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## **CHALLENGES AFFECTING TEACHING OF CLOTHS DYEING TEXTILE DESIGN AS A COURSE IN SECONDARY SCHOOLS, KATSINA STATE, NIGERIA**

**Muntaka Musa**

*Department of Home Economics School of Vocational and Technical Education ISA Kaita  
College of Education P.M.B. 5007, Dutsinma Katsina State, Nigeria*  
[muntades14@gmail.com](mailto:muntades14@gmail.com)

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### **Abstract**

*This study is carried out to assess the challenges of teaching cloths dyeing in secondary schools in katsina state, Nigeria, aimed in finding out the students that are having interest in studying cloths dyeing, availability and quality of equipment for teaching and learning of cloths dyeing, possible challenges on teaching and learning cloths dyeing, as well as contributions of agencies in developing the subject. Secondary data is based on previous researches sourced in the libraries. The population of the study consists of all the staff and students of secondary schools offering cloths dyeing. A random sampling of all the staff (29) and 40% (384) of the students under cloths dyeing were selected for the research. A self-structured 5 points Likert scale questionnaire containing 25 items was developed for collection of data; the data was analyzed using standard mean. The study comes up with findings as; students were studying the subject because they were compelled to or chose it themselves not by parental interest, colleague influence or pre-experience of chemical effects. The schools have laboratories with in adequate*

*facilities, training materials and qualified teachers. The time allocated for practical is inadequate, and no provision made for Students Industrial Works Experience Scheme (SIWES). Parents were not visiting the schools during practical hours, the voluntary agencies were not contributing to the development of the subject, but the community and individuals were using dyed clothes for daily use and ceremonies. The researcher recommends proper orientation so that the government, voluntary agencies, communities and parents put hands together towards developing teaching and learning cloths dyeing in the affected secondary schools.*

### **Keywords**

Teaching, Cloths, Dyeing, Dyes, Colours

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## **1. Background of the Study**

The system of education in Nigeria aims at producing scientifically and technologically qualified manpower for sustainable national development. A noteworthy feature of the system is the introduction and expansion of Technical and Vocational Education (TVED) in the general school curriculum. This is in recognition of the importance of TVED in national development, particularly for practical skills acquisition for employment. The objective of the programmers is to foster creativity, appreciation and criticism of artifacts, mass production, and promotion of artifacts (Sintim, 2008).

The overseers of vocational programmers' assume that skill is the missing link between learning and employment (UNESCO, 1996). As such, the content of skills is given a good attention. Therefore, Craft works as part of vocational education consists of leather work, weaving, knitting, cloths dyeing etc. These are the most important areas being practiced in our society and some institutions of learning. The dyeing of work was being practiced thousand years ago. The major dyes known to the ancients were those obtained from Indigo plants, many techniques of dyeing were discovered during anti – equity and currently used in various countries. An example is the application of an in-organic chemical called a mordant (The New Encyclopedia Britannica, 2010).

Dyeing may be conducted at any stage of manufacture, the yarn or the fabric can be dyed when strips or plants are woven. Textiles in form of dyeing were widely practiced before the coming of white man. The first synthetic dye-mauve was derived from coal tar. It was developed

by British chemist William Henry Perkin in order to be produced easily on a large scale (Huy, 2009).

Currently, Science and Technology have made contributions in using modern chemicals such as hydrous and caustic soda and dyestuffs in assorted colours for the manufacturers of dyeing. Generally, in Northern Nigeria, among Hausa/Fulani, TIV and Gwari dyeing of clothes are widely practiced by men and women. While, in Southern part of Nigeria, Abeokuta is the most outstanding as it has International recognition on the use of blue colours (Indigo) (Claire, 1982; Ogumor, 1990; Polakoff, 1980).

### 1.1 Concept of Dyeing

Wikipedia (2015) described dyeing as the process of adding colour to textile products such as fibres yarns and fabrics. While, Dutsenwai (2010) asserts that textile dyeing is a process of dyeing fabrics by using liquid containing colouring matter for imparting a particular hue to a substance.

