

## TVET: MAXIMIZING SERIGRAPHY POTENTIALS AS A FEASIBLE TOOL FOR ECONOMIC DEVELOPMENT IN NIGERIA

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### ABSTRACT

*Out of many TVET inclined vocations and indigenous crafts which can be maximized to harness economic transformation and development, as well as to further actualize wealth and job creations, serigraphy, otherwise known as screen printing, is one of the most viable crafts. As a result of its presumed technicality, serigraphy is commonly seen by layman as a skill for only few, who are in the science of art, either schooled, trained or talented in visual art. Meanwhile, serigraphy, which is an integral part of both graphics and textile arts, is a tool used in enhancing the creation of corporate and ceremonial identities, through promotional items otherwise known as souvenirs, for the purpose of publicity and advertisements. Serigraphy is encompassed with broad usefulness in this product manufacturing age, more than its few present practitioners. This paper canvassed for increased deployment of serigraphy by sensitizing everyone, including the laymen with the fact that screen printing can be done by people who are not skilled artists, but they desire to use the medium as a tool for self-empowerment and/or financial empowerment. This qualitative research also explains materials, techniques and possible market prospects of serigraphy Methodology used includes literature review, authors' observations and studio experiments. It recommends among other things, that more attention should be given to integrating serigraphy as an entrepreneurial course or subject in both secondary schools and tertiary institutions as well as entrepreneurship education for youth corps members.*

**KEYWORD:** TVET, Serigraphy, Art, Entrepreneurship, Empowerment

### 1.0 INTRODUCTION

One of the primary focuses of Technical and Vocational Education and Training (TVET), is to empower (Tripney, J. S. and Hombrados, J. G. 2013) as many people as possible to be worthy of employment in the fast rising competitive global markets (Esposito, M. and Tse, T. 2013); where robots are already getting inoculated as part of working aids and delivery of medical services (Laguipo, 2020). Similarly, TVET is also aimed at

being a driving force, to influence individuals for capacity building (Ajayi, 2019). Hence, TVET fosters empowerment and entrepreneurship, which are factors that contribute directly to the economic growth of any nation which has such technologically skilled people in abundance (Lindner, 2020; Edigbonya, 2013).

In this computer age (Tucci, 2014), the relevance of education and trainings that would avail the opportunities for youths to acquire the required

knowledge or skills to be productive and technically sound cannot be overemphasized (Onwenonye, 2019; Muyiwa 2015 and Akanbi, 2017). Technical and Vocational Education and Training (TVET) was primarily initiated in order to seamlessly equip youths for the global ultimatum for technological advancement (un.org, 2021; Obiora, 2006). There are several skills and local crafts which can be reconnoitered to enhance seamless economic development and further stimulate the goal of TVET; screen printing is one of them. Perhaps, as a result of its technicality, screen printing is usually seen as a skill for only few who are artistically trained or talented in Visual Art. Meanwhile, it is a stress-free vocation that has already become a leisure pursuit for many people that could understand the profitability facade of the craft. Serigraphy is an old form of art that entails the processes of using a silkscreen otherwise known as organdie or a mesh to transfer designs or captions on any surface or material; usually when considering large quantities.

Another area through which art is instrumental for global relevance is through serigraphy. The vocation is a profitable scheme that is potentially instrumental for wealth creation, employment opportunities, job creation, promote entrepreneurship, youth empowerment, et.al all of which are key factors for economic enhancement; especially for a third world country like Nigeria. It is worthy to note that serigraphy is an aspect of art that bridges art with science and technology. For example, almost every electronic appliance has a touch of screen printing except any appliance that does not have a brand name on it. Even sometimes, the panels, casings, et.al of most electronic appliances usually have diverse signs, symbols, labels, captions, etc. printed on them through serigraphy (screen printing) and/or

the modernized version of printing known as laser printing (in recent time).

