

Management Skills for Career Advancement of Women in Middle–Level Electrical/Electronics-Oriented Occupations

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Abstract

Women in middle-level electrical/electronics occupations are poorly assessed in terms of career advancement. The performance of these women in their places of work is attributing to the failure in electrical/electronic occupations. This study was therefore designed to identify the management skills necessary for career advancement of women in middle level electrical/electronic occupations, and to carry out this study, six research questions and three hypotheses were formulated. Questionnaire was used to collect relevant data from 130 respondents comprising the following categories of worker. Female, male and senior administrative workers, mean and standard deviation were used to answer the research questions while t-test statistics was employed to test the null hypothesis at 0.05 level of significance. The study revealed, that planning, directing, co-ordination, controlling, technical and organizing skills were rated very important for career advancement of women. Furthermore, majority of the other skills framed from the literature reviewed and in line with the purpose of the study as well as the research questions were found to have effect on career advancement of women. It was also found to have effect on career advancement of women. It was also found that the respondent gender has no influence on the responses to the framed skills. Recommendation was finally made based on the finding of the study.

INTRODUCTION

Males are generally noted for energy achievement and enterprising more than female (Meredith, 2000). The relative importance of the male child in an African family setting has made them preferred to female. A reflection on the number of female compare to male in important positions like political, economics, academics and social also reveals male superiority in most spheres of activity. Culturally, boys maintained superiority and dominance over girls. The latter were to focus on becoming sub-ordinate and obedient wives. It is then self-evidence that female students are less than their male counterpart in institution of higher learning in technical-oriented courses in Nigeria (Fapohunda, 2001).

Technical occupation refers to occupation that involves manipulative skills and the application of scientific principles (Ogbonnaya, 2005). Technical occupations also include the occupation that is concerned with the design, manufacturing, sales and installations and servicing of wide variety of products (Okorie, 2000). There are different areas in technical occupations namely: electrical/electronics technology, building technology, woodwork technology, auto-mechanic technology, mechanical/metal technology, agricultural technology, business education and home economics (Bolaji, 2000). Technical occupations are found in the industry, business administration, agriculture, research and services and economic sector. They are occupation/career which aims at acquisition and improvement of skills in science and technology.

Middle-level technical occupations are those occupations that their practitioners are trained through commercial schools, technical colleges and monotronics, metallurgical training institute, colleges of education and polytechnics. Such occupations are found in public and private sectors; a greater percentage of the technicians, technologists, workshop attendants, technical instructors, technical officers, artists and craftsmen/women on the payroll are middle level technical workers (Okorie, 2000). Career is one's chosen occupations for a living (Osuala, 1996). Career advancement on the other hand is the processes through which an individual comes to understand her place in the world of work through career awareness, exploration, and work exposure activities (Satterfield, 1995). An advanced worker is one who has mastered most of the effective functions in the field of endeavour without fear; such person can confidently take vital decision in the interest of the unit of the organization (Olabiya, 2005).

Female in electrical/electronics oriented occupations are poorly assessed in terms of career advancement (Newman, 1998). Specifically women in all levels of management in engineering oriented employment have been graded very low in their annual performance evaluation report (Bolaji, 2000). It has been maintained that most of them lack the requisite knowledge, skills and abilities, competencies, trust and dependence by the director or management of technical

oriented organization or engineering firms on most females especially in the middle level of management in electrical/electronics oriented employment (Newman, 1993). Females are considered less dependable due to biological and personal characteristics (Obi, 1993). Possey (1994) perceived that females are being less knowledgeable and possessing poor technical staff descriptions are more commonly associated with attribute given to technical occupation failure. Though the state of performance of women in electrical/electronics occupation appeared to be poorly assessed, Obi (1999) pointed out that women may still perform better in technical – oriented employment. This point was made out of finding from more than forty years aptitude testing of individuals from all age groups which shows that females have the best aptitude for advancement in any occupation (Obi, 1993). Lack of management skills seems to have kept female in the advancement minority. The study was poised to determine management skills required for career advancement of women in middle level electrical/electronics oriented occupation.

RESEARCH QUESTIONS

1. What are the planning skills needed for career advancement of women in middle-level electrical/electronics related occupations?
2. What are the technical skills needed by women in middle- level electrical/electronics oriented occupations for career advancement?
3. What are the organizing skills needed for career advancement of women in middle level electrical/electronics oriented occupation.
4. What are the directing skills needed for career advancement of women in middle-level electrical/electronics occupations?
5. What are the controlling skills needed for career advancement of women in electrical/electronics occupation?
6. What are the coordinating skills needed for career advancement of women in electrical/electronics occupation?

