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## TEACHING AND LEARNING OF WOODWORK TRADES IN NIGERIAN TECHNICAL COLLEGES USING VIDEOTAPED INSTRUCTIONAL PACKAGE

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### Abstract

*This study deals with teaching and learning of woodwork trades in Nigerian Technical colleges using video-taped instructional strategies. This study emphasizes the Origin of woodwork trades, teaching and learning of woodwork trades in technical colleges, problems confronting the teaching and learning of woodwork trades in technical colleges, the place of videotaped instructional package on skill impartation in woodwork and the level of learning outcome on the use of videotaped instructional package in woodwork skill acquisition and impartation. It is therefore recommended that government, instructors and researchers at all level should create more interest on the use of educational technology by producing video – tape instructional package not only in imparting skills in woodwork trade, but to also see it as one of the most effective methods of teaching and learning in technical colleges.*

Keywords: Teaching and learning, woodwork trade, videotaped, technical colleges, instructional packages.

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### Introduction

Woodwork technology skills are often imparted on students using: lecture method, project method, demonstration and field trip method. These methods are commonly used because woodwork requires the use of technical skills that will enable students themselves perform effectively based on the appropriate utilization of tools, equipment and proper maintenance for effective workshop practice (Eze, 2006). Also, instructors adopt these methods because they feel to the best of their knowledge, can help the students obtain effective communication and good results (Hamza, 2010).

Assessment of students' performance based on the use of any teaching methods for communication according to Jamiesen (2013) would result in either high grade or low grade. The scholar further stated that effective transfer of knowledge in teaching and learning is salient in human life, without which life will be totally meaningless. Since literacy is the goal of a teacher, a free flow of transfer of information between the teacher and learners through the use of videotaped instructional package with conventional method may be considered necessary by the instructors. Instructions from the teachers can then be encoded from signals, decoded and received by the

students for effective utilization of knowledge. Wood (2009) emphasized on communication as most important aspect of teaching and learning process. Thus the transmitted message could be received and interpreted (decoded) based on the receiver's field of study.

In order to alleviate the problems of poor teaching method, lack of professionally competence of vocational instructors, inadequate time allotted for teaching of woodwork practical, students poor attitudes towards vocational subjects and the lack of conducive environment, adoption of videotaped instructional package for Woodwork skill acquisition in technical colleges is suggested. This is because videotaped instruction can give room for skills acquisition at trainee's pace. In addition, it could make teaching and learning real and facilitate playback when required (Ajelabi, 2005).

#### Origin of Woodwork Trades

Woodwork as a trade is also referred to as skill of making items from wood. The operations in the trade include: furniture making, wood carving, wood turning, carpentry and joinery. Skill acquisition in woodwork trades can only be guaranteed if appropriate method is adopted in the training (Goli, 2002). Woodwork Trades can be seen as one of the branches of vocational courses and foundation of technical education curriculum. The origin of woodwork. dates back to the beginning of human communities. Thus it is a trade that existed in traditional forms of vocational education and allows people to work for their survival practically within

family circles. Under indigenous system or traditional vocational education, the Nigerian child was taught various skills like carpentry and joinery, weaving, sculpturing, blacksmithing, carving, farming, fishing, cattle rearing, hair plaiting, dress making, bead weaving, leather work, pottery, brick making, among others (Fafunwa, 1995).

During the colonial era in Nigeria, vocational education was not accorded a worthwhile recognition by the missionary school system. The British Education literacy spread widely almost hundred years in Nigeria and led to reading classics: Latin, Greek and Milton by the educated people. Most of Nigeria's early scholars were well known for their educational development leading to effective learning (Fafunwa, 1995). In the light of this, vocational education institutions had a very unpopular beginning in Nigeria; it was not given an overwhelming official recognition as was accorded grammar school education (Okoro, 1993). The unfortunate situation on the influence of missionary educators gave opportunity for the training of catechists and clerks. The vocational skill training began in formal education curriculum in 1909 when some forms of vocational education programmes like carpentry and joinery, bricklaying, auto mechanics, weaving and others were introduced in Nigeria. During this time, Nasarawa school was opened in 1909 in the North and the technical wings attached to it were leatherwork, carpentry, smiting, weaving and book binding. The apprenticeship programmes then consisted of a number of five parts; hence,

an apprentice was expected to demonstrate their skills and prove their occupational competence during training before they could be awarded apprenticeship certificate. In case of the apprenticeship programme organized in the school setting under entrepreneurship studies, the skills imparted are not enough.

