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GRADUATES' PERCEPTIONS OF EMPLOYABILITY SKILLS NEEDED BY AGRICULTURAL SCIENCE TEACHERS IN BAUCHI AND GOMBE STATES SECONDARY SCHOOLS.

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Abstract

The purpose of this study was to determine the employability skills of needed by graduates teaching Agriculture science in Nigerian secondary schools. Two research questions and two hypotheses 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 graduates teaching Agric Science in Nigerian secondary schools. Purposive sampling was used to select 50 graduate teachers each from Gombe and Bauchi states totalling 100 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 graduates have perceived the employability skills needed for teaching agricultural science in secondary schools as important and they perceived themselves as competent in performing them. It was 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.

Introduction

Employers of teachers and the supervisors representing them depend on educators to provide job-ready and training-ready entry-level employees. The society needs University graduates who query the motives and ideas of politicians, government officials, business leaders, and professors. They should criticize in constructive ways and do not assume that things should be done in a certain ways because that is the way it has always been done. They should want to work in organizations that strive to correct past mistakes, not contribute to new ones (Evers, Rush and Berdrow, 1998). Teichler (1999) reported that higher education institutions should serve three functions when preparing students: the educational function,

based on the cognitive and intellectual capabilities needed to conceive broad 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 relevant 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 et al., 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.

If entry-level graduates are lacking in the skills deemed important for success in their chosen profession, job satisfaction could also be a problem worthy of consideration. Job satisfaction plays an important role in determining whether or not graduates remain in their chosen career. Ubom and Joshua (2004) stated that the main reason employees work is to satisfy their needs in life. Steps should be taken to ensure that graduates are satisfied with their chosen career path and that the employability skills needed have been attained. Therefore, to truly understand the skills needed in the workforce, relations between industry and higher education should be improved.

Dunne and Rawlins (2000) stated that a reason for graduates being ill-prepared to apply the transferable skills to their work is the fact that students often fail to realize the importance of

possessing transferable skills and assume that mastery of technical skills within disciplinary content is more important to Graduates than transferable skills. However, research has shown that skills such as solving problems, communicating effectively, working on a team, thinking critically, and possessing interpersonal skills are the employability skills most desired by employers. While these transferable and employability skills should assist every person entering the workforce, graduates are not prepared in these areas (Billing, 2003).

More often than not the Nigerian public considered students who take to vocational agriculture education as those who lack the ability to continue with formal academic studies in higher institutions. Sadly in Nigeria, social recognition and advancement in workplace depend to a large extent on the stock of academic degrees one has acquired. Because of poor public perceptions about blue-collar jobs the youth are not enthusiastic about vocational agriculture education. The few vocational agriculture schools available in Nigeria lack qualified teachers (Dike, 2009).

Statement of the Problem

Martin and Odubiya (1991) reported that the primary role of vocational agriculture teachers has always been to help students to have knowledge and skills in agriculture. Therefore, the teaching of agricultural science at the secondary school requires a sound background of skills in both theory and practical aspects by the teachers of agriculture (Ikeoji, Agwubike and Disi, 2007). The teaching of agriculture at the senior secondary school level should be geared toward acquisition of practical agricultural skills for meaningful living. Nyanabo and Ahukannah (2008) reported that graduates are required to have vocational skills for employment, but to sustain the job they require employability skills. Ikeoji, (1997a and 1998) observed that as

laudable as the objectives of agricultural and vocational education in Nigeria are, it may be impossible to achieve them due to poor delivery process of the programme at the senior secondary school. Egbule (1998) noted that the teaching and learning activities of vocational agriculture in the secondary schools are grossly insufficient to elicit the desired level of initiative and creativity in students. These university Agriculture Education graduates teaching Agriculture in Bauchi and Gombe state secondary schools of Nigeria should be appraised in an effort to clarify the issue. Thus, understanding the skills and traits requisite of a successful agricultural science teacher is critical (Roberts, Dooley, Harlin and Murphrey, 2006).

Purpose of the Study

The purpose of this study is to determine the employability skills of graduates teaching Agriculture science in secondary schools. The study seeks to determine graduates' perceptions regarding level of importance of identified employability skills and their self-perceived level of competence at performing those skills. Specifically the study will:-

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

Research Questions

The following research questions were formulated to guide the study

1. What are graduates' perceptions of the importance of the employability skills needed for Teaching Agricultural science in secondary schools?

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

Hypothesis

The following six null hypothesis were formulated to guide the study

Ho₁: There is no significant variability on the mean rating scores of graduate on the employability skills constructs.

Ho₂: There is no significant relationship between the mean perceptions of graduates on employability skills constructs needed for teaching Agricultural Science in secondary school.

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 graduates of Agriculture Education that are currently teaching Agricultural Science in secondary schools of Bauchi and Gombe states Nigeria. Purposive sampling technique was used to select school that offer Agricultural Science. In each selected school, some graduate teachers were purposively selected. The sample of the study was 50 graduates from each of Bauchi and Gombe state. 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.

Results

Research Question One

What are graduates' perceptions of the importance of the employability skills needed for Teaching Agricultural science in secondary schools?

Table 1: Graduates' Perception of the Importance of the Employability Skills Clusters needed for teaching Agricultural Science in Secondary Schools.

