
Towards Effective Management of Wood Workshops in the Period of Economic Crisis

By

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Abstract

Woodwork is one the subjects taught in Vocational Centers, Technical Colleges, Colleges of Educations, Polytechnics, Universities and so on to enable students acquire practical skills for self-sufficiency and self reliance. The paper focused attention on effective management of wood workshops in Technical Colleges in the period of economic crisis. The paper suggests the following strategies to be utilized. These include keeping reliable inventory of equipment and improvisation of teaching materials in the workshop; promote maintenance culture; introduce consultancy services, judicious use of fund and group practical demonstration. Recommendations are made in the paper for promoting effective management of wood workshops in Technical Colleges in the period of economic crisis. These include Heads of Woodwork section should take proper inventory of equipment and materials weekly to make sure things are in order in the workshop and woodwork teachers should develop the habit of improvising using local resources since this will help in the effective teaching of woodwork.

Introduction

Woodwork as a subject has faced a lot of setback due to inadequate and poor management of facilities. The effect of this set back is manifested annually in the poor performance of woodwork students in technical colleges. Aina in Umar and Ma'aji (2011) revealed that the mass failure in National Technical Certificate (NTC) in 1999 was as a result of poor management of facilities in the workshop. The failure rates were from 14 to 48 percent in electrical and mechanical trades, while it was from 12 to 50 percent in construction trades such as building and woodwork. It is discovered that many students are studying woodwork only in theory but not in practice. Woodwork as a subject requires ample provision of facilities for effective instruction. It is evident that no woodwork course can be successful if facilities are sparsely provided. Woodwork is taught in technical colleges to enable students acquire skills that will enable them to be enterprising and self-reliant.

Uzoagulu in Filibus (2001) disclosed that where tools and other equipment are not functional or inadequately provided, technical training programme will suffer and lead to the production of highly unskilled personnel who are unemployable and unproductive. Dyikuk (1997) pointed out that the Nigerian educational system aims at transforming Nigerian from traditional society to a modern technological one. If this is to be realized, then technical skills have to be developed well in our children at the foundation level of their education. This means well equipped laboratories and workshops are necessary. Though,

where there is no money to buy new equipment, the available ones should be effectively managed so that students can acquire some basic skills before graduation instead of waiting for government for proper funding.

The economic crisis has slowed down economic activities and it has affected productivity and investment by ways of reducing demand for goods and services. The impact of the economic crisis on technical vocational education and training (TVET) in Nigeria is already felt. The Nigeria educational system is faced with continued decrease in funding from government at all levels (Olateju, 2010). With the economic crisis, technical colleges are facing more problems since they demand equipment and consumables for practical. Therefore, there is a need for proper management of the equipment that is already available.

This paper focuses on the effective management of wood workshops in technical colleges in the period of economic crisis. The following strategies should be utilized: keeping reliable inventory; grouping students for practical lessons; improvisation of teaching materials; promoting maintenance culture; introducing consultancy services and judicious use of fund.

Keeping Reliable Inventory

The serious problem woodwork teachers faced is the issue of reliable record keeping of consumable materials, tools and machines. This problem is caused by over relying on store keepers in wood workshops. Woodwork teachers always make use of the information provided by these

storekeepers in wood workshops without verifying the facts in the inventory book. The writer visited seven technical colleges in Benue State and discovered that many store keepers in wood workshops do not update their records frequently to know the tools that have broken, items that are missing, machines that have been damaged and consumable materials that are out of stock. Only few of the store keepers were able to do their work well and know the state of things in the workshop. It is pertinent to stress that the heads of sections (woodwork) should call for the inventory book at the end of every week in order to make sure it is updated. A workshop logbook should be kept so that all the facilities in the workshop are recorded. These facilities can be recorded as follows:

- (i). Consumables: - Items like nails, glue, polish, wood, veneer, hardware (cabinet fittings) so on.

- (ii). Hand tools and portable power tools:- jigsaw, drilling machine, hammer, screwdriver, mallet and so on.
- (iii). Machine tools:- Circular saw machine, bandsaw machine, surface planner, Tenoner, mortiser and so on.

Three hard covered big notes should be used for each category listed above and a file containing all the receipts of purchase should be kept by the head of section except if the college has a store keeper that is doing this job

Inventory Books

The inventory book should be ruled as shown below and items arranged in alphabetical order. Reasonable number of pages should be devoted to each type of item.

