

Technical and Entrepreneurial Competencies Needed by NCE Home Economics/ Agriculture Education Students for Self-Reliance in Yoghurt Production Enterprise

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Abstract

This study determined the entrepreneurial competencies needed by NCE Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise. Survey research design was adopted. The population was made up of 48 respondents (20 yoghurt entrepreneurs 10 Agricultural and 18 Home economics education lecturers) in Kastina State. Questionnaire was used for data collection .The instrument was face validated by five experts (3 Home economic and 2 Agricultural education lectures) . Data were analyzed using mean. Findings of the study include eight (8) knowledge, sixteen (16) technical, nine (9) basic seven (7) marketing and eight (8) entrepreneurial competencies needed by NCE Home economics /agricultural education trainees for self-reliance in Yoghurt production enterprise. Recommendations were made based on the findings of the study among which includes the need for more practical teaching to adequately equip students for technical entrepreneurial competencies for self-reliance in yoghurt production enterprise.

Keywords: Technical , Entrepreneurial, Competencies, Self-reliance, Yoghurt, Production, Enterprise.

Introduction

The social and economic challenges that is currently facing Nigeria as a nation include poverty, increasing demands for improved standard of living unemployment among many others. This is why the Nigerian educational system is expected to rise to the challenges by equipping individuals with the requisite technical and entrepreneurial competencies required for self-reliance and job creation. The development of these competencies is an important function of educational institutions, especially at the tertiary level like Nigeria certificate of education (NCE).

Home economics/ Agricultural education of programmes of study under vocational teacher education meant to offer to NCE students the opportunities of acquiring both technical and entrepreneurial competencies needed for self-employment ventures. Home economics education is a skill oriented field of study noted for its capacity of equipping learners with saleable relevant skills and knowledge that make for self-reliance, paid employment and small business (Lemchi, 2001). On the other hand, Agricultural education at NCE level is a programme designed to also equip students with knowledge, attitudes and skills in teaching and self-reliance. The two programme areas can adequately

equip learners to be self-reliant in small businesses in such areas as food and nutrition of which yoghurt production is its component.

Home economics/ Agricultural education /graduates are expected to be prepared not only for teaching, but for adaptable employment situations of which self employment is inclusive. One solution to unemployment is the generation of self employment (United Nations Educational Scientific and cultural Organization (UNESCO), 1997) Anyakoha in Ode (2006) identified thirty two (32) technical and entrepreneurial competencies needed for business operators to successfully run a business such as planning, marketing, accounting, among others. The need for these technical and entrepreneurial competencies for self-reliance has become imperative in the face of gross unemployment of NCE graduates and reduction in the availability of paid employment including teaching positions. The technical /entrepreneurial competencies required for self employment in yoghurt production include planning skills in production, marketing, which the study is delimited to. The success of any yoghurt production enterprise is a function of committed and dedicated entrepreneurs.

An entrepreneur is one who organizes manages and assumes the

financial risks of a business enterprise (Okenwa, 2005). Such a person perceives business opportunities and takes advantage of the scarce resources but requires some competencies for success in any given business enterprise. Igbo in Ode (2006) observed that entrepreneur is motivated by the need for achievement, independence, belief in an internal locus of control and willingness to risk business failures in order to secure success. It is expected that NCE graduates of Home economics/ Agricultural science education should poses the required knowledge, skills and attitude that will make them to be competent in establishing an enterprise of their own. Schumpeter in Ozioko (2006) defined entrepreneurship as the establishment of a new business that uses innovation to enter existing markets and to grow by creating new demands while also taking market shares away from existing suppliers. It involves the recognition of opportunities in the form of needs, wants, problems and challenges and the use of resources to implement innovative ideas for new thoughtful planned business that will make them.

In the view of Olaitan (2003) stated that to be competent means that the individual has acquired the knowledge, skills and attitudes required in order to perform

successfully at a specified proficiency level in a given work. Competency is a set of skills an individual requires in order to properly perform a specific job. It is the ability to do something well. Competencies is a state of being functionally adequate or having sufficient knowledge, judgment, skills or strengths in carrying out a particular job or task (Olaitan, Alaribe and Eze, 2010). Competencies are essential knowledge and skills obtainable in a profession and those which the professional in the filed must possess to be able to demonstrate at optimal level of functioning (Enete, Amusa and Eze, 2009). Being competent in yoghurt production will provide individual NCE graduate with a means of livelihood, economic sustainability and self-reliance.

