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Evaluation of the Technical Skills and Employability Skills of Technical Education Graduates for Sustainable Development in Delta North Senatorial District

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Abstract

This study investigated the technical and employability skills possessed by graduates of technical education for sustainable development in Delta North Senatorial District. Eight research questions and four null hypotheses guided the study. The study adopted the ex-post facto descriptive research design. The population comprised all graduates of technical education in the Senatorial District in the last ten years. The sample size comprised 108 graduates of Technical Education in the Senatorial District. Multistage sampling procedure was used to select the sample for the study with questionnaire as instrument and designed by the researcher. The instrument was validated by 2 experts from Technical Education Department, including the researcher's supervisor, and one expert from the Measurement and Evaluation, Delta State University, Abraka. The instrument's reliability was ascertained through Cronbach's Alpha method in which a reliability coefficient of 0.88 was obtained. Data was obtained by administering the questionnaire to 50 graduates of Technical Education of the Delta State University, Abraka, who were not part of the study and was analysed using basic statistical tools in Excel, version 2020. Statistical mean and standard deviation were used to answer the research questions while independent samples t-test was used to test the null hypotheses at 0.05 level of significance. The findings revealed that graduates of technical education possessed technical skills in oral and written communication in their native languages, basic general knowledge in the field of study and decision-making; that graduates of technical education needed technical skills in ethical commitment capacity, generating new ideas, initiative and entrepreneurial spirit. The study also found that there is no significant difference between the technical skills possessed by male and female graduates of technical education, between the technical skills needed by the male and female graduates, and between the employability skills possessed by male and female graduates. There was also no significant difference between the employability skills needed by male and female graduates for sustainable development in Delta North Senatorial District. The study recommended amongst others, that unemployed graduates of Technical Education should put into practice the technical skills possessed for sustainable development, whenever they have the opportunity of doing so.

1.0. Introduction

The rate of unemployment in Nigeria, particularly in Delta State is alarming. One of the many responsibilities of Government at all levels is to provide for the welfare of the citizens. This means that it is the duty of the government, both federal, state and local government, to provide employment for the people who are able and willing to work, and to provide safety net for the vulnerable citizens in the society. Through the welfare clause, government also have the responsibility of providing health facilities, good road networks, schools, recreational centres, pipe-borne water, and communication network among others. These responsibilities can be overwhelming for government with little or no resources [1]**.** When the resources of a state or nation are not enough to cater for the need of the growing population, it becomes difficult for government to provide employment for every employable citizen. This is the case for most developing countries of the world like Nigeria, with its increasing population. In order to mitigate the effect of the dwindling resources on the growing population, there are several strategies that can be employed. One of such strategies is to encourage entrepreneurship among the youthful population. In doing this, skill acquisition is often emphasised.

Since the introduction of the skill acquisition programmes more than seven years ago, more than 5,000 youths from across the 25 local government areas of the state, have benefited [2]. The beneficiaries benefits from different sectors of the economy. The idea behind the skill acquisition was that if one person who is empowered by the government can provide jobs to ten more people, it means one million empowered youths can employ 10 million people in the country. Some higher institutions in the state have courses that train students on technical and vocational education apart from the efforts of the State government. Each year, numerous students are being graduated from the vocational and technical education programme, with the hope that such graduates will be able to do well for themselves and others. Despite the giant stride allegedly recorded in the skill acquisition programmes, it is unfortunate the unemployment still persists. Available report by the Foundation for Partnership Initiatives in the Niger Delta (PIND) shows that Unemployment is high in Delta State [2[. The Nigerian Bureau of Statistics 2nd quarter report, ranked the Delta State third among the South-South States at unemployment rate of 40.36% and underemployment rate of 20.1%. The report estimated the total unemployment rate to be 64%.

It is regrettable that unemployment still persists despite the efforts of the Delta State Government in tackling unemployment and poverty in the State. Available report by the Foundation for Partnership Initiatives in the Niger Delta (PIND) shows that Unemployment is high in Delta State [3]. The Nigerian Bureau of Statistics 2nd quarter report (as cited in [3] ranked the Delta State third among the South-South States at unemployment rate of 40.36% and underemployment rate of 20.1%. The report estimated the total unemployment rate to be 64%. This reported data is a far cry from the objectives of the employment generation scheme of Governor Ifeanyi Okowa. It is expected that seven years after the introduction of the scheme, the unemployment rate will reduce. Rather, what is noticeable in the state are streets populated by unemployed youths. Youths who were covered by the scheme and who benefited immensely from the empowerment were either not able to establish their own **enterprises** or have failed to employ and empower other unemployed youths as proposed by the scheme. The implication is high rate of poverty, proliferation of cyber criminality, kidnapping, armed robbery, ritual killing and political thuggery. In view of this, it became necessary to critically evaluate the technical and employability skills of graduates of technical education for sustainable development in Delta North Senatorial District.

