Teacher Trainers' Perception Of Employability Skills Needed For Teaching Agricultural Science In Nigerian Secondary Schools

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ABSTRACT : The study determined the trainers' perception of employability skills needed by graduate's teacher for teaching Agriculture Science in secondary schools. Two research questions guided the study. The design of this study was a survey research design. The area for this study was Bauchi and Gombe States. The population for this study includes all Agriculture Education lecturers in Nigerian Universities. Purposive sampling was used to select 17 trainers/lecturers as the respondents. The instrument was a structured questionnaire which was validated and pilot tested to obtain its reliability coefficient (Cronbach's Alpha) of 0.98. Data collected was analyzed using AMOS 18 statistical packages for windows. Findings of this study revealed that the trainers perceived that the employability skills needed by the graduate teachers to be successful in teaching agricultural science in secondary schools are important and the graduates are competent in them. It is recommended that all the employability skills be retained or included in the University Agriculture Education curriculum. Agricultural Education being a vocational course, students should be given the opportunity to apply the science they have learned in their course. That means more "hands-on" should be incorporate in the classroom teaching.

Keywords : Teacher Trainers, Skills, Teaching Agricultural Science, Schools

1.0   INTRODUCTION

Employability skills are skills that enable an individual to acquire and keep a job (Lankard, 1987). These days, manpower production is far in excess of demand. That means employers are faced with too many job applicants for very few jobs. Therefore, apart from good educational qualifications, employers need creative, flexible and visionary workers who possess a broad range of interpersonal and managerial skills (Nyanabo and Ahukannah, 2008). Generally, such skills would include personal image, attitudes, habits and behavior, techniques of communication, problem-solving and decision making, management and organizational process (Gainer, 1988).

Carnevale, Gainer, & Villet (1990) also stated that Employers depend on educators/trainers to provide job-ready and training-ready entry-level employees". Teichler (1999) concluded that higher education institutions should serve three functions when preparing students: the educational function, based on the cognitive and intellectual capabilities needed to envisage extensive knowledge; the training function, based on the competencies needed to assist students in specific, specialized work; and the socialization function, based on the values, attitudes, social behavior and the communication skills germane for action in socio-communicative contexts.

However, because of a fast-paced, ever-changing world, researchers have noted the challenges post-secondary education has in preparing graduates for the skills required by industry (Martin, Milne-Home, Barrett, Spalding and Jones, 2000). With these challenges in mind, higher education faculty should amend their curriculum to meet the needs of students and prepare them for the workforce (Evers, Rush, & Berdrow, 1998). To make the necessary amendments, educators should understand which employability skills are most needed by graduates because, given the appropriate skills, they will likely possess a positive attitude toward performing the tasks of the job. Kivinen and Silvennoinen (2002) stated that "for any given individual, skills are the single best source of escaping from underprivileged".

Graduates of university agricultural education programs enter employments outside of school-based teaching of agriculture in public schools. Cartmell and Garton (2000) revealed that slightly more than one-third of agricultural education graduates entered employments outside of school-based teaching. Because of the diversity of career interests and the variety of opportunities agricultural education graduates have available, university faculty often find it challenging to prepare students for the array of skills required for success in their respective employment.

While agricultural education departments are primarily concerned with preparing quality teachers for public schools, they should not become too narrowly focused. Barrick (1993) suggests that agricultural education programs should be competent in preparing students in areas of: human resource development and management, leadership, communication, and social science research methodology. Newcomb (1993) stressed that departments of agricultural education needed to focus on identifying and addressing the needs of students not being met. In an effort to address the needs of students, agricultural education faculties, and departments of agricultural education have a responsibility to not only recognize the variety of students in the agricultural education program, but to build a relationship with them as well.

Training is the process of acquiring specific skills to perform a job better. It helps people to become qualified and proficient in doing some jobs. Usually an organization facilitates the employees' learning through training so that their modified behaviour contributes to the attainment of the organization's goals and objectives. Training is the process of teaching, informing, or educating people so that (1) they would become as well qualified as possible to do their job, and (2) they would become qualified to perform in positions of greater difficulty and responsibility (Halim and Ali, 1997). Competencies needed by an agricultural educator have changed with technology and job requirements, indicating a need to examine the curriculum to make it relevant to students and their future employers. Examination of the competencies needed by professional agricultural educators will help planners design curricula that enable graduates to be more competitive in the marketplace. Students should be qualified to enter the workplace upon graduation and to excel in their careers. Curriculum planning should involve all who are affected by the program (Diamond, 1989). Thus, teachers, students, administrators, employers, and employees should participate in planning and evaluation. All five have essential roles for input, development, acceptance, and outcome of curricular revitalization efforts (Sprecker and Rudd, I997).