Hypotheses

The following null hypotheses were formulated to guide this study and they were tested at 0.05 level of significance.

HO₁: There is no significant difference between the mean rating of women in semi-urban and urban areas on the planning skills needed for career advancement of women in middle-level electrical/electronics oriented occupations.

HO₂: There is no significant difference between the mean rating of experienced and less experienced women on technical skills for career advancement of women in electrical/electronics oriented occupations.

HO₃: There is no significant difference between the mean ratings of levels of training on organizing skills for career advancement of women in middle level electrical/electronic oriented professions.

METHODOLOGY

Design of the Study

This research work adopted survey research design.

Area of the study

The area of this study was Oyo State. This study covered six registered technical industries spread across the state.

Population of the study

Industries in Oyo State are numerous but this study covered six industries and one hundred and fifty (150) Administrative Senior Staff was being sampled.

Instrument for data Collection

The instrument used in collecting data for this study is questionnaire. This was designed to elicit information from the sample in relation to the research questions. The questionnaire is made of seven sections: Section A consists of items on the background information of the respondents. Section B is made up of six items elicit information on planning skills for career advancement of women in middle-level electrical/electronics occupation. Section C consists of ten items on technical skills for career advancement of women in middle level technical occupation. Section D contains nine items soliciting information influence of organizing skill on career advancement of women. Section E contains eleven items on directing skill needed for career advancement of women in middle-level electrical/electronics occupation. Section F contains five items on controlling skills for career advancement of women in middle-level electrical/electronics occupation. Section G contains five items on coordinating skills for career advancement of women in middle-level electrical/electronic occupation.

Finally, the total number of items passed to elicit information necessary for this study is fifty-five. The responses on the questionnaires was structured on a 5-point likert scale namely: Strongly Agree (SA), Agree (A), Undecided (UD), Disagree (D), and Strongly Disagree (SD). The instrument was scrutinized for face validity to establish that they are reasonable and appropriate. Three experts from industrial and technical education unit of the Department of Vocational Teacher Education, University of Nigeria, Nsukka participated in the validation. Their inputs helped to effect necessary adjustment and modifications on the instrument

before final copy was produced and used for this study. The reliability of the instrument was established using a split half method. It was determined using person product moment correlation co-efficient. Each section was first split into two to get the reliability for each section and finally the entire questionnaire items were divided into two to get the instrument reliability co-efficient. The result of the reliability coefficient ranged from 0.77 to 0.84 while the final reliability correlation coefficient (r) was 0.77. This is considered high enough to be relied on.

Method of Data Collection

Copies of the questions were administered to the respondents with the help of two researchers assistants. The two research assistant covered industries in Oyo West and Oyo North senatorial districts. The research collected others. The questionnaires were collected within one week. The data collected were analyzed and used in answering the research questions and testing the null hypotheses.

Method of Data Analysis

Data collected from the respondents were analyzed with mean, standard deviation and t-statistic. The means and

standard deviation were used to answer the research questions. The mean (x) of the response scale was 3.0. The lower limit of the mean was 2.50 while the upper limit was 3.50. Any item with a mean rating of 3.50 and above was regarded as a skill required by women in middle level electrical/electronics occupations for career advancement. The standard deviation was used to determine the closeness or otherwise of the opinions of the respondents from the group mean. The t-test statistics was used to test the null hypotheses at probability of 0.05 level of significance. Any hypothesis whose calculated t-value was greater than table t-value was rejected, but if the calculated t-value of the hypothesis was less than the table t-value, the null hypothesis was accepted or upheld at 0.05 level of significance and relevant degrees of freedom.

RESULTS

Research Question 1

What are the planning skills required for career advancement of women in middle-level electrical/electronics related occupations?