1.1.Research Questions

The following research questions have been raised to guide the study:

1. What are the technical skills needed by graduates of technical education for sustainable development in Delta North Senatorial District?
2. What are the technical skills possessed by graduates of technical education for sustainable development in Delta North Senatorial District?
3. What are the employability skills needed by graduates of technical education for sustainable development in Delta North Senatorial District?
4. What are the employability skills possessed by graduates of technical education for sustainable development in Delta North Senatorial District?
5. Is there any difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?
6. Is there any difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?
7. Is there any difference between the employability skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?
8. Is there any difference between the employability skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?

1.2.Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

1. there is no significant difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District;
2. there is no significant difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District;
3. there is no significant difference between the employability skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District; and
4. there is no significant difference between the employability skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

2.0. Methodology

The study adopted the descriptive method of *ex-post facto* research design. This has been earlier applied in the study on the utilization of personnel in the management of technical education in Akwa Ibom State, Nigeria [4]. The design approach enabled the researcher to evaluate the technical and employability skills of graduates of technical education for sustainable development. The population of the study comprised all graduates of technical education in Delta North Senatorial District in the last ten years. Since only the Delta State University Abraka has been producing the Technical Education graduates for the State in this last ten years, the researcher assumed that the Department of Technical Education produces an average forty (40) graduates per year to give a total population of 400 graduates, in the last ten (10) years.

The population of the study will therefore be taking as 400. Furthermore, since Delta State has three senatorial district, it will be assumed that each Senatorial District would be having approximately, a total graduate population of 400/3= 133.33. In the study, population of 150 will therefore be adopted (when the field (post proposal) work begins, the actual number of graduates in the Department of

Technical Education will be obtained from the Examinations and Records Division of the Delta State University, Abraka for the last ten (10) years and be divided by three (3) to roughly represent each Senatorial District. The sample size for the study comprised 108 graduates of Technical Education in Delta North Senatorial District. These are graduates of the Department of Technical Education, Delta State University, Abraka, who are employed and unemployed. The choice of the sample size was based on the recommendation of Krejcie and Morgan [5], which stated that for a population of 400, the sample size of 196 is adequate. The multistage sampling procedure was used to select the sample for the study.

The instrument that was used to collect data in this study is a questionnaire. The questionnaire was face validated by 3 experts; 2 from Technical Education Department. In order to establish the reliability of the instrument, the questionnaire was administered to 50 graduates of Technical Education of the Delta State University, Abraka, who were not part of the study. The instrument's reliability was ascertained through Cronbach's Alpha method in which a reliability coefficient of 0.88 was obtained. The statistical mean and standard deviation were used to answer the research questions while independent samples t-test was used to test the null hypotheses at 0.05 level of significance. The questionnaire bordered on Technical Skills Rating Scale and Employability Skills Rating Scale respectively. The scales were structured on a four-point scale, ranging from 1 for strongly disagree to 4 for strongly agree. The data obtained were analysed with descriptive and inferential statistics through the use the mean and standard deviation to answer the research questions while independent samples t-test was used to test the hypotheses at .05 level of significance.

3.0.Results and discussion

Research Question: What are the technical skills possessed by graduates of technical education for sustainable development in Delta North Senatorial District?

Table 1: Mean assessment of technical skills possessed by graduates of Technical Education for sustainable development in Delta North Senatorial District

S/N	Technical Skill	Mean	SD	Remark
1.	Oral/written communication in your native language	2.99	0.78	Possessed
2.	Basic general knowledge in the field of study	2.90	0.88	Possessed
3.	Decision-making	2.84	0.94	Possessed
4.	Capacity to learn	2.81	0.86	Possessed
5.	Ability to communicate with non-experts	2.76	1.04	Possessed
6.	Interpersonal skills	2.71	1.04	Possessed
7.	Will to succeed	2.63	1.12	Possessed
8.	Capacity to adapt to new situations	2.62	0.91	Possessed
9.	Ability to retrieve and analyse information from different sources	2.60	1.05	Possessed
10.	Understanding of cultures and customs of other countries	2.56	0.71	Possessed
11.	Appreciation of diversity and multiculturality	2.56	0.74	Possessed
12.	Problem solving	2.56	0.72	Possessed
13.	Teamwork	2.54	1.03	Possessed
14.	Capacity for generating new ideas	2.54	0.75	Possessed
15.	Concern for quality	2.47	1.06	Not Possessed
16.	Critical and self-critical abilities	2.46	1.02	Not Possessed
17.	Project design and management	2.45	1.02	Not Possessed
18.	Leadership	2.44	1.02	Not Possessed
19.	Initiative and entrepreneurial spirit	2.40	0.98	Not Possessed
20.	Ethical commitment	2.36	0.85	Not Possessed
21.	Capacity for applying knowledge in practice	2.35	0.93	Not Possessed
22.	Grounding in basic knowledge of the profession in practice	2.32	0.93	Not Possessed
23.	Ability to work in an international context	2.27	1.07	Not Possessed
24.	Ability to work in an interdisciplinary team	2.20	1.04	Not Possessed
25.	Knowledge of a second language	2.20	0.86	Not Possessed
26.	Research skills	2.11	0.86	Not Possessed
27.	Ability to work autonomously	1.98	0.97	Not Possessed
28.	Planning/time management	1.86	0.89	Not Possessed
29.	Basic computing skills	1.78	0.80	Not Possessed
30.	Capacity for analysis and synthesis	1.44	0.73	Not Possessed
Average Mean		**2.42**	**0.92**	**Not Possessed**