Yoghurt is an acidified coagulated product obtained from milk by fermentation with lactic acid producing bacteria (Jill, 2002). It is a custard like food with a tart flavour prepared from milk, curdled by bacteria especially *lactobacillus bulgaricus* and *streptococcus thermophilus* and often sweetened or flavoured with fruits. Yoghurt is made from cow, goat, sheep, soy or powdered scammed milk to which lactic acid bacteria is deliberately added. The technical competencies needed in the yoghurt production process include sterilization of yoghurt equipment, preparation of

skimmed powder milk with hosted water, cooling, addition of starters, incubation timing, addition of additives, packaging and freeze strong (Pan African Liberation international project (Palip, 2001). If NCE Home economics/Agricultural science students are properly taught and equipped in entrepreneurship competencies in yoghurt production they can be self employed which can reduce the problem of unemployment. This calls for the need for entrepreneurship programme in Home economics/Agricultural education courses and in particular food and nutrition.

Home economics/ Agricultural education lecturers at NCE level are in a strategic position in equipping its students with technical and entrepreneurial competencies for self-reliance in yoghurt production enterprise. The ultimate aim of education is to provide the necessary popular orientation for Man-power and technological development of a country (Okeke, 2005). The study is however motivated by the lack of desired knowledge technical and entrepreneurial competencies (Marketing and accounting) in yoghurt production enterprise. Hence, the need to determine these entrepreneurial competencies in the learning of yoghurt production that are required to adequately equip NCE Home economics/ Agricultural

science education graduates for gainful employment and self-reliance.

Purpose of the Study

The major purpose of the study was to determine the entrepreneurial competencies needed by NCE Home economics/ Agricultural science education students for self-reliance in yoghurt production enterprise in Kastina State. Specifically, the study determined:

1. Entrepreneurial knowledge needed by NCE Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise.
2. Technical competencies needed by Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise.
3. Basic entrepreneurial competencies needed by NCE Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise.
4. Marketing entrepreneurial competencies needed by Home economics/ Agricultural science education students for self-reliance in yoghurt production enterprise.
5. Accounting entrepreneurial competencies needed by Home economics/ Agricultural education student for self reliance in yoghurt production enterprise.

Methodology

Design and Area of Study: The study adopted a survey research design.

Area of the study: The study was conducted in Katsina state.

Population for the Study: The population for the study was 48 respondents made up of 20 registered yoghurt entrepreneurs, and 28 lecturers (15 Lecturers in Federal College of Education, Katsina and 13 Lecturers in Isa Kaita College of Education, Dutsinma). The lecturers are Home economics and Agricultural education specialists. There was no sampling because of its manageable size.

Instrument for Data Collection: A four (4) point scale questionnaire was developed for the various entrepreneurial competencies in line with the specific purposes of the study. The four-point scale included; very important (VI), Moderately Important (MI), less important (LI)

and Not Important (NI) with its corresponding value 4,3,2 and 1 respectively. The instrument was face validated by three Home Economics and two Agricultural education lecturers, from the department of Vocational Teacher Education, university of Nigeria Nsukka.

Data collection and Analysis

Techniques: Forty eight (48) copies of the questionnaire were distributed to yoghurt entrepreneurs, Agricultural and Home Economics Education Lecturers. The entire 48 copies of questionnaire were properly completed and collected. Mean was used for data analysis. A mean rating of 2.50 or above was regarded as important while a mean less than 2.50 was regarded as not important.

Findings of the Study:

The following findings were made:

Table 1: Mean responses of lecturers and yoghurt entrepreneurs on entrepreneurial knowledge needed by Home economics/ Agricultural education student for self-reliance in yoghurt production enterprise.

s/n	Knowledge of :	\bar{x}	Remarks
1.	market for purchasing yoghurt ingredient	4.12	Important
2.	the quality of yoghurt ingredients	3.89	Important
3.	measuring and weighing yoghurt ingredients accurately	3.88	Important
4.	the boiling and cooling points of milk	3.92	Important
5.	quality control	4.05	Important
6.	personal hygiene	4.02	Important
7.	laboratory hygiene	4.07	Important
8.	cleaning equipment before and after production	3.86	Important

N=48 \bar{x} = mean.

Table 1 above reveals that all the items regarded above meet the criterion level of acceptance. This shows that the respondents agreed that all the eight (8) entrepreneurial knowledge needed by NCE Home economics/ Agricultural science education students are important for self reliance in yoghurt production enterprise.

