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Effects of Grinding Machine Operation on Unemployment Reduction Among Youths in Rivers State

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Abstract

The purpose of this study was to determine the entrepreneurial skills required by young entrepreneurs for effective operation and effects of grinding machine operation on reduction of unemployment rate in Rivers State. Descriptive survey research design was adopted for the study. Two research questions to guide the study; while one null hypothesis was formulated and tested at 0.05 level of significance and 100 degrees of freedom. The entire population of 102 respondents consisting of 91 grinding machine operators and 11 technicians were used for the study. The instrument for data collection was a structured questionnaire which contained 18 items. The questionnaire items were face validated by experts. The internal consistency of the questionnaire was determined using Cronbach Alpha method and coefficient of 0.82 was obtained. Data obtained from the administration of the instrument was analyzed using mean, standard deviation to answer the research question and z-test was used to test the null hypotheses. The findings of the study revealed that all the 18 items for grinding machine operation, requires entrepreneurial skills in operating machine safely and also helped in the reduction of unemployment rate in Rivers State. The findings on hypotheses revealed that there was no significant difference in the mean ratings of the two groups of respondents on the skills required by operators and technicians. It was therefore stated that, the findings of this study recommended that Government should make provision for means of empowering young school leavers, youth, women and young entrepreneur, Government should collaborate with NGOs for adequate and more effective entrepreneurial skill training and development, this will make the empowerment scheme more effective, Nigeria local Content policy should be fully implemented to encourage individuals' operations.

Keywords: Empowerment, Grinding Machine, Young Entrepreneur, Machine Operation

INTRODUCTION

Growing youth's unemployment threatens both economic and political stability in the country. Young graduates from Nigerian Universities, Polytechnics, Colleges of Education, technical colleges and secondary schools every year with little or no hope of securing jobs have made

the government to be worried as it contributes to the increasing rate of unemployment, poverty and bad economic condition in the country (Garba, as cited in Okoli, 2013). Okoli stated that the capacity of the Nigerian economy to absorb the products of an over expanding educational institutions is severely limited. Hence, the need for entrepreneurship development of young Nigerians who leave these educational institutions as a way of equipping them with the necessary skills that will enable them start up their own businesses, become entrepreneurs and be able to employ others (Federal Republic of Nigeria, 2013).

The term entrepreneur is usually applied to small business owners, who bear the majority of the risk and reap the most benefit from the business (Maclean, Harvey and Gordon (2013). The author continued that an entrepreneur is an actor who innovates by recognizing opportunities; makes moderate risky decisions that lead into actions requiring the efficient use of resources. However, for an entrepreneur to venture into an enterprise and flourish, he/she must acquire relevant entrepreneurship development skills and competencies through empowerment (Barakabo and Suwari, 2016). Empowering young Nigerians will help the prospective entrepreneurs among them to start and grow their businesses that would add value to their life in this present economic situation and in the future. When the entrepreneur falls below the age of 40, is referred to as a young entrepreneur (Maclean, Harvey and Gordon (2013).

Riahi (2013), stated that the young entrepreneurs are those individuals that are less than 30 years of age. The potential contribution of young entrepreneurs is towards the reduction of unemployment, the promotion of economic growth and innovation. The author continued that lack of capital, underdeveloped skills in business management, limited market contacts and outdated attitudes on the part of support or finance providers, might impede the development of young entrepreneurs. For young entrepreneurs to surmount or overcome these challenges, they need to be empowered. Empowering young people means creating and supporting the enabling conditions under which they can act on their own, rather than at the direction of others (Common Wealth of Nations, 2012).

Empowerment of young entrepreneurs is an attitudinal, structural and cultural process whereby young people gain the ability, authority and agency to make decisions and are aware of the implications of these decisions, taken action based on that decision and implement change in their own lives and the lives of other people, including youths and adults (Common Wealth of Nations, 2012). Okoli and Okoli (2013), stated that the Federal Government of Nigeria in 1986 introduced the Small-Scale Industry and Graduate Employment Scheme under the National Directorate of Employment (NDE) as a measure to empower young entrepreneurs in Nigeria. He further stated that skills acquisition workshops and seminars were organized for

unemployed youths who were practically re-trained on the technicalities of starting and running small-scale businesses such as production of soap, detergents and cosmetic, poultry, fish farming, website design and network marketing, mobile phone repairs, grinding machine business among others.