Criterion Mean = 2.50

Table 1 shows the mean technical skills possessed by graduates of technical education for sustainable development in Delta North Senatorial District. From the table, the mean technical skills ranged from 1.44 to 2.99 with an average mean of 2.42. The criterion mean used for the assessment is 2.50, which means that the graduates possessed basic general knowledge in the field of study, decision-making, capacity to learn, ability to communicate with non-experts, interpersonal skills and will to succeed among others, but did not possess concern for quality, critical and self-critical abilities, project design and management, leadership, initiative and entrepreneurial spirit, and ethical commitment among others, as shown in the remark section of Table 1.

Table 2: Mean assessment of technical skills needed by graduates of technical education for sustainable development in Delta North Senatorial District

S/N	Technical Skill	Mean	SD	Remark
1.	Ethical commitment	3.50	0.54	Needed
2.	Capacity for generating new ideas	3.48	0.73	Needed
3.	Initiative and entrepreneurial spirit	3.34	0.70	Needed
4.	Leadership	3.26	0.80	Needed
5.	Ability to work autonomously	3.02	0.86	Needed
6.	Concern for quality	2.91	0.88	Needed
7.	Understanding of cultures and customs of other countries	2.85	0.87	Needed
8.	Critical and self-critical abilities	2.84	0.94	Needed
9.	Capacity for applying knowledge in practice	2.81	0.98	Needed
10.	Ability to work in an interdisciplinary team	2.77	0.96	Needed
11.	Capacity for analysis and synthesis	2.74	1.09	Needed
12.	Research skills	2.62	0.91	Needed
13.	Knowledge of a second language	2.60	1.05	Needed
14.	Planning/time management	2.57	1.16	Needed
15.	Ability to work in an international context	2.55	1.06	Needed
16.	Capacity to adapt to new situations	2.54	1.03	Needed
17.	Basic computing skills	2.54	1.02	Needed
18.	Grounding in basic knowledge of the profession in practice	2.51	1.04	Needed
19.	Capacity to learn	2.46	0.75	Not Needed
20.	Ability to retrieve and analyse information from different sources	2.44	0.72	Not Needed
21.	Basic general knowledge in the field of study	2.31	1.05	Not Needed
22.	Oral/written communication in your native language	2.10	1.05	Not Needed
23.	Problem solving	2.03	0.98	Not Needed
24.	Appreciation of diversity and multiculturality	2.01	0.89	Not Needed
25.	Teamwork	1.92	0.78	Not Needed
26.	Project design and management	1.89	0.97	Not Needed
27.	Interpersonal skills	1.83	0.78	Not Needed
28.	Decision-making	1.77	0.69	Not Needed
29.	Ability to communicate with non-experts	1.65	0.73	Not Needed
30.	Will to succeed	1.54	0.73	Not Needed
Average Mean		**2.51**	**0.89**	**Needed**

Criterion Mean = 2.50

Table 2 shows the mean technical skills needed by graduates of technical education for sustainable development in Delta North Senatorial District. From the result, the mean technical skills ranged from 1.54 to 3.50 with an average mean of 2.51. The criterion mean used for the assessment is 2.50, which means that the graduates needed technical skills in the area of ethical commitment, capacity for generating new ideas, initiative and entrepreneurial spirit, leadership, ability to work autonomously, concern for quality and understanding of cultures and customs of other countries; but did not need skills of teamwork, project design and management, interpersonal skills, decision-making, ability to communicate with non-experts, and will to succeed; as shown in the remark section of Table 2.

Research Question: Is there any difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?

Table 3: Mean comparison of the difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