Table 1: Mean and standard deviation rating of responses of women in middle-level electrical/electronics related occupation career advancement

| Item no | Planning skills items | \bar{x} | Standard deviation | Remark |
|---------|--|-----------|--------------------|--------|
| | Women in middle level electrical/electronics occupation should have the ability to | | | |
| 1 | Establish the objectives and policy formulation of the organization as well as goals in each area. | 3.67 | 1.53 | Agree |
| 2 | Take purposeful action regarding the company’s major asset, viz its future, financial status, etc | 3.51 | 1.50 | Agree |
| 3 | Advance future course of action on the basis of available facts and figure (Quantitative technical) | 3.60 | 1.50 | Agree |
| 4 | Indicate the objectives of the plan and steps to be taken by her subordinates | 3.57 | 1.57 | Agree |
| 5 | Communicate effectively to make the objectives to be more realistic and reliable | 4.51 | 0.59 | Agree |
| 6 | Less advancement of women in technical occupation can be attributed to lateness in completing assigned tasks | 3.68 | 1.47 | Agree |

In table 1 above, all the six stated planning skills were accepted to influence career advancement of women positively when possessed. The acceptance is based on the facts that they obtained mean scores greater than or equal to 3.50. The value of standard deviation is 0.59 if 1.59 is that the agreement of the respondents is homogenous.

Research Question 2

What are the technical skills by women in middle – level electrical/electronics oriented occupation for career advancement?

Table 2: Mean and standard deviation rating of responses of women in middle-level electrical/electronics related occupation career advancement

| Item no | Planning skills items Women in middle level electrical/electronics occupation should have the ability to | \bar{x} | Standard deviation | Remark |
|---------|---|-----------|--------------------|----------|
| 1 | Design, draw and interpret schematic diagrams of electronics sets. | 3.57 | 2.46 | Accepted |
| 2 | Use proper trouble shooting techniques in testing devices and components to assess their malfunctioning | 4.05 | 0.91 | Accepted |
| 3 | Use soldering and disordering skills to insert or remove electronic components | 3.68 | 2.16 | Accepted |
| 4 | Use electronic test equipment such as oscilloscope, pattern generator, etc. in electronic works effectively | 4.28 | 0.82 | Accepted |
| 5 | Use electrical hand tools such as hammers, hacksaw etc for electrical works. | 4.51 | 0.59 | Accepted |
| 6 | Use test instruments such as megger, tachometer etc. for carrying out electrical maintenance and installation works. | 3.51 | 1.52 | Accepted |
| 7 | Use electrical equipment such as winding machine, clamp, battery charger for electrical works. | 3.54 | 2.44 | Accepted |
| 8 | Earth installations properly; detect and remedy of wiring faults and fixing of fuses correctly. | 4.28 | 0.82 | Accepted |
| 9 | Properly observe IEEE (Institute of Electrical/Electronic Engineers) regulations when carrying out Electrical/electronic works. | 4.32 | 2.31 | Accepted |
| 10 | Properly stand electric poles, run naked wires on them and calculate wiring cost. | 3.51 | 2.26 | Accepted |

In table 2 above, all then technical skills were accepted to have positive influence on career advancement of women when possessed. The acceptance is based on the fact that they all obtained mean scores which are greater than or equal to 3.50.

Research Question 3

What are the organizing skills needed for career advancement of women in middle level electrical/electronics occupations?

Table 3: Mean and Standard deviation rating of responses of women in middle-level electrical/electronics related occupation career advancement.

| Item no | Planning skills items Women in middle level electrical/electronics occupation should have the ability to | \bar{x} | Standard deviation | Remark |
|---------|---|-----------|--------------------|----------|
| 1 | Design and development of organization structure/chart | 4.32 | 0.86 | Accepted |
| 2 | Describe the authority-responsibility relationship of all staff of the organization | 4.24 | 0.78 | Accepted |
| 3 | Define and division of labour among all staff | 4.05 | 0.92 | Accepted |
| 4 | Communicate effectively: whose purpose is to inform other employee what to do, when and how to do it. | 4.12 | 1.15 | Accepted |
| 5 | Interpret Non-verbal communication effectively will reduce the rate of confusion between women and their colleagues | 4.10 | 1.01 | Accepted |
| 6 | Work independently in self-directed manner to achieve the goals on the jobs | 1.28 | 0.82 | Accepted |
| 7 | Practice risk management in electrical/electronics project | 4.49 | 0.59 | Accepted |
| 8 | Learn from past mistake and be innovative in correcting errors | 4.47 | 0.85 | Accepted |
| 9 | Use most of their time at work place positively rather than gossip and answering telephone | 4.51 | 0.59 | Accepted |
| 10 | Adopt to changes in technology | 4.02 | 0.62 | Accepted |

In the table 3 above, all the ten organizing skills were accepted to have positive impacts on career advancement of women when possessed. The acceptance is due to the facts that they all obtained mean scores of 3.50 above. This coupled with a small standard deviation of 0.59 – 1.15, then there is indication of homogeneity in agreement of the respondents. That is greater number of the respondents agreed on the issue under investigation.

