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A Model of Curriculum Integration for Developing Functional Entrepreneurial Skills in Basic Education Programme. An Approach to Peace Building in Nigeria.

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Abstract: *The curriculum programme in Nigeria has been facing serious set backs in skills acquisition. In most cases do not have the practical skills related to their area of specialization. This is as a result of the failure of the educational system to provide the expected equipment and workshop required in the training. Hence, graduation in all the strata of educational system does not have the competence to use their skills in their future endeavour. It is in recognition if the above, this paper develops an integration model for basic education programme, which will go a long way in providing entrepreneurial skills to the basic education programme graduates, that will ultimately provide employment opportunities for the products and consequently develop a peaceful atmosphere among the Nigeria youth.*

I. Introduction

According to Jesscia, Trayce and Kristen (2014). Three integrated curriculum models have proven successful with gifted and talented students. These include:

An overarching concept reading, reflections and discussion provide students with opportunities to create and construct meanings for key concepts. This allows for cross curricular connections. (2) Advanced content-pre-assessments allow students the opportunity to show mastery of concepts and skills in content areas. Teachers are also able to compact the curriculum and guide students through advanced content at a more rapid pace. (3) Process/product-self-directed learning allows students to explore a topic of personal interest. They construct knowledge and apply it to product that are highly qualitative.

The above submission, has shown that, curriculum integration model if properly applied can positively change an educational practice. There are so many educational literature that support curriculum integration, cognitive scientists were able to utilize advanced imaging technologies to study how the brain operates. Jenson (1998) the single best way to grow a better brain is through challenging problem solving, this creates new dendritic connections that allows us to make even more connections. This means, whenever a human brain is challenge with a reasonable and meaningful cognitive activity, will motivate a sound connection between learning concepts.

Wolf & Brand, (1998). One of the best ways to promote problem solving is through an enriched environment that makes connections among several disciplines. It is an acceptable fact that, learners cannot develop the potentials for problem solving ability in an environment which is not conducive. Hence, learners should be exposed to an environment that has the characteristics needed for learners to establish connections among several disciplines.

Austin, Hirstein & Walen, (1997) Educational researchers have found that an integrated curriculum can result in greater intellectual curiosity, improved attitude towards schooling, enhanced problem-solving skills and higher achievement in college. This is usually the essence of educational exposure, to develop the ability of problem-solving. If learners develop this ability than education has become a viable venture.

Barad and Linda, (1997) indicated that when students focus on problems worth solving, motivation and learning increase. The idea presented by Barad and Linda has added yet another opinion that encourages problem-solving capacity in a learner.

Kain (1993) some schools have used an integrated curriculum as a way to make education relevant and thus a way to keep students interested in school. It is an acceptable fact that, integrated curriculum usually is activity-based problem. Naturally learners are more interested in an activity oriented learning conditions where they participate as active members not a passive situation that usually brings so much boredom to the learning activity.

Shane and Venkataraman (2000) defined entrepreneurship as the study of how, by whom and with what effects opportunity to create future goods and services are discovered, evaluated and exploited. Shane and Venkataraman had a correct and impressive view of the concept entrepreneurship. In any case of business

enterprise, it is always pertinent to understand how such enterprise should be established and also who is in a good position to establish it. These provide the information on how it will make an impact to the society as a whole. Shane and Venkataraman (2000) further looked at entrepreneurial opportunities as those situations in which new goods, services, raw materials and organizing methods can be introduced and sold at greater than their costs of production. Therefore, any goods, services or raw materials that an individual acquires and can sell such and realize a profit is rightly considered as an entrepreneurial activities according to the submission of Shane and Venkataraman.

Okpara (2005) defined entrepreneurship as the willingness and ability of an individual to seek out investment opportunities, establish and run an enterprise successfully. The idea of Okpara has a limitless boundary to the concept entrepreneurship, this means, any opportunity an individual can exploit that will help him establish and run an enterprise is considered as an entrepreneurship.

Okpara (2005) further identified entrepreneurial qualities as innovation, autonomy, creativity, determination, flexibility, good orientation, hard work, imagination, initiating, others are, leadership, need for achievement, optimism, perseverance, persuasive powers, problem-solving ability, futuristic, confidence and individuality. The inpending difficulties and risks in entrepreneurial activities, are the brain behind advising an entrepreneur to process the above qualities, this will provide him the mental readiness to face the challenges and have the zeal to succeed in his enterprise.

