Book of Abstracts

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BAYERO UNIVERSITY, KANO

THEME

Issues In STEAM Education In The 21st Century

31 Monday, 31st May to Wednesday, 2nd June, 2021

10:00AM DAILY

Convocation Arena, BUK New Campus

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Teaching and learning of chemistry has generally been regarded as difficult task due to the abstract nature of the subject which results in the mass failure of students in chemistry. Several studies has shown that, 5Es'constructivist instructional approach is one of the best methods of teaching and learning as far as the academic achievement of students is considered. The approach focus on student-centered rather than teacher-centered teaching process guide learners to effectively take responsibility of their lessons. This study reviewed some studies on the effect of 5Es' instructional model on secondary school students' academic performance in chemistry. The studies were reviewed based on study area, research design, methodology, data analysis procedure and findings. The studies revealed that 5E's instructional model were conducted recently and show that the use of 5Es constructivist approach was superior to lecture methods in enhancing students' academic performance. The study recommended that chemistry teachers should employ the used of 5Es' instructional models in teaching and government, professional bodies, institution and relevant stake holders should organize seminars, workshop and re-training programmed for teachers on effective use of the strategy in teaching chemistry

Keywords: Academic performance, 5Es Instructional model, Chemistry

Effects of Scaffolding Technique on Secondary School Physics Students' Academic Achievement in Malumfashi Local Government, Katsina State, Nigeria

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This study investigated the Effects of Scaffolding Technique on Secondary School Physics Students' Academic Achievement in Malumfashi Local Government, Katsina State, Nigeria. Two research hypotheses were raised and tested at 0.5 levels of significance. The study adopted pre-test post-test quasi-experimental design. The population of the study consisted of one thousand and two (1,002) SSII Physics students from which a total of one hundred and twenty three (123) SSII Physics students drawn from two intact classes participated in the study. The schools were randomly assigned to experimental and control group. A forty (40) items multiple-choice "Physics Achievement Test" (PAT) was used for data collection. The instrument was validated by specialist and its reliability was established using Spearman Brown's formula and yielded reliability index of 0.85. The collected data was analyzed using SPSS Version 23 to answer the research questions using descriptive statistics (mean and standard deviation) and the null hypothesis was tested using Z-test. The findings of the study revealed that students taught using scaffolding technique performed higher than students taught using Lecture method, there is no significant difference in the mean achievement scores between male and female physics students taught using scaffolding techniques. On the basis of these findings, the study recommended that, physics teachers should be encourage to use scaffolding technique in the teaching the subject and other science subjects at secondary school because it improve student' academic achievement for both male and female students.

Keywords: Scaffolding Techniques, Physics students, Academic Achievement