

Stakeholders' View of Training Modules for Out-Of-School Youth Skills Acquisition in Plantain Chips Processing in Rivers State

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Abstract

The study focused on training modules that can help provide requisite skills for out-of-school youths development in plantain chips processing enterprise for self-employment in Rivers State. Purposive sampling technique and Yaro Yemene' formula were used to select a sample size of 269 out of 589 population used as respondents. Two hundred and sixty nine (269) copies of the instrument were administered to the respondents out of which 205 were completed and returned. Data were analyzed using mean for research questions and the hypothesis was tested using Analysis of Variance (ANOVA) at 0.05 level of significance. The questionnaire was face-validated by five experts, and the reliability was tested using Cronbach's alpha reliability estimate to determine the internal consistency of the questionnaire. This yielded as reliability coefficient (r) of 0.977. The findings revealed that the ten modules packaged for training out-of-school youths for skills acquisition in plantain chips were all needed. The ANOVA results reveal no significant difference in the mean rating of the respondent's stakeholders (teachers of home economics, extension agents and IITA staff) regarding the training module packaged for out-of-school youths for skills acquisition in plantain chips. Recommendations made include; government of Rivers State should direct the management of skills acquisition centres to integrate the identified and packaged training module into their skill acquisition programmes, to facilitate the training of out-of-school youths in plantain chip processing enterprise.

Keywords: Stakeholders, training modules, out-of-school youth, skills acquisition plantain chips.

Introduction

Plantain is one of the major staple food crops, third after cassava and yam grown by farmers in Rivers State (Simonds 2008). People in Rivers State use plantain as trade community for income generation, industrial raw materials and farming. Haba (2004) remarked that plantain fruits deteriorate rapidly and therefore must be processed into several products of industrial market value with a view to diversifying their product base. The products according to International Institute for Tropical Agriculture (IITA) (2004), include chips.

Robinson (2000), viewed training as the process of being taught a particular skill and practicing it until the required standard is reached. In plantain chips processing, one is trained

if he/she has acquired the basic skills for participating in plantain chips processing enterprise. To ensure the mastery of the skills taught, training modules are used and trainers evaluate the performance of their subjects.

Module is explained by Olaitan (2003) as a unit of related skills arranged sequentially to be used in teaching a group of learners within a given time. Module is defined in this study as a series of arranged packages of operations or training stages that specify the procedures of processing plantain fruits into chips by out-of-school youths. The researcher considers out-of-school youths as the individual or group of individuals who had completed a minimum of three years in the senior secondary school and did not pass the prescribed number of subjects of a required level in sciences, social sciences, or arts. Such individuals may not be qualified for admission into any higher institution. Therefore, they need relevant skills acquisition to enable them gain entry into and function effectively in plantain chips processing venture as a means of livelihood. In the opinion of Mepha (2009), processing of plantain fruits is transforming raw ingredients into food. In this case, the out-of-school youths will be taught skills of transforming plantain fruit into plantain chips using training modules.

Mepba (2009) said that food processing requires the creative imagination of the processor to provide customers with an interesting variety of foods in their diets. He further said that all food processes are made up of series of steps (sometimes called until operations) which have to be followed in a particular sequence in order to make the food. If the steps are changed, the process will produce a different product. Kent (2000), stated that processing starts with harvesting and finishes when the processed foods are eaten. He said the purpose of processing is to:

- *Extend the storage time
- *Preserve the food
- *Change the colour
- *Change the flavor or texture
- * Make the food attractive or easier to eat
- *Less food wastage and therefore an increase in the total food supply and
- *Less exposed food poisoning.