Research Question 4

What are the directing skills needed for career advancement of women in middle level electrical/electronics occupation?

Table 4: Mean and standard deviation rating of responses of women in middle-level electrical/electronics related occupations career advancement.

| Item no | Planning skills items Women in middle level electrical/electronics occupation should have the ability to | \bar{x} | Standard deviation | Remark |
|---------|---|-----------|--------------------|----------|
| 1 | Put much attention to their health by women makes them not to be always fit to participate fully in technical field. | 4.42 | 0.69 | Accepted |
| 2 | Women technical workers are denied promotion due to too commitment to work | 4.18 | 0.95 | Accepted |
| 3 | The way women comport themselves at work affects their career development opportunities | 4.23 | 1.08 | Accepted |
| 4 | Poor stress management skills hinder effective performance of women in technical occupations. | 4.38 | 0.65 | Accepted |
| 5 | View one's self as a continues learner enhances career development of women. | 4.28 | 0.76 | Accepted |
| 6 | Being accommodating fetches women favour and enhances their promotion in the workplace | 4.48 | 0.50 | Accepted |
| 7 | Women use most of their time at their workplace to gossip and this reduces their rate of career advancement. | 4.37 | 0.61 | Accepted |
| 8 | Women workers like using their time to make-up hence they do not advance in their workplace | 4.43 | 0.58 | Accepted |
| 9 | The problem of how to balance career and family life is responsible for less advancement of women in technical occupation | 4.46 | 0.50 | Accepted |
| 10 | Lateness to work is common among women and impedes their promotion at workplace | 4.21 | 0.99 | Accepted |
| 11 | Less advancement of women in technical occupations can be attributed to lateness in completing assignment tasks. | 4.81 | 0.81 | Accepted |

In table 4 above, all the eleven directing skills were accepted to influence career advancement of women in the middle level of electrical/electronic occupation such skill possessed. The mean scores of all the attributes are above 3.50 coupled with a small standard deviation of 0.50 – 0.99 which is indication of homogeneity agreement of the respondents on the value on the necessity of possessing, directing skills for career advancement of women.

Research Question 5

What are the controlling skills needed for career advancement of women in electrical/electronics occupation?

Table 5: Mean and standard deviation of respondents' opinion on controlling skills and career advancement of women

| Item no | Planning skills items Women in middle level electrical/electronics occupation should have the ability to | \bar{x} | Standard deviation | Remark |
|---------|---|-----------|--------------------|----------|
| 1 | Prepare a budget and live within the set budget | 4.21 | 0.99 | Accepted |
| 2 | Prepare APER annual performance evaluation. | 4.23 | 0.83 | Accepted |
| 3 | Report of all the subordinates account and maintain quantity and quality of internal control | 4.31 | 0.68 | Accepted |
| 4 | Set require standards, measures and comparing the outcomes with the set standard | 4.36 | 0.62 | Accepted |
| 5 | Ensure quantitative and qualitative performance plans and fulfilling objectives. | 4.05 | 0.91 | Accepted |

In the table 5 above, five stated controlling skills were all accepted to have a positive impact on career advancement of women in the middle level of management in electrical/electronic oriented occupation since the mean scores of all the attributes of the controlling skills score are coupled with a small standard deviation of 0.62 – 0.99 which implicates an homogeneity agreements among the respondents on the fact or issues.

Research Questions 6

What is the coordinating skills needed for career advancement of women in middle level electrical/electronics occupation?

Table 6: Mean and standard deviation of respondents option on coordinating skills and career advancement of women

| Item no | Planning skills items Women in middle level electrical/electronics occupation should have the ability to | \bar{x} | Standard deviation | Remark |
|---------|--|-----------|--------------------|----------|
| 1 | Securing harmony between individual and organizing goals to provide unity of action | 4.50 | 0.69 | Accepted |
| 2 | Setting up of communities, panel of enquiry, organizing staff meeting and conferences, providing forum for decision making | 4.20 | 0.86 | Accepted |
| 3 | Design time-tables, programme of event, check list and schedules of duty. | 4.51 | 0.59 | Accepted |
| 4 | Have a sound knowledge in sales purchasing, finance, accounting, personnel and office procedures | 4.12 | 0.99 | Accepted |
| 5 | Ability to act as coordinating agencies in the management of technical firms. | 4.32 | 0.85 | Accepted |

In table 6 above, the five stated coordinating skills were all accepted to have a positive influence on career advancement of women in the middle level of management when possessed. This is because the mean scores of al the stated attributes are not less than 3.50, coupled with a small standard deviation of 0.59 – 0.99, this shows that there is n homogeneity of agreement among the respondents.