In 1925, a memorandum on education policy by the British Tropical Africa was issued. The policy statement mandated the government to take more active parts in the vocational courses with the provision of tools, equipment and some qualified staff (Nduka, 1982). In the process, trade centres were established in 1934 beginning with Yaba Higher College (Okoro, 1993 and Imarhiegebe, 2003). The establishment of Yaba Higher College gave lots of motivation and courage to start enrolment with the basic facilities available for the programmes. Hence, engineering and Agriculture were offered to the first set of students (Rayan and Unwin, 2001). The conventional methods adopted in teaching the students include: lecture method, project method and field trip method.

In lecture methods, the instructors were to demonstrate some practical skills while the learners were to view and later practise the observable behaviours of the teachers in actualizing the practical skills to instructors' stated objectives. Hence, the Instructors' role was to evaluate the performance of the learners based on the stated objectives. The evaluation thus, showed how effective the teaching method was.

Project method was meant to assign learners into groups under the supervision of the teachers and the workshop attendance with the aim of carrying out a specified job. Learners were divided into sub-groups depending on the available space in the workshop. The use of basic tools was necessary for the project before achieving the expected skills to be acquired.

Field trips method was carried out outside the school workshop. Instructors and the craft men were to lead the learners to appropriate industries or schools that are well equipped with adequate tools, materials and equipment; while the workshop attendant were to supply the required tools needed for the students. The performances of the students who were properly guided by professional instructors were always encouraging.

#### Teaching and Learning of Woodwork Trades in Technical Colleges for Skills Acquisition

Woodwork trade is one of the essential trades of vocational and technical education. It requires the acquisition of practical skills with the use of wood for human needs in the vocations such as construction work, packaging and educational materials. Woodwork trades according to Agbo (2000), are types of training set to prepare the students' mind to earn a living in a related field depending largely on application of modern technology and design. According to Okoro (2000), woodwork trade is an integral part of building construction that provides skills, knowledge and attitudes

for effective occupation. In achieving this, adequate workshop is required. The basic projection for a small workshop organization recommended 20 students per one teacher at a time, and if more than 20 students then, medium workshop is required.

Teaching of woodwork trades in technical colleges depends on: the available competent instructors; appropriate teaching method and facilities like tools and equipment for carrying out practical in Wood workshops. Most schools adopt conventional method like project and field trip in teaching students, while those that are fairly equipped adopt lecture method and demonstration methods. According to Adewumi (2009), availability of competent instructors is important no matter what materials, tools and equipment on ground to transfer vocational guidance and skills to the trainees. The instructors should be well-trained in relevant skills and the use of basic facilities, portable powered tools and machines.

Wood workers are generally professional instructors, they are regarded as experienced wood workers because must have served for many years. Since instructors are expected to impart adequate skill on learners, students should be able to demonstrate skills acquired during the workshop practices. The term skill could be defined as the level of efficiency achieved or attained through repetitive performance of an operation. Ezeji (2003) referred to skill as organized way of carrying out activities in a sequential order with potentiality or

required ability with moderate cost for the attainment of good performance. For learners to be sound in woodwork practices, constant practice is required. Several methods of instruction could also be used to teach them. However, demonstration method could be seen as one of the best methods in the teaching and learning of woodwork. The use of Videotaped instruction could also be adopted with demonstration method to make acquisition of skill in woodwork more meaningful.

