

Effects of Autodesk Revits and Autocad On Spatial Ability of Higher National Diploma Students In Principle of Architectural Design and Drawing In South-West Nigeria

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Abstract

This study examined the effects of Autodesk Revits and AutoCAD on Spatial Ability of Higher National Diploma students in Principle of Architectural Design and Drawing in South-West Nigeria. Two purposes of the study, two research questions and three hypotheses guided the study. 2×2 factorial design which involved students in their intact classes assigned to treatment groups was adopted. The population for this study comprised of 317 HND I Building Technology students in all the ten Polytechnics offering Building Technology in South-West Nigeria in 2022/2023 academic session. The sample for the study consisted of 80 Male and 34 Female in their HND I totalling 114 students. The experiment commenced with a pre-test that was administered to all the treatment groups using Purdue Visualization of Rotation Test (PVRT) after which treatments were applied and post-test of PVRT was assigned to the treatment groups to have post treatment data for the dependent variables. The pre-test and post-test were analyzed using mean and standard deviation to answer the research questions. The hypotheses formulated for the study were tested at 0.05 level of significance using Analysis of Covariance (ANCOVA). Autodesk Revit was found to be effective in improving students' spatial ability than AutoCAD, however, this does not depend on level of gender. Hence, there was no significant interaction effect of treatment and gender on students' spatial ability in Principle of Architectural Design and Drawing. It was recommended that Autodesk Revit should be adopted to teach Principle of Architectural Design and Drawing.

Keywords: Effects of Autodesk Revits and Autocad On Spatial Ability of Higher National Diploma Students in Principle of Architectural Design and Drawing in South-West Nigeria