Table 2: Mean responses of lecturers and Yoghurt Entrepreneurs on Entrepreneurial technical competencies needed by NCE Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise.

s/n	Technical abilities to:	\bar{x}	Remarks
1.	Procure quality yoghurt ingredients from clean shop.	3.45	Important
2.	Measure and weigh yoghurt ingredients accurately	3.86	Important
3.	heat /boil water to 90°C	3.74	Important
4.	Add powdered milk to the boiled water	3.53	Important
5.	Stir milk vigorously to prevent lumps	3.65	Important
6.	Cool milk to between 110°F-115°F (45°C-46°C) using thermometer.	3.44	Important
7.	Add culture or yoghurt of between 0.5-2% or 2-5 table spoons per 4 of cups of milk	3.72	Important
8.	Allow yoghurt to set for between 4-6 hours at 37°C-44°C or 9-15 hours at 32°C	3.83	Important
9.	Remove excess water on yoghurt	3.28	Important
10.	Break coagulum by stirring	3.77	Important
11.	Add sugar, flavours, colours and stir.	3.81	Important
12.	Test for quality and adjust appropriately.	3.84	Important
13.	Sterilize containers at 85°C for between 10-15 minutes	3.92	Important
14.	Package and cool in fresh cold water.	4.12	Important
15.	Label yoghurt product	3.93	Important
16.	Store and preserve in refrigerator or deepfreezer	4.16	Important

N = 48 \bar{x} = mean.

Table 2 above shows that all the mean indicated that respondents agreed in all the sixteen (16) items of technical competencies in yoghurt are significantly important and are needed by NCE Home economics/ Agricultural education students for self-reliance in yoghurt production enterprise.

Table 3 : Mean responses of Lecturers and Yoghurt Entrepreneurs on the Basic Entrepreneurial competencies Needed by NCE Home Economics /Agricultural education students for self-reliance Yoghurt production enterprise.

s/n	Basic entrepreneurial competencies	\bar{x}	Remarks
1.	Determine steps required for starting yoghurt enterprise	2.55	Important
2.	Indicate NAFDAC requirements for yoghurt enterprise	3.05	Important
3.	State requirement for yoghurt equipment	2.98	Important
4.	Plan the yoghurt enterprise	3.65	Important
5.	Source for capital	3.32	Important
6.	Employ and train staff for yoghurt enterprise	3.58	Important
7.	Organize activities of yoghurt production	3.95	Important
8.	Implement the activities for yoghurt production	3.66	Important
9.	Evaluate the yoghurt enterprise	3.52	Important

N = 48 \bar{x} = mean

Table 3 reveals that all the items above meet the criterion level of acceptance. This shows that the respondents agreed that all the nine (9) basic entrepreneurial competencies are needed by NCE Home economics / Agricultural education trainees and are important for self reliance in yoghurt production enterprise.

Table 4: Mean responses of Lecturers and Yoghurt Entrepreneurs on the Marketing Entrepreneurial Competencies needed by Home Economics/ Agricultural Education Students for self reliance in Yoghurt production enterprise.

S/N	Marketing entrepreneurial competencies	\bar{x}	Remarks
1	Determine sales outlets	3.348	Important
2	Determine seasonal fluctuations of products	3.74	Important
3	Determine current and future trends in sales of products	3.15	Important
4	Determine market segment	3.59	Important
5	Maintain a customer oriented philosophy	3.67	Important
6	Use promotional mix effectively	4.15	Important
7	Withstand competition	3.63	Important

N= 48 \bar{x} = Mean

Table 5: Mean responses of Lecturers and Yoghurt Entrepreneurs on the Accounting Entrepreneurial Competencies needed by Home Economics/ Agricultural Education Students for self reliance in Yoghurt production enterprise.

s/n	Accounting entrepreneurial competencies	\bar{x}	Remarks
1.	Ability to understand basic book keeping and accounting principles and practice	4.75	Important
2.	Keep accurate relevant records	4.25	Important
3.	Fix prices of products properly	3.88	Important
4.	Service and maintain machines and tools	3.33	Important
5.	Grade and sort products	2.87	Important
6.	Source for business financing	3.15	Important
7.	Take appropriate industrial insurance	2.76	Important
8.	Prepare and interpret financial statements	3.28	

N= 48 \bar{x} = mean

Table 5 reveals that the respondents considered all the accounting entrepreneurial competencies important for self reliance in yoghurt production enterprise by NCE Home economic/ Agricultural science education students, with the mean ranging from 2.76 to 4.25 which is above the cut-off point of 2.50.

