ISSN 0975-1122
International Journal of
EDUCATIONAL SCIENCES

PRINT: ISSN 0975-1122 ONLINE: 2456-6322
Int J Edu Sci, 12(2): 155-168 (2016)
DOI: 10.31901/24566322.2016/12.02.07

Promoting Intrinsic and Extrinsic Motivation among Chemistry Students Using Computer-assisted Instruction

Eunice Eyitayo Olakanmi[1*], Amosa Isiaka Gambari[2], Elizabeth Bimpe Gbodi[3] and Nathan Eneojo Abalaka[2]

[1]Department of Science and Technology Education, University of Johannesburg, Johannesburg, South Africa
[2] Department of Science Education, Federal University of Technology, Minna, Nigeria
[3]Department of Science Education, IBB University Lapai, Nigeria

KEYWORDS Chemistry. Computer. Extrinsic Motivation. Gender. Intrinsic Motivation. Simulation

ABSTRACT This study established the effects of computer-assisted instruction in promoting intrinsic and extrinsic motivation among 90 senior secondary one (SS1) students from three secondary schools in Minna, Niger state Nigeria. A pre-test and post-test experimental design was used during which students were randomly assigned into either the experimental groups or the control group. The experimental group I was taught two selected concepts of chemistry using a computer simulation instructional package (CSIP), the experimental group II was exposed to computer tutorial instructional package (CTIP) while a conventional teaching method (CTM) was used for the control group. The Chemistry Achievement Test (CAT) and Chemistry Motivation Questionnaire (CMQ) were used for data collection. Additional qualitative data was collected using classroom observations as well as interview schedules. The outcome of this study revealed that students taught with CSIP performed better than those in CTIP and CTM groups. The CSIP and CTIP were found also to be gender friendly. Based on the findings, it was recommended that chemistry teachers should employ computer simulation for improving their students' performance and motivation in the subject.