

ASSESSMENT OF FACILITIES FOR IMPLEMENTING EMPLOYABILITY SKILLS MODULE IN THE REPAIR AND MAINTENANCE OF SMARTPHONES: A STUDY IN TECHNICAL COLLEGE, SOUTHWEST NIGERIA

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Abstract

This study focuses on identifying and evaluation of the appropriate facilities for implementing an employability skills module in the repair and maintenance of smartphones for technical college students in south west, Nigeria. The study adopted Research and Development (R&D) design. The research contained a population of 860 individuals, including technical teachers, technical instructors, road side phones technicians and industrial- station-based supervisors. Employing a multi-stage sampling technique, a sample size of 360 participants were selected. Data were collected using the implementing Employability skills Module Questionnaire (IESMQ), The reliability of the instrument was established using Cronbach Alpha Coefficient method and overall coefficient of 0.96 was obtained. Moreover, constructs were examined through Average Variance Extracted (AVE) and Composite Reliability (CR) values of 0.95 and 0.96, respectively. Confirmatory Factor Analysis (CFA) was employed in evaluating the appropriateness of identifying facilities for implementing the employability skills module in the repair and maintenance of smartphones. The results revealed that the conditions for convergent, construct, and discriminant validity were duly fulfilled. Based on these findings, it was recommended that the development of Employability Skills Module in the Repair and Maintenance of Smartphones should be properly implemented using appropriate facilities receive prioritization and procurement to ensure the successful execution of the employability skills module in the repair and maintenance of smartphones across the technical colleges in Nigeria.

Keywords: Employability Skills Module; Smartphones; Facilities; Technical College.

Introduction

Employability skills are a set of soft skills, also known as transferable skills that are essential for success in the workplace. These skills go beyond technical or academic knowledge and are valuable to employers across various industries (Caballe et al., 2020). Employability skills are crucial for career success as they enable individuals to perform effectively in the workplace, interact positively with colleagues and clients, and adapt to the changing

demands of the job market. According to the Confederation of British Industry (2019) submitted that "Employability " is a set of attribute skills and knowledge that all labour market participants should possess for the workplace and the benefit of themselves, their employer, and the wider economy. According to Cheng, et al., (2021) employability skills can be acquired throughout an individual lifetime, including volunteer work, self-employment, paid-for jobs, formal education, and community activities.

Bradley, et al.,(2021) defined employability as a set of achievements – skills, understanding, and personal attributes that make graduates more likely to gain employability and be successful in their chosen occupations, which benefits themselves, the workforce, the country and the economy(Anthony & Suzanne, et al., 2016; Ayoubi, et al., 2017).

Employability, according to Andrewartha, et al., (2017) opined that employability is regarded as the benefit and usefulness of study programmes for career and work tasks. Thus employability skills are crucial and remain a fundamental component of Technical and Vocational Education and Training (TVET) methods in world of work. Employability skills comprises various retinue of attributes, such as, problem-solving skill, communication, teamwork, and technical proficiency, that necessary for self-employment, or for individuals to secure and maintain employment. Technical colleges are designed to prepare individuals to acquire practical skills basic scientific knowledge and attitudes required as Craftsmen and Technicians at sub-professional levels.

Technical colleges are parts of the Nigeria TVET institutions under the supervision of the National Board for Technical Education (NBTE). The quality of academic programmes in technical colleges is ensured by NBTE's curriculum development and periodic accreditation exercise. Trades. According to Oke (2016), the technical college provides students through training with the relevant and adequate knowledge, skills, and attitude for employment under the guidelines of a teacher in related occupations. It must be noted that technical colleges play a crucial role in equipping students with the technical

skills and knowledge needed in various industries.

Technical colleges in Nigeria are the institution that responsible to imparting skills acquisition and employability skills. Also provide training in several courses which include general education, electronic trade, automobile trade, building and woodwork trade, business trades, computer and contributing economic growth to the nation at large. Thus it addressing the employability skills gap in various established industries in Nigeria (Souviron, et al., 2019; Olakotan & Oke,2023).

Smartphones have become an essential part of life among Nigerians. According to the National Bureau of Statistics (NBS, 2023), there are over 222.5 million smartphone users in Nigeria which is the largest smartphone market in Africa. However, most Nigerians do not have access to qualified smartphone technicians which often leads to electronic waste disposal issues in Nigeria. According to commonwealth of learning (2015). Akinola., et al.,(2022) A handheld smartphone allows people to make and receive telephone calls while moving around a wide geographical area.

A smartphone also supports several other functions, such as text messaging, email and internet access, photography, money transfer, and banking services among others. There are many different types of smartphones available in the market. These include Ios iPhone-smartphones, Gaming smartphones, Rugged smartphones, Windows smartphones, Budget smartphones, Business smartphones, Foldable smartphones, Camera-focused smartphones, Flagship smartphones, among others. There is no general rule used to classify smartphones.