Discussion of Findings

In table 1, the study identified eight (8) entrepreneurial knowledge needed by NCE Home economics/ Agricultural science education students for self-reliance in yoghurt production enterprise all of which are considered significantly important by the respondents. The result indicates that knowledge of

market for purchasing yoghurt ingredients has the highest mean of 4. 12. This is in an agreement.

With the assertions of Ohwovriole and Ochonogor (2008) that knowledge is required by students for performance in any field of endeavour. The study is also in tandem with Olaitan and Mama (2001) who asserted that drawing up a business programme plan for procurement of facilities including raw materials, are, and vital skills for successful business enterprise. This study also affirms the assertion of Ajala and Olaitan (2010) that exposure to a variety of knowledge and skills are facilitated through experiences that are meaningful.

In table 2, the study identified sixteen (16) yoghurt production entrepreneurial competencies needed by students of NCE Home economics/Agricultural education for self-reliance in yoghurt enterprise. The respondents agreed that all items are significantly important. Ability to store and preserve yoghurt in refrigerator or deepfreezer has the highest mean rating of 4.16. This shows that preservation of yoghurt is very important as it prevents spoilage and loss in cost of production. The sixteen (16) items are in consonance with the assertion of Nwokolo (2010) that competencies are what individuals can supply and gainfully utilize for the purposes of achieving optimum productivity in industries and should be properly stored.

In table 3 the study identified nine (9) basic entrepreneurial competencies needed by NCE Home economics /Agricultural education students for self reliance in yoghurt production. All of which respondents considered important. The result shows that ability to organize activities of yogurt production has the highest mean of 3.95. This is in congruent with the assertion of Oshagbemi (2003) who stated that any entrepreneur without good knowledge of organizing as a managerial function cannot operate optimally. Organizing is a major

ingredient in setting up a business enterprise.

In table 4 the study identified seven (7) marketing entrepreneurial competencies needed by NCE Home economics/ agricultural; education students for self reliance in yoghurt enterprise. The respondents rate ability to use promotional mix effectively with a mean of 4.15. However, they all agreed to the seven (7) items as important in developing sales and marketing competencies in Home Economics/Agricultural education students. This finding is in agreement with Ezike (2011) that great needs of technical skills (Competencies) are required for effective transaction in marketing activities.

In table 5, the study identified eight (8) accounting entrepreneurial competencies. The respondents agreed on all the eight items as important to the needs of Home economics/ Agricultural education students for success in yoghurt production enterprise. Knowledge accurate book-keeping accounting scored the highest mean of 4.75. This is in line with the assertion of also (2004) who stated that book-keeping records, and basic accounting practices are the foundations of whole and balanced accountant frame work which indicates effective financial operations.

Conclusion

The entrepreneurial competencies indentified in the study were considered important by the respondents to the needs of NCE Home economics/ agricultural education students for self-reliance in yoghurt enterprise. These suggest that, for NCE Home economics/ Agricultural education graduate to be successful as yoghurt entrepreneurs, they must be well equipped with technical knowledge organizational marketing and accounting entrepreneurial competencies. Entrepreneurial competencies for self-reliance in yoghurt production are an antidote to NCE Home economics/ Agricultural education graduate unemployment, social vices and economics dependence.

Recommendations

The following recommendations were made on the basics of the findings of this study.

- 1.Home economics curriculum should be reviewed to accommodate accounting and business management subjects. This is hoped to have positive impact on students in the teaching/learning of entrepreneurial competencies not only in food and nutrition but other courses.
- 2.Lecturers of food and nutrition / agricultural education must be

committed to practical that will enhance the acquisition of knowledge in technical competencies needed for self-reliance in yoghurt enterprise.

- 3.The teaching of learning practical of entrepreneurship education must not be compromised. The learning experiences will equip NCE Home economics /Agricultural education students in technical and entrepreneurial competencies in marketing sales and accounting needed for self-reliance in yoghurt enterprise.
- 4.Field trips and students individual working experience scheme are also areas that can adequately complement entrepreneurial learning competencies in the school environment by equipping NCE Home economics/ agricultural education students with entrepreneurial competencies in yoghurt enterprise.

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