

Senior Secondary School Graduates Entrepreneurial Skill Training Requirement for Improved Pig Production in Abua /Odual Local Government Area, Rivers State, Nigeria

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Abstract

The study examined Senior Secondary School Graduates Entrepreneurial Skill Training Requirement for improved Pig Production in Abua /Odual Local Government Area, Rivers State, Nigeria. Descriptive survey research design was adopted. A sample size of 64 subjects was used for the study. This comprised of 20 pig farmers and 16 Agricultural Science secondary school teachers in Abua/Odual Local Government Area and 28 agricultural extension agents in Rivers State. The Entrepreneurial Skill Training Inventory (ESTI) and Improved Pig Production Scale (IPPS) instruments were used. The instruments were validated by 2 experts each in the department of vocational and technical education, Ignatius Ajuru University of Education and Rivers State Agricultural Development Programme (ADP). The reliability of the instruments was established using the Cronbach Alpha method to obtain indices of 0.754 and 0.775 for the ESTI and IPPS instruments respectively. Data obtained from the 64 copies of the ESTI and IPPS instruments was analyzed using multiple linear regression analysis. The result revealed that: Entrepreneurial skills (via: technical and managerial) contributed to SSS graduates training on improved husbandry, post-husbandry and marketing stages of pig production in Abua/Odual Local Government Area of Rivers State. The study recommended amongst others that: Would-be student pig farmers constantly develop and apply innovations that will improve the post-husbandry stage which increases the physical, social and economic environment of pig production, alongside encouraging government to develop the markets for pig products, which will improve income generation, food security and employment provision.

Keywords: Senior Secondary School Graduate, Entrepreneurial Skill Training, Improved Pig Production, Abua/Odual Local Government Area, Rivers State, Nigeria.

Introduction

One of the most pressing challenges facing the Nigerian economy is the issues of unemployment among graduates. According to Idoko (2010), it is estimated that about 4.5 million youths, mostly educated ones are entering the labour market annually. Obi (2010) revealed that mass unemployment which has been evident in the last two decades has reached alarming proportion involving all categories of citizens. It therefore, becomes imperative that the youths be equipped with entrepreneurial skill training to elevate them from the present condition of indigence and joblessness. Graduates should acquire entrepreneurial skill training in pig production in order to create wealth, reduce unemployment and bridge the gap in animal protein demand and supply in Nigeria.

Entrepreneurship education according to the National University Commission (NUC) is based on a model developed as entrepreneurially processes with the following opportunities, discovering opportunities and finally execution. Gani (2011) saw entrepreneurship in terms of seeking out investment opportunities. In the words of Ekong and Williams (2006) entrepreneurship education is the acquisition of practical knowledge and skills which are impacted simultaneously for self-sustenance, self-employment and self-reliance. This means that entrepreneurship education is the act of acquiring practical knowledge and skills for self-employment. Skill referred to ability to use ones knowledge effectively in doing something. Ogbuanya and Shetima (2013) defined skill as the capability to accomplish a job with precision of certainty, with practical knowledge in combination with the ability, cleverness and expertness.

Entrepreneurship is associated with several activities, which deal with the establishment and operation of a business enterprise. These activities include the identification of investment opportunities, selection of particular opportunities for exploitation, promotion and establishment of the business enterprise, organization and management of human and material resources for the attainment of the objectives of the enterprise, risk bearing and innovation. Furthermore, training farmers on the acquisition of entrepreneurial (technical and managerial) skills implies: improving farmers ability to identify and select investment opportunities, providing investment capital, coordinating the production process, innovating new modus operandi, working out incentives to increase production and bearing risk, which are the function of attitudes, motivations and aspirations. The ability to identify and select investment opportunities requires technical knowledge, while the ability to provide investment capital and bear risk depends on managerial skills, ultimately helps the pig farmer to meet the requirements of commercial agriculture and increased production (Onyebinama & Onyebinama, 2010).



