

An Appraisal of Employable Content of the National Diploma in Architectural Technology Program in North East Nigeria

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Abstract:- The study was designed to determine the applicability of knowledge and skill content of the National diploma in Architectural Technology (NDAT) Program. The study involves 4 Polytechnics in the North East zone of Nigeria are involved, Namely Federal Polytechnic Mubi, Bauchi, and Damaturu along with Ramat Polytechnic, Maiduguri. The respondents are from stakeholders of the NDAT Operating departments at the listed institutions. They include lecturers (54), Instructors (14), Technologist (9), Technicians (26), Higher National Diploma (HND) Architectural Technology Student (44) and NDAT graduating Class Student (33). A total population of 192 respondents. To guide the study, research questions touched on which occupations can be associated with type of knowledge and skill content of the NDAT program. A structured questionnaire containing twenty occupations that require core, Linkage or general knowledge or skills as those in NDAT training was administered. The data collected was cumulated and analyzed using sample percentage as statistics tool, the result showed that all occupations scored more than 50%, 3 had scores between 50-59%, 3 between 60-69%, 7 scored 70-79%, 6 had 80-89% while 1 recorded over 90% acceptance of its applicability to knowledge and skill sets in the NDAT, the responses indicate a level of acceptance that the NDAT courses carry knowledge and skills that are similar to those applied in the occupations listed. These findings suggest that the researchers recommend that application and applicability of courses be clearly explained along with other objectives of the courses in the training. With a target of preparing the potential NDAT Graduate to develop flair for aspects of the training leading to practice, specialty and employment has assumed calls for need to increase a graduates' chance by being multi skilled, or even trans-Occupational, might well be considered and attitude of the graduate must radiate dignity of labour and humility.

Keywords:- Appraisal, Employable, Applicability, Content Architectural Technology.

I. INTRODUCTION

The National diploma in Architectural Technology (NDAT) Program, which is run in polytechnics is appraised as to if its content holds Employable Aspect, that can be associated with certain occupations. This work is meant to find grounds for mitigating unemployment problem among NDAT Graduates.

The North East of Nigeria has its share of graduate unemployment, and the matter seem to be assuming a worrisome level. In spite of solutions proffered by previous government, like the National directorate of Employment (NDE) and the N-power program. To prepare trainees while at school, the entrepreneurship development program (EDP) courses were introduced in tertiary institutions, with intention that it will make prospective graduates prepared to start and manage their own businesses on graduation, but as noted by Odigbo (2005) Students who scored 'A' in the EDP sometimes lead the employment queue the problem of unemployment seem to evade solutions, so far, considering that a large number of students are graduating from our tertiary institutions annually to join the row that appears already saturated.

Where is the problem? Why are the graduates not employed and are often unable to participate in Occupation or Economic activity? This situation causes frustration and despair among the Unemployed graduates and their parents. Particularly those with the NDAT that is considered by some as 'Jack of all trade' but opinions vary and some say 'Master of all' other say 'Master of none' the parent also believe their lads are learning/reading a 'hand work' course in the institutions. Discussions on unemployment often underscore the need skills of their choice as was proposed by Maina (2015) on the need to introduce elective courses in areas of Specialisation.

A pragmatic approach need to be adopted in our training and Educational system, where the learner and graduate are more versatile in learning and in doing, there are for example many categories of craftsmen in the building industry as observed by Obiegwu (2000) that are in short supply and getting extinct, in the same view Bugaye (2019) Explained that in the gas industry, welding in Port Harcourt is done by Asians, while plaster of Paris (POP) works in buildings is mostly handled by craftsmen from

Benin and Togo Republic. These are employment Avenues which the NDAT skills may not be said to be tangential.

Opinions vary on why the problem of unemployment seems to be gaining ground. Some blame it on the curriculum, scope of courses, inadequate practical work Mis-match between numbers of the graduates and needs of sectors that employ their services or on non development of marketable skills on graduation. These factors militate against employability of graduate. OFPPT (2024) explained that their training programs are demand-driven. Musa (2018) stated that skills required for certain vocations, occupations, trades, crafts, and building related jobs lie in the corridors of the NDAT training.

The training of NDAT is wide and demands the trainee to comprehend a large number of areas, making skill development and specialization more difficult, as aptly put by Uji (2013) training in Architecture remain stymied, stagnated and limited and suggested Architecture be made a faculty school or college with department under it offering aspects of Architecture. This is expected to promote in-depth study and specialization. While supporting the mentioned proposal, this study tries to establish belief on how different occupations can be associated with skills learnt in the NDAT program. So that between hobby, vocation and occupation the learners can develop affection for occupations.

The study proposes a unification of the NDAT training to some employable activities, be they from the general knowledge linkage or core Architectural courses, which trainees are exposed to, in presentation of lectures, workshop or laboratory practical works. According to Google (2024) the Bauhaus an Art and design school in waiver, Germany, has philosophy of unifying Art, Craft, design and Architecture, this suggest there is latent Universality in these bodies of knowledge.