Smartphones are classified based on their form factor. According to Lee, et al., (2014); Commonwealth of Learning (2015); Samaha and Hawi (2016) stressed that form factor refers to the size, style, and shape of a smartphone, as well as to the layout and position of the phone's major components.

National Bureau of Statistic (NBS, 2023) pointed out that over 222.5 million of smartphones users in Nigeria, which is the largest smartphones in Africa. Due to the wide spread used of smartphones, the majority of smartphones users prefer repairing their devices instead of buying new one's with present economic factors lead to inflation across the country. This widespread ownership and use of smartphones has created a need for professionals who can repair and maintain smartphones. This urgent need, calls for craftsmen who are a thorough breed of the nation's technical colleges to immerse themselves in the art of repairing and maintaining of smartphones.

However, the traditional technical college curriculum may not adequately prepare students for the demands of smartphone repairs and maintenances. It seems that there is no module to train students on the repair and maintenance of smartphones as well as adequate facilities for smartphones repair and maintenance. The employability skills modules in the repair and maintenance of smartphones it needs adequate facilities.

Facilities are physical objects and materials that are necessary for implementing the effective teaching of employability skills for the repair and maintenance of smartphones. There is needs to assess facilities for carrying out the repair and maintenance tasks or activity on smartphones. Facilities according to Yisa and Olakotan (2017) are physical items and structures such as

buildings, offices, equipment, tools, machines, and other materials. Facilities include relevant tools, devices and equipment for teaching and learning the employability skills within the contents of the modules. Manabete and Makinde (2016) explained that facilities are those goods and services that help to facilitate the teaching and learning process in any performance. Adequate and relevant training facilities make the learning process more satisfying. (Bakare., 2020). According to Oke and Olakotan(2018) asserted that facilities are the pivot on which skills acquisition hinges upon in all TVET institutions.

Therefore various facilities such as; sets of screwdrivers, soldering irons, cutting pliers, solder wire, tweezers, brushes, stable electricity, jumper wire, screen guide, thinner or alcohol, magnifying microscope, flashing software, booster chargers, fluxes, and analog or digital multimeter could be used for the repair and maintenance of smartphones as well as the implementation of smartphones training modules. Therefore having, appropriate and suitable facilities couple with financial resources is essential for trainees to acquire the technical, practical and employability skills needed for their professional careers.(Bakare.,2015; lemo & Olakotan., 2016b; Yisa & Olakotan., 2017). Azonwu (2017). Repair and services of smartphones required well-equipped laboratories, and conducive classrooms with standard facilities. Thus the skills acquisition of these provide an opportunity for students to apply acquired theory to world of work situations.

Meanwhile, availability facilities and both human and financial resources are integral to enhancing the quality of education and training in TVET. The crucial question is about what are the

appropriate and suitable facilities that necessary for attainment of effective implementation of employability skills module in the repair and maintenance of smartphones in Nigeria technical colleges. Although Nigeria technical colleges were facing challenges in keeping their curricula up- to – date with the ultimate demands of manufacturing companies(Similarly the used of obsolete facilities affecting the teaching activities and impartation of skills acquisition to the students. The effectiveness of TVET depends on a close connection between what learners are taught and what employers expect that is, the outcome. this was noted by Oke and Olakotan (2018) that persistent challenges bedeviling TVET programmes in Nigeria such as, insufficient infrastructure, outdated curricula, and a mismatch between skills taught and industry demands.

Facilities are the major pivot in which implementation of any TVET programme hinges upon, in TVET, Smartphones Repair and Maintenance inclusive. This study ascertained on required facilities for implementing employability skills module in the repair and maintenance of smartphones for Technical College students. In addition, if relevant facilities are not identified, and procured as appropriate and suitable for the implementation of the any skill- based programme will be marred and the expected skills to be acquired by students of such programmes will be hampered. Thus there is needs to give room for unemployment and idleness among youths of workable age in Nigeria. Therefore all the stakeholders of technical colleges should intensify effort to ensure that necessary and relevant facilities and both human and financial resources to deliver a relevant employability skills module in the repair and maintenance of

smartphones are put in place. This will bridge the gap between classroom education and the needs of the job in labour market. If the problem would be considered.