According to Hemsworth (2003), pig farming is the raising and breeding of domestic pigs. It is a branch of animal husbandry amenable to many different styles of farming via intensive commercial units, commercial free range enterprises, extensive farming (where pigs are allowed to wander around a village, town or city, or kept in a pen outside the owners house). Pigs are raised principally as food (e.g. pork, bacon, gammon) and sometimes for their skin. The activities on a pig farm depend on the husbandry style of the farmer, and range from very little intervention (as when pigs are allowed to roam villages or towns and dispose of garbage) to intensive systems where the pigs are contained in a building for the majority of their lives. Each pig farm will tend to adapt to the local conditions and food supplies that enable them to fit their practices to their specific situation (Hemsworth, 2003).

Pig production is an efficient and interesting innovation which involves the management of financial, technical and natural resources for a profitable production of pigs to enhance income generation, food security, employment provision and wealth creation. Consequently, the acquisition of these requisite skills by secondary school graduates according to FAO (2001a) equips them with certain techniques, entrepreneurial skill and training in pig production for self-employment. Pig production can be improved through the various strategies.

- (a) Pre-husbandry level (selection of piglets, breeding technique, pen construction and stocking).
- (b) Husbandry level (proper feeding, health care services, stress and temperature control)
- (c) Post husbandry (matured pig for slaughter, pig husbandry process, processing pork and bacon products, preservation and handling of pork and bacon products
- (d) Marketing level-identifying marketing channels, identification of major consumers of pigs in the locality, distribution of pork and bacon products.

Furthermore, Hemsworth (2003) outlined certain factors which can influence the type of pig farms in any given region via: available food supply suitable for pigs, ability to deal with manure or other outputs from the pig operation, local beliefs or traditions, including religion, the breed or type of pig available to the farm, local diseases or conditions that affect pig growth or fecundity, local requirements, including government zoning and/or land use laws, local and global market conditions and demand and traditional farming styles and methods

Senior secondary school (SSS) graduates are school leavers who had completed a minimum of three years in the senior secondary programme. Such individuals, while in school were exposed to the Agricultural Science Curriculum with specific instructions on animal husbandry but have not been employed by any employer of labour or admitted into any institution of higher learning for further studies. Majority of these people are found roaming the streets and often get involved in anti-social behaviours such as gambling, stealing and prostitution to earn a living. Secondary school graduate unemployment is on the increase in Abua/Odual Local Government Area. Thousands of unskilled graduates are produced every year from the state school system. Employers of labour are handicapped in providing employment to the secondary school graduates because they lack entrepreneurial skill training.

Although the government of Rivers State had also established skill acquisition centres in all the Local Government Areas to help in retaining the secondary school graduates. These skill acquisition centres were expected to provide entrepreneurial skills in different occupational areas. However, experience has shown that the training programmes of skill acquisition centres on pig production have not been properly carried out.

Pig farming in most places in Nigeria Abua/Odual Local Government Area of Rivers State is mainly at subsistence level which hardly ensures sustainable meat supply to meet the daily requirement of the ever increasing population of the Abua/Odual Local Government Area people. Most pig farmers in Abua/Odual Local Government Area in Rivers State are not familiar with the relevant entrepreneurial skill training to effectively engage themselves in the various aspects of pig production (FAO, 2001). The effect of low and inadequate training of the pig farmers has contributed to low level of meat production (Bassey, 2006). This situation is getting worse as pig farmers who constitute about 60% of livestock farming population are being frustrated and are opting out of farming (Okon, 2008).

Statement of the problem

Entrepreneurship skill impacts significantly to improved pig production or the development of animal husbandry and agriculture in Nigeria. However, there seems to be limited entrepreneurial (technical and managerial) skill or capacity by most farmers in Nigeria due to old age, illiteracy, lack of skill in agricultural production, gender related constraints, dearth of current extension education practices in Nigeria, discriminatory information dissemination and introduction of new and improved farm technologies to farmers without any provisions for concurrently improving the ability of these farmers who ought to cope with the changes in production, organization and introduction of new technologies.

