means scores of learners exposed to scaffoldings.

Variable	Mean	N	Std. Deviation	t	df	Sig. (2-tailed)
Pre –test	12.21	29	1.58	40.852	28	.000
Post-test	71.31	29	9.40			

Table 2 explains the t-test statistical output of the achievement of experimental groups at both pre and post test level. From the table, the F-value is 14.413 and the p -value of .000 was less than the level of significant (0.05). This indicates that there was a significant difference between the mean scores. Hence, the null hypothesis is rejected.

Ho<sub>2</sub>. There is no significant difference in the achievement of male and female undergraduate learners taught with scaffolding studio painting skills through scaffolding.

The hypotheses two is tested with t-test to compared mean scores of undergraduate male and female learners of visual arts exposed to Scaffoldings shown in Table 3.

**Table 3**. The One-Sample Statistics (t-test) of male and female students taught with scaffoldings.

Variable	N	Mean	Std. Deviation	df	t	Sig. (2-	
						tailed)	
Female	14	68.86	9.43	13	27.301	.000	
Male	15	73.60	9.07	14			

Table 3 also explains the t-test statistical output of undergraduate male and female taught with scaffoldings aid. From the table, the t value was .185 and the p-value of .654 was greater than the level of significant 0.05. This indicates that there is no significant difference between the mean scores of the experimental group and the control group. Hence, hypotheses one is accepted.

### **Findings and Discussions**

The hypothesis one that stated that, there is no significant difference in the achievement of undergraduate students taught with studio painting skills through scaffolding is rejected. The finding agreed with the findings of Dinh (2016), whose finding established that scaffolding is positive and also brings collaboration among the learners and considered to support meaningful learning. Also, that scaffolding helps in producing and upholding positive and stimulating learning. Similarly, the findings are in line with the findings of Reiser and Tabak (2014) whose findings stressed that scaffolding promotes self individual learning among the students. In the same vein, the finding conforms with the findings of Jumaat and Tasir (2014) who finding confirmed that scaffolding promotes learning and knowledge acquisition through teacher's facilitation. Also, the findings in accord with the findings of Reingold, Rimor and Kalay 2008 and the study of Sharmaand Hannafin 2007 whose finding stressed the effectiveness of scaffolding in promoting positive learning. The findings conform to the findings of Olson and Prath (2000) whose findings observed that scaffolding is significant and assists learners to achieve their goal through self directed.

Moreover, the finding is in support of the findings of Huang, Wu, and Chen (2012) whose findings mentioned that scaffolding is an effective instructional pedagogical in various educational stages. The findings negate the finding of Anne and Alan (2009) whose findings stated that the higher level of cognitive in term of scaffolding acquisition of knowledge had a negative effect on the learner's development and capability to complete a definite task via solitary on instruction. In essence, it is real that scaffolding promotes learning of both theory and practical courses.

On gender, this hypothesis that stated no significant difference in the achievement of male and female undergraduate learners taught with scaffolding studio painting skills through scaffolding is also accepted, the result of the findings is in line with the findings of Azih and Nwosu (2011) whose findings established that using instructional scaffolding to study financial accounting is positive and without gender biased. Also, the findings in conform with the findings of Rahmani and Abbas (2014) whose findings confirmed that scaffolding is significantly increased the engagement of girls than boy in double-loop learning(DLL) peer game. Also, the findings are in line with the findings of Gibson, Jardine-Wright and Bateman (2015) whose study on Scaffolding recently been argued that it preferentially benefits female students, therefore it has the potential to aid in reducing the gender gap.

#### **Conclusion**

In conclusion, the study has strong implication in teaching of paintings skill. Although, Scaffolding is an educational pedagogical tool towards achieving specifying learning goals, the study exhibited the efficacy of scaffolding in teaching of studio paintings. Also, the study pointed out the great improvement in promoting teaching and learning via scaffolding. Based on the outcome of the findings, the recommendations therefore are; ecturers should be encouraged to handling creative paintings teaching in Nigeria universities via scaffolding, overnment should provide enough the teaching materials for learning of paintings in Nigeria University, and government should monitor the lecturers to enable them judicious use of Scaffolding for Teaching and learning of painting courses.