While many attempts have been made at defining the employability skills graduates need to possess upon entering the workforce, few studies have looked specifically at agriculture teacher's trainers. Specifically, there is a need to understand which employability skills are being sought by agriculture teacher employers (in teaching and) to determine whether or not agriculture education University graduates feel as though they possess the employability skills desired by their employers (Garton and Robinson, 2006).

Therefore, an additional need exists to assess the University graduate's immediate trainers to determine which employability skills are most important and whether or not the

University graduate is utilizing the skills to the best of his or her ability. This is because Agricultural education in Nigerian secondary schools requires professional teachers who understand the psychology, principles and techniques of teaching and the learning process. In recent years, there have been changes in technology in every field of learning. Teachers of agriculture need to be current with agricultural development and technology. Teachers need to improve their knowledge and competency on the job beyond what was required for initial certification in order to become effective professionals. That was why agricultural education in Nigerian secondary schools has not developed to its potential. The agricultural science curriculum in Nigeria is primarily concerned with academic preparation for entry into university studies while neglecting vocational or occupational education (Abolaji and Reneau, 1988).

1.1   Statement of the Problem

Researchers have noticed a "skills gap" occurring in society (Robinson, 2000; Morley, 2001; Kivinen & Silvennoinen, 2002; Andrews and Wooten, 2004; Shivpuri & Kim, 2004). This skills gap is most notable with University graduates, since they are not equipped with the desired skills needed to be successful in their various working places. Employers believe higher education is failing by not adequately developing the employability skills of graduates (Evers, Rush & Berdrow, 1998). This is because there is a disconnection between the demands of employment and the quality of educational preparation of university graduates (Understanding Employers, 1998). Employers do not feel as though higher education is succeeding in the role of adequately developing the employability skills of graduates (Peddle, 2000). Evers et al. (1998,) stated that "the skills most in demand are least in supply". Candy and Crebert (1991) stated that graduates are simply not prepared in the areas of "problem solving, decision making, working in a team, or learning for themselves" (p. 572). Therefore, the main concern of this study is to find out the trainers perception as to whether the graduates of the Agriculture Education in Nigeria possess the employability skills needed for teaching Agriculture in secondary schools as determined by professionals and researchers in literature (Robinson, 2000), (Graham, 2001), (Garton and Robinson, 2006), (Roberts, Dooley, Harlin and Murphrey, 2006), (Robinson and Garton, 2007) and (Arensdorf, 2009).

1.2   Purpose of the Study

The purpose of this study is to determine the teacher trainers' perceptions regarding level of importance of identified employability skills and the perceived level of competence of the teachers at performing those skills. Specifically the study will:-

1. Determine trainers' perceptions of the importance of the employability skills needed by graduates to be successful in Teaching Agricultural science in secondary schools.

2. Determine trainers' perceptions of the graduates' level of competence at performing the employability skills needed for Teaching Agricultural science in secondary schools.

1.3   Research Questions

The following research questions were formulated to guide the study

1. What are the trainers' perceptions of the importance of the employability skills needed by graduates to be successful in Teaching Agricultural science in secondary schools?
2. What are the trainers' perceptions of the graduates' level of competence at performing the employability skills needed for Teaching Agricultural science in secondary schools?

2.0   METHODOLOGY

The design of this study was a survey research design. The area for this study was Bauchi and Gombe States. Bauchi and Gombe States are located in the North-East sub-region of Nigeria. The population for this study includes all University trainers of the graduates of Agriculture Education that are currently teaching Agricultural Science in secondary schools of Bauchi and Gombe states Nigeria. There was no sampling. The instrument for data collection was a structured questionnaire adapted from Roberts, Dooley, Harlin and Murphrey (2006), Robinson and Garton (2007) and Arensdorf, (2009). In the questionnaire the trainers ranked the items listed as: (1) - Not important, (2) – Fairly important, (3) –Important, and (4) – Very Important. To determine the level of teachers' competence, the trainers were asked to rate the items as: (1) – Not competent, (2) – Fairly competent, (3) –Competent, and (4) – Very Competent.

Face and content validity was established for this study by three (3) experts from department of Agric Education, College of Agricultural Sciences, University of Agriculture, Makurdi-Nigeria, Agric Education unit, department of Vocational and Technical Education, Ahmadu Bello University, Zaria-Nigeria and Degree section of Agric Education department, School of Vocational Education, Federal College of Education (Technical) Gombe-Nigeria to examine and criticize for appropriate language, clarity and typographical errors. After suggestions were considered from the panel of experts, statements in the instruments were modified. The instrument was pilot tested in schools not selected in the sample but have the same characteristics with the selected schools in another state. The reliability coefficient of each item and cluster was determined using the correlation coefficient while the overall reliability coefficient was determined using the Cronbach's Alpha model of item analysis in the statistic section of MINITAB statistical package version 15.1 for windows. The overall reliability for the whole instrument shows a Cronbach's Alpha of 0.98. The data was collected using the questionnaire and was analysed using Analysis of MOment Structures (AMOS) version 18. Means, standard error of the mean, variance, standard error of the variance and the P value were reported.

