



Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations

KEYWORDS

Apprenticeship, Female participation, Technical occupations.

Anaele, Edmond Opara

Ph.D, Department of Vocational Teacher Education,
University of Nigeria, Nsukka.

Isiorhovoja Ogheneruone

M.Ed, Department of Vocational and Technical
Education, Delta State University, Abraka.

Dele Adare

M.Ed, Department of Science and Technical Education,
AdekunleAjasin University, Akungba-Akoko,
Ondo State.

Asoluka, CaroleneOnyinyechi

M.Ed, Department Vocational Education
Abia State University, Uturu

ABSTRACT *Participating of females as apprentices in technical occupations has not been encouraging in Delta, Ondo and Imo States. The study was therefore designed to determine strategies for enhancing female participation in apprenticeship in technical occupations. The study was a survey research. Through purposive sampling technique 50 parents, 50 master trainers and 50 female apprentices in technical occupations were taken from three States covered by the study. Questionnaire was the instrument used for data collection. The questionnaire was face validated and with a reliability coefficient of 0.75 using Cronbach Alpha. Mean was used to answer the research questions while Analysis of Variance (ANOVA) was used to test the hypotheses at 0.05 level of significance. The strategies for enhancing females' participation as apprentices in technical occupations as found by the study are enrolling, training, occupational guidance and follow-up strategies. It is recommended among others that females should be assisted in discovering and developing their potentials especially in technical occupations.*

Background

Apprenticeship is a method of learning a trade to acquire practical skills under the tutelage of a master trainer. Okorie (2002) stated that apprenticeship is a means of providing training for an individual in a particular trade. According to Olaitan (2002), apprenticeship is a procedure by which young persons acquire skills necessary to be proficient in a trade, craft, art or profession under the tutelage of a master trainer. By this method, an experienced skilled worker contracts to teach the broad range of skills to the apprentice. Osuala (2004) defined apprenticeship as an organized system for providing young people with manipulative skills needed for competent performance in occupations. Barab and Hay (2001) stated that apprenticeship includes the development of training for trainees as they become immersed in authentic activities and independent practices to enable the trainees master the skills. Apprenticeship is a training method utilized by trainers to teach apprentices how to solve problems understand tasks and deal with difficult situations associated with the occupation or trade.

Apprenticeship is therefore a method used to train apprentices in specific occupations. Apprentices work closely with an expert to learn a specific skill so as to become skilled master trainers at the end of apprenticeship period. Apprenticeship is one of the methods of vocational training in Nigeria today. Through apprenticeship training, skills in technical occupations such as Motor Vehicle Mechanic Works, Welding and Smiting, Carpentry and Joinery, Block/Brick-Laying and Concreting, Electrical Installation, Electronics servicing and repairs, Refrigeration and Air-conditioning servicing and repairs, Electric motor rewinding and Auto wiring among others can be acquired.

In view of the technological changes and innovations taking place in the world at large, the concept of apprenticeship has become vital as many modern trades such as computer servicing and repairs, photocopying machine servicing and repairs, cell phone repairs, digital video cameras and digital cameras now exist alongside the old

trades that have survived despite changes in techniques and knowledge. The technological advancement and development of any country rest on both male and females, but females are fewer in number compared with males in apprenticeship in technical occupations in Nigeria in general and Delta, Ondo and Imo States in particular. The reason for this might be as a result of occupational stereotype which promotes some occupations exclusively for males and some for females.

However, the lady mechanic initiative (LMI) which is non-governmental and non-profit organization was found by the first female Mechanic in Nigeria in 1986 to promote sustainable positive change in the socio-economic status of females through acquisition of skills in technical occupations. The LMI is committed to imparting technical and entrepreneurial skills to females to enhance their well being. Also to stimulate female interest in technical skill acquisition in formal education, the National Policy on Education, NPE (2004) provides for both boys and girls to be exposed early to various aspects of Science and Technology by the introduction of Basic Technology as a compulsory subject in the Basic Education curriculum.

Problem of the Study

Occupational stereotype is the age-long belief that certain occupations are especially reserved for a particular sex and this has been in place for a long time in Nigeria. For instance, most physically and mentally challenging occupations like Block laying and Masonry, Carpentry and Joinery, Auto Mechanic works, Welding and Fabrication, Steel fixing, Electrical installation among others are believed to be exclusively for males while occupations like fashion designing, hair dressing, hotel and catering services, manicure and pedicure are specially reserved for females. According to Green (2000), the components of occupational stereotype include occupational sex composition, occupational gender stereotypes and status of an occupation. However, efforts have been made to remove barriers to females' entrance as apprentices into technical occupations.