S/N	Technical Skill	Male N = 66			Female N = 42		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
1.	Capacity for analysis and synthesis	1.47	0.75	Not Possessed	1.40	0.70	Not Possessed
2.	Capacity for applying knowledge in practice	2.36	0.91	Not Possessed	2.33	0.98	Not Possessed
3.	Planning/time management	1.86	0.89	Not Possessed	1.86	0.90	Not Possessed
4.	Basic general knowledge in the field of study	2.95	0.87	Possessed	2.81	0.89	Possessed
5.	Grounding in basic knowledge of the profession in practice	2.26	0.93	Not Possessed	2.43	0.91	Not Possessed
6.	Oral/written communication in your native language	2.91	0.84	Possessed	3.12	0.67	Possessed
7.	Knowledge of a second language	2.18	0.84	Not Possessed	2.24	0.91	Not Possessed
8.	Basic computing skills	1.82	0.74	Not Possessed	1.71	0.89	Not Possessed
9.	Research skills	2.09	0.80	Not Possessed	2.14	0.95	Not Possessed
10.	Capacity to learn	2.89	0.88	Possessed	2.67	0.82	Possessed
11.	Ability to retrieve and analyse information from different sources	2.73	1.03	Possessed	2.40	1.06	Not Possessed
12.	Critical and self-critical abilities	2.50	1.06	Possessed	2.40	0.96	Not Possessed
13.	Capacity to adapt to new situations	2.56	0.90	Possessed	2.71	0.94	Possessed
14.	Capacity for generating new ideas	2.52	0.75	Possessed	2.57	0.77	Possessed
15.	Problem solving	2.55	0.68	Possessed	2.57	0.77	Possessed
16.	Decision-making	2.77	0.96	Possessed	2.95	0.91	Possessed
17.	Teamwork	2.45	1.01	Not Possessed	2.67	1.05	Possessed
18.	Interpersonal skills	2.74	1.06	Possessed	2.67	1.03	Possessed
19.	Leadership	2.42	1.04	Not Possessed	2.45	0.99	Not Possessed
20.	Ability to work in an interdisciplinary team	2.21	1.05	Not Possessed	2.19	1.04	Not Possessed
21.	Ability to communicate with non-experts	2.64	1.02	Possessed	2.95	1.06	Possessed
22.	Appreciation of diversity and multiculturality	2.50	0.75	Possessed	2.64	0.73	Possessed
23.	Ability to work in an international context	2.41	1.12	Not Possessed	2.05	0.96	Not Possessed
24.	Understanding of cultures and customs of other countries	2.42	0.77	Not Possessed	2.79	0.57	Possessed
25.	Ability to work autonomously	2.03	1.01	Not Possessed	1.90	0.91	Not Possessed
26.	Project design and management	2.39	1.11	Not Possessed	2.55	0.86	Possessed
27.	Initiative and entrepreneurial spirit	2.33	1.03	Not Possessed	2.50	0.89	Possessed
28.	Ethical commitment	2.21	0.89	Not Possessed	2.60	0.73	Possessed
29.	Concern for quality	2.33	1.10	Not Possessed	2.69	0.98	Possessed
30.	Will to succeed	2.56	1.17	Possessed	2.74	1.06	Possessed
Average Mean		**2.40**	**0.93**	**Not Possessed**	**2.46**	**0.90**	**Not Possessed**

Criterion Mean = 2.50

Table 3 shows the mean comparison of the difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District. From the result, the mean technical skills ranged from 1.47 to 2.95, with an average mean of 2.40 for male graduates and from 1.40 to 3.12, with an average mean of 2.46 for female graduates. The criterion mean used for the assessment is 2.50, which means that both male and female graduates do not possess majority of the technical skills. This result suggests that male and female graduates do not differ in the possession of technical skills.

Research Question: Is there any difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?

Table 4: Mean comparison of the difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

S/N	Technical Skill	Male N = 66			Female N = 42		
		Mean	SD	Remark	Mean	SD	Remark
1.	Capacity for analysis and synthesis	2.71	1.09	Needed	2.79	1.09	Needed
2.	Capacity for applying knowledge in practice	2.80	0.95	Needed	2.81	1.04	Needed
3.	Planning/time management	2.53	1.15	Needed	2.64	1.19	Needed
4.	Basic general knowledge in the field of study	2.32	1.06	Not Needed	2.29	1.04	Not Needed
5.	Grounding in basic knowledge of the profession in practice	2.38	1.05	Not Needed	2.71	1.00	Needed
6.	Oral/written communication in your native language	2.15	1.06	Not Needed	2.02	1.05	Not Needed
7.	Knowledge of a second language	2.73	1.03	Needed	2.40	1.06	Not Needed
8.	Basic computing skills	2.50	1.06	Needed	2.60	0.96	Needed
9.	Research skills	2.56	0.90	Needed	2.71	0.94	Needed
10.	Capacity to learn	2.48	0.75	Not Needed	2.43	0.77	Not Needed
11.	Ability to retrieve and analyse information from different sources	2.45	0.68	Not Needed	2.43	0.77	Not Needed
12.	Critical and self-critical abilities	2.77	0.96	Needed	2.95	0.91	Needed
13.	Capacity to adapt to new situations	2.45	1.01	Not Needed	2.67	1.05	Needed
14.	Capacity for generating new ideas	3.42	0.81	Needed	3.57	0.59	Needed
15.	Problem solving	2.03	1.10	Not Needed	2.02	0.78	Not Needed
16.	Decision-making	1.88	0.73	Not Needed	1.60	0.59	Not Needed
17.	Teamwork	2.02	0.85	Not Needed	1.76	0.62	Not Needed
18.	Interpersonal skills	1.76	0.63	Not Needed	1.95	0.96	Not Needed
19.	Leadership	3.39	0.76	Needed	3.05	0.83	
20.	Ability to work in an interdisciplinary team	2.80	0.96	Needed	2.71	0.97	Needed
21.	Ability to communicate with non-experts	1.64	0.67	Not Needed	1.67	0.82	Not Needed
22.	Appreciation of diversity and multiculturality	2.14	0.84	Not Needed	1.81	0.94	Not Needed
23.	Ability to work in an international context	2.52	1.03	Needed	2.60	1.13	Needed
24.	Understanding of cultures and customs of other countries	2.88	0.87	Needed	2.81	0.89	Needed
25.	Ability to work autonomously	3.00	0.93	Needed	3.05	0.76	Needed
26.	Project design and management	1.86	0.98	Not Needed	1.93	0.97	Not Needed
27.	Initiative and entrepreneurial spirit	3.20	0.77	Needed	3.57	0.50	Needed
28.	Ethical commitment	3.44	0.56	Needed	3.60	0.50	Needed
29.	Concern for quality	2.94	0.91	Needed	2.86	0.84	Needed
30.	Will to succeed	1.56	0.77	Not Needed	1.50	0.67	Not Needed
Average Mean		**2.51**	**0.90**	**Needed**	**2.52**	**0.87**	**Needed**