Although, the essence of entrepreneurship is innovation i.e., goal oriented change to utilize the technical and managerial potentials of any venture but a pig farmer who fatalistically exhibits a desire to avoid risk and an unwillingness harness the environment and to employ innovations that will revolutionize or improve pig production. Will be prone to conditions that limit the level of motivation, aspirations and inspiration of the pig



farmer who intends to move from subsistence to commercial vis-a-vis increased productivity, revenue and employability.

This ugly situation necessitated the government to redirect attention to the Senior Secondary School graduates and other unemployed youth who could take up jobs in pig production. It became necessary to undertake a study on senior secondary graduates' entrepreneurial skill for improved pig production in Abua/Odual Local Government Area, Rivers State, Nigeria.

Specifically, the purposes of the study were to:

- 1. Determine the contribution of entrepreneurial skills on Senior Secondary School (SSS) graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.
- 2. Determine the contribution of entrepreneurial skills to the training of Senior Secondary School(SSS) graduates on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.
- 3. Determine the contribution of entrepreneurial skills to the training of Senior Secondary School(SSS) graduates on improved post husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.
- 4. Determine the contribution of entrepreneurial skills to the training of Senior Secondary School (SSS) graduates on improved marketing of pig production in Abua/Odual Local Government Area of Rivers State
- 5. Determine the joint contributions of the variables of entrepreneurial skills on Senior Secondary School (SSS) graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State.

Research Questions

The following research questions were raised to guide the study

- 1. What is the contribution of entrepreneurial skills to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State?
- 2. What is the contribution of entrepreneurial skills to the training of SSS graduates on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State?
- 3. What is the contribution of entrepreneurial skills to SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State?
- 4. What is the contribution of entrepreneurial skills to the training of SSS graduates on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State?
- 5. What is the joint contribution of the variables of entrepreneurship skills on SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State?

Scope of the study

The study was centred on Senior Secondary School Graduates Entrepreneurial Skill training requirement for improved pig production in Abua /Odual Local Government Area, Rivers State, Nigeria. The study would also be centred in the 5 communities of Emoh, Odaga, Otari, Omelema and Ogbema in Abua/Odual Local Government Area where pig farming is concentrated. Furthermore, entrepreneurial skill (via technical and managerial) is the independent variable while pig production (via pre-husbandry, husbandry, post-husbandry and marketing) is the dependent variable.

Methodology

The study adopted the descriptive survey research design. The design was employed to gather information from a sample of relevant subjects with similarity in characteristics. The population of the study was all the adult pig farmers in the 44 communities in Abua/Odual Local Government Area, all the 16 Agricultural Science teachers in all the senior secondary schools in Abua/Odual Local Government Area (RSSSSB, Planning, Research & Statistics Department, 2016) and all the 28 agricultural extension agents in Rivers State (RSADP, 2016). Purposive sampling was used in the selection of 5 communities of Emoh, Odaga, Otari, Omelema and Ogbema in Abua/Odual Local Government Area where pig farming is concentrated in the study area. Furthermore, purposive sampling was also used in the selection of 20 pig farmers (4 each from the 5 selected communities), 16 Agricultural Science teachers in Abua/Odual Local Government Area of Rivers State and 28 agricultural extension agents in Rivers State. This constituted of a sample of 20 pig farmers, 16 Agricultural Science teachers and 28 agricultural extension agents, totaling to 64 respondents that was used for the study.