Literature Review

Udofia, Ekpo, Nsa and Akpan (2012) on instructional variables and students 'acquisition of employable skills in vocational education in vocational education in Nigerian. Technical Colleges in Akwa Ibom. The population of the study comprised of senior technical II students in the six technical colleges in Akwa Ibom State, Nigeria. The population size was 240. A random sampling technique was used to obtain a sample size of 120. The study adopted a correlational survey design. A 28-item structured questionnaire titled, students' Acquisition of Employable Skills Questionnaire with a four-point rating response options was used for data collection. Mean, Pearson product-moment Correlation (PPMC), and Regression analysis were used for data analysis. The findings revealed that there was a significant relationship between teacher quality and students' acquisition of employable skills. The researchers recommend that modern technical equipment, tools machines, and instructional materials should be made available for student's practical lessons in Technical Colleges throughout the country. Bakare (2015) on developed and validated cell phone maintenance training modules for National Diploma Students. The study answered five research questions and tested five formulated null hypotheses at a 0.05 level of significance. The study adopted a research and development (R&D) design and was carried out in Lagos State, Nigeria. The population for the study was 137 comprising 35 lecturers, 14

instructors of Electrical / Electronic Technology, 21 supervisors, and 67 roadside cell phone Technicians in Lagos State. Purposive sampling techniques were used to select 67 literate roadside cell phone technicians. A cell phone maintenance training module questionnaire was used for data collection for the study.

The instrument was face-validated by three experts. Internal consistency of CMTMQ was determined using Cronbach Alpha reliability method and the overall reliability coefficient of 0.86 was obtained. Seven trained research assistants were involved in the data collection using (CMTMQ) out of 137 copies of CMTMQ administered to 35 lecturers, 14 instructors, 21 supervisors, and 67 roadside cell phone technicians only 104 copies were properly completed and returned representing a 75.91 percent return rate. Factor analysis and mean were used for answering the research questions, while analysis of variance (ANOVA) was employed for testing null hypotheses at 0.05 level of significance. The findings of the study revealed that 12 objectives and 140 contents were required for the development of cell phone maintenance training modules for National Diploma students. The findings of the study revealed that facilities, delivery systems, evaluation techniques and activities were confirmed necessary for implementing cell phone maintenance training modules. The hypotheses were tested and revealed that there was no significant difference in the mean responses of lecturers, instructors, and supervisors in telecommunication industries on 57 out of 58 delivery systems, 31 out of 33 evaluation techniques and activities that could be used for assessing each of the cell phone maintenance training modules.

The study recommended that the National Board for Technical Education and other government agencies such as Nigeria Universities Commission, National Commission for Colleges of Education, and Nigeria Educational Research and Development Council should integrate the developed cell phone maintenance training modules into Polytechnics, Universities, Colleges of Education Programmes and secondary school curriculum for training of students. The study also recommended that the developed cell phone maintenance training module should be integrated into the programmes of skill acquisition centers to train youths to enable them to acquire cell phone maintenance skills. Jimoh Bakare (2020) built the cell phone maintenance capacity of graduates for job security, creation, and retention for the peaceful existence of Nigerian communities. The study adopted a descriptive survey design. Three research questions guided the study while the hypotheses were tested at a 0.05 level of significance. The population for the study was 123 subjects. A structured questionnaire was used as an instrument for data collection. Five experts validated the instrument. The internal consistency of the questionnaire items was determined by using the Cronbach Alpha reliability method and a 0.89 reliability coefficient was obtained. The findings revealed 57 maintenance attributes, 23 affective competencies for building the cell phone maintenance capacity of graduates for job security, creation and retention for the peaceful existence of Nigerian communities, and 15 strategies for acquiring material resources for setting up and running cell phone enterprises in Nigerian communities. Recommendations include that all the competencies determined in this study should be used to build the capacities of

Nigerian graduates for job creation, security, and retention. It was also recommended that all the competencies determined should be integrated into the relevant programmes in Nigerian tertiary institutions. Olakotan (2021) on the developed employability skills modules in Aluminum Fabrication and Glazing Work for Technical Colleges in Nigeria. The study adopted Research and Development (R&D) design. The population for the study was 1,181 respondents comprised 147 technical teachers, 116 technologists, and 918 industrial-based supervisors in Southwest, Nigeria. A multistage sampling technique was used to select 318 participants for the study. This comprised 132 technical teachers, 96 technologists, and 90 industrial-based supervisors in Southwest, Nigeria. The instrument for data collection was the Employability Skills Module in Aluminum Fabrication and Glazing Work Questionnaire (ESMAFGWQ). The instrument was validated by five experts and two specialists. The reliability of the instrument was established using the Cronbach Alpha coefficient method and a coefficient of 0.95 was obtained.

The data collected on the research questions were analyzed using mean and Confirmatory Factor Analysis (CFA). Hypotheses 1-6 were answered using Analysis of Variance (ANOVA) and it was found that significant differences exist in the responses of technical teachers, technologists, and industrial-based supervisors. The Schaeffer test for multiple comparisons revealed that there were significant differences in the mean responses of technical teachers, technologists, and industrial-based supervisors. Hypothesis 7 was tested with Confirmatory Factor Analysis (CFA). The CFA was done using Analysis of Moment Structures (AMOS) software. All the

hypotheses were tested at a 0.05 level of significance.