Hypothesis 1

Ho1: There is no significant mean difference between the ratings of women of in semi-urban and urban areas on planning skills required for career advancement of women in middle-level of management in electrical/electronics occupation.

Table 7: The test analysis of mean ratings of the respondents on the planning skills required for career advancement of women

| Item no | Planning skills items | \bar{x}_1 | α_1 | \bar{x}_2 | α_2 | t-cal | t-tab | Remark |
|---|---|-------------|------------|-------------|------------|-------|-------|--------|
| Women in middle level electrical/electronics occupation should have the ability to | | | | | | | | |
| 1 | Establish the objectives and policy formulation of the organization as well as goals in each area. | 3.66 | 1.53 | 3.70 | 1.54 | 0.13 | | NS |
| 2 | Take purposeful action regarding the company's major asset, viz its future, financial status, etc | 3.52 | 1.56 | 3.44 | 1.60 | 0.23 | | NS |
| 3 | Advance future course of action on the basis of available facts and figure (Quantitative technical) | 3.59 | 1.50 | 3.63 | 1.53 | 0.11 | | NS |
| 4 | Indicate the objectives of the plan and steps to be taken by her subordinates | 3.59 | 1.55 | 3.49 | 1.63 | 0.31 | | NS |
| 5 | Communicate effectively to make the objectives to be more realistic and reliable | 3.74 | 1.41 | 3.49 | 1.63 | 0.78 | | NS |
| 6. | Less advancement of women in technical occupation can be attributed to lateness in completing assigned task | 4.49 | 0.60 | 4.56 | 0.51 | 0.53 | 1.96 | NS |

Keys:

S = significance difference – reject H_0 ; NS = not significant difference – accept H_0 ; $p < 0.05$; $df = N_1 + N_2 - 2$; $103 + 27 - 2 = 128$

The results in Table 7 shows the mean, standard deviation and the t-test values of the responses of the respondents on the planning skill used to test the hypothesis one. The results indicates that there is no significant difference between the mean ratings of urban and semi-urban areas on the planning skills required for career advancement of women in electrical/electronics occupations. The null hypothesis were accepted for the six items at 0.05 level of significance, since each of the calculated t-values (0.11 – 0.78) is not greater than the table t-value of 1.96 (two tail test) at 128 degrees of

freedom. In facts any observed difference is not a true difference but a mere chance which could result from sampling errors.

Hypothesis 2

H_0 : There is no significance difference between the mean ratings of experienced and less experienced women on technical skills required for career advancement of women in middle in electrical/electronics oriented occupations.

Table 8: The t-test analysis of mean ratings of respondents on technical skills required for career advancement of women

Experienced workers, $N_1 = 88$

Less experienced workers $N_2 = 42$

| Item no | Planning skills items | \bar{x}_1 | α_1 | \bar{x}_2 | α_2 | t-cal | t-tab | Remark |
|---|--|-------------|------------|-------------|------------|-------|-------|--------|
| Women in middle level electrical/electronics occupation should have the ability to | | | | | | | | |
| 1 | Design, draw and interpret schematic diagrams of electronics sets. | 3.58 | 1.58 | 3.55 | 1.58 | 0.36 | | NS |
| 2 | Use proper trouble shooting techniques in testing devices and components to assess their malfunctioning | 4.06 | 0.91 | 3.54 | 0.92 | 1.17 | | NS |
| 3 | Use soldering and disordering skills to insert or remove electronic components | 3.68 | 0.47 | 4.02 | 1.49 | 0.93 | | NS |
| 4 | Use electronic test equipment such as oscilloscope, pattern generator, etc. in electronic works effectively | 4.28 | 0.82 | 3.69 | 0.83 | 0.92 | 1.96 | NS |
| 5 | Use electrical hand tools such as hammers, hacksaw etc for electrical works. | 4.49 | 0.63 | 4.55 | 0.25 | 0.76 | | NS |
| 6. | Use test instruments such as megger, tachometer etc. for carrying out electrical maintenance and installation works. | 3.52 | 1.22 | 3.48 | 1.27 | 0.70 | | NS |
| 7 | Use electrical equipment such as winding machine, clamp, battery | 3.54 | 1.58 | 3.55 | 1.55 | 0.01 | | NS |

