PRINTING DEXTERITY IMPROVEMENT NEEDS OF HOME-ECONOMICS STUDENTS IN SOUTH-EAST NIGERIAN UNIVERSITIES

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Abstract

The aim of Home-Economics Education to equip students with necessary skills for self-reliance and poverty reduction calls for upgrading the skills impacted in students to keep them abreast of dynamic changes in today's world. This study therefore identified different skills in printing Home-Economics students need to enhance their dexterity prowess for self-reliance and poverty reduction. To carry out this research, three research questions were raised; the first research question was answered using means and mean differences, while the last two were answered using mean and standard deviation. The study employed the descriptive survey research design. 60 lecturers and 340 final year students of universities that offer Home-Economics education in the five states of the south-eastern geopolitical zone of Nigeria formed the population of the study. No sampling for the population was manageable. A structured questionnaire constructed and validated by experts was used for data collection. The reliability coefficient of the questionnaires was 0.82 and 0.73 respectively for the two scale components. The data analyses revealed nine novel printing skills needed by Home-Economics students for self- employment. It was recommended that consistent workshops and conferences should be made mandatory for students to attend amongst others.

Keywords

Dexterity, University Education, Home-economics students, Clothing and Textile, Printing.

Introduction

Dexterity which is the possession of skill in performing task is the application stage which depicts that a student excels in a skill. In teaching a skill, emphasis is on practicing the skills and improving on the skill to form a habit. Sound application ability is a highly significant aspect that gives confidence to a student in applying theoretical knowledge to practical situations (Armstrong, 1998) in (Eijal Gul, 2014). Oke and Olakotan (2017) asserted that skill acquisition development and sustained improvement give credence to advancement of intrinsic individual potentials. The students need sustained ability and encouragement to rise to dexterity level by overcoming the challenges inherent in skills acquisition processes. To this effect, Osuala (2016, 2004) pointed out that most technical skills training actually present challenges to the learner by integrating practical work, theoretical knowledge, common sense, observation ability and encouragement in an occupation. Eijal Gul (2014), also asserts that students are required to go through a cycle of practices until they become skillful. One of the ways appropriate skills are imbibed in students formally is through University Education.

University education is the level of education which aim to empower individuals with the knowledge, skills, and values needed to lead fulfilling lives, positively impact society, and contribute to the advancement of knowledge and human progress. It is often regarded as a pinnacle of academic pursuit and a transformative phase in educational journey of an individual. According to National Policy on Education (NPE, 2013), university education shall make optimum contribution to national development by making entrepreneurial skill acquisition a requirement for all Nigerian Universities, also intensifying and diversifying programmes for the development of high level manpower within the context of the need of the nation. This simply implies that university education should not be devoid of skill oriented programmes that will equip students with skills for technology and economic growth of the nation. One of such skill oriented programmes offered in University is Home-Economics education.

Home Economics is one of the vocational or skill oriented subjects taught in Nigerian Educational system especially in most universities. It is an applied field of study that integrates a lot of relevant disciplines which can help individuals, families and society at large improve their ways of living. It is a unique field of study that focuses on the improvement of the welfare of the individuals, families and nations striving to solve the most pressing problems of the present as well as the future. (IFHE, 2004) in (Caroline, 2015) asserted that Home Economics is both a body of theoretical knowledge, based on exact sciences and humanities and forms of practice, backed up by appropriate technologies.

Home-economics covers a large swath of dexterity that may be necessary for people to perform daily.As stated by Obanya (2004) and Okpala (2005), Home Economics Education is a skill oriented, decision-making subject, that equips learners with skills and knowledge which will help them to be self- employed and at the same time, contribute effectively to the socio- economic development of the family and society. As a vocational/skill oriented subject, Home-Economics has several areas like foods and nutrition, home management, clothing and textile amongst others.