The instruments for data collection were "Entrepreneurial Skill Training Inventory" (ESTI) and "Improved Pig Production Scale" (IPPS). The ESTI and IPPS was a 15 item and 20 item self-structured instruments respectively patterned after a four (4) point modified Likert rating scale of Strongly Agree" (SA, 4



Points), "Agree" (A, 3 Points), "Disagree" (D, 2 Points) and Strongly Disagree (SD, 1 Point). The instruments were divided into two sections. Section A dealt with the personal data of the respondents while Section B sought information on the entrepreneurial skill training and improved pig production in Abua/Odual Local Government Area of Rivers State. The instrument was face and content validated by 4 experts viz: 2 from the department of vocational and technical education, Ignatius Ajuru University of Education and 2 from Agricultural Development Programme (ADP, Rivers State).

Furthermore, Crobanch Alpha method was used to determine the internal consistency of the ESTI and IPPS instruments. Therefore, 30 respondents (via 10 each of Agricultural Science teachers, Pig Farmers and Extension Agents) was purposively selected in Etche Local Government Area of Rivers State (which was not used for the study) where pig production is also concentrated. Then, 30 copies of the ESTI and IPPS instruments was distributed and upon completion was retrieved, score, coded and analyzed using the Cronbach Alpha (ra) method to obtain the reliability coefficients of 0.754 and 0.775 for the ESTI and IPPS instruments respectively. This necessitated the use of the instruments for the study. The researcher and 2 research assistants administered the ESTI and IPPS instruments on the respondents at their various locations. All the 64 administered copies of the ESTI and IPPS instruments were retrieved (representing 100% return rate). Collected data was scored, coded and subsequently analyzed using multiple regression analysis to answer the research questions at 0.05 level of significance.

Results

Table 1: Summary of Multiple Linear Regression Analysis on the contribution of entrepreneurial skills to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State

Source	Sum of Squares (SS)	Df	Mean Square	F. Ratio	P-value	Remark
Regression	1.672	1	1.672	.200	.657 ^b	NS
Residual	519.312	62	8.376			
Total	520.984	63				

Multiple R $(r_p) = .057^a$ R. Square $(r^2) = .003$

Adjusted $R^2 = -.013$

Standard Error of Estimate = 2.89413

Table 1 shows that the use of Entrepreneurial skills to predict to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State yielded a coefficient of multiple regression R (rp) of 0.057 and multiple regression square (R^2) of 0.003. This also shows that F is 0.200 which is not significant at P > 0.05 because the value of P is greater than 0.05. Therefore variables of Entrepreneurial skills did not statistically and significantly contribute to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.

This shows that Entrepreneurial skills accounted for 0.3 percent of the variance in SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. In other words, 0.3% of the variance in the change in SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State can be explained by pulling the different variables of Entrepreneurial skills together. This means that 99.7% of the variation in SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State cannot be explained by Entrepreneurial skills variables alone. Thus, there must be other variables that must have influenced SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State also.

Table 2: Summary of Multiple Linear Regression Analysis on the contribution of entrepreneurial skills to the training of SSS graduates on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State

Source	Sum of Squares (SS)	Df	Mean Square	F. Ratio	P-value	Remark
Regression	141.126	1	141.126	23.034	.000 ^b	S
Residual	379.859	62	6.127			
Total	520.984	63				

Multiple R $(r_p) = .520^a$ R. Square $(r^2) = .271$

Adjusted $R^2 = .259$

Standard Error of Estimate =2.47523

Table 2 shows that the use of Entrepreneurial skills to predict to SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State yielded a coefficient



of multiple regression R (rp) of 0.520 and multiple regression square (R^2) of 0.271. This also shows that F is 23.034 which is significant at P < 0.05 because the value of P is less than 0.05. Therefore variables of Entrepreneurial skills statistically and significantly contributed to SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.

This shows that Entrepreneurial skills accounted for 27.1 percent of the variance in SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. In other words, 27.1% of the variance in the change in SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State can be explained by pulling the different variables of Entrepreneurial skills together. This means that 82.9% of the variation in SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State cannot be explained by Entrepreneurial skills variables alone. Thus, there must be other variables that must have influenced SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State also.