| | | | | | | | | |
|----|---|------|------|------|------|------|--|----|
| | charger for electrical works. | | | | | | | |
| 8 | Earth installations properly; detect and remedy of wiring faults and fixing of fuses correctly. | 4.28 | 0.82 | 4.27 | 0.83 | 0.92 | | NS |
| 9 | Properly observe IEEE (Institute of Electrical/Electronic Engineers) regulations when carrying out Electrical/electronic works. | 4.33 | 0.85 | 4.31 | 0.87 | 0.12 | | NS |
| 10 | Properly stand electric poles, run naked wires on them and calculate wiring cost. | 3.52 | 1.57 | 3.48 | 1.58 | 0.16 | | NS |

Keys:

S = significant difference – reject H0; NS = Not significant difference – Accept H0; experience workers – more than 5 years working experience

Less experienced workers – less than 5 years working experience

$$df = N_1 + N_2 - 2$$

$$86 + 42 - 2 = 128$$

Thus, $t_{128}(0.05) = 1.96$ (two tailed test)

Decision: All the items remarks are not significant there is no reason for rejecting the null hypothesis since the calculated t-value of (0.01 – 1.17) are less than the critical values of 1.96

at 128 degree of freedom and 0.05 level of significant. Therefore, the researcher uphold the null hypothesis (H₀) this indicated that there is no significant difference between the mean rating of experienced workers and less experienced workers on the technical skills required for career advancement of women in electrical/electronics occupation.

Hypothesis 3

H03: There is no significant difference between the mean ratings of level of training/education on controlling skills required for career advancement of women in middle level management in electrical/electronics oriented professions.

Table 9: The t-test analysis of mean ratings of respondents on controlling skills required for career advancement of women.

NCE, OND/GCE; N₁ = 98

B.Sc/HND; N₂ = 32

| Item no | Planning skills items | \bar{x}_1 | α_1 | \bar{x}_2 | α_2 | t-cal | t-tab | Remark |
|---|--|-------------|------------|-------------|------------|-------|-------|--------|
| Women in middle level electrical/electronics occupation should have the ability to | | | | | | | | |
| 1 | Prepare a budget and live within the set budget | 4.19 | 0.99 | 4.25 | 1.03 | 0.27 | 1.96 | NS |
| 2 | Prepare APER annual performance evaluation. | 4.22 | 0.84 | 4.25 | 0.80 | 0.15 | | NS |
| 3 | Report of all the subordinates account and maintain quantity and quality of internal control | 4.32 | 0.67 | 4.28 | 1.38 | 0.14 | | NS |
| 4 | Set require standards, measures and comparing the outcomes with the set standard | 4.37 | 0.62 | 4.34 | 0.78 | 1.16 | | NS |
| 5 | Ensure quantitative and qualitative performance plans and fulfilling objectives. | 4.03 | 0.92 | 4.09 | 1.72 | 1.01 | | NS |

Keys

s = significant difference – Reject H0; NS = Not significant – Accept H0

$$df = N_1 + N_2 - 2$$

$$98 + 32 - 2$$

$$= 128$$

Thus, $t_{128}(0.05) = 1.96$ (two tailed test)

Decision: Since the calculated t-values of 0.27, 0.15, 0.14, 0.16 and 1.01 and items have 1, 2, 3, 4 and 5 respective are each less than the critical value of t 1.96. The researcher did not reject the null hypothesis. Thus, there is no significant difference skills required for career advancement of women in electrical/electronics occupation in respective level of training or educational attainment controlling skills must be acquired for a managerial post.

DISCUSSION

The United Nation Education, Scientific and Cultural Organization (1998) wrote that women in general avoid occupation, which they consider to be exclusively meant for men. Okorie and Ezeji (1988) argued that the feelings about women's and responsibilities associated with married life scare women away from vocations considered the traditional workers roles of men. According to these authors, most parents and other members of the family regard engineering, architecture, law and blacksmithing among others as masculine jobs and this notion inhibits women's aspiration towards such occupations. In support of the above argument, Omole (2002), found that occupational opportunities of women are impeded by the general notions of parents and other members of the family.