In essence, Scaffolding could invariably be inculcating into teaching of paintings in Nigeria universities, teaching and learning would be advanced and positive.

#### References

- Adegoke, B. A. (2011). Effect of multimedia instruction on senior secondary school students' achievement in physics. *European Journal Educ. Studies*, *3*, 537-541 Alibali, M. (2006). Does visual scaffolding facilitate students' mathematics
- learning. Evidence from Early Algebra. Retrieved September, 12, 2008. Anne, J. & Alan, (2009). Maternal support for autonomy: Relationships with
- persistence for children with Down syndrome and typically developing children. *Research in Developmental Disabilities*, 30(5), 1023-1032
- Aslam N., Khan am A., Fatima G., Akbar A., Muhammad N., (2017). A study of the impact of scaffold instructions on the learning achievements of post graduate. *Students Journal of Arts and social Sciences*, 4(1).
- Azih, N. & Nwosu, B.O. (2011). effects of instructional scaffolding on the achievement of male and female students in financial accounting in secondary schools in Abakaliki Urban of Ebonyi State, Nigeria. *Current Research Journal of Social Sciences*, 3(2), 66-70

- Belland, B. R. (2014). Scaffolding: Definition, current debates, and future directions. In *Handbook of research on educational communications and technology* (pp. 505-518). Springer, New York.
- Bello, I. & Odewumi, M. O. (2017). Relevance of painting packages on the performance of junior secondary students in creative arts in Ila Orangun, Nigeria. *Journal of curriculum and instruction*, 10(2),107-117.
- Chang, K., Chen, I., & Sung, Y. (2002). The effect of concept mapping to enhance text comprehension and summarization. *The Journal of Experimental Education*, 71(1), 5-23.
- Chen, C. H., & Law, V. (2016). Scaffolding individual and collaborative game-based learning in learning performance and intrinsic motivation. *Computers in Human Behavior*, 55, 1201-1212.
- Dawkins, H., Hedgeland, H., & Jordan, S. (2017). Impact of scaffolding and question structure on the gender gap. Phys. Rev. Phys. Educ. Res. 13,Retrived from <a href="https://journals.aps.org/prper/abstract/10.1103/PhysRevPhysEducRes.13.020">https://journals.aps.org/prper/abstract/10.1103/PhysRevPhysEducRes.13.020</a>
- Dinh H. (2016). *The effectiveness of scaffolding in a blended learning course from students' perspective*. A Master's Thesis in Education submitted to Faculty of Education University of Oulu
- Gambari, A. I., Obielodan, O. O., & Kawu, H. (2017). Effects of virtual laboratory on achievement levels and gender of secondary school chemistry students in individualized and collaborative settings in Minna, Nigeria. *Online J. New Horizons Educ.*, 7, 86-102
- Gibson, V. Jardine-Wright, L. and Bateman, E. (2015). An investigation into the impact of question structure on the performance of first year physics undergraduate students at the University of Cambridge, *Eur. Journal Phys. 36*, 045014
- Hasan, M. (2018). Impact of Motivational Scaffolding on the Acquisition of Writing Skills in L2 Situation. *International Journal of Humanities and Social Science Invention*, 7(12)39-45.
- Huang, H., Wu, C., & Chen, N. (2012). The effectiveness of using procedural scaffoldings in a paper-plus-smartphone collaborative learning context. *Computers & Education*, 59(2), 250-259.
- Ismail N., Ismail, K., & Nur, S. M. S. A. (2015). The role of scaffolding in problem solving skills among children. *International Proceedings of Economics Development and Research IPEDR*, 85, 154-158.
- Jumaat, N. F., & Tasir, Z. (2014). *Instructional scaffolding in online learning environment: A meta-analysis*. Teaching and Learning in Computing and Engineering (LaTiCE), 2014 International Conference On, 74-77.
- Mercer, N. and Littleton, K. (2007). *Dialogue and the development of children's thinking: A sociocultural approach*. London: Routledge
- Miller, L. C., Russell, C. L., Cheng, A. L., & Skarbek, A. J. (2015). Evaluating undergraduate nursing students' self-efficacy and competence in writing: Effects of a writing intensive intervention. *Nurse Education in Practice*, *15*(3), 174-180.