Briggs (2011) reported that dyeing guarantees the information of leveled shades on textiles in exhaust or continuous methods. He further explained on the selection of a specific dye which depends on its cost, brightness of shade and fastness in relation to the intended end use of the textiles. Dyes are used to cooler textile leather and other substances. When processing, dyeing molecules are deposited from solution on to the materials in such a way that they cannot be subsequently removed by the solvent in which they were dissolved (The New Encyclopedia Britannica, 2010).

Chakra borty, (2009) notes that, it is important to be aware that uneven dyeing is the result of lack of control over influencing factors, insufficient or overdosing of chemicals, the shades thus develop and remain uneven without any specific order and look ugly. The dyes and chemicals used in dyeing can be local or modern as shown in (Table 1.2a), and the examiners schedule for dyeing practical (Table 1.2b), below:

**Table 1.1a: Local and Modern Dyeing Materials**

Local	Modern
a. <b>Colours/dyes</b> (dye plant): i. <b>Red</b> - Mahogany, cam wood ii. <b>Yellow</b> - Wild ginger root iii. <b>Blue</b> - Indigo (Baba) iv. <b>Orange</b> - Hausa cocoanut	a. <b>Colours/dyes</b> (artificial): i. Red ii. Yellow iii. Blue iv. Orange

<p>v. <b>Green</b> - Unripe plantain sap</p> <p>vi. <b>Black</b> - Oil bean seed</p> <p>b. <b>Yarn/fabric</b> (100% cotton)</p> <p>c. <b>Chemicals:</b></p> <p>i. Wood ash</p> <p>ii. Salt</p> <p>iii. Water</p>	<p>v. Green</p> <p>vi. Purple etc.</p> <p>b. <b>Yarn/fabric</b> (100% cotton)</p> <p>c. <b>Chemicals:</b></p> <p>i. Caustic Soda</p> <p>ii. Hydrous</p>
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Source: Katsina Youth Craft Village (2014)

**Table 1.1b: Examiners Swapping Schedule for Dyeing and Bleaching (Practical) Katsina State**

S/no.	Centre no.	Name of centre	No. of candy-dates	Name and address of examiner	School posted to conduct practical	Custodian centre
1.	4210304	G.S.S. Tsanni	58	Loran Bara'u G.S.S., Tsanni	Govt. Senior Sec. School, Batagarawa	<b>WAEC, Katsina (4 Schools)</b>
2.	4210305	Govt. Science Sec. School, Batagarawa	147	Abu-Bakr Ibrahim Govt. Science Sec. School, Batagarawa	SUNCAIS Katsina	
3.	4211906	Sir. Usman Nagogo Coll. of Arabic and Islamic Studies, Katsina (SUNCAIS)	376	Babangida Danfulani Sir. Usman Nagogo Coll. of Arabic and Islamic Studies, Katsina (SUNCAIS)	Govt. Senior Sec. School, Abukur	
4.	4212603	G.S.S.S., Abukur	104	Agodichuku Favour Govt. Senior Sec. School, Abukur	G.S.S., Tsanni	
		<b>TOTAL</b>	<b>685</b>			

Source: Time Table - May/June 2014 Wasc Examination, Katsina. Prepared by West African Examination Council, Katsina State, Nigeria

## 1.2 Purpose of the Study

The purpose of the study is to find out the “Challenges affecting teaching of cloths dyeing textile design as a subject in Secondary Schools within Katsina State, Nigeria.

## 1.3 Objectives

- To determine the students that are having interest in studying cloths dyeing.

- To determine the availability and quality of equipment for teaching and learning of cloths dyeing.
- To identify the possible challenges in teaching and learning the subject.
- To find out the contribution of governmental and private agencies in developing students' interest in studying cloths dyeing.

#### **1.4 Research questions**

- Do the secondary schools students in Katsina have interest in studying cloths dyeing?
- Do the secondary schools in the state have adequate and functional equipment for teaching and learning cloths dyeing?
- What are the possible challenges affecting the teaching and learning cloths dyeing?
- Is there any governmental or private sector contribution towards developing students' interest in studying cloths dyeing?

#### **1.5 Hypothesis**

- The students will perform very well if equipped with necessary materials, studios and competent professional teachers in the schools.
- Also, they will acquire knowledge and perform very well if theory and practical aspects of dyeing are based on the schools' curriculum.