The findings of the study revealed that the module is structured under required 6 objectives, required 5 contents, required 6 teaching methods, required 6 learning activities, required 7 facilities and, required 6 evaluation techniques in Aluminum Fabrication and Glazing Work for Technical Colleges in Nigeria is valid and reliable having fulfilled all the conditions for convergent, construct and discriminant validity. Average Variance Extracted (AVE) of 0.63, 0.50, 0.52, and 0.52, 0.54 and 0.52 and Composite Reliability (CR) of 0.91, 0.83, 0.87, 0.87, 0.89, and 0.86 were obtained respectively.

Based on the findings of the study, it was recommended among others that the development Employability Skills Module in Aluminum Fabrication and Glazing Work should be adopted by the National Board for Technical Education and Industrial Training Fund for integration into Technical College trades in Nigeria and training youths and artisans respectively. This will enable recipients of the Aluminum fabrication and Glazing Work in Technical Colleges in Nigeria to be employable and self-reliant. Similarly, Olakotan and Oke (2023) on assessment and validation of facilities for implementing employability skills module in aluminum fabrication: A study in Nigeria technical colleges. This study adopted a descriptive research design of the survey type which involved the use of a questionnaire to elicit information from the respondents. The design was considered suitable for the study since it sought the opinion of technical teachers, technologists, and industrial-based supervisors, and no variable was manipulated.

The population for the study was 1181, comprising 147 technical teachers

(Mechanical study was 318 using multistage sampling procedure. Stage one involved the selection of 132 respondents comprising 22 technical teachers each from Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo State using a proportionate sampling technique. Stage two involved the selection of 96 respondents comprising 16 technologists each from Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo State using a simple random sampling technique. Stage three involved the selection of 90 respondents comprising 15 industrial-based supervisors each from Ekiti, Lagos, Osun, Ondo, Osun, and Oyo State using a purposive sampling technique. Purposive sampling researchers exercise judgment on the representative sample to suit the research purpose. A self-developed instrument entitled "Implementing the Employability Skills Module Questionnaire (IESMQ) was used for the study.

The IESMQ was based on an adapted Likert scale rating of: Highly Required (HR) – 5, Required (R) -4, Undecided (U) -3, Not Required (NR) -2, and Highly Not Required (HNR) - 1. The face and content validation of the instrument was ascertained by five experts, while the reliability of the instrument was ensured using Cronbach Alpha, and a coefficient of 0.92 was obtained. The instrument was administered to the respondents with the help of six research assistants out of the 132 copies distributed to technical teachers, 103 copies were retrieved, 79 copies were also retrieved from technologists out of 96 copies earlier distributed, while 85 copies were retrieved from industrial-based supervisors from the 90 copies earlier distributed. In all, 267 copies were duly returned representing 83.9% return rate.

The data generated was analyzed using descriptive and inferential statistics. The descriptive statistics of mean and standard deviation were used to answer the research question raised. Furthermore, as soon as the descriptive analysis was achieved, the normality of the data for each construct was ensured before embarking on Confirmatory Factor Analysis (CFA). The CFA was done using Analysis of moment Structure (AMOS) software. A mean of 3.50 was used as the cut-off point for decision rule for each item.

Based on this value, any item with a mean of 3.50 and above was considered as appropriate, while any item with a mean below 3.50 was considered as inappropriate. Therefore, for every fitted model, all the factor loadings must be equal to or above 0.5. Also, the modification indices such as CFI, IFI, and TLI must be above 0.90; the ratio of the Chi-square and the Degree of freedom (df) < 3 and RMSEA < 0.08 . Hence, the revised models were performed wherever the initial CFA model did not meet the stated criteria. The findings of the study on appropriate facilities revealed that 7 facilities are adjudged necessary for implementing the Employability Skills Module in Aluminum Fabrication. The adjudged necessary facilities for implementing the Employability Skills Module in Aluminum Fabrication and Glazing Work include basic hand tools, basic power tools, basic equipment; personal protective equipment; basic machines; consumables and accessories, and teaching and learning facilities.

Common relationships exist among those studies, they were adopted research and development (R&D) design. Those studies focused on facilities, but their facilities did not categorize. The previous study did not revealed the initial

model facilities and final model facilities, for implementation of their programmes. The current study categorized the facilities for implementing employability skills module in the repair and maintenance of smartphones as; environmental facilities, equipment facilities, personal protective facilities, basic tools facilities, and, consumable materials, based on their uses. The current study specified the final facilities fitted for implementation of employability skills module in the repair and maintenance of smartphones for technical college students in southwest, Nigeria.