There are several factors to be considered when venturing into a business as technical as serigraphy. Such factors are: procuring the screen printing materials and tools, choosing location, creating a market niche, creating a brand, as well as identifying the market prospects for the business. Almost all of the factors would be addressed in this study in order to ensure it becomes less cumbersome for as many youths/adults as possible who may wish to venture into the business as entrepreneurs. In this study, these terms are used interchangeably: Silkscreen, Organdie and Mesh they all mean the same thing; as they all refer to the screen printing tool for exposing artworks on dissimilar surfaces. Similarly, serigraphy and screen printing are interchangeably used to mean same thing. This paper intends to uncover the lucrativeness of screen printing business and it will be delving into the step-by-step procedures of constructing silkscreen (mesh frame) and avail information on how to expose artworks for screen printing.

About 86.9 million Nigerians are estimated to be living below the poverty line, which discredits Nigeria to be tagged as “poverty capital of the world” (Kryshna Panchal, 2020). This is a stigma that is already taming the reputation of a nation popularly nicknamed as giant of Africa; hence, there is no doubt that one of the ways such stigma can be absorbed is by creating employment opportunities for Nigerian citizens and by promoting entrepreneurial skills (TVET) to make as many citizens as possible self-employed and/or gainfully employed. This was the problem statement and the basis on which this research was premised. It intended to introduce another vocation mined from

art which is easy enough to learn and viable to create wealth for interested individuals.

Relevant literatures reviewed for this research have their roots in all of the keywords for this study which are: TVET, Serigraphy, Art, Economic Development, Empowerment

This study focused on how serigraphy can help improve the living standards of as many people as possible, if diligently embraced as a means of self-empowerment which will indefinitely affect societies or a nation positively; and at the same time, fulfill the aim and objectives of TVET.

## 2.0 LITERATURE REVIEW

Nigeria, with over 200 million people, is considered as the 7<sup>th</sup> country in the world with the largest population; it is situated in the continent of Africa, precisely on the Gulf of Guinea. Nigeria is a sovereign country in West Africa enriched with many natural landmarks as well as wildlife reserves. Censored areas such as Cross River National Park and Yankari National Park are enriched with waterfalls, dense rainforest, savanna and rare primate habitats. Zuma Rock, a 725m-tall monolith outside the capital of Abuja that's pictured on the national currency is considered as one of the most recognizable sites in the country (Simona, 2020).

Serigraphy in this context is the art or process of creating prints or culminating visual interactions, through the use of silkscreen otherwise referred to as screen-printing. Meanwhile, TVET is recognized to be a crucial vehicle for social equity, inclusion and sustainable development. TVET (Technical and Vocational Education and Training) is education and training, which provides knowledge and skills for

employment (Val, E., Gonzalez, Iriarte, Beitia, Lasa, and Eikoro, 2017). TVET uses formal, non-formal and informal learning. The synopsis of the goal on which the existence of Technical and Vocational Education and Training (TVET) is rooted can be said to be the continuous existence of education and training that promote required skills for employment and basically entrepreneurship. Hence, it is expedient to note that TVET's aim and objectives are geared towards employment and entrepreneurship; to further validate this, while probing the scope of TVET, it was likened to the biblical activity of the creation of man (Adam) and his empowerment as the caretaker of the earth. Just as Nwosu and Micah (2017) would have us believe:

*“TVET in form of indigenous skill acquisition, development and utilization is as old as man himself. The Holy Bible (2016) in Genesis 2:15 say: The LORD God put the man in the Garden of Eden to work the soil and take care of the garden.”*

They further posited that God was the first TVE instructor while Adam was arguably proposed to be the first TVE student.

In Nigeria, the emergence of TVET which could precisely be traced back to 1969, did not just happen in a day, it was a gradual process which has elements of activism. The emergence of TVET is however well summarized in the submission of Akanbi (2017):

*“At the 1969 National Curriculum Conference (NCC), Naibi (1972) advocated that TVET should even be incorporated into the primary school curriculum to emphasize its importance. He noted that: In developed countries where there is universal education up to secondary level, vocational education could wait till after primary education. In Nigeria and many other African countries, the majority of children have an opportunity of only primary education. For this reason, we cannot wait until after primary education to provide our children with vocational education. Many parents are not keen on sending their children to school only to learn academic subjects and for them to return to them after schooling without acquiring any valuable skill. (p. 12) Naibi’s submission to the 1969 curriculum conference set the agenda for the importance of TVET and gave it a space in the NPE which was the outcome of NCC. The first edition of the NPE was published in 1977 and subsequently reviewed in 1981, 1988, 2004, and 2013. It is important to note that all the revisions unequivocally stated the importance and the objectives of TVET, though the training was given different names: Technical Education in 1981; Polytechnic and Monotechnics Education in 1988; Technical and Vocational Education in 2004; and Technical and Vocational Education and Training in 2013.”*