3.0   RESULT

3.1   Research Question One

What are the trainers' perceptions of the importance of the employability skills needed by graduates to be successful in Teaching Agricultural science in secondary schools?

Table 1: Trainers' Perception of the Importance of the Employability Skills Clusters needed by Graduates to be successful in teaching Agricultural Science in Secondary Schools.

S/N	ITEMS	$\overline{X}$	S.E	σ	S.E	Remak
1.	Instruction	3.27	.085	.362	.073	Important
2.	Supervised Agricultural Experience	3.29	.088	.384	.078	Important
3.	School and Community Relations	3.16	.089	.394	.080	Important
4.	Professional Growth and Personal Qualities	3.27	.087	.371	.075	Important
5.	Computer Skills	3.12	.092	.421	.085	Important

$\overline{X}$ = Mean (1.00-1.49=Not Important, 1.50-2.49=Fairly Important, 2.50-3.49=Important and 3.50-4.00=Very Important)
S.E. = standard error of the mean
σ   = variance
S.E. = standard error of the variance

In order to answer this research question, the means, standard error of the mean, variance, standard error of the variance and P value of the trainers' perception of the importance of the employability skills (identified in the Literature) that are needed by graduates to be successful in teaching Agricultural Science in secondary schools were calculated and tabulated in Tables 1. From Table 1, the trainers have perceived that all the five (5) employability skills construct are important to the graduates in teaching Agricultural Science in secondary schools of the study area, with construct means ranging from 3.12-3.29. This implies that the trainers have perceived that all the employability skills needed for teaching agricultural science in secondary schools are important to the graduates, with posesing classroom management as the most important.

3.2   Research Question Two

What are the trainers' perceptions of the graduates' level of competence at performing the employability skills needed for Teaching Agricultural science in secondary schools?

Table 2: Trainers' Perception of the Graduates' Level of Competence at Performing the Employability Skills Clusters needed for Teaching Agricultural Science in Secondary Schools.

S/N	ITEMS	$\overline{X}$	DECISION	σ	S.E	Remak
1.	Instruction	2.96	.089	.397	.080	Competent
2.	Supervised Agricultural Experience	2.94	.091	.417	.084	Competent
3.	School and Community Relations	2.86	.095	.445	.090	Competent

4.	Professional Growth and Personal Qualities	2.89	.096	.489	.099	Competent
5.	Computer Skills	2.44	.125	.709	.158	Fairly Competent

X = Mean (1.00-1.49=Not Competent, 1.50-2.49=Fairly Competent,

    2.50-3.49= Competent and 3.50-4.00=Very Competent)

S.E. = standard error of the mean

σ   = variance

S.E. = standard error of the variance

In order to answer this research question, the means, standard error of the mean, variance, standard error of the variance and P value of the trainers' perception of the graduates' level of competence at performing the employability skills (identified in the Literature) that are needed for teaching Agricultural Science in secondary schools were calculated and tabulated in Tables 2. From Table 2, the trainers' have perceived that the graduates are competent in four (4) and fairly competent in one (1) employability skills construct that is important to the graduates in teaching Agricultural Science in secondary schools of the study area, with construct means ranging from 2.44-2.96. This implies that the trainers have perceived that the graduates are competent in performing all the employability skills needed by the graduates to be successful in teaching agricultural science in secondary schools except three computer skills. The trainers consider the graduates to have their least competency in application of computer "graphic skills" to teaching and learning. This is pointing out that the graduate, supervisors and trainers agreed that the graduates are not having enough competencies in using computer application for teaching and learning of Agricultural science in secondary schools.

4.0   SUMMARY OF THE FINDINGS

The following are the major findings of this study

1. The trainers have accepted that for the employability skills identified as needed for teaching agricultural science in secondary schools are important to the graduates.

2. The trainers have accepted that the graduates are competent in performing the employability skills identified as needed by the graduates to be successful in teaching agricultural science in secondary schools.