Okpara (2005) identified characteristics of an entrepreneur as self-confidence, task or result oriented, risk taker, leadership, originality and future-oriented. Indeed, one can hardly succeed in entrepreneurial activities without one possessing the above characteristics outlined by Okpara. These will give him the expected focus on whatever he wants to achieve in his enterprise. In the sense that, the entrepreneur is considered as action oriented highly motivated individual who takes risk to achieve goal.

Calvin, (2006) being an entrepreneur or small business manager satisfies our personal needs for freedom, flexibility, variety, creativity, responsibility, control and authority. In order for an individual to succeed in entrepreneurial activities, has to endeavour to possess these potentials. These stabilize him in the venture, which will bring the expected reward or profit.

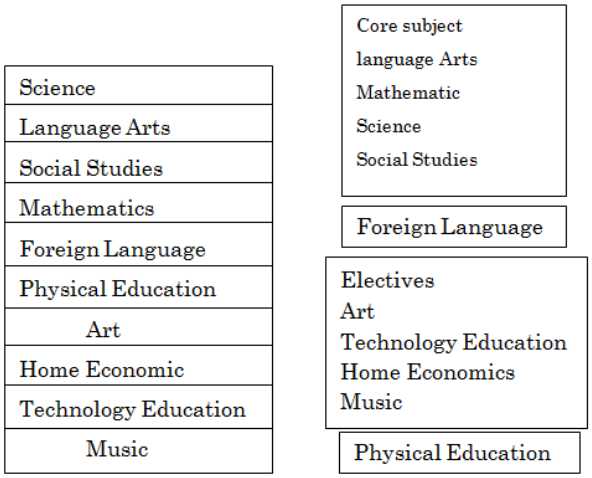
II. Curriculum Integration model

It has been discovered, in the past decade, there has been several models of curriculum integration that have come to play a vital role in educational practice. Curriculum integration occurs at the lower levels of education (K-8) than at the high school and college levels (Loepp, 2014). This means, at this level curriculum theorist find it easier to propose an integration model being a lower level of the educational stratum. Hence, it will help this research work to venture into developing a model for integration of curriculum, since the target population of this work focuses on the lower level of the educational system.

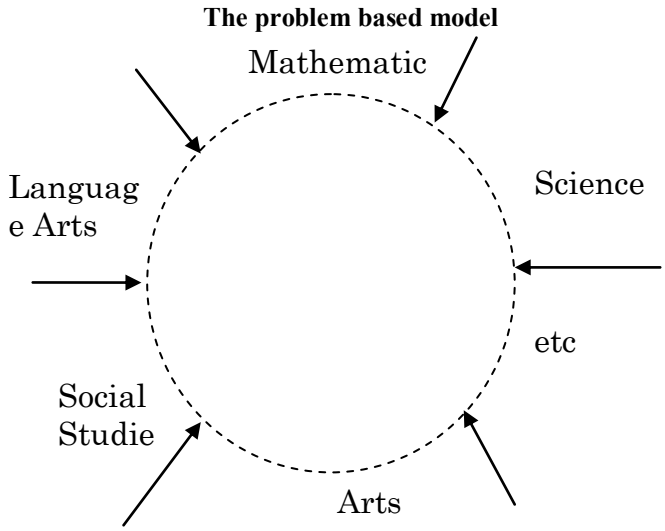
Leopp, (2014)

The emerging trend is for elementary schools to build interdisciplinary curricula around themes, whereas in high schools and colleges integrated curricula are most likely to be based around problems. An example of a theme at the elementary level could be "our community," which afford a relevant setting to specify distance, area and quantities in the community, to focus on the resources needed to sustain a community to recognize the blend of ethnic influence on community life; to investigate community festivals and other cultural activities;…… A solution of this problem would naturally lead the students into mathematical, scientific, and technological issues that would have to be addressed.

The essence of any form of curriculum integration is to improve the quality of the curriculum output. In most cases, integration programme comes to focus whenever an inadequacy has been identified in the curriculum outfit. The following integrated curriculum models are identified in generic format (Leopp, 2014).



The above model offers several advantages. Teachers are given to work together, they have a limited number of students and the model can support a traditional curriculum while offering scheduling flexibility to the term. One disadvantage is that it is easy for teachers to simply continue doing what they have always done with little or no attention given to the interdisciplinary or integrated curriculum.



Another curriculum integration model is referred to as the problem based model. Ideally, the model places technology education at the core of curriculum. The world today is characterized by technological inventions; hence, technology has become a human activity. This is the way to design the curriculum, with the expectation to solve a technological problem. The model was the advantage of high potentials for the identification of relevant, highly motivating problems, on the other hand, a disadvantage of this model is its difficulty of assuring that state frameworks/or national standard are fully addressed in a given grade level.