Methodology

This study employed a descriptive research design of the survey type that involved the use of questionnaire to elicit information from the respondents. The design was considered suitable for the study since it sought the opinions of technical teachers, technical instructors, roadside phones technicians and industrial-base station supervisors and no variable was manipulated. The population for the study was 860 respondents. The population were made up of four categories namely; 240 technical teachers, 210, instructors, 220 roadside technicians, and 190 industrial - based supervisors. The sample size for this study was 360 and a multistage sampling procedure was used. Stage one involved the selection of 108 respondents comprising 18 technical teachers, each from Ondo, Ekiti, Osun, Ogun, Oyo, and Lagos State. Using proportionate sampling technique. Stage two involved the selection of 84 respondents comprising of 14 technical instructors, each from Ondo, Ekiti, Osun, Ogun, Oyo, and Lagos States. Using simple random sampling technique. Stage three involved the selection of 96 respondents

comprising of 16 roadside smartphone technicians, each from Ondo, Ekiti, Osun, Ogun, Oyo, and Lagos State. Using simple random sampling technique. Stage four involved the selection of 72 respondents comprising of 12 industrial- based supervisors, each from Ondo, Ekiti, Osun, Ogun, Oyo, and Lagos State, using a purposive sampling technique. Purposive sampling technique was employed because this sample had the desired criteria and consequently the researcher judgement based on the representative sample as to suit and appropriate the research purpose.

A self –development instrument entitled “implement Employability Skills Module Questionnaire (IESMQ) was used for the study. The IESMQ was slated for a adapted five Likert scale and the response options are; Highly Required (HR) = 5, Required (R) = 4, Not Required (NR) = 3, Highly Not Required (HNR) = 2, Undecided (UD) = 1. The face and content validation of the instrument was ascertained by four experts, while the reliability of the instrument was administered on the respondents with the help of six research assistants in which out of the 108 copies distributed to technical teachers, 90 copies were retrieved, 71 copies from technical instructors out of 84 copies initially distributed, and 78 copies from roadside phone technicians out of 96 earlier distributed. Out of 72 copies distributed 65 copies were retrieved. In all, 304 copies were duly returned representing 84.44% return rate. The data collected was analyzed using descriptive and inferential statistics.

The descriptive statistics of mean and standard deviation were used to answer the research questions raised. Moreover, after descriptive analysis was achieved, item that mean was below 3.50 was removed. The normality of the data

for each construct was ensured before proceeding on Confirmatory Factor Analysis (CFA). The CFA was done using structural equation model (SEM) software. A mean of 3.50 was used as the cut-off point for the decision rule for each item. Based on this value, any item with a mean of 3.50 and above was considered appropriate and suitable for the module, while any item with a mean below 3.50 was considered inappropriate and not suitable for the module. Thus for every fitted model, all the factor loadings must be equal to or above 0.50. Similarly, the modification indices such

as CFI, IFI, TLI must be above 0.90; the ratio of the Chi-square and the Degree of freedom (df) < 3 and $RMSEA < 0.08$. Thus, the revised models were performed wherever the initial CFA models did not meet up with the stated condition.

Results

To answer the research question, mean and Confirmatory Factor Analysis were used. The result of the computation is as presented in Table 1 as well as Figure a and b.

Table1. Appropriate and Suitable Facilities for Implementing Employability Skills Module in the Repair and Maintenance of Smartphones.

S/N	Facilities for implementing the employability skills modules in the RMSP are:	X	S.D	Remarks
55	Conductive classroom	4.22	0.63	Required
56	Conductive laboratory	4.35	0.74	Required
57	Conductive workshop	4.37	0.69	Required
58	Stable electricity	4.50	0.74	Required
59	Power equipment such as batteries.	4.21	0.84	Required
60	Generating, power such as a 1000watts generator	4.15	0.85	Required
61	Basic measurement equipment such as a multimeter	4.25	0.78	Required
62	Hot air blower	4.20	0.91	Required
63	Advanced telescope adapted to monitor or computer	4.41	2.37	Required
64	Eye goggles	3.68	1.01	Required
65	Hands glove	3.67	0.96	Required
66	Safety boots	3.58	1.05	Required
67	Overall	4.02	0.80	Required
68	Nose mask	3.95	0.94	Required
69	Ear plugs or muff.	3.65	0.90	Required
70	A set of precision screw driver	4.42	0.90	Required
71	Screw driver	4.46	0.75	Required
72	Brushes	4.34	0.87	Required
73	Soldering iron	4.44	0.68	Required
74	A set of pliers	4.42	0.74	Required
75	Solder wire	4.44	0.75	Required
76	Tweezers	4.25	0.96	Required
77	Sponge	3.82	1.11	Required
78	Jumper wire	4.18	0.90	Required
79	Solder paste	4.29	0.79	Required
80	Screen guide	4.36	0.72	Required
81	External ear piece	4.23	0.81	Required
82	Thinner or alcohol	4.31	0.89	Required

The data presented in Table 1 revealed 28 facilities that were suitable and appropriate for implementing the

employability skills module in the repair and maintenance of smartphones. The Means for the facilities ranged from 3.58

to 4.50. Each Mean is above the cut-off of 3.50 showing that all facilities were required for the development of the Employability Skills Module in the Repair and Maintenance of Smartphones. The

standard deviation of the facilities also ranged from 0.62 to 2.37. This revealed that the respondents were close to one another in their opinions and that they were not far from the mean.