Clothing and textiles as an area of Home Economics is one of the skill oriented/vocational subjects taught in Nigerian Universities. Igbo (2013), opined that every individual is a consumer of clothing and textile in one form or the other, either as a direct purchaser, a manufacturer or a merchandiser. Clothing and Textiles is concerned with teaching the students characteristics of different fabrics, designing, sewing and reasons for choice of clothes. It also involves the knowledge

of the different textiles, principles of clothing selection and maintenance, interior decoration etc. As a skilled subject, clothing and textiles has different skill-based areas which are all designed to provide students with skills needed for fabric composition, clothing selection, home sewing and mending, clothing design and production, personal hygiene, good grooming and prepares the students for working in textile and clothing industries. The different skill-based areas include; garment making, pattern drafting, soft furnishing/interior decoration, laundry, dry cleaning, fabric decoration amongst others,

Fabric decoration which is one of the skill-based areas of clothing and textiles is the ornamenting the surface of a fabric or garment. It is the patterning of an essentially plain fabric to render it more appealing or to serve decorative purposes. Also, fabric decoration is essentially the process of creating designs for plain, woven, knitted or printed fabrics or surface ornamented fabrics. This ornamentation of the fabrics usually consists of repetition of patterns and is achieved through so many methods such as embroidery, designing, dyeing, appliqué, affixing sequins, rhinestones, use of lace, weaving, printing amongst others.

Printing is a process of applying colour to fabric in definite patterns or designs. In printing, coloured designs are applied to the surface of the cloth in the form of patterns. It can be thought of as the coloring technique that combines art, engineering, and dyeing technology to produce fabric. Ezema (2006) defined printing as the application of coloured figures on the surface of fabrics. She stated further that the design is not woven into the fabric rather, it is printed on it after it has been woven. Colour is usually applied as paste containing pigments and a binding material. This is fixed by steaming or heating, and the excess colour removed by washing. There are several techniques thus skills embedded in printing.

Skills/techniques in printing are numerous, they include hand block printing, use of stencil, engraved plates, wooden blocks, screen printing, rollers, drying the printed fabric; after printing the fabric, the paste is dried to prevent accidental smearing of the print design and color migration, digital textile(ink-jet) printing amongst others. Designs may be printed with stamps or carved wooden blocks, an art requiring great skill and accuracy on the part of both printer and block-maker. Polystyrene blocks are another alternative material for the block. Silk screen-printing is basically a stencilling process. The stencil carries the design to be printed. The screen consists of gauze stretched on a frame. Ezema further said that while screen printing, the areas of the design to be printed in a particular colour is left unblocked so that the printing or textiles ink is squeezed through these areas with a squeegee. Other parts of the design that should not be printed will be blocked out with certain paint which will resist printing paste. A screen is made with silk stretched on a wooden frame and the design to be shown on a fabric adhered to it. One problem of this screen is that it has a short life span. Ezema outlined numerous types of printing on fabrics thus; Roller printing, Discharged printing, Resist printing, Screen printing, well laying of fabrics thus the golden rule in the dyeing of textiles is that "a well-prepared fabric is a fabric half-dyed." This simply indicates the importance good fabric preparation plays in producing high quality final products thus regarded as a skill. Also the computer aided design (CAD) which is most recent and variedly. Ezema (2006) concluded by saying that all these require the availability of the needed equipments for ease and perfection. However, many of these skills are not taught to the students as is evident by the little skills possessed by the students hence need for this present study. Home economics students are students who are studying Home Economics education in tertiary institution like Universities. These universities like some in South East Nigeria offer Home Economics education in their program of study. Studies have shown that five

out of nineteen universities in South East Nigeria has Home Economics education in their programme of study.

Unemployment and unemployable graduates have become a serious challenge to educators, educationists and the Nigerian government. In today's world, merely having a degree is no guarantee of employment, nor is it a reliable indicator of the individual's competence in a job. Rather, graduates must have current and relevant knowledge, practical experience, soft skills and a positive attitude to allow them to be competitive in the job market. There is need therefore for the type of education that equips students for self-employment. Printing as one of the skills in clothing and textiles should be capable of equipping Home Economics students with saleable skills that will enable them be self-employed, self-reliant and competitive in the world market, it is therefore pertinent varied skills in printing are identified, ways of tackling hindrances to acquiring these skills so as to improve Home-economics students' skill acquisition in printing be identified also so as to help make them self-employed thus self-reliant. They therefore formed part of the population for this present study.