Criterion Mean = 2.50

Table 4 shows the mean difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District. From the result, the mean technical skills ranged from 1.56 to 3.44, with an average mean of 2.51 for male graduates and from 1.50 to 3.60, with an average mean of 2.52 for female graduates. The criterion mean used for the assessment is 2.50, which means that both male and female graduates do not need majority of the technical skills. This result suggests that male and female graduates do not differ in the technical skills needed.

Research Question: Is there any difference between the employability skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District?

Table 5: Mean comparison of the between the employability skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

S/N	Employability Skill	Male N = 66			Female N = 42		
		Mean	SD	Remark	Mean	SD	Remark
1.	Solving problems	2.32	0.95	Not Needed	2.02	1.05	Not Needed
2.	Allocating time efficiently	1.70	0.86	Not Needed	1.95	1.04	Not Needed
3.	Communicating ideas verbally to groups	2.56	1.10	Needed	2.36	1.28	Not Needed
4.	Responding positively to criticism	2.35	0.94	Not Needed	2.33	1.14	Not Needed

5.	Functioning well in stressful situations	3.11	0.83	Needed	2.76	1.08	Needed
6.	Keeping up-to-date on developments	2.47	0.90	Not Needed	2.64	1.03	Needed
7.	Identifying problems	2.89	1.03	Needed	2.55	1.11	Needed
8.	Recognizing the effects of decisions made	2.53	0.93	Needed	2.50	1.13	Needed
9.	Assessing long-term effects of decisions	2.68	0.91	Needed	2.57	0.99	Needed
10.	Identifying components of problems	2.53	1.03	Needed	2.67	0.95	Needed
11.	Prioritizing problems	2.68	0.91	Needed	2.50	1.02	Needed
12.	Functioning at optimal performance	2.56	1.07	Needed	2.55	0.99	Needed
13.	Adapting to situations of change	2.55	0.77	Needed	2.48	0.67	Not Needed
14.	Maintaining a positive attitude	2.53	0.73	Needed	2.50	0.74	Needed
15.	Making decisions on thorough analysis	2.67	0.95	Needed	2.79	0.87	Needed
16.	Keeping-up-to-date with external realities	2.41	1.02	Not Needed	2.60	0.70	Needed
17.	Establishing critical events to be completed	2.61	0.93	Needed	2.52	0.97	Needed
18.	Conveying information one-to-one	2.53	1.00	Needed	2.24	1.06	Not Needed
19.	Recognizing alt. routes in meeting obj‘s.	2.65	1.06	Needed	2.74	1.13	Needed
20.	Managing/overseeing several tasks at once	2.42	1.07	Not Needed	2.64	1.06	Needed
21.	Setting priorities	2.48	0.73	Not Needed	2.67	0.75	Needed
22.	Listening attentively	2.39	1.01	Not Needed	2.40	1.04	Not Needed
23.	Initiating change to enhance productivity	2.47	0.73	Not Needed	2.60	0.63	Needed
24.	Providing novel solutions to problems	2.97	1.05	Needed	2.93	0.89	Needed
25.	Conceptualizing a future for the company	2.64	1.00	Needed	2.33	0.85	Not Needed
26.	Making decisions in a short time period	2.58	1.01	Needed	2.60	1.01	Needed
27.	Providing innovation to company‘s future	2.61	0.68	Needed	2.57	0.70	Needed
28.	Identifying potential negative outcomes	2.55	0.93	Needed	2.62	1.01	Needed
29.	Sorting out relevant data to solve problems	2.82	0.98	Needed	2.69	1.05	Needed
30.	Revising plans to include new information	2.85	0.98	Needed	2.88	1.04	Needed
31.	Gaining new knowledge everyday	2.23	0.99	Not Needed	2.48	1.02	Not Needed
32.	Combining relevant info. from sources	2.56	1.10	Needed	2.48	1.13	Not Needed
33.	Ability to work independently	2.27	1.00	Not Needed	2.24	0.98	Not Needed
34.	Monitoring progress against the plan	2.56	0.96	Needed	2.62	0.96	Needed
35.	Assigning/delegating responsibility	2.02	1.07	Not Needed	1.90	0.88	Not Needed
36.	Gaining new knowledge outside the job	2.47	1.03	Not Needed	2.33	0.95	Not Needed
37.	Maintaining a high energy level	2.32	0.91	Not Needed	2.50	1.02	Needed
38.	Giving direction and guidance to others	2.44	1.07	Not Needed	2.45	0.99	Not Needed
39.	Meeting deadlines	2.55	0.77	Needed	2.48	0.67	Not Needed
40.	Monitoring progress toward risky ventures	2.53	0.73	Needed	2.50	0.74	Needed
41.	Responding to others‘ comments	2.33	0.95	Not Needed	2.21	0.87	Not Needed
42.	Establishing good rapport w/ subordinates	2.41	1.02	Not Needed	2.60	0.70	Needed
43.	Reconceptualizing roles of the corporation	3.33	0.54	Needed	3.38	0.49	Needed
44.	Knowing ethical implication of decisions	3.23	0.60	Needed	3.31	0.47	Needed
45.	Applying info. to new or broader contexts	2.95	0.87	Needed	2.79	0.84	Needed
46.	Working well with fellow employees	2.36	0.78	Not Needed	2.10	0.79	Not Needed
47.	Contributing to group problem solving	1.77	0.65	Not Needed	1.71	0.60	Not Needed
48.	Resolving conflicts	3.27	0.54	Needed	3.31	0.47	Needed
49.	Integrating strategic considerations in plans	3.06	0.65	Needed	3.07	0.60	Needed
50.	Relating well with supervisors	1.27	0.51	Not Needed	1.14	0.35	Not Needed
51.	Understanding the needs of others	2.33	0.95	Not Needed	2.45	0.94	Not Needed
52.	Delegating work to peers	2.15	0.69	Not Needed	2.29	0.55	Not Needed
53.	Making effective business presentations	3.03	0.58	Needed	3.26	0.59	Needed
54.	Integrating info. into general contexts	3.48	0.66	Needed	3.69	0.47	Needed
55.	Identifying political implications	3.30	0.68	Needed	3.45	0.55	Needed
56.	Writing internal business communication	3.21	0.65	Needed	3.33	0.57	Needed
57.	Supervising the work of others	1.33	0.66	Not Needed	1.31	0.47	Not Needed
58.	Coordinating the work of peers	1.95	0.59	Not Needed	1.71	0.55	Not Needed
59.	Coordinating the work of subordinates	1.52	0.64	Not Needed	1.52	0.59	Not Needed
60.	Making impromptu presentations	3.52	0.53	Needed	3.55	0.50	Needed
61.	Identifying conflict among people	3.53	0.56	Needed	3.52	0.51	Needed
62.	Empathizing with others	3.53	0.81	Needed	3.67	0.61	Needed
63.	Writing external business communication	3.09	0.65	Needed	3.24	0.62	Needed
64.	Writing reports	3.48	0.69	Needed	3.31	0.75	Needed
65.	Using proper grammar, spelling, & punctuation	2.20	0.83	Not Needed	2.10	0.66	Not Needed
Average Mean		**2.60**	**0.85**	**Needed**	**2.59**	**0.82**	**Needed**