Table 1: Consumable items

S/N	ITEMS	QTY	DATE RECEIVED 3/2/2011	ITEMS USED 28/3/2011	END OF TERM STOCK 14/4/2011
1.	Glue	2 gallons	“	1	1
2.	Glass Paper	5 packets	“	2	3
3.	Glossy Polish	15 gallons	“	8	7
4.	Plywood ³ / ₄ ” thick	7 sheets	“	5	2
5.	Nails 1 1/2”	3 bags	“	1 1/2	1 1/2
6.	Screw 1” long	5 packets	“	3	2
7.	Thinner	6 gallons	“	2	4
8.	Veneer	9 rolls	“	4	5

Hand Tools and Portable Power Tools

For hand tools and portable power tools, the name of the tools, the date these tools were received in the workshop and after each practical lesson, any broken or damaged tool must be

recorded in exercise book which will later be transferred to inventory book as shown in table 2. At the end of every term, it is essential to take a comprehensive stock of tools in the workshop.

Table 2: Hand Tools and Portable Power Tools

S/N	ITEMS	QTY	DATE RECEIVED 5/1/2011	ITEMS USED 11/5/2011	END OF TERM STOCK 14/4/2011
1.	Goggle	60	“	3	57
2.	Hammer	10	“	2	8
3.	Hand drill	8	“	-	8
4.	Jig saw	5	“	1	4
5.	Jack plane	30	“	1	29
6.	Mallet	20	“	2	18
7.	Pincer	15	“	-	15
8.	Smooth Plane	14	“	-	14
9.	Spoke shave	23	“	-	23

Machine Tools

These are machines fixed on the floor or bench. These machines should be recorded in a separate book. They should be inspected at the end of each practical lesson and record damages done to machines. Such damages include broken knives or blades, burning of the coil in the motor

(damaged electric motor), broken chain and burnt rubber belt and so on. This will help in urgent replacement of the damaged parts. The damaged parts should be recorded in exercise book which should be transferred later into the inventory book as shown in table 3.

Table 3: Machine Tools

S/N	ITEMS	QTY	DATE RECEIVED	ITEMS USED	END OF TERM
			5/1/2011	16/3/2011	STOCK 14/4/2011
1.	Band saw Machine	2	“	-	2
2.	Circular saw Machine	3	“	-	3
3.	Drilling Machine	3	“	1	2
4.	Mortising Machine	2	“	-	2
5.	Thickneser	3	“	1	2
6.	Tenoner	2	“	-	2
7.	Spindle Moulder	2	“	-	2

The stock book makes it easier in making requisition for a term. It enables the teacher to calculate terminal consumption very easily (Uno and Ibe, 2001). For example, if the teacher receives 3 bags of ½” nail and he has only 1 bag left to start a new term, he can now know how many bags will be sufficient for a term. The stock book enables teachers to know at a glance how rich or poor the workshop is. To achieve this, the Head of section should check the activities in the workshop very closely. This period of economic crisis calls for giving more attention to stock taken than relying too much on the information provided by the store keepers. This is because some of them lack the basic scientific knowledge of the trade in which they are the custodian of the equipment.

Group Practical Demonstration

It is evident that many schools lack sufficient materials for students' practice due to lack of adequate fund. Students should be grouped for practical work. The teacher should have time table for each group and demonstrate to the group one after the other. Okoro (1993) asserted that demonstration is an essential teaching method in vocational and technical education. For demonstration to be effective, the teacher should plan the demonstration, prepare students for the demonstration, carry out the demonstration properly, review demonstration processes and re-state the important points connected with it.

The practical assignment given to them has to be done on group bases because of the limited resources. Individual practice can be allowed depending on the availability of materials. Individual practices can also be allowed by asking students to provide their own materials if it is not very expensive and later ask them to submit the project for assessment. The teacher should supervise the work and make sure every student partake in the activity. He has to make sure that students observe him fully during demonstration. Ikeobi (1985) advised that Heads of departments should hold discussion on teaching strategies including maximum and proper use of available scarce resources.

Improvisation of Teaching Materials

The value of material and equipment in the teaching and learning of woodwork can not be under estimated. At times, when materials and tools

are available, it is not easily affordable. Eshiet (1982) and Balogun (1982) said that schools and teachers have been called upon to improvise. The call for the improvisation is because of the present financial predicament in the face of the emergent circular and educational policies which give added impetus to the drive towards improvisation in schools. The problems involved in improving facilities for schools is compounded by high cost of tools, materials, machines and even spare parts. This makes it difficult for educational institutions to replace and sustain imported tools and other equipment in schools. The answer to this problem is to emphasis on improvisation and use of locally produced technological tools and equipment in our educational institutions (Medugu, 2002).