Purpose of the Study

The main purpose of the study was to identify the printing dexterity needs of Home-Economics students in south-eastern Nigerian universities. Specifically, the study identified
1. the printing skills possesed and needed by students in Universities in South-East Nigeria..
2. the hindrances to acquiring these skills
3. ways of curbing these hindrances to improve students skill acquisition in printing

Research Questions

The following questions were answered by the study
1. What are the printing skills possesed and needed by students in Universities in South-East Nigeria?
2. What are the hindrances to acquiring these skills?
3. What are ways of curbing these hindrances to improve students skill acquisition in printing?

Method

The descriptive survey research design was employed in the study. The population of the study was 400, made of two categories of respondents. The first category comprised of 340 final year students offering either Home Economics, Home science or textile major/fashion and designing students in Fine and Applied arts in the five universities. The second category was made up of all the 60 lecturers in the clothing and textile units of Home economics, textiles unit of fine and applied arts and Home Science departments of the five universities. The entire population was used because the population is of a manageable size.Questionnaire was used for data collection. It was designed into Group A and Group B. Group A had items with two categories of response scales of possessed and needed. The possessed category scale had four point response scales of highly possessed (HP), averagely possessed (AV), slightly possessed (SP), not possessed (NP), which was meant to determine the extent of the printing skills possessed by Home-Economic students. The needed category scale had four point response scale of highly needed (HN), averagely needed (AN), slightly needed (SN), not needed(NN), designed to seek information on the extent printing skills are needed by Home-economics students. All these four point response scales had corresponding nominal values of 4, 3, 2, 1 respectively. Group B had items with 4 point scale of strongly agree (SA), agree (A), disagree (D) and strongly disagrees (SD) designed to seek information on ways printing dexterity of home-economics students can be improved. The response scales had nominal values of 4, 3, 2, 1 respectively. The questionnaire was validated by three experts, and reliability coefficients obtained

through Cronbach alpha formular were 0.82 and 0.72 for the skills in printing possessed and needed category respectively, 0.54 for the opinion on problems encountered by Home-Economics students in acquiring skills in printing and 0.65 for ways the problems encountered by home economics students in acquiring skills in printing can be solved. Data was analyzed using mean and mean differences to answer research question one, while mean and frequency was used to answer research questions two and three. In taking decision, for research question one, the following steps were followed:Weighted mean value of each of the item of extent of printing skills possessed by Home economics students (Xp) was calculated and the weighted mean value of each of the item of extent of printing skills needed (Xn) was calculated.The calculated mean difference (Xd) which is the difference between Xn and Xp was used for decision making. Where (Xd) is positive (+), it means that Xn is greater than Xp. Thus the printing skill is needed.Where (Xd) is negetaive (-) it means that Xn is lesser than Xp. Thus, the printing skill is not needed. Where (Xd) is 0, it means that the skill is not possessed nor needed by Home-economics students.In taking decision for research questions two and three, mean and standard deviation was gotten using SPSS 20.0. Mean rating of 2.50 was used in taking decision. Items with mean rating of 2.50 and above was upheld while items with mean ratings of 2.49 and below was not upheld.

Results

The results of the study were obtained from the analysis of the data for the research questions. The results are presented in tables as follows:

Research Question 1: What are the skills in printing possessed and needed by home-economics students in Universities in South-East Nigeria?