Criterion Mean = 2.50

Table 5 shows the mean comparison of the between the employability skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District. From the result, the mean technical skills ranged from 1.27 to 3.53, with an average mean of 2.60 for male graduates and from 1.14 to 3.69, with an average mean of 2.59 for female graduates. The criterion mean used for the assessment is 2.50, which means that both male and female graduates do need majority of the employability skills. This result suggests that male and female graduates do not differ in employability skills needed.

Hypothesis 1: there is no significant difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

Table 6: t-test analysis of the difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

Gender	*n*	Mean	*SD*	*Df*	*T*	*P*	Remark
Male	66	2.40	0.18	106	1.437	0.154	Not Significant
Female	42	2.45	0.21				
$\alpha = 0.05$							

Table 6 shows the result of an independent samples t-test, which was used to compare the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District. The result shows that there is no significant difference in the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District, t (106) = 1.437, p > 0.05 level of significance. Hence, the null hypothesis is accepted.

Hypothesis 2: there is no significant difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District.

Table 7: t-test analysis of the difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

Gender	*n*	Mean	*SD*	*Df*	*T*	*P*	Remark
Male	66	2.51	0.13	106	0.223	0.824	Not Significant
Female	42	2.52	0.14				
$\alpha = 0.05$							

Table 7 shows the result of an independent samples t-test, which was used to compare the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District. The result shows that there is no significant difference in the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District, t (106) = 0.223, p > 005 level of significance. Hence, the null hypothesis is accepted.

Hypothesis 3: there is no significant difference between the employability skills possessed by male and female graduates of employability education for sustainable development in Delta North Senatorial District

Table 8: t-test analysis of the difference between the employability skills possessed by male and female graduates of employability education for sustainable development in Delta North Senatorial District

Gender	*n*	Mean	*SD*	*Df*	*T*	*P*	Remark
Male	66	2.46	0.13	106	0.969	0.335	Not Significant
Female	42	2.48	0.14				
$\alpha = 0.05$							

Table 8 shows the result of an independent samples t-test, which was used to compare the employability skills possessed by male and female graduates of employability education for sustainable development in Delta North Senatorial District. The result shows that there is no significant difference in the employability skills possessed by male and female graduates of employability education for sustainable development in Delta North Senatorial District, t (106) = 0.969, p > 0.05 level of significance. Hence, the null hypothesis is accepted.