IITA (2005) pointed out the following management skills in plantain chips processing enterprise. Fresh plantain fruits are received in the processing mill. The fresh fruits are thoroughly washed before piecing. Known quantities of plantain fruits are measured for processing into chips. The plantain fruits are peeled with stainless knives or peelers. The peeled plantain fruits are washed in rust free containers with clean water to remove pieces of peels sand and dirt. The plantain fruits are sliced to chips of about 5cm in length using mechanically operated chippers. The chips are placed in trays and dried in the sun for 3 days or in a rotary dryer and ensure 10% moisture content. The dried chips are soaked in clean water for 8 hours. The chips are sun-dried for a second time or dried in an oven at 100°C for 2 hours to ensure moisture content of about 8%. The chips are sprayed on polythene sheets to cool before packaging. Chips of known weights are packaged in polythene bags and stitch with stitching machine. The package chips are labelled and stored in cool dry place.

Statement of the Problem

The high population and economy of Rivers State, especially Port Harcourt where most of the out-of-school youth live is favourable for prospective industrialist. The out-of-school youths could exploit this situation to float small-scale enterprise and become self-employed. Floating a profitable or productive enterprise is a function of well articulated and functional training for acquisition of the relevant skills. Most out-of-school youths have the problem of insufficient training. Commenting on the relevance of skill training, Olaitan, Nwachukwu, Igbo, Onyemachi and Ekong (1999) stated that training will expose trainees to knowledge and skills in jobs related situations using functional training modules in an environment that is same with work situation.

The researcher observed that the inability of out-of-school youths to establish small-scale enterprises of their own hinged on certain conditions that prevent them from succeeding. These

include the non-availability of agricultural processing training centre in Rivers State and facilities for training. Most of the out-of-school youths cannot help themselves financially due to their poor parental background; and most of them are not academically strong as to further their academic ambitions in universities. This group of youths therefore continue to roam the streets of major cities in Rivers State, such as Port Harcourt, Onne, Eleme, and Ahoada in search of white collar jobs which are not available. They become involved in crimes, such as kidnapping, assassination and armed robbery. These anti-social behaviours have been of great concern to government, the society and parents in Rivers State.

In Rivers State, abundant plantain fruits are produced all over the Local Government Areas, which according to Simonds (2008), could have been utilized by these out-of-school youths if exposed to training. With the above constraints, it is evident that it would be difficult for the out-of-school youths to be self-employed beyond their present condition if there are no interventions. It therefore became justified that efforts should be made to provide training modules for training of out-of-school youths on acquisition of skills in plantain chips processing enterprise. This study was therefore designed to fill the gap.

Purpose of the Study

The purpose of the study was to identify the needed training module for skill acquisition in plantain chips processing for out-of-school youths in Rivers State. Specifically, the objective of the study is to develop training modules for out-of-school youths acquisition in plantain chips processing enterprise.

Research Question

What are the needed training modules for skills acquisition in plantain chips processing for out-of-school youths in Rivers State?

Hypothesis

There is no significant difference in the mean responses among stakeholders (Home Economics Teachers, Extension Agents and IITA staff) on the training module needed for skills acquisition in plantain chips processing for out-of-school youths in Rivers State.

Methodology

The study employed research and development (R &D) design. The population comprised 589 respondents drawn from IITA Onne Office Rivers State, Agricultural Extension Agents from Rivers State Agricultural Development Programme (RSADP): and Home Economics Teachers from Rivers State Senior Secondary Schools Board (RSSSSB). The sample size consists of 269 out of which 20 from IITA, 29 Agricultural Extension agents and Yaro Yamen's Formula was used to choose 158 out of 498 Home Economic Teachers. Data were collected by use of questionnaire titled "Skill Acquisition Training Modules Questionnaire (SATMQ)". The instrument was used to elicit opinions from the respondents, on the following skills planning, management, organizing, marketing, material resources, waste and by-products management, maintenance of facilities and safety practices, instructional training programme plan, instructional plan, and instructional training procedure. The (SATMQ) was subjected to face and content validation by experts in Home Economics, University of Uyo, two from IITA Onne office, Rivers State, two from Agricultural extension Agents (EAs) of (RISADEP). The reliability of the instrument was tested using 20 respondents who were not part of the sample, but equivalent in all respects using test-retest method. Cronbach's Alpha reliability estimate was employed and a reliability coefficient of 0.977 was obtained which was considered adequate for the study. The researcher personally administered the questionnaire with the help of trained research assistants. The completed questionnaire from the respondents was collected through the same process and a

100% rate of return was recorded. The results were analysed using mean and (ANOVA).