Table 1: Mean response on the skills in printing possessed and needed by Home Economics students in South East Nigeria Universities

s/n	Printing Skills	Xn	Xp	Xd=Xn-Xp	Remark
1	Practicing of hand block printing	1.63	3.66	-2.03	NN
2	Prepare stencil for printing	1.70	3.86	-2.16	NN
3	Use of engraved plates for hand printing	3.95	1.26	2.69	SN
4	Use of wooden blocks for printing	3.62	1.24	2.38	SN
5	Preparing the screen for screen printing	3.70	1.35	2.35	SN
6	Preparing plate for digital textile printing	3.70	1.22	2.48	SN
7	Preparing fabric and laying fabric on padded table.	1.33	3.66	-2.33	NN
8	Use of paper or felt for textile printing	2.00	3.57	-1.57	NN
9	Appropriate handling of printing equipment	1.25	3.31	-2.06	NN
10	Constructing the desired design to be used	1.57	3.73	-2.16	NN
11	Transferring the design for printing	1.45	3.57	-2.12	NN
12	Preparing fabric for resist printing	1.73	3.53	-1.80	NN
13	Use of rollers for block printing	3.70	1.63	2.07	SN
14	Felting fabric ready for perrotine printing	3.70	1.53	2.17	SN
15	Sliding rollers correctly over fabric	3.70	1.63	2.07	SN
16	Sliding squeege accurately over fabric	3.70	1.41	2.29	SN
17	Following correct steps to effect a good design	3.64	1.65	1.99	SN

N = 400

Source: Filed study 2016   NN means Not Needed   SN means Skill Needed

The data presented in table 1 revealed that the mean responses of the skills possessed by Home-Economics students' ranged from 1.22 to 3.86, while the mean responses of printing skills needed by Home-economics students ranged from 1.25 to 3.95. The value of the mean differences (Xd) for skills possessed ranged from -2.33 to -1.57. The value of the mean differences (Xd) for printing skills needed ranged from 1.99 to 2.69. Since nine skills have their values of Xd positive and eight skills have theirs negative, it means that Home-Economics students need nine skills out of seventeen identified printing skills.

Research Question 2: What are the hindrances to acquiring printing skills?

Table 2: Mean response of the lecturers on the hindrances to acquiring these printing skills by Home economics students in Southeast Nigeria, Universities?

s/n	Items	$\overline{X}$	SD	Remarks
1	Inadequate basic fabric decoration equipment, tools and fabrics in the laboratories	3.75	0.437	Agreed
2	Not using the supposed appropriate method of teaching practical	3.72	0.454	Agreed
3	Insufficient number of lecturers in the areas of clothing and textiles	3.36	0.537	Agreed
4	Lack of resourcefulness or innovation by clothing and textiles lecturers	3.53	0.536	Agreed
5	Rigidity of the lecturer	3.42	0.530	Agreed
6	Poor enterprise culture	3.83	0.524	Agreed
7	Discouragement of anything outside the prescribed pattern	3.75	0.437	Agreed
8	Lack of seed money for practical	3.42	0.743	Agreed
9	Non-inclusion of a well-planned industrial training for the student in the curriculum	3.21	0.691	Agreed

N=60

Source; Field study 2016   SD means Standard Deviation   X means Mean

In table 2 above, the data thereof revealed that all the items have their mean values ranged from 3.21 to 3.83 and therefore are above 2.50 which is the cutoff point. Thus, all the items revealed are upheld are some of the hindrances to acquiring printing skills by Home-Economics students.

Research Question 3: What are ways of curbing these hindrances to improve students' skill acquisition in printing?