Hypothesis 4: there is no significant difference between the employability skills needed by male and female graduates of employability education for sustainable development in Delta North Senatorial District.

Table 9: t-test analysis of the difference between the employability skills needed by male and female graduates of employability education for sustainable development in Delta North Senatorial District

Gender	***n***	**Mean**	***SD***	***Df***	***t***	***P***	**Remark**
Male	66	2.60	0.11	106	0.380	0.705	Not Significant
Female	42	2.59	0.09				
$\alpha = 0.05$							

Table 9 shows the result of an independent samples t-test, which was used to compare the employability skills needed by male and female graduates of employability education for sustainable development in Delta North Senatorial District. The result shows that there is no significant difference in the employability skills needed by male and female graduates of employability education for sustainable development in Delta North Senatorial District, t (106) = 0.380, p > 0.05 level of significance. Hence, the null hypothesis is accepted.

3.1. Discussion

Technical Skills Possessed by Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The first finding revealed that graduates of technical education possessed technical skills in oral/written communication in their native language, in the field of study, possess basic general knowledge, decision-making, capacity to learn, able to relate with non-experts, interpersonal skills and will to succeed. They also possessed technical skills in capacity to adapt to new situations, to retrieve and analyse information from various sources, understanding of cultures and customs of other countries, appreciation of diversity and multiculturality, problem solving, teamwork and ability to generate new ideas.

The finding however, showed that the graduates did not possess technical skills in concern for quality, critical and self-critical abilities, project design and management, leadership, initiative and entrepreneurial spirit, ethical commitment, capacity for applying knowledge in practice and growing in basic knowledge of the profession in practice. They also do not exhibit technical skills to work in an interdisciplinary team, an international context, they do not have knowledge of a second language, research skills, they cannot work autonomously, planning/time management, basic computing skills, and capacity for analysis and synthesis. The above finding is at variance with the findings of [6], who examined the levels of skills possessed by technical college graduates, and found among others that, the graduates possessed 90% of the skills required of them. While 10% were completely not possessed by the MECPT graduates.

3.2. Technical Skills Needed by Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The second finding showed that graduates of technical education needed technical skills in ethical commitment capacity for generating new ideas, initiative and entrepreneurial spirit, leadership, ability to work autonomously, concern for quality, understanding of cultures and customs of other countries, critical and self-critical abilities and capacity for applying knowledge in practice. They also need technical skills and ability to work in an interdisciplinary team, capacity for analysis and synthesis, research skills, knowledge of a second language, planning/time management, ability to work in an international context, capacity to adapt to new situations, basic computing skills and grounding in basic knowledge of the profession in practice. The finding however, revealed that the graduates do not need technical skills in capacity to learn, ability to retrieve and analyse information from different sources, basic general knowledge in the field of study, oral/written communication in your native language, problem solving and appreciation of diversity and multiculturality. The fining also showed that the graduates do not need technical skills in teamwork, project design and management, interpersonal skills, decision-making, ability to communicate with non-experts and will to succeed.
The above finding agreed with the findings of [7], who examined employers' ability to identify skills needed by Technical and Vocational Education graduates for industrial work effectiveness, and found that problem solving skills, technical skills and information and communication technology (ICT) skills are highly needed by TVE graduates for improved industrial work effectiveness. Findings from the study showed that in terms of information and communication technology skills and problem-solving skills, there was no significant difference in the mean ratings of employers.

3.3.Employability Skills Possessed by Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The third finding revealed that graduates of technical education for sustainable development in Delta North Senatorial District possessed employability skills in monitoring the work of others using proper grammar, spelling, & punctuation, coordinating the work of subordinates, working well with fellow employees, coordinating the work of peers, understanding the needs of others, contributing to group problem solving, solving problems, allocating time efficiently, delegating work to peers, relating well with supervisors and listening attentively. The graduates also possessed employability skills in giving direction and guidance to others, responding positively to criticism, conveying information one-to-one, gaining new knowledge every day, ability to work independently, gaining new knowledge outside the job, maintaining a high energy level, assigning/delegating responsibility, responding to others' comments, establishing good rapport w/ subordinates and combining relevant information from sources.

The finding however, showed that graduates of technical education did not possess employability skills in revising plans to include new information, conceptualizing a future for the company, meeting deadlines, adapting to situations of change, keeping-up-to-date with external realities, making decisions in a short time period, setting priorities, making decisions on thorough analysis, providing novel solutions to problems and applying information to new or broader contexts. The graduates also did not possess employability skills in recognizing alternative routes in meeting objectives, reconceptualizing roles of the corporation, establishing critical events to be completed, resolving conflicts, sorting out relevant data to solve problems, identifying political implications,

identifying problems, monitoring progress toward risky ventures, maintaining a positive attitude and prioritizing problems.
The above finding is consistent with [8], who identified the employability skills of technical students from the Industrial Training Institutes (ITI) and Indigenous People's Trust Council (MARA) Skills Training Institutes (IKM) in Malaysia. Their findings revealed that the vast population of the trainees has an average level of employability skills. Their basic skills were at the moderate level; thinking skills; source skills; informational; interpersonal; technical and system skills; and self-qualities.