Table 3: Summary of Multiple Linear Regression Analysis on the relative contribution of entrepreneurial skills to SSS graduates training in improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State

Source	Sum of Squares (SS)	Df	Mean Square	F. Ratio	P-value	Remark	
Regression	79.791	1	79.791	11.213	.001 ^b	S	
Residual	441.194	62	7.116				
Total	520.984	63					

Multiple R $(r_p) = .391^a$

R. Square $(r^2) = .153$

Adjusted $R^2 = .139$

Standard Error of Estimate = 2.66759

Table 3 shows that the use of Entrepreneurial skills to predict to SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State yielded a coefficient of multiple regression R (rp) of 0.391 and multiple regression square (R^2) of 0.153. This also shows that F is 11.213 which is not significant at P < 0.05 because the value of P is less than 0.05. Therefore, variables of Entrepreneurial skills statistically and significantly contributed to SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.

This shows that Entrepreneurial skills accounted for 15.3 percent of the variance in SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. In other words, 15.3% of the variance in the change in SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State can be explained by pulling the different variables of Entrepreneurial skills together. This means that 84.7% of the variation in SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State cannot be explained by Entrepreneurial skills variables alone. Thus, there must be other variables that must have influenced SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State also.

Table 4: Summary of Multiple Linear Regression Analysis on the relative contribution of entrepreneurial skills to the training of SSS graduates on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State

Source	Sum of Squares (SS)	Df	Mean Square	F. Ratio	P-value	Remark
Regression	157.021	1	157.021	26.748	.000 ^b	S
Residual	363.964	62	5.870			
Total	520.984	63				

Multiple R $(r_p) = .549^a$

R. Square $(r^2) = .301$

Adjusted $R^2 = .290$

Standard Error of Estimate =2.42289

Table 4 shows that the use of Entrepreneurial skills to predict to SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State yielded a coefficient of multiple regression R (rp) of 0.549 and multiple regression square (R^2) of 0.301. This also shows that F is 26.748 which is significant at P < 0.05 because the value of P is less than 0.05. Therefore, variables of Entrepreneurial skills statistically and significantly contributed to SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State.

This shows that Entrepreneurial skills accounted for 30.1 percent of the variance in SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State.



In other words, 30.1% of the variance in the change in SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State can be explained by pulling the different variables of Entrepreneurial skills together. This means that 69.1% of the variation in SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State cannot be explained by Entrepreneurial skills variables alone. Thus, there must be other variables that must have influenced SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State also.

Table 5: Summary of Multiple Linear Regression Analysis on the joint contribution of entrepreneurial skills on SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State

Source	Sum of Squares (SS)	Df	Mean Square	F. Ratio	P-value	Remark
Regression	228.906	1	228.906	48.590	.000 ^b	S
Residual	292.078	127	4.711			
Total	520.984	128				

Multiple R $(r_p) = .663^a$ R. Square $(r^2) = .439$ Adjusted R²= .430

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Standard Error of Estimate =2.17047

Table 5 shows that the use of the two Entrepreneurial skills variables (via: technical and managerial) to predict SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State yielded a coefficient of multiple regression R (rp) of 0.663 and multiple regression square (R^2) of 0.439. This also shows that F is 48.590which is significant at P < 0.05 because the value of P is less than 0.05. Therefore the two (2) predictor variables of Entrepreneurial skills jointly statistically and significantly contribute to SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State.

This shows that the variables of Entrepreneurial skills accounted for 43.9 percent of the variance in SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State. In other words, 43.9% of the variance in the change in SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State can be explained by pulling the different variables of Entrepreneurial skills together. This means that 56.1% of the variation in SSS graduates training on improved pig production in Abua/OdualLocal Government Area of Rivers State cannot be explained by Entrepreneurial skills variables alone. Thus, there must be other variables that must have influenced SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State also.