The best method to be used at any time is the method that impacts the necessary skills and abilities more than others. This means that woodwork skill acquisition practice are better achieved through activities or experiments demonstrated by the instructors after given due considerations to the facilities available on ground and students' ability (Ayegbusi; 2001).As supported by Uzoeachi (2007), the effective transfer of knowledge can only be achieved when students learn by practice.

Sufficient impartation of adequate skills by the woodwork instructors on students is necessary before the students can demonstrate the skills. Contrary to this submission, observation shows that the standard of performance of Nigerian technical college graduates, in general is very low, thereby retarding the overall productivity of Nigerian economy (Okorie; 2001). Ogundeji (2012) also observed that the problem affecting Trades Centre in Nigeria is that of production of unskilled technical personnel who cannot function

effectively well in imparting adequate skills in teaching and learning situation. As a result of this deficiency, the performance of trainees is found not encouraging based on the fact that technical college instructors are not sound enough in transferring adequate skill to the students in their various schools Oranu (2001).

In a comparative study on achievement of fortieth grade students taught by demonstration method with that of students taught by viewing and listening in other subjects like chemistry, Nwachukwu (1992) found that there was no significant difference in the performance of students in the three groups. The author expressed that students' achievement in the set objectives depend on: the methods adopted and the material resources used by the instructor in disseminating the instruction.

Consequently, some scholars have showcased the importance of videotaped instructional strategy. For example, in a study on explanatory use of videotaped instructional package in teacher's education, Gareth (1998) stated that videotaped instructional package was used on one hundred (100) students from five Colleges in Lusaka. The scholar found out that students exposed to videotaped instructional package performed significantly better than those exposed to lecture method. Also, in a study on effect of videotaped instructional package on secondary school achievement in creative design, the result of the study revealed that students taught with videotaped instructional package achieved better than

those taught with the lecture method (Osokoya; 2007). Therefore it is assumed that the use of videotaped instructional package is indispensable in teaching and learning situation and that it could be a supplement to other teaching method adopted in all technical colleges in Ekiti State. Most of the researches conducted on multi – media package by researchers have proved that videotaped instructional package has high potential in teaching and learning situation. Thus it can multiply and widen the channels for communication between the teacher and the students.

#### Problems Confronting the Teaching and Learning of Woodwork Trades in Technical Colleges in Nigeria

The existing problems that militate against the effective teaching of woodwork trades in technical colleges are: poor teaching method, lack of professionally qualified instructor, inadequate time allotted for the lesson, students' attitude towards vocational subjects and the environment.

- Inadequate time allotted to the lesson: Time allotted to each vocational subjects in technical colleges is too small, comparing with general subjects like English language and mathematics. According to Oranu (2000), five periods per week should be allocated to teach each vocational subject so that there will be effective transfer of adequate skills. In some schools and colleges, the period allotted to each subject is not up to four periods. The number of periods allotted to teach liberal Arts subjects are the same as

vocational subjects which should not be so. Akaninwor (2001) posited that one of the aims of vocational education in the school and colleges is preparation of individual learners to earn a living by acquiring adequate skills and habits that can make them self-reliant after graduation. The essence is to make them employable immediately after graduation. Nevertheless, the small limited time allowed for technical courses makes it difficult for the course to achieve the full vocational status.

- Lack of professionally competent vocational instructor: Some woodwork instructors in various technical colleges are not competent in their related field Oranu (2001). Some of the vocational instructors cannot effectively perform the essential functions and the required activities. Rather than this, they teach the theoretical aspect of their subjects. that results in poor performance of the students. Okoro (1993) said that the major purpose of vocational education is not to give certificate, but to train skilled workers who can function well in their place of employment. Vocational instructors according to Olaniyan (2001), are not competent because they lack necessary qualifications and do not understand the subjects matter to impart on the students. Also, Sara (2000) criticized that the available high level paper-

qualification vocational instructors in tertiary institutions could not perform the skills or provide technical services they were expected to render to their students.