Serigraphy can be said to be a printing technique where a silkscreen is used to emit ink on a surface that is smooth, woolen, partially rough, etc., exempting the blocked areas that are made impermeable to the ink. In demystifying the term, serigraphy, it is not an overstatement to say it is considered to be an age long printing technique. According to Ibiwoye, and Ilesanmi, (2020) as well as Imri, (2019), serigraphy has been around for centuries, at least since the Song Dynasty in China around 1000 AD, while it strikingly emerged into modern culture during the 1960s. However, serigraphy which is otherwise called screen printing, according to Seyi-Gbangbayau and Ajayi, (2019), is said to also be a prominent and widely used technique for monogramming; which is a process of

producing textual and pictorial designs or imprint on fabric or other similar planes.

Furthermore, there is no way serigraphy will be talked about without mentioning the premise on which it rests. Just as (Sevdaliza, 2020 and Ajayi, 2017) would make us believe:

*“Art and Design is a course which generally touches almost every facet of human life, including fashion. No wonder art is defined as “Life and as a discipline that promotes self- discovery”*

Art is a multidisciplinary field that encompasses dissimilar crafts, vocational skills/trainings which could be maximized to integrate self-empowerment and entrepreneurship among the youths. The significant role of youth empowerment/entrepreneurship vocations in a deploring economy like Nigeria cannot be overemphasized. It behooves to note that the wealth of the youths, especially in a country like Nigeria where the population of the youths is more than the average of the whole population of the country, will incontestably spur the wealth/economy of such nation (Nigeria).

It behooves that visual art should be driven towards money making venture and, there is a need to shift the objective of art generally from meeting only the aesthetic needs of the environment to further absorb human satisfaction in an environment” (Akintonde, 2019; Seyi-Gbangbayau and Ajayi, 2019). Furthermore, the curriculum of Art and Design should be tailored towards entrepreneurship purpose.

To better understand the term economic development, it is necessary to split the term into two (2): economic and development. According to Collins dictionary, (2000), economic manifests itself



to be of or relating to an economy, economics, or finance. Economics is said to be pertinent for different areas of society; as it has the ability to improve standards of living and make a community, society or nation a better place for inhabitants. Similarly, Economics is likened to science simply because it can be used to improve people's living standards and also to make things worse; as it lightly depends on the priorities of society and what is considered most important (Tejvan, 2017).

In contrast, Sid, (2018) defined development as a process that produces good tidings such as growth, progress, the increase of physical, socioeconomic, environmental, and geographical components. While the essence of development is said to spur a rise in the level and quality of people's standard of living, the improvement of revenue creation alongside employment opportunities, without having to endanger the environmental resources. Something about development is that it is sustainable, physically visible and/or felt realistically; though it manifests in a gradual process, yet everyone knows something good is manifesting. Therefore, to say economic development of anything is to mean how the said thing is important to improving the living standard of people or how it can make a society a better place for its inhabitants.

The term, empowerment, is said to be a set of measures designed to increase the degree of autonomy and self-determination in people and in communities in order to enable them to represent their interests in a responsible and self-determined way, acting on their own authority.

### 3.0 METHODOLOGY

The methodology used for this study includes authors' observations, field experiences as well as studio experiment.

#### 3.1 Population of Screen Printing Companies in Nigeria

Nigeria So far, according to Businesslist.com (2020), about 68 standard screen printing companies are found in Nigeria. This translates into the fact that the companies must have offered job employment for some Nigerians, hence, chopping off a certain percent from the huge rate of unemployment in the country. The said employed youths would have a stipend to survive on, pay taxes, utility bills and engage in VAT-inclined transactions; not exempting the taxes paid by the 68 companies to their various local/state/federal government agencies. This is indirectly, impacting Nigeria's economy and improving the living standard of those who are directly or indirectly connected to the 68 companies. It is estimated that about 86.9 million Nigerians live below the poverty line, this means that, those connected to the said 68 screen printing companies must have fallen among the over 100 million Nigerians, who do not live below the poverty line, hence, if we should have more screen printing firms opened for commercial activities, this will reduce the 89.1 million Nigerians that are destitute. This will also fulfill the primary aim of TVET.