Discussion of findings

The result in table 1 revealed that Entrepreneurial skills did not statistically and significantly contribute to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. This finding aligns with the submission of Hemsworth (2003) who posits that early interactions with pigs (especially with large numbers of pigs) by many handlers lead to complacency about animal welfare, fear in the animals which can develop into stress, increased susceptibility to disease and other negative handling techniques which results in overall reduction in growth rates and productivity of pigs. This no doubt will decrease the adoption of innovation techniques which is the essence of entrepreneurship (Onyebinama, 2004).

The result in table 2 revealed that Entrepreneurial skills statistically and significantly contributed to SSS graduates training on improved husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. This finding aligns with earlier findings by Amaza and Olayemi (2000) who posits that farmers with formal training tend to be more efficient in food production due probably to their enhanced ability to acquire technical and managerial experience or knowledge. Consequently, experience in farm business management, which is Oboh, Sani and Ochi (2007) paradoxically, put farmers in Nigeria to have >20 years and up to 50 years of farming experience, enable farmers set realistic time and cost targets, allocate, combine and utilize resources efficiently and identify production risks Onyebinama, 2004).

The result in table 3 revealed that Entrepreneurial skills to statistically and significantly contributed to SSS graduates training on improved post-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State. This finding is consistent with the views of Onyebinama (2004) who contends that interest or adoption of innovation will likely increase the sensitivity to risk and entrepreneurial (technical and managerial) capacity of the pig farmer. This will enable pig farmers to perform less of laborious tasks and more of entrepreneurial (technical and managerial) functions that enables them to exploit the improvements that have been made on the physical, social and economic environment of agricultural production in Nigeria (Onyebinama & Onyebinama, 2010).

The result contained in table 4 revealed that Entrepreneurial skills statistically and significantly contributed to SSS graduates training on improved marketing stage of pig production in Abua/Odual Local Government Area of Rivers State. This finding is in agreement with Onyebinama (2004) who indicated that



education (via training and skill acquisition) enables pig farmers to develop interest and make better use of production information and techniques. However, their interest in innovation and inclination to save increases their production plans, level of aspiration, income generation, food security, employment provision and wealth creation. These attitudes effectively impact on entrepreneurial capacity. This is probably why most successful farmers in Nigeria have vast technical and managerial capacity that effectively enables pig farmers adapt to the current emphasis of transiting from subsistence to commercial levels in pig production(Onyebinama & Onyebinama, 2010).

The result in table 5 revealed that the variables of Entrepreneurial skills (via: technical and managerial) jointly statistically and significantly contribute to SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State. This finding is consistent with earlier findings by Onyebinama and Onyebinama (2010) who posits that the main object of agricultural development policies and programmes is the development of the entrepreneurial (technical and managerially) capacity of farmers which increases their output and productivity. Therefore, Onyebinama (2004) reiterates that skills acquired through special training in agriculture are important to the pig farmer in identifying activities and operations, materials, equipment and people needed to undertake the activities and operations and in allocating responsibilities.

Conclusion

The study concluded that the two (2) predictor variables of Entrepreneurial skills (via: technical and managerial) contributed to SSS graduates training on improved husbandry, post-husbandry and marketing stages of pig production in Abua/Odual Local Government Area of Rivers State. This means that consideration of Entrepreneurial skills will lead to SSS graduates training on improved husbandry, post-husbandry and marketing stages of pig production and will not lead to SSS graduates training on improved pre-husbandry stage of pig production in Abua/Odual Local Government Area of Rivers State.

Furthermore, the two (2) predictor variables of Entrepreneurial skills (via: technical and managerial) when considered jointly, contributed to SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State. This means that regularity of training on Entrepreneurial skills (via: technical and managerial) jointly contributed to SSS graduates training on improved pig production in Abua/Odual Local Government Area of Rivers State.