#### **1.6 Research Design**

The study was a descriptive survey aimed at finding out the opinions held on challenges affecting teaching and learning cloths dyeing as a secondary school subject in Katsina State, Nigeria.

#### **1.7 Area of the study**

The study was carried out in Katsina State Ministry of Education public secondary schools being the only schools offering such subjects.

#### **1.8 Population of the study**

The population of the study consists of all the staff and students of the four (4) secondary schools offering cloths dyeing as the students were examined by West African Examination Council (WAEC) and National Examination Council (NECO). These schools include:

- Government Secondary Schools, Tsanni
- Government Science Secondary. School, Batagarawa

- Sir. Usman Nagogo College of Arabic and Islamic Studies, Katsina (SUNCAIS)
- Government Senior Secondary School, Abukur (see **page 3** above).

### **1.9 Sample and Sampling Techniques**

A simple random sampling technique was employed. The schools were stratified into Senior and Junior wings in which the senior wings were selected. The senior wings were further sub-divided into Science Classes, Art classes and Technical/Vocation classes. The Technical Vocational class was selected being the subject under the group. A sample of all the Principals, Vice principals, technical/vocational teachers as well as 40% of the technical/vocational students in TT1, TT2 and TT3 classes, thus this gives a total of 29 staff and 384 students respectively.

### **1.10 Instrument for data collection**

The instrument used for data collection was self structured questionnaire designed to assess the research variables and it contains five (5) sections which cover the personal data and the four research questions, in all it contained 25 items. It is in form of five (5) point Likert scale structured questionnaire with options as strongly agree, agree, not sure, disagree and strongly disagree. It was face validated by two lecturers from Isa Kaita College of Education Dutsin-ma.

### **1.11 Method of data collection**

The questionnaire was administered by the researcher himself and the respective schools staff as research assistance, the entire questionnaires distributed/administered were collected intact.

### **1.12 Method of data analysis**

The responses in each of the questionnaire item was analyzed using standard mean of 3.00, each questionnaire item mean value that is equal or greater than the standard mean is considered to be accepted, this means the item has an impact on teaching cloths dyeing in secondary schools, while those mean values less than the standard mean are considered to be rejected, that is to have no impact on the study.

## **2. Findings based on the research Questions**

The findings are presented graphically as shown below.

### **2.1 Research Question I**

Do the secondary school students in Katsina State have interest in studying cloths dyeing?

**Table 1.2:** Responses on students' interest in studying cloths dyeing

s/n	Items	Mean	Remarks
1	Students were studying cloths dyeing because they were posted to the class	3.89	Accepted
2	Students were studying cloths dyeing because they chose it by themselves	4.34	Accepted
3	Students were studying cloths dyeing because it is marketable now a days	1.56	Rejected
4	Students were enrolled in to cloths dyeing because their parents wanted them to study it	2.73	Rejected
5	Students were studying cloths dyeing because they have pre experience on the effects of chemicals	2.11	Rejected
6	Students were enrolled in to cloths dyeing because their mates were studying the subject	2.74	Rejected

## 2.2 Findings

The table 1.2 above shows that most of the respondents accepted the items 1 and 2 with their mean values of 3.89 and 4.34 that indicates students are studying cloths dyeing because they either posted to or choose by themselves, while reject the opinions on items 3, 4, 5, and 6 that stated that students are studying the subject because of its marketable value, parent interest, pre experience of chemicals effects and colleagues influence with their mean values as 1.56, 2.73, 2.11 and 2.74 respectively.

## 2.3 Research Question II

Do the secondary schools in the state have adequate and functional equipment for teaching and learning cloths dyeing?



**Table 2.2:** Responses on adequate and functional equipment

s/n	Items	Mean	Remarks
1	Your school have laboratory for cloths dyeing practical	3.10	Accepted
2	The laboratory is adequate and in good condition for practical class	1.33	Rejected
3	There are adequate functional tools and equipment for cloths dyeing practicals in the schools	2.43	Rejected
4	There are adequate safety devices such as hand gloves, eye shield, nose muffs etc.	2.27	Rejected
5	There are enough training materials for cloths dyeing in the schools	1.98	Rejected

## 2.4 Findings

The table 2.2 above shows that most of the respondents accepted schools have laboratory for practical cloths dyeing with mean value of 3.10, while they all rejected the opinions that the laboratories are adequate in good condition with functional tools and equipment, also having safety devices with regular supply of training materials with the items mean values of 1.33, 2.43, 2.27 and 1.98 respectively.