Grinding machine business is among the kind of job people will refer to as 'menial job' since it appears to be very unattractive business to be involved in (Johnson, 2017). Grinding machine business has changed from what it used to be, to becoming a very lucrative business, especially now that people are in a hurry to get things done. According to Johnson, the business may not make you a millionaire but it can lead you to becoming a millionaire. The grinding machine business that is of interest to the researcher include grinding of tomatoes, pepper, beans, corn, guinea corn, soya beans, millets, cassava, yam, plantain, melon among others. This business will continue to strive because Nigeria's population is increasing every day. As businesses are unfolding, new innovations and technologies are on to cater for the agricultural products that need to be processed into finished products for easy consumption and packaging and also for preservation of foodstuff which has been a challenge to the farmers, however, these foodstuffs have to be broken to pieces or grinded to powder with a grinding machine.

Grinding machines are devices that break solid materials into smaller pieces by grinding, crushing, or cutting. There are many different types of grinding machines and many types of materials processed with them. Grinding machine and size reduction equipment are commonly known as milling equipment, grinding equipment, pulverizing equipment, crushing equipment, de-lumping equipment or powdering equipment with different models to meet customers' various fineness and capacity requirement. These machines are used to make lumpy materials, flakes, cakes, granules, irregular shape material into coarse, medium fine and ultra-fine powder. Historically grinding machines were powered by hand (e.g., via a hand crank). Today, they are usually powered by electricity. There are two types of grinding machine, the manual and the electrically operated grinding machines. The manual uses diesel or fuel while the other grinding machine uses electricity (Johnson, 2017). Grinding machine operations helped many Nigerians to be on their own, and creates employment for others.

Safety Measures

In other to operate grinding machine safely and effectively the following safety measures should be adhered to;

i. Do not operate grinding machine when you are ill, taking strong medications, fatigued or consuming alcoholic drinks.

ii. Do not wear loose-fitting clothes or jewelry that can get caught in moving parts. Do not roll up long sleeves.
iii. Remove all jewelry, including rings, necklaces, bracelets and watches that could get caught in rotating machine.
iv. Safety Glasses must be worn at all times to protect flying particles.
v. Pull back long hair in a band and tuck it under your shirt collar or a cap to keep it from been exposed.
vi. Avoid distractions. Keep your mind on your work. Talking or listening to the radio while running machinery can lead to accidents.
vii. Keep the work area clean, and the floor free of dirt and oil.
viii. Cell phones, mp3 players and other personal electronic devices must not be used during machine operations.
ix. Never force an object into moving parts to stop a machine.
x. Keep grinding tools/ materials clean and in good repair.
xi. Always turn off and unplug electric power grinding machine before; adjusting, oiling, cleaning or repairing it.
xii. Unplug grinding machine by pulling directly on the plug. Before making adjustments or changing bits or cutters.
xiii. Disconnect the power cord to avoid accidentally touching the switch and possible injury when the grinder starts.
xiv. Keep guards in place. Safety guards cannot protect you if they are not in place and in proper working order.
xv. Do not leave a machine running unattended.
xvi. Make sure all moving parts have come to a complete stop before you leave the work area or before you make minor adjustments.
xvii. Before using any tool, read the operator's manual.
xviii. Remember where the switch is located so you can turn off the grinder quickly.
xix. Used rags, especially oily and greasy ones, should be kept in a covered container.

Many young Nigerians are involved in grinding business because it can be done passively, it is easy to operate. Despite the effect of grinding machines operations to the economy of the nation, many young Nigerians are yet to seize the available opportunity been provided to become self- employed as well as employing others. This underscores the background for which this study is undertaken to determine the extent grinding machine operations is used for the empowerment of young entrepreneurs in Rivers State.

Statement of the Problem

One of the responsibilities of the Government is to empower the younger generations by creating and supporting the enabling conditions under which they can act on their own, and not at the direction of others. Empowering the young people by the government and other stakeholders can help youth especially the young entrepreneurs to reduce some risks and to have better condition to start a business. One possibility on how to face the economic challenges is to support talented students, individuals and young entrepreneurs to prepare themselves for the future. Okoli and Okoli (2013), stated that skills acquisition workshops and seminars were organized by the government for unemployed youths who are practically re-trained on the technicalities of starting and running small-scale business.

However, they added that government has not done enough in the area of empowering and encouraging young Nigerians to start up grinding machine business, knowing the importance of grinding machine operations in the grinding of grains, cereals etc. Nigerians nowadays are embracing food made of coarse grains and watery paste vegetables that are common in most areas in Rivers State. Some of these foods according to Riahi (2010), include corn flour, yam flour, cassava flour, plantain flour among others. Food processing is an integral part of agriculture, as most farm produce must undergo one form of conversion or the other for either storage or breaking down into smaller, workable units as a food source or raw material. For farmers of large farms, they harvest large amounts of corn, plantain, yam and cassava tubers each year, and many of them have no grinding machines for home and farm use. Particle size reduction and milling is a necessity for agro- materials to make them smaller before further processing or utilization.