Results

Table 1: Training Modules in Plantain Chips Product Processing Enterprise

Modules S/N	Module items	Mean \bar{X}	Ranks
Module A	Planning skills in plantain flour processing enterprise		Level of need
A1	Formulation of specific objectives for the product processing enterprise.	3.96	Needed
A2	Revision of the formulated objectives with changes in innovation in plantain flour processing enterprise.	3.87	Need
A3	Identification of equipment needed for specific processing operations (e.g. mixer, dryer and thermometer for measurement of room temperature.)	3.96	Needed
A4	Budgeting for the purchase of processing equipment needed	3.94	Needed
A5	Provision of storage facilities (warehouse) needed for storing material and equipment.	3.90	Needed
A6	Identification of sources of market for the processed plantain chips.	3.85	Needed

Module B	Management skills in plantain chips processing enterprise (12 skill items)	\bar{X}	Remarks
BI	Receiving the fresh bunches in the processing mill.	3.79	Needed
B2	Washing the fresh bunches thoroughly before piecing.	3.78	Needed
B3	Measuring known quantities of plantain fruits for processing into chips.	3.92	Needed
B4	Peeling plantain fruits with stainless steel knives or peelers	3.88	Needed
B5	Washing the peeled plantain fruits in rust free containers with clean water to remove pieces of peel, sand and dirt.	3.89	Needed
B6	Slicing plantain fruits to chips of about 5cm in length using mechanically operated shippers.	3.75	Needed
B7	Placing chips in trays and dries in the sun for about 3 days or in a rotary dryer and ensures 10 percent moisture content.	3.79	Needed

B8	Soaking dried chips in clean water in tank for 8 hours.	3.61	Needed
B9	Sun-drying chips for a second time or dry in an oven at 100c for 2 hours to ensure moisture content of about 8 percent.	3.71	Needed
B10	Spraying chips on polythene sheets to cool before packaging.	3.81	Needed
B11	Packaging the chips of known weights in polythene bags and stitch with stitching machine.	3.89	Needed
B12	Labeling the packaged chips and store in cool dry place.	3.86	Needed
Module C	Organizing skills in plantain chips processing enterprise (4 skills items).		
C1	Building plantain chips processing enterprise in line with specifications.	3.88	Needed
C2	Registration of the chips processing enterprise with relevant bodies and start off the enterprise.	3.93	Needed
C3	Provision of suitable machine tools and materials for processing high quality plantain chips.	3.89	Needed
C4	Coordination of the activities of the workers to achieve unity of purpose.	3.86	Needed

Module D	Marketing skills in plantain chips processing enterprise (6 skill items)	\bar{x}	Remarks
D1	Carrying out market survey for the plantain chips	3.95	Needed
D2	Fixing prices of the products according to grade	3.88	Needed
D3	Advertisement of chips to different buyer and supplying chips to different buyers	3.86	Needed
D4	Recording all sales / financial transactions in their appropriate column	3.88	Needed
D5	Filling bank tellers, receipts and other evidence of payments for account reconciliation	3.76	Needed
D6	Reconciling sales and expenditure to determine profits or loss of the enterprise.	3.87	Needed
Module E	Material Resources needed in plantain chips processing enterprise (7 skill items)		
E1	Land, buildings and structures.	3.83	Needed
E2	Open drums, basins and buckets.	3.80	Needed
E3	Polythene bags of various sizes	3.77	Needed
E4	Files, cabinet, receipts book and stationary	3.61	Needed
E5	Mixer, gas oven and pans of various sizes	3.85	Needed
E6	Power generating set, oil and fuel	3.84	Needed
E7	Dryers [drying machine] stitching machine, and thermometer.	3.80	Needed
Module F	Waste and by-product management skills (4 skill items)		
F1	Cleaning in and around the plantain chips factory	3.96	Needed
F2	Installation of waste collecting and disposal facilities	3.94	Needed
F3	Provision of adequate ventilation to the processing room	3.91	Needed
F4	Draining the floor of the processing room	3.87	Needed
Module G	Maintenance of facilities and safety practices skills (5 skill items)		
G1	Keeping to guidelines or instructions while operating processing machine	3.92	Needed
G2	Carrying out regular maintenance exercise on facilities used for producing chips	3.97	Needed
G3	Identification of hazards in the factory	3.91	Needed
G4	Wearing suitable apron while at work.	3.98	Needed
G5	Provision of first-aid and fire-fighting facilities.	3.94	Needed