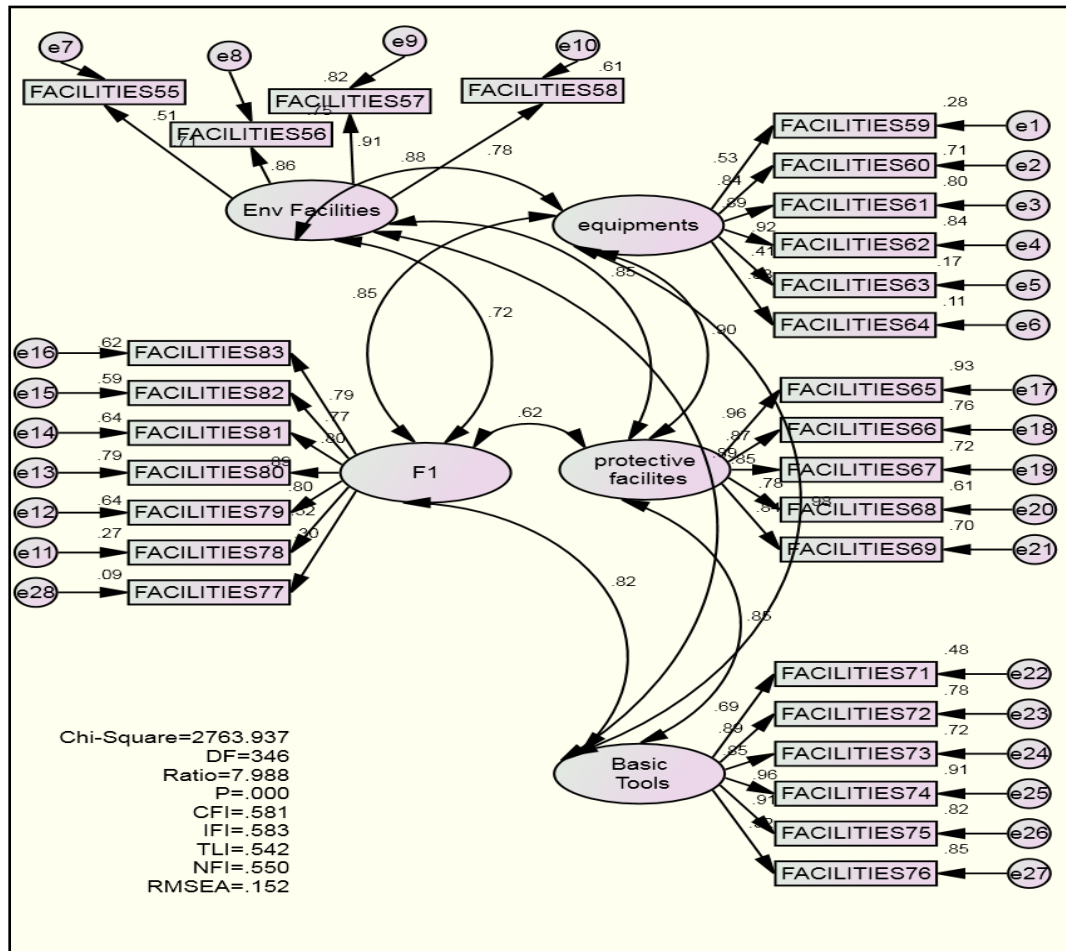


Figure 1: initial Model for Suitable and Appropriate Facilities for Implementing Employability Skills Model in the Repair and Services of Smartphones.

The initial model from figure 1, had 28 items, based on Confirmatory Factor Analysis (CFA) on Facilities for Implementing Employability Skills Model in the Repair and Maintenance of smartphones was not found fitted and did not comply with a goodness model fit. The Chi – square =2763.937, df = 346, P=.000, the ratio of the Chi-Square and the df(> 3) = 7.988, NFI =

.550(<.90), CFI = .581(<.90), IFI = .583,(<.90), TLI = .542(< .90) and RMSEA = .162(>.080). Thus, in order to fulfill the requirements, the model was trimmed sequentially so that the items remaining will fit well to the data at $P > 0.05$ while the modification indices (NFI, CFI, IFI, TLI) and RMSEA measured up to the standard.