## 2.5 Research Question III

What are the possible challenges affecting the teaching and learning of cloths dyeing?

**Table 3.2:** Responses on Challenges Affecting Teaching and Learning Cloths Dyeing

s/n	Items	Mean	Remarks
1	The time allocated for practical lessons in the schools is adequate	2.44	Rejected
2	There are enough qualify teachers for teaching the subject	2.13	Rejected
3	The teachers are experience teachers based on their teaching methods	2.11	Rejected
4	The subject syllabus is in line with the community needs	3.33	Accepted
5	Parents do come to the schools to observe dyeing practical class for contribution	0.25	Rejected
6	More than half of the secondary schools in katsina state are studying cloths dyeing	1.68	Rejected
7	The curriculum made provision for students industrial works experience scheme (SIWES)	0.78	Rejected



## 2.6 Findings

The table 3.2 above shows that most of the respondents rejected time allocated for practical is adequate, there are enough qualify teachers, teachers have experience based on their methodology, more than half of the state secondary schools are offering the subject and there is provision of students industrial works experience scheme (SIWES) with their mean values of 2.44, 2.13, 2.11, 0.25, 1.68, and 0.78 respectively. But accepted the opinion that, the syllabus is in line with the community needs, with mean values of 3.33.

## 2.7 Research Question IV

Is there any contribution of governmental and private agencies toward developing students' interest in studying cloths dyeing?

Table 4.2 responses on the contribution of governmental and non governmental agencies in developing students' interest in cloths dyeing.

**Table 4.2:** Responses on Challenges Affecting Teaching and Learning Cloths Dyeing

s/no.	Items	Mean	Remarks
1	Voluntary agencies provide structures and equipment for cloths dyeing in the schools	2.34	Rejected
2	There are volunteers participation in training students especially practical works	1.23	Rejected
3	The state government provide training ,material to the schools regularly	2.57	Rejected
4	The immediate community have enough local dyeing industries were the graduates will practice the profession.	3.10	Accepted
5	The community and individuals are using dyed clothes for their daily use and ceremonies	4.23	Accepted

## 2.8 Findings

The table 4.2 above shows that most of the respondents rejected the opinion that voluntary agencies provides structure and equipment to schools, volunteers participated in training students, and state government provide enough training materials regularly, with mean

values 2.34, 1.23, and 2.57. The immediate community also accept that, they have enough local dyeing industries were graduates can practice as well the community and individuals are using dyed clothes for daily use and ceremonies, with mean values 3.10 and 4.23.

### **3. Recommendations**

- Parents should be oriented on the importance of cloths dyeing for social and economic development.
- Government should equip the available laboratories with standard functional practical facilities.
- Cloths dyeing and other vocational subjects should be introduced in all the public secondary schools.
- Parents and other agencies should put hands together in providing training and practical materials to schools.
- The curriculum planners should give adequate time to practical lessons and make provision for Students' Industrial Works Experience Scheme (SIWES) in the syllabus.
- More recruitment of qualified teachers as well as encouraging existing ones to go for training workshops/seminars.
- The community should organize an annual event where different patterns and styles of cloths dyeing will be display for people to buy.

### **4. Conclusion**

In conclusion, the researcher observed that, students were studying cloths dyeing, because they either had been posted to do so or choose it by themselves as manifested in the research work. In addition, they studied cloths dyeing which had no relevance to parents needs, pre-experience of chemicals effects, its marketable values or colleagues influence. Furthermore, the selected secondary schools have laboratories for practicals with inadequate functional equipment as well as inadequate safety equipment and training materials.

The researcher found that, Very few schools were offering the subject, parents were not visiting the schools to observe practical, as well no provision for Students' Industrial Works Experience Scheme (SIWES) in the syllabus. Finally, it was also observed that, the community has many local dyeing industries and the people were using dyed clothes for daily use and ceremonial activities.

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