Module H	Instructional training procedures skills (6 skill items)	\bar{x}	Remarks
H1	Obtaining a copy of the programme plan or module meant for training persons in plantain chips processing enterprises.	3.84	Needed
H2	Studying the module and tasks or clusters of the programme carefully and be familiar with the contents.	3.88	Needed
H3	Stating general and specific objectives of the training programme bearing in mind him modules, tasks and clusters.	3.85	Needed
H4	Identification of relevant teaching materials [text book, bulletin or journals] needed for the understanding of the content.	3.88	Needed
H5	Planning your lesson or instruction for each task or cluster to cover both theory and practical activities.	3.93	Needed
H6	Identification and arrangement for classroom environment or laboratory where instruction will take place.	3.91	Needed
Module I	Instructional plan (components) (5 skill items)		
I1	Identification of the objectives and unit contents to be taught in plantain chips processing enterprise.	3.90	Needed
I2	Teachers/ trainers activities for the unit.	3.87	Needed
I3	Students/learners activities within the unit.	3.83	Needed
I4	Instructional materials for the unit.	3.85	Needed
I5	Method of evaluating the unit.	3.63	Needed
Module J	Instructional training procedures implementation (9 skill items)	\bar{x}	
J1	Teaching trainees from known to unknown concepts using modules (A – J) in plantain chips processing enterprises.	3.91	Needed
J2	Explaining different terms in plantain chips enterprise.	3.90	Needed
J3	Explaining to the trainees such facilities and equipment needed for specific operations and how they can be used in plantain chips processing	3.96	Needed
J4	Demonstration of the skills step-by-step while the trainees observe.	3.95	Needed

J5	Causing the trainees to learn by doing what the instructor demonstrated while the instructor observes.	3.95	Needed
J6	Correction of any mistake made by trainees during practice of any skill	3.97	Needed
J7	Encouragement of visits to other chips processing enterprise and writing of report of the visits for assessment.	3.81	Needed
J8	Discussion of the common hazard trainees is likely to experience in their environment.	3.88	Needed
J9	And suggestion of the possible solutions to the problems	3.85	Needed

Data presented in Table 1 showed that the six planning skills (module A) in plantain chip processing had mean values above the mean between 3.50-4.00, similarly, the twelve management skills (module B); four organizing skills (module C); six marketing skills (module D); seven material resources skills (module E); four waste and by product management skills (module F); five maintenance of facilities and safety practices skills (module G); six instructional training procedures skills (module H); five instructional planning (component) (module I) and nine instructional training procedures implementation (module J), all had mean values above 3.50 - 4.00.

Deduction from the analysis showed that all the skills in modules A - J are all highly needed for the out-of-school youth training in plantain chips processing enterprise.

H₀₁: There is no significant difference in the responses among Home Economics Teachers, Extension Agents (EAs) and IITA staff, on the training modules that can be packaged for out-of-school youth for skills acquisition in plantain chips processing enterprises.

Data for testing the above hypothesis were obtained from modules A-J of the instrument and are presented in table 2.