Table 3: Mean response of the lecturers on the ways these hindrances to acquiring these printing skills by Home economics students in Southeast Nigeria, Universities can be solved?

s/n	Items	$\overline{X}$	SD	Remarks
1	Provision of infrastructural facilities/textiles items	3.75	0.427	Agreed
2	Employing more specialists in clothing and textiles area to handle the difficult areas	3.72	0.454	Agreed
3	Use of demonstration technique in teaching clothing and textiles aspects	3.50	0.537	Agreed

4	Organizing conferences, seminars and workshops for upgrading knowledge and skills for students and lecturers	3.33	0.536	Agreed
5	Sending students an real/ actual industrial training	3.42	0.530	Agreed
6	Embracing innovation	3.38	0.523	Agreed
7	In-service training of clothing and textiles lecturers	3.75	0.437	Agreed
8	Research	3.42	0,734	Agreed
9	Improvisation	3.22	0.691	Agreed
10	Improved school-industry relationship	3.77	0.427	Agreed
11	Advocacy	3.65	0.481	Agreed
12	Exhibition	3.57	0.500	Agreed
13	Marketing of products to encourage students	3.42	0.530	Agreed

N=60

Source: field study 2016.   SD means Standard Deviation   X means Means

The data in table 3 above revealed that all the items have their mean ranges from 3.22 to 3.77 and therefore are all above 2.50 which is the cutoff point. Thus, all the items are upheld as ways of curbing hindrances towards achieving improved printing skills.

Discussion of Findings

The collected data to answer research question 1 shows that home-economics students need improvement in printing skills. The data summarized in Table 1 showed that out of seventeen printing skills identified, eight printing skills having mean differences ranging from -2.33 to -1.57 thus are possessed by home-economics students, while nine printing skills have their mean differences ranging from 1.99 to 2.69 thus are needed by Home-economics students. This is in line with Chan-klin (2014), who asserted that the current environment is plenty of rapid technological and media advancement. Thus, students should be made to keep abreast of those technological changes for self -reliance, self-sufficient and become employable. (Asuquo,2007) in Nwaokaomah (2010) asserted that vocational and technical education in which clothing and textiles education falls into requires a lot of physical equipment and other infrastructure to thrive. Hence from these it can be deduced that possibly, those skills in printing possessed by the students are probably because of available resources while there is need to provide the equipment needed for those skills in printing needed by the students.

The analysis of data for research question 2 depicted that the respondents agreed to all the nine factors that can hinder acquisition of printing skills. The mean ranging from 3.21 to 3.83 is above 2.50 which is the decision cutoff point Thus, upholding all the items as factors that can hinder student's printing skill acquisition. This is in line with what several authors found out such as Ewubare (2010), who opined that inadequate facilities and equipment to cope with the number of students stifles acquisition of skills amongst students and also insufficient laboratory facilities compels Home Economics teachers/lecturers to use inappropriate methods of teaching and this makes learning delivery difficult. Also, Ozioko (2006), stated that some Home Economics lecturers in tertiary institution do not like the teaching of clothing and textiles. On the issue of lack of seed money for practical, Ewubare (2010), pointed out that inadequate funding of tertiary institutions has often affected the teaching and learning of Home Economics amongst others.

Data analyzed for research question 3 showed that the mean ranging from 3.22 to 3.77 is above the decision cut off point which is 2.5 thus, respondents agreed that all the thirteen ways found out can help in improving Home economics students' dexterity in printing. This is in line with Nwaokaomah (2010) who suggested that workshops and seminars should be encouraged in Home Economics courses to keep the teachers abreast with new trends in the use of equipments and machines, Ozioko (2006) wrote on improvisation that individuals should discover different ways of using existing resources and materials to produce completely new or changed revisions of existing goods and services. On the issue of funding, Nwaokaomah (2010), suggested that governmental bodies should assist tertiary institutions in funding the subject area as well as regular maintenance on the existing equipment so as to keep them in continuous working condition for effective learning amongst others.

Conclusion and Recommendation

For Home-economics students to be employable graduates, there is need for constant improvement in their skill acquisition. It is pertinent home-economics students be kept abreast of different novel skills and appropriate use of machines and gadgets for effective participation in a world that is technically challenging and technologically changing. For this will aid Home-Economics students to be employable and/or self-reliant. In line with the findings,it is recommended a well-organized industrial training scheme be mapped out for Home-Economics students so as to bridge the gap between school and industry. Also there is need for advocacy for Federal Government to fund universities for well-equipped laboratories amongst others.

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