



DIFFERENTIAL EFFECTS OF TWO MODE OF INSTRUCTIONAL METHOD ON STUDENTS' PERFORMANCE IN WOODWORK TECHNOLOGY IN TECHNICAL COLLEGES

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Abstract

The study was to determine the two mode of instructional methods on students' performance in Woodwork. The population of the study consisted of 232 TC II students offering Woodwork in Niger State. The study sample was made up of 192 TC II Woodwork Technology students. The quasi-experimental research design which utilized non-randomized pre-test, post-test, experimental-control group design was employed. Mean, t-test, ANOVA and ANCOVA statistics were used to analyze data. The findings revealed that: there was a significant difference between the post-test Mean score of the control group taught with conventional teaching method and that of the experimental groups taught with Kolb's experiential learning model and Gardner's multiple intelligences learning model. It was recommended that woodwork teachers should be encouraged to employ Kolb's experiential learning model and Gardner's multiple intelligences learning model more in their teaching method in order to increase the level of students' performance in Woodwork.

Research Highlights

Woodwork technology is one of the professional subjects taught in Nigeria technical colleges. The objective of Woodwork technology as indicated by NBTE (2007) is to deliver talented experts for self or paid work in the realm of work. The fast changes in technology have required the need to furnish technical students with working environment essential and thinking abilities which will make them adaptable and versatile to the present and conceived future changes. Kolb's experiential learning model and Gardner's multiple intelligence learning model are contemporary methods for guidelines, equipped for improving the learner's/students' learning capacities and creating higher request thinking and solid critical thinking abilities in the student.

Research Objectives

This research work sought to examine the KEM, GMI, and CTM on the students performance in Woodwork Technology in Technical Colleges, The effect of gender on performance of students' in Woodwork Technology and also The interaction effect of KEM, GMI, and CTM and gender on Woodwork Technology students' performance in Technical Colleges

Methodology

The study employed a quasi-experimental research design. The population for this study consisted of all 232 TC II (male 165 and female 67) students in the two Technical Colleges in Niger State. The study sample consisted of 192 TC II Woodwork Technology purposively selected from the two Technical Colleges in Niger State offer Woodwork Technology.





Therefore, the sample consisted of 49 females and 143 males from two out of the four Technical Colleges offering Woodwork Technology in Niger State. The following instruments were used for data collection in this study: the researcher developed Woodwork Technology Achievement Test (WTAT) and Workplace Skills Rating Scale (WPSRS). The instruments were validated by three experts. The reliability of WTAT was determined by administering WTAT on a trial group of intact class of 40 TC II Woodwork Technology students in Technical Colleges within the study population but not included in the main study. Mean was used to answer the research questions. The hypotheses were tested with the t-test and analysis of covariance (ANCOVA). The statistical package for the social sciences (SPSS) computer analysis software was used for all data analysis.

Results

The study uncovered that there was contrast in the performance of students because of instructional strategies. The students educated with co-usable learning (Kolb's experiential learning model and Gardner's multiple intelligences learning model) performed higher than the students instructed with the customary instructing technique. The study uncovered that students instructed under the second trial gathering (Gardner's multiple intelligences learning model) accomplished more than those educated under Kolb's experiential learning model and ordinary showing strategy (73.19 Vs 72.27 Vs 53.94) separately. The impact of instructional strategy on Woodwork Technology students' procurement of work environment aptitudes obtaining in the post-test yielded F estimation of 24.075, being noteworthy just at .001, the basic F-esteem is 2.30 huge at .05 degree of essentialness. Testing at an alpha degree of .05, the determined Festeem (24.075) is more prominent than the basic F-esteem, in this way, the invalid speculation which expresses that there is no noteworthy distinction in the procurement of working environment abilities of ND II Woodwork Technology students instructed with KEM, GMI, and CTM is dismissed. Kolb's experiential learning model and Gardner's multiple intelligences learning model have been severally utilized by various analysts to improve academic, social aptitudes and work environment abilities at the different degrees of education (Uwameiye and Aduwa-Ogiegbean, 2016; Adeola, 2014; Gartner and Riessman, 2012; Kohler and Greenwood, 2010).

Findings

The finding of this study revealed that tutors (students) develop their capacity for communication in the process of performing their role as teachers. Mentors increase their level of knowledge as well as the organization of that knowledge for the purpose of teaching. Tutors develop a sense of responsibility to others in the group. Tutees may learn to concentrate for longer periods of time when taught by peer tutors, and find what is being taught interesting and easier because it is being taught by their peers



References

Kohler, F. W., & Greenwood, C.R. (2010). Peer-assisted interventions: Early promises, notable achievements, and future aspirations. *Clinical Psychology Review* 10 (4), 441 - 452. Federal Republic of Nigeria (2013). *National policy on education*. Lagos: NERDC

Gartner, A. J., & Riessman, F. (2012). Tutoring helps those who give, those who receive. *Educational Leadership Journal* 5 (1), 58 - 60.

Adeola, K. L. (2014). *The effect of peer tutoring on students academic achievement in business studies*. Unpublished M.Ed. Project, Department of Vocational and Technical Education, University of Benin, Benin City.

Uwameiye, R., & Osunde, A. U. (2015). Analysis of enrollment pattern in Nigerian polytechnics' academic programmes and gender imbalance. *Journal of Home Economics Research* 6 (1), 150 - 155.

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