Table 2: ANOVA on Training Modules in Plantain Chips Processing Enterprise N-205

Module S/N	Module	Items	Group	Sum of	df	Sig	Rk
A	Planning skills in plantain chips processing enterprise (6 skill items)		Bet	2.70	2	1.030 .395	N S
			wee	264.	2		
			n	46	0		
			Tot	267.	2		
B	Management skills in plantain chips processing enterprise (12 skill items)		Bet	34.5	2	1.807 .167	N S
			wee	4	2		
			n	1930	2		
			Tot	1865.	2		
C	Organizing skills in plantain chips processing enterprise (4 skill items)		Bet	4.05	2	.125 .290	N S
			wee	328.	2		
			n	44	2		
			Tot	332.	2		

D	Marketing skills in plantain chips processing enterprise (6 skill items)	Bet	14.65	2	1.58	N
		wee	936.		.208	S
		n	17	?		
		Tot	951.	2		
E	Material resources needed in plantain chips processing enterprise (7 skill items)	Bet	7.54	2	1.17	N
		wee	649.7		.312	S
		n	1	2		
		Wit	657.	0		
F	Waste and by-product management skills (4 skill items)	Bet	2.44	2	1.09	N
		wee	226.		.340	S
		n	67	?		
		Tot	229.	2		
G	Maintenance of facilities and safety practices skills (5 skill items)	Bet	.53	2	.502	N
		wee	107.0		.606	S
		n	6	?		
		Tot	107.5	2		
H	Instructional training procedures skills (6 skill items)	Bet	10.5	2	.2	N
		wee	0		54 1.380	S
		n	768	?		
		Tot	779.	2		
I	Instructional plan (components) (5 skill items)	Bet	2.58	2	1.076	N
		wee	336.0		.343	S
		n	1	2		
		Tot	339.	2		
J	Instructional training procedures implementation (9 skill items)	Bet	5.60	2	.931	N
		wee	608.		.396	S
		n	11	?		
		Tot	613.6	2		

Significant at .05 alpha level: critical F-value = 3.040 df = 2 and 202

The ANOVA on Table 2 reveals that the calculated F- value of 1.030 module A; planning skills, 1.807 module B; management skills, 1.2 module C; organizing skills, 1.58 module D; marketing skills, 1.17 module E; material resources skills 1.09 module F; waste and by-product management skills, .502 module G; maintenance of facilities and safety practices skills, 1.380 module H; instructional training procedures skills, 1.076 module I; instructional components skills and .931 module J instructional training procedures implementation skills are all less than the critical F-value (F- tabulated) of 3.040 at .05 alpha level with 2 and 202 degree of freedom. The null hypothesis Ho4 of no significant difference in the responses of home economic teachers, extension agents ((EAs) and IITA staff, on the training modules packaged for skills acquisition in plantain chips processing enterprise was therefore upheld; Deduction from the hypothesis indicated that the 10 modules are needed for training of out-of-school youths for skills acquisition in plantain chips processing enterprise.

There was no significant difference in the mean rating of the responses of Home Economics Teachers, Extension Agents and International Institute for Tropical Agriculture (IITA) staff on the training modules packaged for skills acquisition on plantain chips processing enterprise.

Discussion of Findings

The findings of this study have been arranged and discussed according to the research question and hypothesis formulated. The research question is discussed first followed by the hypothesis.

The findings of this study highlighted all the ten modules with 64 corresponding skill items as needed for the training of out-of-school- youths for skills acquisition in plantain chips processing enterprise. The ten modules with the sixty four corresponding skill items were needed because, the out-of-school youths will need skills in planning, management, organising, marketing, material resources handling, waste and by-products management, safety practices and instructional training procedures for success in plantain chips processing enterprise. On planning, skills needed for plantain chips processing, the respondents opinion were in consonance with the observations of Olaitan and Mana (2001) that planning of any farm operation should incorporate, management skills such as formulation of specific objectives, reviewing the formulated objectives periodically with changes in innovations, drawing up programme plan for the farm, selection of site for processing operations, deciding on the type of processing to adopt in his enterprise, making of budget for the processing plan, planning for the procurement of the processing equipment material, among others.