The study is set to determine if stakeholders of NDAT program who are the respondents agree or otherwise that there is relationship between courses in the program and certain professions, trades jobs vocation or occupations and whether they used similar skills. Information extracted from data after administration of test can be considered a reason and basis for reviewing the current mode of applicability of skills learnt to occupations, establishing the belief that skills in the NDAT can be said to be associative. The finding can be used to justify or otherwise type and amount of proposed review in mode of training the study can be a yardstick as to why various occupations can appear legitimately in

presenting courses, practical and workshop practices of the NDAT program.

➤ *Purpose of Study*

- To establish if the NDAT holds content needed for entry into other occupations.
- To create awareness of relationship of skills learnt in the NDAT and the world of work.
- Put the NDAT graduate in better position to be employed or for self reliance.
- Promote universality of knowledge and skills for trans-occupational Migration
- Familiarize stakeholders in NDAT of wealth of Employable and self reliance content in the courses.

➤ *Research Questions*

- Which occupations share skills embedded in the NDAT courses?
- Can the NDAT program be considered to bear many employable aspects?
- Are NDAT graduates aware of employable content in the program?
- Are the NDAT courses taught with objectives of applicability to other occupation?
- Are marketable aspects of courses taught as course objectives?

II. MATERIALS AND METHOD

➤ *Study Population*

The population of the study is 192 respondents from 4 polytechnics in the North east zone of Nigeria comprise of federal polytechnics in Mubi (52) Bauchi (62) Damaturu (24), then Ramat polytechnic Maiduguri (54). All the respondents have knowledge of NDAT program and its courses, they are Architects (12), lecturers (54) instructors (14) Technologists (9), Technicians (26), Higher National Diploma HND (Architectural Technology) students (44) and final year graduating NDAT students (33).

➤ *National Diploma in Architectural Technology Course.*

The national diploma in Architectural technology (NDAT) program, is a two year, 4 semesters program, regulated by the National Board for Technical Education (NBTE) The 10 courses for the study are selected from the curriculum and course specification for National diploma in Architectural Technology (NBTE) (2004)

Table 1 NDAT Courses

S/N0	NDAT courses	Domain of knowledge/skills.
1	Architectural design	Design of Buildings
2	Basic design	General Design/Art principles
3	Building materials	Material Knowledge/Application
4	Computer Appreciation	General Digital Technology (CAD)
5	Construction methods	Techniques of Construction
6	Free hand drawing	Sketching/Art

7	Graphics	Graphic/Geometric Communication
8	Building services	Electrical/plumbing/fire safety/HVAC
9	Site management	Project Management/Organization
10	Modeling	Scaled/MiniatureReproduction

Source: Author

➤ *Occupations*

Professions, wage employment, Jobs, Trades, hobbies and vocations, are categories of employable activities which gives income and self reliance, skill sets required for the employment activities are grouped into 3, that is requirement for core NDAT skills, Linkage professional skills and general or others non specific skills not related directly to Architectural Technology.

➤ *Instrument*

A structured questionnaire was designed for data collection, list of 10 NDAT courses and occupation are provided, the questions are based on if the respondents

agrees or others wise, that knowledge and skills learnt in the NDAT can be useful, for entry into listed occupations. Part A on core Architectural skills, B on Linkage and C on general skills in the NDAT training.

III. RESULTS

The results are presented for core, Linkage and general knowledge/skills based occupations, their acceptance or otherwise are presented in tables 2, 3 and 4, table 2 below carries 7 items; These are occupations based and require knowledge and skills of type in the NDAT core courses.

Table 2 Occupations Requiring Core NDAT Skills

S/N0	Requiring NDAT core skills	Positive No	Negative No	Positive %	Negative %
1.	Architectural firms	184	8	95.83	4.17
2.	Building material sales man	154	38	80.20	19.80
3.	Cabinet making	118	74	61.45	38.55
4.	Construction firm	126	66	65.62	34.38
5.	Interior design	156	36	81.25	18.75
6.	Landscaping	144	48	75.00	25.00
7.	Plaster & Tiling works	132	60	68.75	31.25

Source: Author

The results in table 2 shows working at Architectural firm with 95.83%, interior design 81.25% and Building material salesmanship, landscaping 75%, Plaster and Tiling works 68.75% and working with construction firms 65.62% followed, while cabinet making 61.45% recorded the least score in the table.

Table 3 below carries 6 items, these are occupations requiring knowledge and skills of Linkage professionals of Architecture, the NDAT graduate may enter, the results show how respondents scored the 6 occupations in the table below.

Table 3 Occupations Requiring NDAT Linkage Skills

S/N0	Requiring NDAT Linkage skills	Positive No	Negative No	Positive %	Negative %
1.	Electrical works	136	56	70.83	29.17
2.	Fire safety system	156	36	81.25	18.75
3.	Plumbing system	109	83	56.77	43.23
4.	Security system	162	30	84.37	15.63
5.	Solar energy	152	40	79.16	20.84
6.	Windmill energy	102	90	54.68	45.32

Source: Author

The results in table 3 above show that security system/Installation 84.37%, fire safety system/Installation 81.25% and solar Technology 79.16% recorded the highest score or acceptance. Electrical works/Installation 70.83%

followed. Plumbing 56.77% and windmill Technology 54.48% scored the lowest acceptance.