The theme-based model

Mathematics	Science	Technology	Language Art	Social Studies
Objectives				
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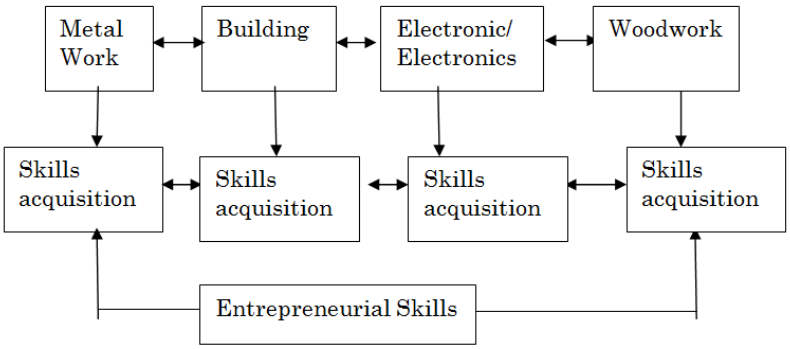
The theme based model is a model that teachers can identify with a given discipline. The curriculum can connect the curriculum with national standard and state framework. In this approach, students make connections among objectives and from various disciplines, this model has the tendency to disconnect relationship with other discipline, which makes teachers to engage learners in shallow or irrelevant learning.

Mohammed's improved model of curriculum integration



The model attempts to establish some of the related Basic technology subjects identified under the programme. These skills cannot be easily acquired in the classroom and secondly, the schools do not have the required equipment for teaching these subjects in basic technology skills. Therefore, the programme has to incorporate practical skills. The skills will be acquired though attaching the learners to various technicians in the community where they will have a practical exposure. This approach will guarantee the child to develop the expected entrepreneurial skills inherent in basic technology.

Entrepreneurial skills opportunities in Basic education

The Federal Ministry of Education (2007) had produced a comprehensive curriculum in its 9-year Basic Education curriculum. The Basic technology which runs for three years in the programme, has the potentials to produce Basic education products in the entrepreneurial skills in materials and processing applied electricity and electronics/building, maintenance, drawing practice, energy and power and tools and machines.

(a) **Materials and processing**

The Basic education technology curriculum has itemized the curriculum contents of the above course which include wood, metals, day ceramics and glass, plastics and rubber, isometric drawing, oblique drawing. Others are, orthographic projection, one-point perspective drawings and the recommended instructional materials include, posters, charts on various methods of steel production, limestone, coke and rings, others are clay, potter's wheels, ceramic products, glass work equipments. Materials like plastics and rubber materials, injection moulding machines, extruder, blowing machine and chemicals are also recommended. Other recommended learning materials include, drawing instruments and materials, models of shaped blocks, charts and pictures, drawing instruments like sheets, materials square, board and instrument.

(b) **Drawing practice**

This is an area that teaches the child concepts like isometric drawing, oblique drawing, orthographic projection, one-point perspective drawing. The required teaching and learning materials include, drawing instrument and materials, mode of shaped block, charts and pictures. Others are, drawing instrument, sheets and materials, square board instrument.

(c) **Tools and machines**

The major concept in this area are woodwork projects. Metal work machines, simple metal work projects, soldering and brazing. The recommended instructional materials include, portable woodwork machines and tools, charts and pictures, timber, hand tools, safety posters, first and materials. Others include, non-wood materials, adhesive, nails, screws, hinges and wood finisher.

(d) **Tools and process**

The subject areas in this broad topic include, metal work machines, simple metal work project, soldering and brazing. Teaching and learning materials recommended in this area are machine like lathe, power

backsaw, pedestal drilling, pedestal grinder, charts showing milling machines, shaping machine, grinding machine, metal, hand tools. Other include portable drilling machine, soldering and brazing tools equipment and materials.

(e) **Energy and power**

The area emphasizes concepts like mechanical energy transmission system like friction, belt drivers, gears, linear motion and rotary motion. Instructional materials under this subject area include, lubricants, different wood or metal surfaces, students palms, rags, motor driven pepper grinding, motor fan belt, sewing machine, others are bicycle and motorcycles, chain drives, pictures of chain and chain driven machines, card board, old clock, driving systems of machine in school, workshop and gear box. Scrap engines or mechanical components that contains levers, linkages, slides and slots, charts and films. Others are old shafts of cars, brakes, clutches, charts, films, pictures of crank shaft, connecting rod and piston.