On the management skills needed in plantain chips, the findings corroborated the views of Philips (1999) who summarized the steps involved in modern or mechanized processing of plantain chips to include, receiving fresh plantain fruits in the processing room., washing the fresh bunches thoroughly before piecing, measuring known qualities of plantain fruits for processing into chips, peeling plantain fruits with stainless steel knives or peelers.

The findings on organizing are in consonance with the views of Sanni et al (2005), who highlighted some steps in organizing plantain chips products to include, building plantain products processing enterprise in line with specifications, registration of the products processing enterprise with relevant bodies and start off the enterprise, provision of suitable machine tools and materials for processing high quality plantain chips and coordination of the activities of the worker to achieve unity of purpose. The findings on marketing skills in plantain chips is in accordance with Food and Agriculture Organization Report (FAO 2002): the report stated that specialized marketing management skills needed by plantain chips marketers for profitable plantain products, include fixing prices of the products according to grade, adverting products to different buyers and supplying products to different buyers, recording all sales and financial transactions in their appropriate column, reconciliation of sales and expenditure to determine profits or loss of the enterprise. The findings on material resources needed agreed with the opinion of IITA (2006) that land, building and structures, open drums, basins and buckets, polythene bags of various sizes, mixer, gas oven and pans of various sizes, power generating set, oil and fuel, dryers, stitching machine and thermometer, are material resources needed in plantain chips processing enterprise.

On waste and by-product management skills the findings are in agreement with Tubman (1999) and Sanni et al (2005) that processors need to clean in and around the plantain factory, installation of waste collection and disposal facilities, provision of adequate ventilation to the processing room and draining the floor of the processing room among others if the product is to be of high quality. On maintenance of facilities and safety practices skills, such as keeping to guidelines or instructions while operating processing machine, carrying out regular maintenance exercise on facilities used, identification of hazards in the factory, wearing suitable apron while at work and provision of first-aid and fire-fighting facilities were also highlighted by Sanni, et al (2005) as very necessary in a modern processing factory.

The findings on instructional training procedures needed in consonance with the views of Olaitan and Onuka (2007) which highlighted some steps and training procedures required to guide instructors on how to train individuals in acquiring skills in any processing enterprise. Such training procedures include teaching from known to unknown concepts; using modules or programmes plan; definition of key terms used in the enterprise, demonstration of the skills involved in the enterprise; testing trainees on the practice of the skills learnt and others.

Conclusion

This paper has established that the effective utilization of skill acquisition will be a strong combating tool for poverty reduction and empowerment among out-of-school-youths. The following has been deduced from the findings of this study that skill acquisition will contribute significantly to the society in terms of reduction of joblessness and crime. Unemployment rate of out-of-school youths would be reduced, if government agencies in-charge of youth's skills acquisition and employment, use identified training modules. Training information on training module for out-of-school youths for skill acquisition in plantain chips has been identified. The rating of home economics teachers, agricultural extension agents and International Institute for Tropical Agriculture (IITA) staff, on the training modules packaged for out-of-school youths for skill acquisition was the same in spite of their difficult areas of operation.

Recommendations

Based on the above findings, it is recommended among others to improve skill acquisition among out-of-school youths for their empowerment that:

- ❖ The government of Rivers State should direct the management of Skills Acquisition Centres (SACs) to integrate the identified and packaged training modules into skills acquisition programmes.
- ❖ The Niger Delta Development Commission (NDDC) should make use of the identified plantain chips processing enterprise in training their youths in the entire states that produces oil in the country.
- ❖ The entrepreneurs in the plantain processing industry in the state should be allowed access to the skill items in the training modules, as identified in this study as to enable them improve on their production.
- ❖ The government should make the findings of this study available to the media for dissemination to the general public including out-of-school youths.

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