- Lack of using appropriate teaching method: Olumese (2004) pointed out that teaching is a gradual process that makes learning very easy in a teaching learning situation. Therefore, for effective teaching of woodwork technology to be actualized, teachers need to interact with their immediate teaching environment. The scholar further observed that some instructors adopt methods without studying the contents of the instruction.
- Students' attitudes towards vocational subjects: The students look at vocational courses as education for drop-outs. According to Riddell (2008), attitude is a complex word but the students' directions and feelings can be reflected through their reactions and characteristics. Some woodwork students feel that they are being looked down upon by others because of the course they pursue. Hence generally speaking, students who offer vocational subjects in technical colleges are very few (Ozioma, 2011)

The Place of Video – Tape Instructional Package on Woodwork Learning Skill Acquisition

Videotape is an electronic – mechanical device that mostly appeal to sense of hearing and seeing at the same time. Videotaped instruction is seen as one of the most effective methods of communication in teaching and learning process (Ergin; 2007). Also, Nzewi (2003) reported that videotaped instructional package has more advantage over conventional method of teaching because it can help aid retaining and recalling memory assurance. Agommuoh (2003) considered video-taped instructional package as a useful media tools that has a high quality with increased potential in students' learning habit. The use of Audio – Visual Aids in teaching and learning are universal in most of the schools and colleges in developed nations

In under developed nation like Nigeria, very few schools and colleges rely on Videotaped instructional package. They are more conversant with using videotaped instruction in JAMB and the University Post UTME for students seeking admission into the university. In a study by Durbin (2002), computer and the internet were used as teaching tools in a geography class Hence, an increase in the students' achievement rates and knowledge acquisition was observed. Akgun (2007) also reported that VTI has shown positive effect on the academic achievement of students in chemistry. Notwithstanding, vocational courses have been left behind in the use of video – tape instructional package in teaching and learning in Nigerian technical colleges.

Niger Republic employed education television instruction to tackle the problem of shortage of teacher. In order to make this a reality, government, instructors and researchers at all levels should create more interest on the use of educational television by producing video-taped instructional package in vocational subjects. Hence the utilization of video-taped instruction will help achieve the following:

- giving learners / trainees opportunity to learn at their own pace, rate and convenience,
- helping them to assimilate with ease, based on the greater percentage of what they hear, see and manipulate,
- helps instructors and students to learn and teach more quickly and combine active learning with computer technology,
- aiding authentic technological growth in the society thereby improving the economic status of both individual and the entire State,
- helps to ensure quality assurance when working techniques are mastered and adequately utilized especially in vocational skill acquisition.

Level of learning outcome on the Use of video-taped instructional package in Woodwork Skills Acquisition Learning

Personal observation has shown that studies on the use of video-taped instructional package in woodwork vocation are not widely carried out in

Nigeria. Notwithstanding some of the studies carried out on the use of videotaped instruction for impartation of skills yielded positive outcomes. For example, according to Osokoya (2007), the videotaped instructional package mediated instruction was adopted in teaching of secondary school students on creative design, such as fine Arts and Weaving.

The result of the study revealed that students taught with videotaped instructional package achieved better than those taught with the lecture method. In support of Osokoya (2007), Akgun (2007) was of the opinion that effect of televised instruction on the academic achievement of learners in chemistry is more encouraging that students exposed to lecture method group.

#### Conclusion and Recommendations

Literature review in this study has shown that the choice of videotaped instructional package is effective in the teaching and learning of woodwork. Based on the findings, videotaped instructional package could be recommended for use in teaching and learning of Woodwork. The adoption of videotaped instructional package will help learners to develop learners' knowledge towards woodwork skills acquisition, thereby increasing the level of learning outcome. Also, government, instructors and researchers at all levels should create more interest on the use of educational television by producing video – tape instructional package on each subject for use in

imparting skills on the learners in Nigeria technical colleges..

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