In spite of the efforts by the government and non-governmental organizations to stimulate and increase female partic-

ipation in technical occupations, the trend has not shown any remarkable improvement. Therefore the study was to determine the strategies that can be employed to enhance female participation in apprenticeship in technical occupations.

Research Questions

The following research questions guided the study:

1. What are the enrolling strategies for enhancing female participation in apprenticeship in technical occupations?
2. What are the training strategies for enhancing female participation in apprenticeship in technical occupations?
3. What are the occupational guidance strategies for enhancing female participation in apprenticeship in technical occupations?
4. What are the retention strategies for enhancing female participation in apprenticeship in technical occupations?
5. What are the follow up strategies for enhancing female participation in apprenticeship in technical occupations?

Hypothesis

The following hypothesis formulated for the study were tested at 0.05 level of probability:

Ho₁ There is no significant difference in the mean responses of parents, amaster trainers, and female apprentices in technical occupations on the enrolling strategies for enhancing female participation in technical occupation.

Method

This study adopted a survey research design. According to Osuala (2005), survey research is interested in the accurate assessment of the characteristics of the people or population, their attitudes and values.

The study was carried out in Delta, Ondoand Imo States of Nigeria. The States are in the South-south, South-west and South-east geo-political zones of Nigeria.

The population for the study was 150 respondents. Through purposive sampling technique, a total of 50 parents, 50 trainers and 50 female apprentices were sampled from the area of the study and used for the study.

The instrument used for data collection for the study was a questionnaire developed after review of literature on apprenticeship in technical occupations. The instrument was based on five point Likertscale of Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree. The instrument was face-validated by three lectures and tested for reliability using Cronbach Alpha and a reliability coefficient of 0.75 was obtained.

The questionnaire was administered personally by the researchers and with the aid of six research assistants. All the copies of the questionnaire administered were retrieved representing 100% return rate.

The data collected for the study were analyzed using mean to answer the research questions. Based on the five-point scale, any item with mean 3.5 and above is agreed upon while any item with less than 3.50 is disagreed upon. The null hypotheses were tested with analysis of variance (ANOVA) at 0.05level of significance. If the F- calculated is less than the F-table, the null hypothesis is accepted, but if the F-calculated is more than the F- table, the null hypothesis is rejected.

Results

Table 1: Mean Responses of respondents on Enrolling Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupation N=150

S/N	Enrolling Strategies	X	Remarks
1	Organizing seminars and workshops to encourage female apprenticeship in technical occupation	3.82	Agree

2	Apprenticeship for females in technical occupations to be without any charge from the trainer.	4.16	Agree
3	Movies/documentaries of female technicians shown to females to encourage them to enroll as apprentices in Technical occupations	4.08	Agree
4	Sensitization campaign by the government on the benefits of skill acquisition in technical occupations.	4.02	Agree
5	Government and master trainers to create incentives that would encourage females to enroll as apprentices in technical occupations.	4.00	Agree
6	Female master trainers to be involved in policy formulation on skill acquisition through apprenticeship in technical occupation.	3.90	Agree
7	Government should appoint females with technical skills as head of technical sections/units	4.00	Agree
8	No form of discrimination should be entertained in apprenticeship in technical occupations.	3.92	Agree
9	Females should be encouraged to visit industries especially those that are technically oriented.	3.90	Agree
10	Parents should encourage their daughters to acquire technical skills through apprenticeship.	3.82	Agree
11	Females should be encouraged to enroll as apprentices in technical occupations through outreach campaign in schools and social gatherings.	3.84	Agree

Table 1 shows that all the items on enrolling strategies for enhancing female participation in apprenticeship in technical occupations are agreed upon by the respondents based on their means which range between 3.82 to 4.08.