#### 3.2 Materials needed for Screen Printing

There are several materials/tools required for the production of screen printing. As a result of those who are just venturing into the business afresh, the good news is that, once the materials are procured, in

subsequent cases, the materials to be purchased would assuredly not be as much as starting afresh. For example, there is no need of buying another mesh for subsequent jobs, except the new jobs required a larger size of mesh. Also, it will be needless to buy buckets, rags, foam, et.al. To start a small scale screen printing business, the following materials as noted by (Ibiwoye, et.al., 2020 and Onoja, 2014) are comprehensively accurate and to be considered:

*“The following materials are needed for successful screen printing process to take place.. A wooden printing frame, Organdie (a lightweight see-through cotton or silk fabric, often stiffened), Staple gun or drawing pins, A squeegee to force the ink through the mesh to the design surface, Print out of logos, floral designs and other motifs for the transfer to the organdie (This was done using transparency paper. It can also be improvised by printing out on paper and smearing kerosene or olive oil on the surface to achieve transparency), Photo emulsion, Printing inks of various colours, Large cellotapes, Turpentine and silk cleaning solvents, Cleaning rags, Knives and scissors.”*

In addition, there are significant roles that buckets, bowls, foam, moderately big tables, water, desktop/laptop computers, glass, printers, etc. would play in enabling a friendly environment for a seamless experience. However, if procuring computers may be threats to the small scale budget, it may be considered for future procurement, while the designs and printing of artworks would be commissioned to the commercial graphic designers at affordable charges.

### 3.3 Step-by-Step Procedures for Stretching a Piece of Silkscreen

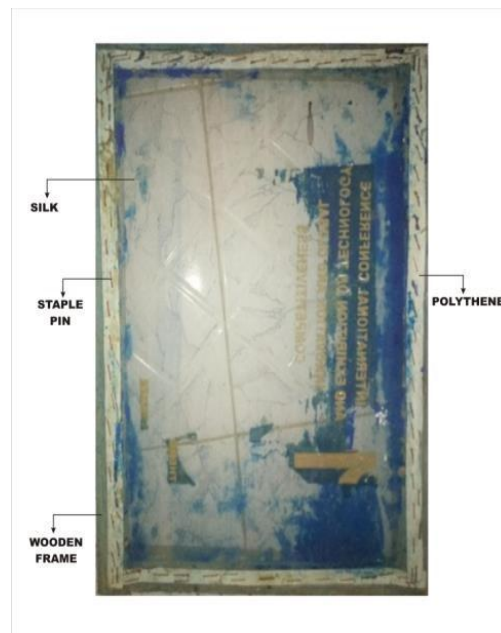


Plate 1: Image of a stretched silk (mesh)

Usually, readymade silk frames (mesh) of sizes ranging from 12x8 inches and above are sold at affordable prices ranging from ₦400 – ₦600 in today’s market value. However, if you wish to make the mesh by yourself, you will have to buy a yard of silk for about ₦500 and then visit a carpentry workshop to create wooden frame(s) also at affordable prices. The difference is that, a yard of silk can seamlessly produce more than 1 silkscreen and it will afford you to create a silk frame size of your choice; perhaps bigger than the 12x8 inches that would be sold at ₦500 or more.