In the process of changing agricultural materials from one form to the other with the use of fabricated processing machine, people who want to make money from grinding machine business can make use of this opportunity to become entrepreneurs. This is because both milling and secondary processing are major sources of income for thousands of people in Rivers State. However, despite the aforementioned benefits of grinding machine operations to Nation's economy; many young Nigerians are yet to identify and seize the available opportunities made by grinding machine to become entrepreneurs and be able to employ others. This is the reason most youths view the grinding machine business as a kind of job people will refer to as menial job because it appears to be unattractive business. Therefore, it has become necessary to determine the entrepreneurial skills required by young entrepreneurs and the extent grinding machine operation affects the reduction of unemployment rate among the youths in Rivers State.

Purpose of the Study

The main purpose of the study was to investigate grinding machine operations as used for the empowerment of young entrepreneurs in Rivers State. Specifically, the study sought to:

1. Determine the entrepreneurial skills improvement required by young entrepreneurs in Rivers State.
2. Determine the extent grinding machine operation affects the reduction of unemployment rate in Rivers State.

Research Questions

The following research questions guided the study.

1. What are the entrepreneurial skills required by young entrepreneurs in Rivers State?
2. What are the effects of grinding machine operations on reduction of unemployment rate in Rivers State?

Hypothesis

The following hypothesis were formulated and tested at 0.05 level of significance.

H_{01}: There is no significant difference in the mean ratings of the responses of grinding machine operators and grinding machine technicians on the entrepreneurial skills required by young entrepreneurs in Rivers State.

METHODOLOGY

Descriptive survey design was used for the study. The study was carried out in Rivers State. The population of the study was 102, comprising 91 grinding machine operators in Rivers State and 11 grinding machine technicians in the area of study. The entire population was used for the study, since it is not too large to manage. Nworgu (2015) defined population as a group of people inhabiting a specified geographical location. No sampling was done because the number was small and manageable. Structured questionnaire was used for data collection in this study. This questionnaire items were developed from the related research questions that sought information on the entrepreneurial skills improvement required by young entrepreneurs, and effects of grinding machine operation on reduction of unemployment rate in Rivers State. The instruments used for data collected were stated below: The "needed" and performance column of five-point responses options as follows: Strongly Agee (SA – 5), Agree (A - 4), Undecided (U - 3), Strongly Disagree (SD - 2) and Disagree (D - 1) respectively. This aspect of the questionnaires was designed to collect data from the grinding machine operators and technicians only, to determine their level of performance and competency. The instrument was validated by experts in vocational and technical education department, and measurement evaluation. Data were analyzed by using, mean and standard deviation. The croubach Alpha

coefficient method was used to determine the internal consistency of the instrument. The data were used to calculate Alpha coefficient. Croubach Alpha coefficient value of 0.86 was obtained for the instrument.

RESULTS

The results from the study were presented as follows.

Research Question 1: What are the entrepreneurial skills required by young entrepreneurs in Rivers State?

Table 1: Mean Responses on Entrepreneurial Skills Required by Young Entrepreneurs.

S/N	Item Statement	Operators			Technicians		
		$\overline{X}$	SD	RMK	$\overline{X}$	SD	RMK
1	Financial management skill.	3.86	0.35	Agree	3.75	0.43	Agree
2	To know how to operate grinding machine.	3.88	0.31	Agree	3.86	0.91	Agree
3	Ability to communicate effectively.	4.04	0.67	Agree	4.02	0.73	Agree
4	Problem-solving skill.	3.46	0.80	Agree	3.90	0.99	Agree
5	Ability to lead and control people.	3.96	1.12	Agree	3.84	0.71	Agree
6	Fast thinking and decision-making.	4.14	1.05	Agree	4.87	1.37	Agree
7	Marketing skills.	3.73	0.46	Agree	4.15	0.34	Agree
8	Acquiring food production skills	3.84	0.73	Agree	4.05	0.81	Agree
9	Developing mechanical skills of machines and tools.	3.85	0.57	Agree	3.91	0.92	Agree
10	Servicing and maintenance skills needed.	4.01	1.12	Agree	4.02	0.65	Agree
11	Troubleshooting skills.	3.16	0.50	Agree	3.95	0.82	Agree
	Average Mean/SD	**3.81**	**0.70**	**Agree**	**4.03**	**0.79**	**Agree**

Source: *Researcher's Field Result; 2021* A - - Agree, D - - Disagree

Result in Table 1 above revealed that 11 items have their mean values ranged from 3.81 to 4.03. This showed that the mean value of each item was above the cut- off point of 3.00, indicating that entrepreneurial skills required by young entrepreneurs in Rivers State is necessary. The Table also showed that the standard deviation (SD) of the items is within the range of 0.70 to 0.79 and are positive. This indicated that the respondents were not far from one another in their responses.