The discussion of finding is in relation to the literature and gaps bridged. The findings on the management skills needed for career advancement of women in middle – level electrical/electronics occupation. The study therefore identified the management skills required by women in middle level electrical/electronics occupation. The findings of this study have organized and discussed according to the six research questions and three hypotheses formulated. The research questions are disused first, allowed by the hypotheses as outline below. In research question one, the finding as displayed in table 1 indicated that all the items of the planning skills were found as required skills for career advancement of women in middle – level electrical/electronics occupation with mean above 3.50 cut-off point. The grand mean scores obtained for planning skills for career advancement ranged from 4.51 for ability to communicate effectively to make the objective to be more realistic and reliable to 3.51 for ability to take purposeful action regarding the company's major asset, viz its future, financial status, etc. The high mean values were accepted to influence career advancement of women positively when possessed. To place on management skill Atkinson (2001) management skills therefore examine how person judges the social status of others on bases of perceptual case and how a persons own social circumstances affects her perception and performance in a particular setting. Adeyanju (2001), Awotunde(1986), Osuala (1999), that management skills can make person initiate a small scale business. From this result it is clear that ability to determine the work to be done when where, how and by who is a function of a good manager. It follows that if appropriate planning skills are

acquired by the women in middle level electrical/electronics occupations will advance in their career.

In research question two, all the items on technical skills were required for career advancement of women in middle-level electrical/electronics occupation with mean above 3.50 cut-off point. The grand mean obtained for the technical skills for career advancement from 4.32 for ability to properly observe IEEE (Institute of Electrical/Electronic Engineers) regulations when carrying out electrical/electronics work to 3.51 for ability to properly stand electrical poles, run naked wires on the and calculate wiring cost. The high mean values obtained for these skills confirm that the existing practice in electrical/electronics occupation never encouraged women in the middle level electrical/electronics occupation to acquire technical skills needed for career advancement the finding of the study may be stemmed from the current emphasis. Imaga (2001), technical skills are he ability to use knowledge methods, techniques and equipment necessary for the performance of specific task acquired form experience, education and training. Sowande (2002) on technical skills acquisition asserted that the more extensive the programme of studies the greater services the school can render to its students. It followed that if appropriate technical skills are acquired by the women in middle level of electrical/electronics occupation it will increase the number of women in advancement group.

In research question three, as shown in table 3, all the items of the organizing skills were found as required by women in middle-level electrical/electronics occupation with mean above 3.50 cut-off point. The grand scores obtained from organizing skills for career advancement ranged from 4.51 for ability to use most of their time at work place positively rather than gossip and answering telephone calls to 4.05 for ability to define and division of labour among all staff. The high mean values obtained for this skill confirmed that organizing skill if the items were properly followed will have positive impact on women in middle-level electrical/electronics occupation with mean above 3.50 cut-off of women when possessed. The finding on table 3 emphasis the importance of organizing skills in career advancement of in middle level electrical/electronics skills. Imaga (2001), Olabiyi (2005) stated that effectiveness of women in middle-level electrical/electronics occupation is a direct relation to their advancement. Women should be given re orientation on organizing skills. This will provide them the opportunity to keep abreast of current trends and improve their competencies, skills and knowledge.

In research question four, the findings displayed in table 4, indicated that all the items in the cluster were agreed by the respondents as directing skills required by the women in middle-level electrical/electronics occupation. This was based on the mean rating of the response of respondents that were above 3.50 the cut-off point. The grand mean scores obtained for directing skills for career advancement of women in

middle-level electrical/electronics occupation range from 4.81 for: less advancement of women in electrical/electronics occupation can be attributed to lateness in completing assigned task to 4.18 women technical worker are denied promotion due to their low commitment to work. The eleven directing skills were accepted to influence career advancement of women in middle-level electrical/electronics occupation and such skills must be possessed. The mean scores of the entire attribute are above 3.50 coupled with a small standard deviation of 0.50 – 0.99 which indicates homogeneity agreement of the respondents on the value on the necessarily to possessing directing skills for career advancement of women.