- Obikwelu, C., Read, J. & Sim, G. (2013). Children's problem-solving in serious games: The "Fine-tuning system (FTS)" elaborated. *Electronic Journal of e-Learning*, 11(1), 49-60.
- Odewumi, M. O. & Okonkwo, I. E. (2017). Effect of painting series package on the performances of junior secondary cultural and creative arts in Ogbomoso, Nigeria. *African Journal Online* (AJOL), *17*(3),324-333.
- Odewumi M. O., Omoyajowo B. S., Onojah A. O., & Ajala I. R. (2018). Students exploring educational e-learning technology of podcasts on fine arts instruction in Nigeria universities. *Pakistan Journal of Education*, 35(2), 175-192.
- Olson, J., & Parth, T. (2000). The instructional cycle: Teaching children and adolescents with special needs. Prentice Hall Inc., New Jersey.
- Punzalan, J. F. (2018). The impact of visual arts in students' academic performance. *International Journal of Education and Research*, 6(7), 122-130.
- Piaget, J. (1959). The language and thought of the child (Vol. 5). Psychology Press Rahmani, E. & Abbas, M. (2014). The Influence of single-gender peer scaffolding in problem-based gaming on performance in double-loop learning and sub-dimensions of science process skills. Procedia Social and Behavioral Sciences, 116(2014), 4103-4107
- Raymond, E. (2000). Cognitive characteristics. Learners with mild disabilities (pp. 169-201). Needham Heights, MA: Allyn & Bacon, A Pearson Education Company.
- Reingold, R., Rimor, R., & Kalay, A. (2008). Instructor's scaffolding in support of student's metacognition through a teacher education online course: A case study. *Journal of Interactive Online Learning*, 7(2),139-151.
- Reiser, B., & Tabak, I. (2014). *Scaffolding*. The Cambridge Handbook of the Learning Sciences, 44-62
- Reynolds, D., & Goodwin, A. (2016). Supporting students reading complex texts: Evidence for motivational scaffolding. AERA Open, 2(4), 2332858416680353.
- Sharma, P., & Hannafin, M. J. (2007). Scaffolding in technology-enhanced learning environments. *Interactive Learning Environments*, 15(1), 27-46
- Sawyer, R. K. (2005). *The Cambridge handbook of the learning science*. Cambridge: Cambridge University Press.
- School, C. (2017). Effective scaffolding. Instructional scaffolding noun a learning process designed to promote a deeper level of learning. <a href="http://www.chaucer.sheffield.sch.uk/images/schoolimprovement/tla/scaffolding.pdf">http://www.chaucer.sheffield.sch.uk/images/schoolimprovement/tla/scaffolding.pdf</a>
- An de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacher–student interaction: A decade of research. *Educational Psychology Review*, 22(3), 271-296.
- Van de Pol, J., Volman, M., Oort, F. & Beishuizen, J. (2015). The effects of scaffolding in the classroom: support contingency and student independent

- working time in relation to student achievement, task effort and appreciation of support, 43(5), 615–641.
- Van, D, S., Slot, E., & Bakker, A. (2018). A primary teacher learning to use scaffolding strategies to support pupils' scientific language development. *European Journal of STEM Education*, 3(2), 1-14
- Vygotsky, L.S. (1962). Thought and language. Cambridge, MA: MIT Press.Vygotsky, L.S. (1978). Mind in society. Cambridge, MA: Harvard University Press.
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100.
- Wood, E., Petkovski, M., De Pasquale D., Gottardo, A., Evans, M.A., & Savage, R.S. (2016). Parent scaffolding of young children when engaged with mobile technology. *Front. Psychol*, 7(690). doi: 10.3389/fpsyg.2016.00690
- Usman, A., Odewumi, O., Obotuke, E., Apolola, O. & Ogunyinka, C. O. (2014). *Cultural and creative arts book one for junior secondary schools*. Ibadan, Nigeria: Spectrum Books Limited, Ring road Ibadan.