Table 2: Training Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations N=150

S/N	Training Strategies	X	Remarks
1	Less difficult tasks should be given to female apprentices at the beginning of the training.	3.88	Agree
2	Training to be followed with theoretical explanations, notes and demonstrations.	3.96	Agree
3	Individualized training to be given to female apprentices in technical occupations.	3.90	Agree
4	Female apprentices should be separated from their male counterparts during training	3.49	Disagree
5	Training should be systematic, from simple to complex, concrete to abstract.	3.90	Agree
6	Master trainers should pre-plan daily activities to ensure that the female apprentices are always engaged.	3.90	Agree
7	Training should be related to the socialization of the female apprentices.	3.88	Agree
8	Training should be specific to the job	3.83	Agree
9	Master trainers should be patient and tolerant with the female apprentices.	3.99	Agree
10	Female apprentices in technical occupations should be provided with basic tools for private practices.	3.78	Agree
11	The basics of the technical occupations should be taught with numeracy.	3.96	Agree

Table 2 shows the training strategies for enhancing female participation in apprenticeship in technical occupations. The respondents disagreed only on item 4 with mean 3.49 but agreed on the other items as training strategies.

Table 3: Occupational Guidance Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations N=150

S/N	Occupational Guidance Strategies	X	Remarks
1	The government should provide effective occupational guidance services to females prior to apprenticeship.	3.76	Agree
2	Provision of information relating to the particular trade to the female apprentice.	3.75	Agree
3	Provision of information on the nature of work and duties to be performed to the female apprentice.	3.89	Agree
4	Provision of information on responsibilities and compensations involved in various technical occupations.	3.93	Agree
5	Provision of information about employment outlooks, promotion opportunities and entrance requirements.	4.00	Agree
6	Occupational guidance given through illustrated materials like bulletins, handbills, visual aid materials to enhance females' participation in apprenticeship in technical occupations.	3.78	Agree
7	Occupational guidance through personal inventory using testing programmes such as intelligence, achievement, and attitude or interest test.	3.78	Agree
8	Occupational guidance through good practices that demonstrate the benefit of training to female apprentices.	3.80	Agree

The data presented in table 3 reveal that the occupational guidance strategies were all agreed upon by the respondents based on the mean range of between 3.75 to 4.50.

Table 4: Retention Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations N=150

S/N	Retention Strategies	X	Remarks
1	Female apprentices should be secured from sexual harassment.	3.96	Agree
2	Daily training periods should be reduced for female apprentices	3.75	Agree
3	Female apprentices should be trained on less rigorous/strenuous jobs.	3.76	Agree
4	Physically challenging jobs should not be taught to female apprentices	3.47	Agree
5	Government should partner with organizations and agencies that provide services to enable females succeed in apprenticeship in technical occupations	3.61	Agree
6	Committee set up to evaluate and report on quality of on-the-job training to ensure females are assigned to persons willing to teach them.	3.93	Agree
7	Female apprentices should be given a realistic picture of what they would encounter and how to deal with the challenges.	4.01	Agree
8	Female apprentices should be taught workplace culture, expectations and appropriate behavior to realistically prepare them for the task ahead.	4.11	Agree
9	Schedule female apprentices to attend related training along with other women to help them avoid feeling isolated and lonely.	3.87	Agree

Analysis of data presented in Table 4 show that the retention strategies are agreed upon by the respondents.

Table 5: Follow-up Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations N=150

S/N	Follow-up Strategies	X	Remarks
1	Female practitioners in technical occupations should be visited regularly by their trainers to ascertain their areas of deficiency and render help where necessary	3.92	Agree
2	Female practitioners in technical occupations should be visited regularly by their trainers to ascertain their progress in the occupation	3.75	Agree
3	Merit award should be given to the best female practitioner in technical occupation.	4.00	Agree
4	Responses can be elicited from the people of the locality regarding the level of proficiency of the female practitioners in technical occupations.	3.80	Agree
5	Parents/sponsors should monitor and report back to the master trainers the level of proficiency of the female practitioners.	3.64	Agree
6	Re-training female practitioners in technical occupation on emerging technical skills	4.22	Agree
7	Providing current occupational and technical information in the female practitioners areas of specialization	3.89	Agree
8	Providing the needed support to the female practitioners enable them turn the labour methods into feasible practices	3.52	Agree
9	Evaluation of the quality and relevance of the training process given to the female practitioners to keep them current and upgraded	3.58	Agree
10	Increase female integration in technical occupations often times blocked by occupational stereotyping or ignorance.	3.61	Agree

Data presented in Table 5 show that the items are agreed upon as follow-up strategies to enhance female participation in technical occupations.