However, if you wish to produce the organdie (silkscreen) by yourself, the following activities should be tailed:

## Procedures

- Step 1: Place the organdie (silk) on the wooden frame accurately at a well distributed proportion.
- Step 2: Cut the polythene into stripes of about 1inch to 2 inches. You would need about 4 pieces of the stripes.
- Step 3: Take one of the polythene stripe and fold it together to have doubled layers
- Step 4: Place the folded polythene on a side of the silk you had already placed on the wooden frame.
- Step 5: Use the stapler to staple (repeatedly) the folded polythene and the silk into the wooden frame; from the upper side of the wooden part to the lower side.
- Step 6: Repeat step 5 on the opposite side of the side you just stapled. Be intentional to drag the silk firmly, you may need the help of a person here. Position the folded stripe of polythene on the firmly dragged silk and repeatedly staple them from the upper side of the wooden part to the lower side
- Step 7: Repeat “Step 5” on the 3<sup>rd</sup> side of the wooden. Avoid the silk from rumpling.
- Step 8: Repeat “Step 6” on the 4<sup>th</sup> side of the wooden frame and avoid the silk from rumpling.
- Step 9: Trim off the excess of the silkscreen

*Note: Repeatedly means having at least 20 staple pins fused into each side of the wooden frame; in a very close sequence. (Check Plate 1)*

### 3.4 Materials for making Organdie/Mesh (Silkscreen)

You need a wooden frame, either rectangular, square or any shape you can seamlessly cope with. You also need a piece of silk (organdie) that should advisably be bigger than the wooden frame at all sides. Then

be reminded a well loaded stapler or gun stapler will be needed alongside a piece of polythene. The role of the polythene is to overlay it on the silk before stapling the silk into the wooden frame.

### 3.5 Processes Involved in Exposing an Artwork

There are several techniques that could be adopted for exposing an artwork. From the level of designing the artworks by oneself or outsourcing it out to commercial graphic designers at an affordable price, all to the level of having the printed artwork which must be made to be sharp very well and completely black like what is shown below:



Plate 2: Example of how an art work for screen printing should be.

However, it is pertinent to note that in carrying out the application of ink seamlessly, a squeegee is moved vertically or horizontally with a slight hand pressure on the screen in order for the fabric or other objects to be branded with the contents of the artwork exposed on the silkscreen. Similarly, except in a case where the artisan is already an expert to control a single mesh for multiple colours, it is advisable that a single colour be printed with a single silkscreen, while 2 or more silkscreens would be needed for works that entail multiple colours.

## 4.0 REFLECTION ON OUTCOME FROM OBSERVATIONS

### 4.1 Economic Relevance/Market Prospects of Serigraphy

The practice of screen printing which had been in existence for ages, has become a force in the printing industry.

From time to time, the demand for the services rises depending on the society as well as season. For example, the demand for screen printing inclined services by schools ranging from primary to tertiary level is usually inevitable during the end of session in schools as well as festive periods from October to December yearly. Services ranging from customized school uniforms, sportswear, promotional cum ceremonial items and souvenirs for companies, groups, schools, churches, individuals, et.al would always make screen printing exist against all odds. For those who have invested in it, they are already milking the treasures accrued to it. Screen printing has been improving the living standard of individuals, groups and companies whose business services are within the scope of screen printing.

## 5.0 CONCLUSION AND RECOMMENDATIONS

It is pertinent to show the up and coming youths the way to grow by hatching them from their early primary stage in order for them to be familiarized with crafts and similar skills which are abundant in art. This will validate a situation whereby when they grow up with the crafting habits, they would have been used to entrepreneurship in form of crafting, beyond a level they could afford to depart from.

Hence, this vocation should be integrated into entrepreneurship education in order for its awareness to be registered among the youths as a way of enabling the possibility of having more screen printing companies across the country.

In order to erase the present status quo of Nigeria being the “poverty capital of the world”, besides from the corruption cum other sociopolitical and socioeconomic deficiencies that must be put into critical check, the necessity of youths empowerment and entrepreneurship cannot be overemphasized. Hence, this study has not only been able to successfully present serigraphy as a vocation that can help empower as many Nigerians as possible and jerk them from living below \$1 in a day, the study has also revealed the necessity of investing more on vocational programmes and policies for the aim and objectives of TVET to be actualized. This study presented a step-by-step analysis of how to produce a screen printing major tool which is the silkscreen (organdie); as well as introduced readers to how to successfully expose an artwork. It also gave hint about the market prospects of serigraphy business; hence making it relevant for those who may pick interest in embarking on a low cost business and pursuing entrepreneurial career; all in a bid to developmentally boost and revamp the deploring economy of the 7<sup>th</sup> country with the largest population in the world -Nigeria.

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