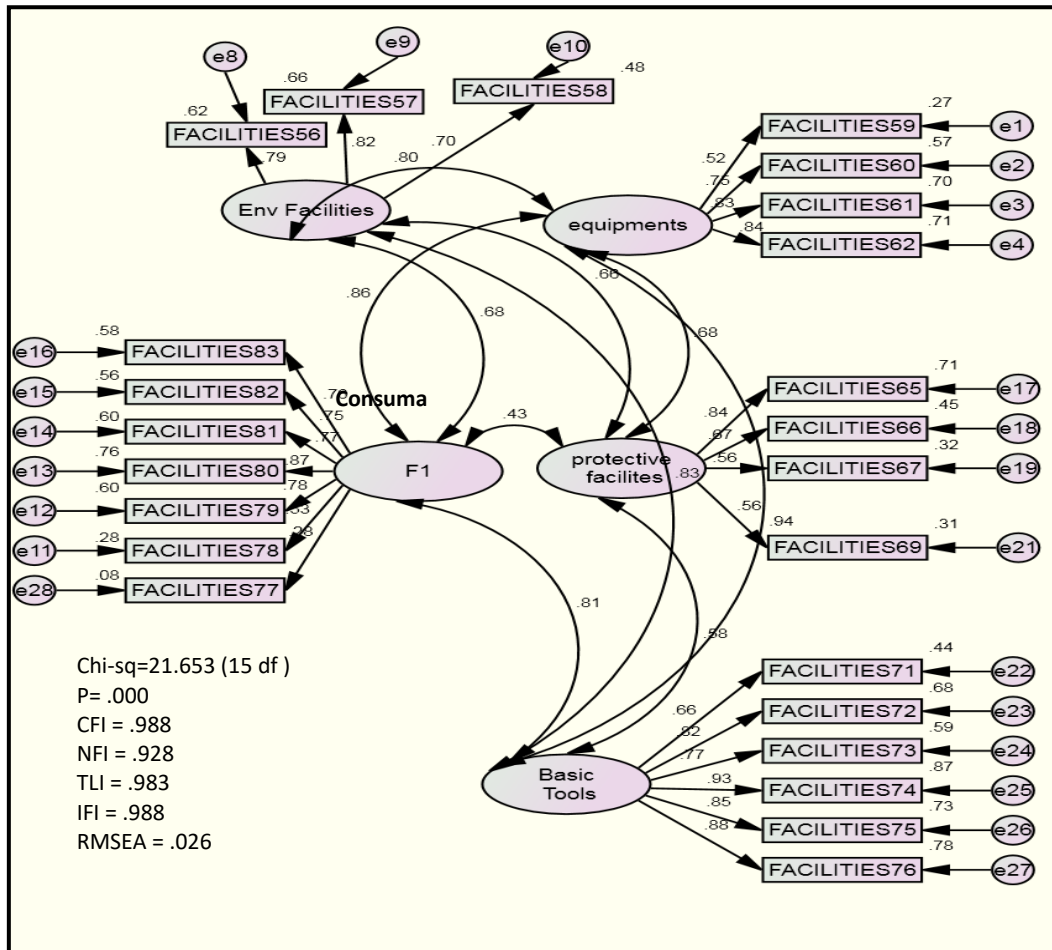


Figure 2: Final model developed on facilities for implementing the Employability Skills Model in the Repair and Maintenance of Smartphones.

The final model developed on facilities for implementing the Employability Skills Model in the Repair and Maintenance of Smartphones from figure19 had twenty four (24) items with factor loadings from .08 to .94. The Chi-

square = 21.653,df = 15,P = .000, the ratio of the Chi-square and the df (< 3) = 1.44, NFI = .928($> .90$), CFI = .988($> .90$),IFI = .988($> .90$), TLI= .983($> .90$) and RMSEA = .026($< .080$)

Table 2: Factor Loadings for Facilities for Implementing Employability Skills Model in the Repair and Maintenance of Smartphones.

CODE	Item Statements	Initial Model		Final Model		Validity/ Reliability	
		Factor Loadi -ng	Error Varia-nce	Factor Loadi -ng	Error Varia-Nce	CR	AVE
FACIL1	Conducive class room	.51	.02	Deleted			
FACIL 2	Conducive laboratory	.86	.08	.79	.62		
FACIL 3	Conducive workshop	.91	.82	.82	.66		
FACIL 4	Stable Electricity	.78	.61	.70	.48		
FACIL 5	Power equipment such as battery	.53	.28	.52	.27		
FACIL 6	Generating, such as 1000watts Generator	.84	.71	.76	.57		
FACIL 7	Basic measurement equipment such as multimeter	.89	.80	.83	.70		
FACIL 8	Hat Air Blower	.41	.84	.84	.71		
FACIL 9	Advance microscope adapted to monitor or computer	.48	.17	Deleted			
FACIL 10	Eye Goggles	.49	.11	Deleted			
FACIL 11	Hands Glove	.96	.93	.84	.71		
FACIL 12	Safety Boots	.84	.76	.87	.45		
FACIL13	Overall	.85	.72	.56	.32		
FACIL 14	Nose Mask	.78	.61	Deleted		0.96	
FACIL 15	Ear plug or Muff	.84	.70	.94	.31		0.95
FACIL 16	A set of precision screw driver.	.69	.48	.66	.44		
FACIL 17	Screw driver	.89	.78	.82	.68		
FACIL 18	Brushes	.85	.72	.77	.59		
FACIL 19	Soldering iron	.96	.91	.93	.87		
FACIL 20	A sets of pliers	.91	.82	.85	.73		
FACIL 21	Solder wire	.48	.85	.88	.78		
FACIL22	Tweezers	.30	.09	.55	.58		
FACIL 23	Sponge	.52	.27	.68	.83		
FACIL24	Jumper wire	.80	.64	.60	.78		
FACIL 25	Solder paste	.09	.79	.76	.87		
FACIL 26	Screen guide	.80	.64	.60	.77		
FACIL 27	External ear piece	.77	.59	.56	.75		
FACIL 28	Thinner or Alcohol	.79	.62	.58	.76		