Research Question 2: What are the effects of grinding machine operations on reduction of unemployment rate in Rivers State?

Table 2: Mean Responses on Effects of Grinding Machine Operations on Unemployment Reduction.

S/N	Item Statement	Operators			Technicians		
		$\bar{X}$	SD	RMK	$\bar{X}$	SD	RMK
12	It provides investment opportunity for young entrepreneurs	3.88	0.61	Agree	3.53	0.50	Agree
13	It helps to create wealth	3.08	0.71	Agree	3.96	1.20	Agree
14	It encourages young entrepreneurs in job creation.	4.10	0.69	Agree	3.90	0.97	Agree
15	It Provides opportunity to cater for psychological needs.	3.80	1.07	Agree	4.01	0.82	Agree
16	Create job to young school leavers.	3.92	1.17	Agree	3.95	1.22	Agree
17	Changes standard of living as they become self-employed.	4.02	0.91	Agree	4.91	0.82	Agree
18	It stops get rich-quick syndrome	3.80	1.07	Agree	3.91	0.71	Agree
	Average Mean/SD	**3.80**	**0.88**	Agree	**4.02**	**0.82**	Agree

Source: *Researcher's Field Result; 2021* A - - Agree; D - - Disagree

Result in Table 2 above revealed that all the 7 items have their mean values ranged from 3.80 to 4.02. This showed that the mean value of each item was above the cut- off point of 3.00, indicating that, the effect of grinding machine operations played vital roles on the reduction of unemployment rate in Rivers State. The Table also showed that the standard deviation (SD) of the items is within the range of 0.82 to 0.88 and are positive. This indicated that the respondents were not far from one another in their responses.

Statistical Test of Hypotheses

The following null hypotheses were formulated and tested for this study at 0.05 significant level.

Hypothesis 1

There is no significant difference in the mean ratings of the responses of grinding machine operators and grinding machine technicians on the entrepreneurial skills required by young entrepreneurs in Rivers State.

Table 3: z-Test Analysis on Entrepreneurial Skills Required by Entrepreneurs in Rivers State

S/N	$\bar{X}$	SD	N	df	α	zcal	zcrit	Remark
Operators	3.81	0.70	198					
				327	0.05	-3.92	1.96	Accepted
Technicians	4.03	0.79	131					

Source: *Researcher's Field Result; 2021* *Accept* Ho if zcal ≤ zcrit, Otherwise Reject Ho.

Since the z_{cal} (-3.92) is ≥ z_{crit} (1.96) at 0.05 level of significance, the null hypothesis was accepted. Therefore, from the table above, it implies that, there was no significant difference in the mean response of grinding machine operators and grinding machine technicians on

entrepreneurial skills required by young entrepreneurs for effective operations in Rivers State. Therefore, the null hypothesis of no significance difference in the mean responses of the entrepreneurial skills required by young entrepreneurs in Rivers State was upheld.

Discussion of Findings

The findings of this study revealed that the respondents agreed that all the 11 entrepreneurial skills identified in the operation of grinding machine by both operators and technicians are earnestly required to enhance productivity and promote safety. Whenever, operators are knowledgeable enough about tools selection, setting up of machine, marketing and troubleshooting skills operation runs smoothly and there will be reduction in down time. The findings of this study revealed that the respondents agreed that all the 7 items identified were the areas grinding machine operation helped in the reduction of unemployment rate among youths in Rivers State. It provides opportunities for business investment, changes standard of living, helps in job creation, it stops get rich-quick syndrome and also makes people to be self-reliance. One of the responsibilities of the Government is to empower the younger generations by creating and supporting the enabling conditions under which they can act on their behalf, and not at the direction of others (Okoli & Okoli (2013). It indicates that, empowering the young once with grinding machine helps deeply on the reduction of unemployment rate in Rivers State.

Conclusion

It was found out from the study that all the items identified in the entrepreneurial skills required by young entrepreneurs in Rivers State by the operators and technicians, were needed in the operation of grinding machine. The study also found out that technicians and operators of grinding machine need improvement on the operation for effective production. This, in effect, will help them to improve on the quality and safety of grinding operation skills. The study also revealed that improvement of entrepreneurial skills is highly required for effective running of grinding machine business, are needed to effect changes to the community and make life more meaningful by becoming self-reliant and employer of labour.

Recommendations

Based on the findings of this study, the following recommendations were made:

1. Government should make provision for means of empowering young school leavers, youth, women and young entrepreneurs.
2. Government should collaborate with NGOs for adequate and more effective entrepreneurial skill training and development, this will make the empowerment scheme more effective.
3. Nigeria local Content policy should be fully implemented to encourage individual operation.

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