(f) **Applied Electricity and Electronics**

The subject areas for the above concepts include, simple electrical wiring like electrical circuits series, circuits and parallel circuits, wiring tools and materials like screw driver, pliers, hammer, clips, wooden block and cables. Others are Accessories like switches, lamp and holders. The recommended learning and teaching materials are cables, hammer, pliers, nails, lamp, holder, switches and joint boxes.

(g) **Building**

In learning building, the learner will be exposed to areas like foundation, walls, floors, doors, windows and openings, roofs and simple blue print reading. Teaching and learning materials includes diggers, charts, posters, films blocks, cement, sand zinc, curtains grass, stones, drawing, charts, documentary, doors, windows, pictures, charts. Others are roof models, building plans, architectural designs.

(h) **Maintenance**

The learner is required to understand periodic maintenance, fault detection. Teaching materials related to this area include, grease, engine oil, tools and machine parts, cotton rug, protective wears, record cards, cleaning materials and instruments, fault detection tools, operational charts and protective devices.

III. An Approach to Development of Entrepreneurial Skills in Basic Education Programme

The theory of learning by Benjamin Bloom and others emphasized the need to combine the three domains of learning cognitive, affective and psycho-motor domains. The educational programme in Nigeria for centuries has been faced with the problem of integrating practical skills, where a graduate of a particular area of specialization fails to prove his professional potentials as a result of the emphasis on cognitive domain of instructional objectives. This problem is not unconnected with the problem of lack of the needed materials, equipment and workshop. Hence, the need to provide an alternative to these problem through attaching the Basic Education products to various artisans, mechanics, electricians, carpenters and builders, commonly found in our local communities.

In learning the subject area in materials and processing, the learner needs to be attached to road side workshop where the learner will be exposed to practical skills. There is no amount of teaching that will substitute practical skills. Most, if not all basic education schools, have the problem of lack of the needed materials for having practical skills in this subject area.

In learning drawing practice there are many drawing professionals in every part of our communities many of these professionals have made this as their means of livelihood. It will not be possible to develop entrepreneurial skills through simple classroom instruction without exposure to the work in practice. Therefore, if Nigeria as a country is serious in its intention to make the Basic education programme as a channel for providing employment opportunities to our teaming population, there is the need to expose these children to the skills by attaching them to these professionals in the field in order to acquire the expected skills.

The entrepreneurial skills in tools and machine can best be developed if the basic education students are attached to local carpenters that specialized in furniture making, and metal work. These two areas have immeasurable potentials in giving employment to our teaming youth in Nigeria. The inadequacy of the educational system to expose the products to these skills in school is the major predicament of the educational system. Therefore, it is important to utilize our local artisans and technicians in order to provide the needed skills to our children.

There are unlimited opportunities to develop entrepreneurial skills in applied electricity and electronics, but the area is grossly under estimated by failure to provide the equipment for the training of the products in Basic education programme. However, the gap can be filled through making use of our local electricians that are readily available in our communities throughout the country. It is earlier giving the children training on the field, this provides the opportunity for the students to develop the skills in this area.

Building too, to a greater extent, can provide means of entrepreneurial skills development, if the students are attached to the real masons in the field. Therefore, it is important to expose the students interested in this area, practical skills that the local builders of our society specialized.

Despite the fact that, Nigerians are not good in maintenance culture. There are situations that they must maintain their building structures in a situation where their comfort will be compromise. Hence, it is not out of place if we expose the Basic education products to maintenance skills. This too, has much entrepreneurial skills that will go a long way in providing employment opportunities.

IV. Conclusion

The educational system that compromises practical skills, It is doom for a failure. There is always a strong connection between learning and skills. If a learner cannot slow any potentials or proficiency in the area he/she specializes, the educational treatment such a learner received is greatly undermined. This is the mess Nigerian educational system faces. Therefore, if we need our education system to stand the test of time, the stakeholders in education should change our orientation towards embracing semi-skilled labour in our local communities in order to achieve the desired objectives of the educational system which will ultimately neutralize the social vices of the nation.

V. Recommendations

The following recommendations are advanced for further enhancement of the Basic Education programme in Nigeria.

(a) The work experience of one year should be recommended for Basic Education products.
(b) The Basic education departments should be made to sponsor the products within the period of the training.
(c) Local artisans and technicians should be identified for the programme.
(d) The artisans and technicians should be employed as technical staff of the programme.
(e) The practical training should last for a period of one year before the products are certified graduates of the programme.
(f) The government should provide the products not willing to continue with senior secondary education programme, a loan to buy the equipment for their chosen skills.

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