3.4.Employability Skills Needed by Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The fourth finding showed that graduates of technical education for sustainable development in Delta North Senatorial District need employability skills in empathizing with others, integrating info. into general contexts, identifying conflict among people, making impromptu presentations, writing reports, identifying political implications, reconceptualizing roles of the corporation, resolving conflicts, writing internal business communication and knowing ethical implication of decisions. The graduates also need employability skills in writing external business communication, making effective business presentations, integrating strategic considerations in plans, functioning well in stressful situations, providing novel solutions to problems, applying information to new or broader contexts, evaluating plans to include new information, bringing out important data to solve problems, identifying problems and making decisions on thorough analysis. The finding however, revealed that graduates of technical education did not need employability skills in establishing good rapport w/ subordinates, keeping-up-to-date with external realities, communicating ideas verbally to groups, giving direction and guidance to others, gaining new knowledge outside the job, conveying information one-to-one, listening attentively, maintaining a high energy level, understanding the needs of others and responding positively to criticism.

The graduates also did not need employability skills in gaining new knowledge every day, responding to others' comments, ability to work independently, working well with fellow employees, delegating work to peers, solving problems, using proper grammar, spelling, & punctuation, assigning/delegating responsibility, coordinating the work of peers, allocating time efficiently, contributing to group problem solving, coordinating the work of subordinates, supervising the work of others and relating well with supervisors. The finding agrees with [9], who listed employability skills to include basic skills, thinking skills, resource skills, information skills, interpersonal skills, system and technology skills and personal qualities.

3.5.Difference between the Technical Skills Possessed by Male and Female Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The fifth finding revealed that both male and female graduates do not possess majority of the technical skills. This result suggests that male and female graduates do not differ in the possession of technical skills. A corresponding hypothesis showed that there is no significant difference between the technical skills possessed by male and female graduates of technical education for sustainable development in Delta North Senatorial District.
The finding is at variance with the finding of [10], who examined the factors of gender difference in vocational and technical skills acquisition programs in Rivers State technical colleges, and found that societal and parental/guidance views were some of the determinants of gender difference in acquisition of vocational and technical educational skills.

3.6.Difference between the Technical Skills Needed by Male and Female Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The sixth finding showed that both male and female graduates do not need majority of the technical skills. This result suggests that male and female graduates do not differ in the technical skills needed. A corresponding hypothesis revealed that there is no significant difference between the technical skills needed by male and female graduates of technical education for sustainable development in Delta North Senatorial District

3.7.Difference between the Employability Skills Possessed by Male and Female Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The seventh finding revealed that both male and female graduates do not possess majority of the employability skills. This result suggests that male and female graduates do not differ in the possession of employability skills. A corresponding hypothesis showed that there is no significant difference between the employability skills possessed by male and female graduates of employability education for sustainable development in Delta North Senatorial District. The finding is consistent with [8], who identified the employability skills of technical students from the Industrial Training Institutes (ITI) and Indigenous People's Trust Council (MARA) Skills Training Institutes (IKM) in Malaysia. Their finding revealed that there were no significant differences of employability skills between trainees from IKM and ITI in term of gender, work experience, and between courses. The finding is however, at variance with [11], who examined the impact of gender and age on the employability skills acquisition of university students in Imo State, and found that the extent of employability skills acquisition among university students is significantly high; gender and age have significant influence on employability skills acquisition.

3.8.Difference between the Employability Skills Needed by Male and Female Graduates of Technical Education for Sustainable Development in Delta North Senatorial District

The seventh finding showed that both male and female graduates do need majority of the employability skills. This result suggests that male and female graduates do not differ in employability skills needed. A corresponding hypothesis revealed that there is no significant difference between the employability skills needed by male and female graduates of employability education for sustainable development in Delta North Senatorial District.

The finding agrees with [14], who reported no contrast between male and female students in their employability skills in terms of all the sub-variables. The finding is however, at variance with [11], who discovered that male students performed well compared to their female counterparts in employability skills acquisition in terms of communication skills, planning and organization, self-management, decision making, computer skill and overall employability skills. However, females performed better in terms of teamwork, problem solving, initiative and enterprise.

4.0. Conclusion

This study investigated the technical and employability skills possessed by graduates of technical education. Eight research questions and four null hypotheses guided the study. Adequate literature was reviewed in line with variables of the study. The study adopted the descriptive survey of *ex-post facto* research design. The population comprised of 108 graduates in technical education in Delta North Senatorial District in the last ten years. Based on the findings of the study, it is concluded that graduates of Technical Education in Delta North Senatorial District possess sufficient technical and employability skills for sustainable development. There is however, the need for personal improvements in the areas of understanding the needs of others, contributing to group problem solving, coordinating the work of subordinate, etc. for sustainable development. The possession and need for these skills did not differ in relation to gender of the graduates. The study recommends that unemployed youth and graduates of technical education should put into practice some of the technical skills possessed for sustainable development

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