The initial factor loadings of the facilities for implementing the Employability Skills Module in the Repair and Maintenance of Smartphones from Table 16, had initial factor loadings of 28 items ranging from .09 to .96. While the final factor loadings had 24 items with factor loadings ranging from .08 to .94. Each factor loading is above the cut-off of 0.5 showing that all were required for the development of Employability Skills Module in the Repair and Maintenance of Smartphones. The Composite Reliability (CR) of the facilities for implementing the Employability Skills Module in the Repair

and maintenance of Smartphones is 0.96, while the Average Variance Extracted (AVE) is 0.95

Discussion

The findings of the study from table2 on facilities revealed that 24 facilities are adjudged necessary and suitable for implementing Employability Skills Module in the Repair and Maintenance of Smartphones are in agreement with the submissions of Olakotan (2021) where 7 facilities are adjudged necessary for implementing Employability Skills Module in Aluminum

Fabrication and Glazing Work. The findings of the study on facilities from Table 2 shown that Composite Reliability and Average Variance Extracted are 0.96 and 0.95 respectively which is in collaborated with the Olakotan (2021) where Composite Reliability and Average Variance Extracted are 0.89 and 0.54 respectively. Also the findings revealed that 24 facilities are adjudged necessary by technical teachers, technical instructors, road side smartphones technicians, and industrial based supervisors for the implementing the Employability Skills Module in the Repair and Maintenance of Smartphones.

The findings on the facilities for implementing the Employability Skills Module in the Repair and Maintenance of Smartphones are in agreement with the opinion of Yisa and Olakotan(2017) who stated that adequate training facilities enhance skills development of students in technical occupation. Similarly, the submission of Olakotan and Oke (2023); Bakare (2020) also buttressed the findings of this study as the duo noted that using facilities during teaching and learning would equip the students with adequate psychomotor skills and as a results improve their interest level, stimulate their interest to participate in the teaching and learning activities, help them to picture reality in what has been taught and create an interactive learning environment thereby promoting effective teaching and learning. In similar manner the positions of Lemo and Olakotan(2016b) in relation to findings of this study was that training learners with relevant facilities help in acquiring skills to carry out given tasks.

Therefore, the adjudged necessary facilities for implementing the Employability Skills Module in the Repair and Maintenance of Smartphones include: environmental facilities, basic

hands tools, basic equipment, consumable materials, and personal protective equipment.

Conclusion

Smartphones have become an essential part of life in all spheres of human endeavor. Smartphone allows people to make and receive telephone calls while moving around a wide geographical area. Smartphone also supports several other functions, such as text messaging, email and internet access, photography, banking services, and money transfer, both in urban and rural areas. The need to identify appropriate quality facilities that are in good condition for implementing employability skills module in the repair and maintenance of smartphones. This is to ensure that implementers of employability skills module in the repair and maintenance of smartphones procure and utilize appropriate facilities for effective skill acquisition in the repair and maintenance of smartphones. Therefore there is necessities for all relevant stakeholders to ensure that the identified facilities be given priority and procured for the successful implementation of the employability skills module in the repair and maintenance of smartphones.

Recommendations

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

1. The development Employability Skills Module in the Repair and Maintenance of Smartphones should be properly implemented using appropriate facilities identified for the execution of the module
2. Relevant government and private agencies that will adopt the development Employability Skills

- Module in the Repair and maintenance of Smartphones should strictly follow the laid guidelines for implementing the module.
3. The developed employability Skills Module in the Repair and Maintenance of Smartphones should be adopted by the Industrial Training Fund for training youths and artisans in National Industrial Skills Development Programme.
 4. For effective implementation of the development employability Skills Module in the Repair and Maintenance of Smartphones, government and relevant agencies should provide conducive laboratory for the learners to encourage them to acquire the Employability skills.
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