Table 6: One-way Analysis of Variance (ANOVA) on the Strategies for Enhancing Female Participation in Apprenticeship in Technical Occupations

Source of Variance	Sum of squares	df	Mean Square	F-cal	F-critical
Between groups	0.37	2	0.19	0.19	3.06
Within groups	143.92	147	0.98		
Total	144.29				

Data presented in Table 7 show that the F-cal is less than the F-critical (3.06), the null hypothesis of no significant difference in the mean responses of parents, master trainers and female apprentices on the strategies for enhancing female participation in technical occupation is accepted as postulated.

Discussion

The findings of the study on recruiting strategies revealed that parents and government should encourage females to acquire skills in technical occupations through apprenticeship. Master trainers should not discriminate against female apprentices but rather encourage them to participate so that their potentials can be discovered and developed. This is in line with Okwori (2004) who stated that females need a lot of encouragement and persuasion to get into technical occupations that are regarded as males' world.

The findings on the training strategies showed that female apprentices prefer to train with the male counterparts on the same skill and tasks. Also training has to be on actual jobs. The findings agree with Okorie (2001) who stated that the effective establishment of process habits in any learner will be secured in proportion as the training is given on actual jobs not exercises on pseudo jobs.

Occupational guidance strategies as found by the study provide information needed by females on vocational choice, training information, opportunities, duties performed, nature of the work and employment outlook. This agreed with Ezeji (2001) who stated that effective occupational guidance services are required for the success of females in apprenticeship in technical occupations.

To retain female in apprentices in technical occupations which is male dominated requires that female apprentices be protected especially from sexual harassment. Female apprentices have to be compensated and rewarded to encourage them to remain. They also have to be given a realistic picture of what they would encounter in the work place and how to deal with the challenges. These findings agree with Adamu (2000) that expectations in technical skill acquisition and appropriate behavior are necessary to realistically prepare female apprentices for the task ahead.

The follow-up strategies found by the study will help to ascertain the relevance of the skill acquire so as to render assistance in areas of deficiency. Follow-up also assures female practitioners in technical occupations that they are appreciated by their trainers, fellow male apprentices, parents/guidance and the government. These findings are in line with Onwuegbuna, (2008) that females that venture into technical occupations should be appreciated and encouraged to increase gender equity in technical occupations.

Analysis of the hypothesis postulated for the study show that there was no significant difference in the mean responses of master trainers, parents and female apprentices on the strategies for enhancing female participation in technical occupations. The null hypotheses were accepted as postulated.

Conclusion

Based on the findings of the study, the application of the strategies will enhance female participation in apprentices in technical occupations and this will reduce social problems among females in the country. Moreover, over dependence on the government for employment will be reduced as more females will be meaningfully engaged or self-employed.

Based on the findings of the study, the following recommendations are made:

Government and individuals should be involved in the campaign for enhancing and encouraging female participation in apprenticeship in technical occupations.

Female apprentices should not be discriminated against during training.

Female apprentices should be assisted financially during training to take care of their basic needs.

Evaluation and follow-up should be carried out on regular basis by the master trainer to ascertain the extent of their understanding and demonstration of the acquired skill.

Females should be assisted in discovering and developing their potentials especially in technical occupations.

REFERENCE

- Adamu, A. (2000). The social and cultural factors inhibiting female students' choice of technical career as perceived by administrators and technical teachers in Kano State. Unpublished Dissertation, University of Nigeria, Nsukka. | Barab, S.A. & Hay, K.E. (2001). Doing science at the elbows of experts. Issues related to the science apprenticeship camp. *Journal of research in Science teaching* 38, (1), 70-102. | Ezeji, S.C.O.A. (2001). Guidance and counseling in education. Nsukka: Chibulson International Press. | Federal Republic of Nigeria (2004). National Policy on Education. Abuja: Federal Ministry of Education. | Green, G. (1999). The failure of women to succeed in predominantly male occupations. *Journal of Vocational Education Research* 4(2), 19-25. | Okorie, J.U. (2002). Vocational Industrial Education. Bauchi: League of Researchers. | Okwori, R.O. (2004) Gender inequality in education. The case of females and technology education. *Journal of International Gender Studies* 2 (1), 29-34. | Olaitain, S.O. (2000). Vocational and technical education in Nigeria (Issues and Analysis). Onitsha: Noble Graph Press. | Onwuegbuna, J.O. (2008). Strategies for increasing gender equity in technical education in Benue State. Unpublished Ph.D. Thesis, University of Nigeria, Nsukka. | Osuala, E.C. (2004). Foundations of vocational education, Enugu: Cheston Books. |