Recommendations

Based on the findings of the study, the following recommendations were proffered

- 1. Secondary school administrators should ensure students acquire training that will enable them effectively carry out the pre-husbandry stage which sets the platform for animal welfare, decreased susceptibility to disease and improved pig production.
- 2. Agricultural Science curriculum should be pattered to provide for students continuous improvement and training on husbandry stage which will enable the would student pig farmers to effectively set realistic time and cost targets, utilize resources and identify production risks.
- 3. The would-be student pig farmers are required to constantly develop and apply innovations that will improve the post-husbandry stage which increases the physical, social and economic environment of pig production.
- 4. The government is encouraged to assist the pig farmers by developing the markets for pig products which will improves income generation, food security and employment provision.
- 5. The Ministry of Agriculture and other agencies should identify activities, materials, equipment and people needed to improve the operations of pig farms.
- 6. The government are also advised to emphasize Entrepreneurial skills (via: technical and managerial) as an efficient strategy to pig farmers improvement in the pre-husbandry, husbandry, post-husbandry and marketing stages of pig production.

References

- Amaza, P. S. & Olayemi, J. K. (2000). The influence of education and extension contact on food crop production in Gombe State, *Nigeria. Nig. J. Agribusiness Rural Dev.*, 1, 80-92.
- Bassey, S. E. (2006). Women role in sustainable food supply. *Journal of Women in Agriculture*. University of Ibadan Press, 6(1), 121-124.
- Delp, P.; Thesen, A.; Molivatlla, J. & Seshadun, N. (1997). *Delphi system tools for project Planning*. Columbus: National Centre of Research in Vocational education, the Ohio state University.
- Ekong, A. O. & Williams, P. S. (2006). Entrepreneurship education in Nigeria and its implication for manpower needs of the nation. *An International Journal of the Teacher Registration Council of Nigeria Abuja, TRCN*, 3, 113.
- Food and Agricultural Organization (FAO, 2001a). Food and Agricultural Organization: Database for Agriculture. http://apps.fao.org



- Food and Agricultural Organization (FAO, 2001b). World Agriculture towards 2015/1030 an FAO perspective. Rome: FAO Publication.
- Gani, S. S. (2011). Entrepreneurship. Kaduna: Jofegan Associates.
- Hemsworth, P. H. (2003). Human–animal interactions in livestock production. *Applied Animal Behaviour Science*, 81(3), 185–98.
- Idoko, C. (2010). *Tracking Youth unemployment through vocational skill acquisition*. Retrieved from http://www.skills acquistion.html on 19/01/11.
- Obi, N. J. D. (2010). Practical based skills oriented Entrepreneurship training in secondary and tertiary institutions for realization of millennium development goals. *Journal of Technical Education Research and Development (JOTEROD)*, 10(2), 74-82.
- Oboh, V.U.; Sani, R. M. & Ochi, J. E. (2007). Availability and Utilization of Formal Agricultural Credit by Arable Crop Farmers in Benue State, Nigeria. In: Consolidation of Growth and Development of the Agricultural Sector, Bauchi. Nigeria, Haruna, U., S.A. Jibril, Y.P. Mancha and M. Nasiru (Eds.). Nigerian Association of Agricultural Economists, Nigeria, pp: 75-83.
- Ogbuanya, T. C. & Shetima, A. (2013). Electrical installation competencies required of electrical/electronics teachers in Bauchi and Gombe States technical colleges. *Journal of Nigerian Association of Teachers of Technology (NATT) JONAT*, 9, 20-33.
- Okon, S. (2008). Food production and food security. *Journal of food technologists*, 3(2), 221-225. Lagos:Triangular Linkage Publishers.
- Onyebinama, U.A.U. (2004). Farm Business Management for Smallholder Farm Firms in Nigeria. Owerri: Alphabet Nigeria Publishers, Nigeria.
- Onyebinama, U. A. U. & Onyebinama, I. C. (2010). Extension Education and Entrepreneurship Development in Nigerian Agriculture. *Agricultural Journal*, 5(2), 63-69.