The results on general or non specific skills that are in the NDAT comprise of 7 items are in table 4 below.

Table 4 Occupation Requiring NDAT General Skills

S/N0	Requiring NDAT general skills	Positive No	Negative No	Positive %	Negative %
1	Agricultural housing	106	86	55.20	44.80
2	Event planning	172	20	89.58	10.42
3	Arts/ graphic design	138	54	71.87	28.13
4	Desk publishing	148	44	77.08	22.92

5	Fashion design	163	29	84.89	15.11
6	Cap needle work design	152	40	79.16	20.84
7	Snack kiosk design	142	50	73.95	26.05

Source: Author

The responses on applicability of NDAT course show that event planning 89.58%, fashion design 84.89%, and cap pattern geometry for needle work 79.16% had the highest scores or acceptability. The next batch is Desk publishing 77.08%, snack kiosk 73.95% and Art/graphic design 71.87% which followed with medium scores. Agricultural housing (Animal + Plant types) 55.20% had the least score.

IV. FINDINGS

The results can be grouped into 5 by scores; the first group with 95.83% is Architectural office.

The second group with scores of 80.89% includes interior decoration, material salesmanship, snack kiosk design security, fire safety, and event planning and fashion design.

Occupations in this include core, Linkage and general.

The third group 70-79% are upholstery, Desk publishing, Arts and graphics, landscaping, plaster and Tiling works, Electrical installation and solar energy networking.

The fourth group with scores 60-69% include constitution firm, cabinet making while the fifth group with scores of 50-59% comprises of plumbing and windmill technologies.

V. DISCUSSION

The number of unemployed graduates depicts a situation seemingly a failure in planning our education/Labour balance. Odigbo (2005) mentioned curriculum failure on this issue, the OFPPT (2024) explained that their training is demand-driven. Emphasizing the need to know where the graduate trainee will work. While there many graduates unemployed, Jobs are out there that require workers, a mis-match might have set in between graduates produced and demand for them.

Some organizations have different approach to qualities sought from job seekers colagrossi (1982) stated that more renowned and prestigious companies like Apple and Google no longer require degree for work appointment, skills are the qualities now demanded and sought for.

The way courses including the entrepreneurship development program (EDP) are currently presented in our institution need to adapt and be reformed. Mere addition of the EDP course, while learners are not fully knowledgeable of marketable and employable content that lie in them portend less insight into employable potentials therein. Stakeholders have to re-direct efforts for the learner to know the use of what he/she is learning, associated skills, how it is

applicable to present day economy, where it is demanded/related and complementary businesses.

With scarcity of employment, learners are better trained not only to know but also to do, as Obiegwu (2002) describes this as action learning. This is an asset for the prospective graduate, whatever happens, the multi-skilled Job seeker has a better chance of employment or self reliance.

VI. CONCLUSION

The regulating bodies for the NDAT program the National Board for Technical Education (NBTE), the Architects Registration Council (ARCON), Nigerian Institute of Architects (NIA) all need to reconsider the statement in the National education policy on Vocational Technical and self reliance objectives, so that these objectives form part of the presentation and delivery of the courses.

The Association of Architectural Educators in Nigeria (ARCHES) whose members are the lecturers that deliver what is in the curriculum have to come on board. To ensure clarity in employable values in each course.

The study proves that shareholders believe that the NDAT graduate learns courses that have application in many occupations, but the program as it is does not hold objectives other than the subject matter that is Architecture and Architectural Technology. The course objectives need to include what can be done with the courses, with reference to employment and occupation that skills learnt can be applicable.

The NDAT graduate if challenged on skills needed for the occupations tested in the study, though may be clear in knowledge may not be as feasible by the hands. Skills need to be developed and craftsmanship is prestigious and demanded, the NDAT training contains many starting points that can lead to development of skills for occupational proficiency. These need to be treated during lectures and practical sessions.

RECOMMENDATIONS

- The NBTE, ARCON, NIA and ARCHES have a need to combat graduate unemployment with policies that make the graduate more prepared for the world of work.
- Employable/marketable content of a course should carry same weight as the objectives of learning the subject in the discipline.
- There is need to train the trainers for a better interaction and a built-in entrepreneurship into the courses themselves rather than attaching it.

- Courses with universality of application like Technical drawing, metrics, Anthropometrics and menstruation should be emphasized and practical lessons of them included.
- Guidance and counseling to students will promote assurance and development of area of interest from core, linkage or general skill occupations.
- To make the graduate prepared for world of work effective disposition matters, dignity of labour, humility and willingness to learn, are psychological assets that can open ways to forms of employment.

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