It was also revealed in this study that controlling skills is needed for career advancement of women in middle-level electrical/electronics occupation shown in table 5 with means above 3.50 cut-off point. The grand mean scores obtained for planning skills for career advancement ranged from 4.36 ability to set require standards, measure and comparing the outcomes with the set standard to 4.05 for ability to ensure quantitative and qualitative performance of working in the organization for executing plans and fulfilling objectives. The findings of this are in line with the view of Imaga (2001), Olabiyi (2005) state that managers are accountable for quality and quantity, he must give the dead line, this is done by setting standards, measuring and comparing and must have control over all activities to realize the plans.

Further finding in this study also revealed that co-ordinating skills are very important in career advancement of women in middle level electrical/electronics occupation. The table 6 displayed the finding indicated that all the items of co-ordinating skills are found as required skills for career advancement of women in middle-level electrical/electronics occupation with mean above 3.50 cut off point. The grand mean scores obtained from 4.51 for ability to design time table, programme of events, check list and schedules of duty to 4.12 ability to have sound knowledge in sales, purchasing, finance, accounting, personnel and office procedures. Imaga (2001), Colin (2001), Bolaji (2000), Fapounda (2001) state that co ordination is a process whereby the effort of a group is synchronized, so that the desired goal is easily achieved. For women to advance in middle-level electrical/electronics occupation they must be aware of these management skills and should also undergo retraining programme in order to meet the new needs in industries.

Hypothesis one

The analysis of hypothesis one shown on table 7 indicated that the comparison in the mean rating of response of the respondents on the planning skills required for career advancement women in middle-level electrical/electronic occupation tested with t-test statistics at 0.05 level of significance and 120 degrees of freedom. The finding indicated

that all the items were accepted by the respondents. This is based on the items, the items in which calculated t-values were not greater than the table t-value of 1.96 were accepted and those which calculated t-value were greater than table t-value of 1.96 were rejected. Therefore, it could be deduced that there was no significant difference between the mean rating of the responses of urban and semi-urban areas on the planning skills required for career advancement of women in middle-level electrical/electronics occupation.

Hypothesis two

The analysis of hypothesis two shown on the table 8 indicated that the comparison in the mean rating of responses of the respondents on the technical skills required for career advancement women in middle-level electrical/electronics occupation tested with t-test statistics at 0.05 level of significance and 128 degrees of freedom. The finding indicated that all the items on technical skills were accepted by the respondents. This is based on the result of the calculated t-values of all the items. The items in which the calculated t-value were not greater than the table t-value of 1.96 were accepted and those which calculated t-value were greater than table t-value of 1.96 were rejected. Therefore, there was no significant difference between the mean rating of the responses of experienced and less experienced women on the technical skills required for career advancement of women in middle-level electrical/electronic occupation in Oyo State.

Hypothesis three

The analysis of hypothesis three shown on table 9 indicated that the comparison in the mean rating of responses of the respondents on the controlling skills required for career advancement women in middle-level electrical/electronic occupation was tested with t-test statistics at 0.05 level of significance and 128 degrees of freedom. The finding indicated that all the items on controlling skills were accepted by the respondents. This is based on the result of the calculated t-values of all the items. The item in which the calculated t-value were not greater than the table t-value of 1.96 were accepted and those which calculated t-value were greater than table t-value of 1.96 were rejected. Therefore, there was no significant difference between the mean rating of the responses of level of training/education on condoling skills required for career advancement of women in middle-level management in electrical/electronic occupation in Oyo State.

CONCLUSION

The findings of this study shows that in middle-level electrical/electronic occupations women required an adequate knowledge of planning skills, technical skills, organizing

skills and co-ordination skills for their career advancement. Obviously, most employed female technical workers are less advanced. All effort is being geared towards improving and enhancing the enrolment and performance of women in electrical/electronics professions. This would be full alienated through proper and effective implementation in the findings of this study.

RECOMMENDATIONS

In line with the findings of this study, the following recommendations were made.

1. Women intending to enroll in to electrical/electronic oriented courses should prepare themselves for hard work. They should be ready to face the challenges that the nature of the occupation will necessarily impose on them.
2. Findings of studies like this should be made available to the under-graduate students so as to enlighten them to such skills required for their successful working days.
3. Workshops and seminars should be organized regularly to enable women technical workers at all level to improve on their job and the aware of new trend in management skills.
4. The technical educators in their various classes to meet the demands of employers should stress the importance of management skills.
5. The management skills can be taught as content in a course and evaluated so as to ensure that student acquire these skills before graduating into the world of work.

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