5.0   DISCUSSION OF RESULT

The result also revealed that the trainers have perceived that for the employability skills needed for teaching agricultural science in secondary schools is important to the graduates. This finding agreed with that of (Robinson and Garton, 2007) who reported that it can be implied that graduates need more experience at solving problems. While the "ability to work independently" was rated high on the importance scale, it was rated even higher on the competence scale, indicating the curriculum is adequately addressing graduates needs in this area. Buck and Barrick (1987) emphasis three points which were the concerns of employers as follows: For entry-level positions, employers are looking for young people who demonstrate a sense of responsibility, self-discipline, pride, team work and enthusiasm; Employers strongly value employee's ability to learn and to solve problems; Employers assume that schools are doing a poor job of developing the much needed attitudes, abilities and skills. Employer's consultative committee requires school to develop employability skills relevant to the job and career anticipated by their students on graduation.

In their 2004 study, Shivpuri and Kim sought to understand the discrepancies between what Universities and employers saw as important employability skills for graduates to possess when entering and succeeding long-term in the workplace. A random sample of university department heads and college recruiters from across the United States were selected to participate in the survey research. Employers rated six of the 12 constructs as "very important" while department heads ranked only two of the 12 same constructs as "very important." The two constructs that were agreed upon were ethics and integrity and knowledge. Employers also stressed the importance of leadership, interpersonal skills, adaptability and life skills, and perseverance.

The result also revealed that the trainers have perceived that the graduates are competent in performing the employability skills needed by the graduates to be successful in teaching agricultural science in secondary schools. This finding is consistent with prior research conducted by Robinson and Garton (2006) concerning agricultural education graduates. The findings from that study revealed agricultural education graduates lacked employability skills dealing with defining and solving problems and analyzing information in making decisions and that curriculum enhancement was needed in those particular areas. Graham (2001) reported that lecturers from Department of Agricultural Education graduates from Texas A&M University indicated that their students were somewhat prepared to be successful in their careers. However, they recognized the need for more preparation, especially in communication and character skills. These findings are inconsistent with employer perceptions that graduates were ill-prepared for their first job. But they do provide an opportunity for programmatic development within the department. Graduates indicated that the most important skills related to decision making, organizing, time management, and self motivation, problem-solving, the global concept of character, understanding instructions, listening, Internet use, and similar skills were extremely important to career success. Although most of these skills are taught in college classrooms, success in their use comes from a lifetime of learning: they are components of life-long lessons that begin in the home.

Graham (2001) reported that in general, agriculture students are prepared to enter into entry level positions. Only the skill or ability to speak a second language was rated as unprepared by the employers of agriculture graduates. However, when compared to the level of importance placed on the interpersonal skills and abilities, it appears that agriculture students need to improve in the area of professionalism. Our graduates need to demonstrate the ability to work in groups, show leadership, dedication, and initiative more than they are now doing. It may also be that graduates exhibit "on-the-job awkwardness." These perceptions may simply be a lack of maturity or business savvy that all graduates have

without a few years of on the job training. Agriculture students are proficient in computer skills, except the use of the Internet. CAD and accounting systems were rated as the least area of preparation. With the increased impact of the Internet, these skills will have a more immediate impact of need than some of the other computer skills. In the communication skills area, employers rated verbal expression, presentation skills, listening, and understanding instructions as very important. All character traits were very important to the employers.

Spotanski and Foster (1989) reported that the majority of employment skills and competencies currently provided in instructional materials used in Nebraska vocational agriculture programs were rated as only sometimes required or not required by agribusiness managers. Agribusiness managers rated skills consistently lower and did not require as many skills to gain employment as perceived by vocational agriculture instructors. Customer relation skills and communication skills were the most required skill categories identified by Nebraska agribusiness managers. Curriculum materials used to provide agribusiness instruction in Nebraska should be reviewed and updated to enhance appropriate materials. Required employment skills should be identified and instructional materials developed to meet the needs of the agribusiness employer. Agribusiness persons and vocational agriculture instructors should work cooperatively on this task. Instructors should discuss and identify appropriate agribusiness skills required for employment with agribusiness managers in the area. Vocational agriculture instructors and local agribusiness persons should promote opportunities for students to improve the communication skills needed to gain employment. Customer relation skills and communication skills should be taught in all vocational agriculture programs with agribusiness in the curriculum.

6.0   CONCLUSION

The trainers have perceived all items to be important to employability success in the teaching profession; they also felt that having experience and competence in the employability skills such instruction, supervised agricultural experience, computer skills was an influencing factor for success of the Agricultural education graduates employees.

7.0   RECOMMENDATIONS

Based on the findings of the study it is recommended that

1.   The employability skills identified should be retained or included in the curriculum.

2.   A competency-based approach to University education is necessary and it should be feasible to meet the workplace demands by incorporating more "hands-on" activity in the class room teaching.

3.   Workshops should be conducted in an effort to assist faculties of Education of Nigerian Universities in developing the innovative methods and techniques needed to incorporate and teach these skills to future students.

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