The writer said that schools can cut down trees near their surroundings and convert them to timbers to be used for practical in wood workshops. It is vital to create substitute instead of relying on government alone. Okwori (2002) disclose that teachers should improvise when the real object is lacking. This item should serve the purpose of the real object. A cardboard paper, wood, cloths and so on could be used as materials for improvisation. If a teacher wants to show ripsaw to students in his lesson and there is no ripsaw in the workshop, then it can be produced from cardboard paper and presented to students. Olaitan and Gusobo in Okwori (2002) listed some of the advantages of improvising teaching materials which include arousing the interest of the learners and making the lesson more interesting; it focuses the attention of the students on the lesson and it permits a high degree of presentation of ideas verbally and visually.

Maintenance of Facility:

Woodwork teachers, workshop attendants and students should imbibe maintenance culture in order to prolong the life span of the equipment. When equipment is properly maintained, it enhances high degree of efficiency on the part of the machines. It helps to maintain safe working condition and it also keeps the cost of operation low and increase the life span of the tools and machines. It is important to imbibe maintenance culture since woodwork equipment is expensive. Cutting blades or knives should be properly sharpened before use, chains, sprockets, spindles and other nipples should be checked every week

and greased appropriately. All bearings that are enclosed should be lubricated daily with engine oil before work commences. Machines should be cleared of sawdust after day's work.

All hand tools should be kept sharp before use. They should be properly kept in their packets or cabinets at the end of the day's work. Any damage or breakage should be recorded and reported to the sectional head. Replacement should be effected immediately especially when the item is not very expensive. Store keepers should not loan out tools to people outside the department except with the permission of the Head of Section. Such loan should be reflected in the record book.

Consultancy Services

Internally generated revenue helps to promote academic activities in the school. Such fund should be used to provide essential amenities when the need arises. Woodwork section should be involved in rendering services to the community. Such services include production of furniture items and rehabilitation of damaged ones. The money collected for these services can be used to procure hand tools, consumable materials for students' practical. Over the years, the management of institutions has become more complex as a result of their growth, dwindling human and financial resources available for their operations as well as socio-economic instability. Institutions have to explore and exploit more aggressive ways of generating money locally to solve their problems (Ngoka, 1999).

Anigboso (1993) disclosed a strategy for financing technical education with less reliance on government and that is commercializing research results of schools. World Bank publication on Higher Education (1994) emphasized that one of the ways of generating revenue is to organize short term courses for enterprises or individuals. This fund generated can be used to purchase pedagogical materials such as textbooks and workshop equipment. No matter how small the amount is, it will have perceptible impact on the quality of technicians produced. Onyejemezie in Agwumezie (1999) said that since school lack sufficient fund to produce, maintain and manage the equipment, fund can be generated through sales of items produced by students and services rendered.

Management of Fund

Effective management of internally generated revenue such as school fees, materials, levy and consultancy fee paid is very essential. This money can be used to supplement government effort by using it to procure tools, machines and consumable materials needed in the workshop for students' practical. Nwoye (1998) disclosed that tuition fees, sales of application forms and other charges are

sources of revenue for educational institutions, therefore, part of such money can be used for purchasing training materials for students. Woodwork is a structured practical course which demands practical demonstration so that students can acquire skill. There is a need for greater financial discipline and respect for financial regulations. Corruption has been a single factor bedeviling the country over the years. Some school administrators take corruption as a way of life and as a result of this, majority of the working class have imbibed corruption as a culture which is now difficult to break and abandon. This is the reason why actual implementation of projects in some schools is difficult (Ugaigbe and Ogboro, 2001). The sabotage of technology education is government's attitude, that is, the merging of technology education and general education in the ministries. The merging results in a situation where administrators of technology are those who have little or no knowledge of technology education. Consequently, they do not understand the needs of technology education and divert funds meant for technology education into areas that appeal to them (Sara, 2001).

Conclusion

Many woodwork teachers de-emphasize the practical aspect of woodwork due to the economic crunch. Woodwork teachers should explore different strategies towards effective management of wood workshops in order to improve the teaching of woodwork and make sure students excel in the subject. Teachers should get themselves involved in the maintenance of tools and machines while sectional head of woodwork take proper inventory of the equipment and materials in the workshop weekly. This will enhance effective management of wood workshops in Technical Colleges.

Recommendations

Recommendations are hereby made which will help in the effective management of wood workshops.

1. Woodwork teachers should participate fully in the maintenance of equipment instead of leaving it for workshop attendants alone. This maintenance will help to prolong the life span of the equipment.
2. Heads of woodwork sections should take proper inventory of equipment and materials weekly to make sure things are in order in the workshop.
3. Heads of woodwork sections should introduce consultancy service if it is not in existence in their colleges. This will help to boast more equipment in the workshop and it will also assist in the maintenance of equipment.

4. Woodwork teachers should develop the habit of improvising using local resources. This will help in the effective teaching of woodwork.
5. School fund should be properly managed by principals in order to enhance smooth running of wood workshops and also to promote academic activities in the school.

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