SN	ITEM	\bar{X}	S.E.	σ	S.E.	Remak
1.	Instruction	3.35	.067	.441	.062	Important
2.	Supervised Agricultural Experience	3.15	.071	.496	.071	Important
3.	School and Community Relations	3.21	.070	.490	.070	Important
4.	Professional Growth and Personal Qualities	3.33	.065	.425	.060	Important
5.	Computer Skills	3.04	.075	.560	.080	Important

\bar{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 graduates' perception of the importance of the employability skills (identified in the Literature) that are needed for teaching Agricultural Science in secondary schools were calculated and tabulated below in Tables 1. From Table 1 below, the graduates perceived that all the five (5) employability skills construct are important in teaching Agricultural Science in secondary schools of the study area, with construct means ranging from 3.04-3.35. This implies that the graduates have perceived that all the identified employability skills needed for teaching agricultural science in secondary schools are important. Therefore all the identified employability skills needed for teaching agricultural science should be included in the University Agricultural Education Curriculum for training of the Agricultural Science teachers, with emphasis on "planning the content of a lesson" and "demonstrating concern for the student".

Research Question Two

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

Table 2: Graduates' Perception of the Competence of the Employability Skills Clusters needed for teaching Agricultural Science in Secondary Schools.

SN	ITEM	\bar{X}	S.E.	σ	S.E.	Remak
1.	Instruction	3.35	.067	.441	.063	Competent
2.	Supervised Agricultural Experience	3.15	.071	.496	.071	Competent
3.	School and Community Relations	3.21	.070	.490	.070	Competent
4.	Professional Growth and Personal Qualities	3.33	.065	.425	.060	Competent
5.	Computer Skills	3.04	.075	.560	.080	Competent

\bar{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 graduates' perception of the competence at performing the employability skills (identified in the Literature) that are needed for teaching Agricultural Science in secondary schools were calculated and tabulated below in Tables 2. From Table 2 below, the graduates have perceived that they are competent in all the five (5) employability skills construct for teaching Agricultural Science in secondary schools of the study area, with construct means ranging from 3.04-3.35. This implies that the graduates have perceived that they are competent in performing the employability skills needed for teaching agricultural science in secondary schools. When teaching the undergraduate these identified skills, emphasis should be given to computer skills such as Database management and Graphics for instructional design where the graduates feel that they are less competent.

H₀₁: There is no significant variability on the mean rating scores of graduates on the employability skills constructs.

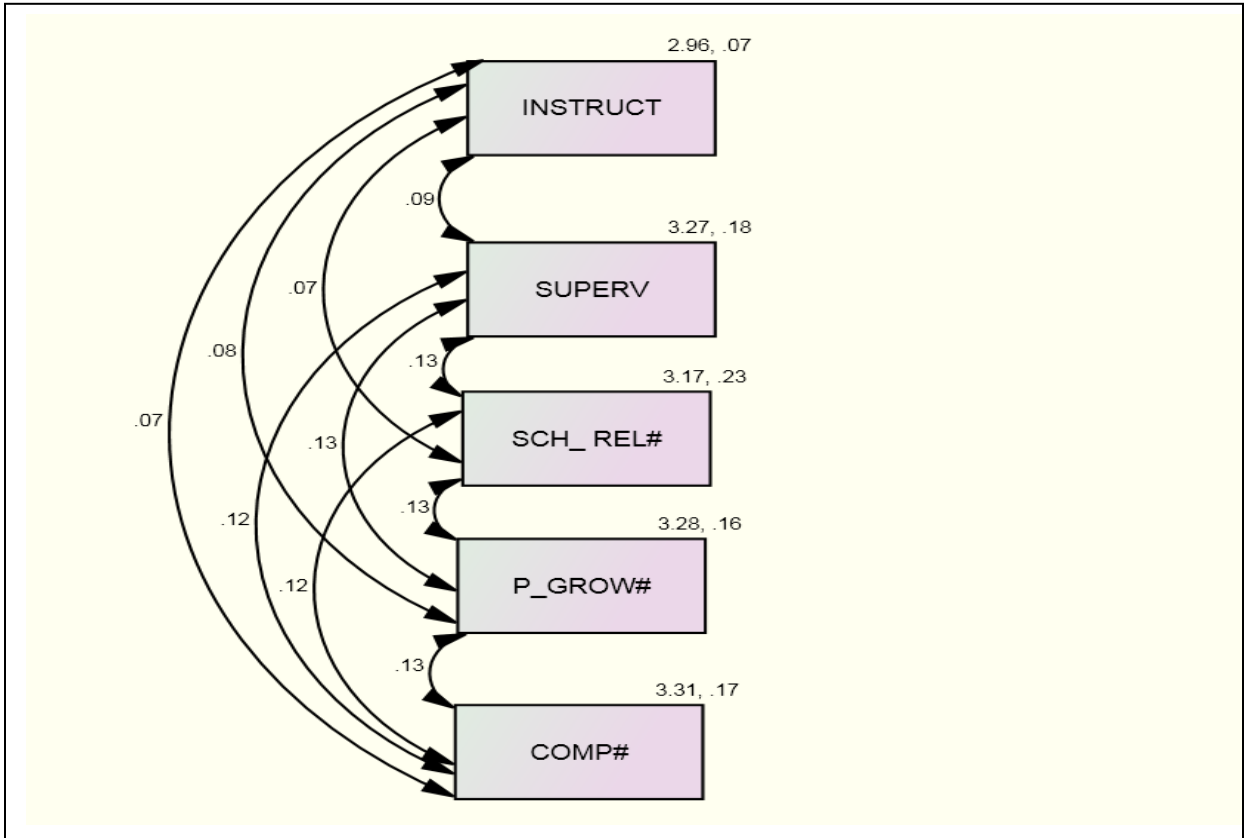


Figure 2: Employability Skills Perception Model Result of Graduates Agricultural Science Teachers

Where INSTRUCT = Instruction Construct
 SUPERV = Supervised Agricultural Experience
 SCH_REL = School & Community Relations
 P_GROW = Professional Growth & Personal Qualities
 COMP = Computer skills

The model result on the variability of the mean rating scores of graduates on the employability skills constructs as presented in Figure 2 shows that all the values of mean, variance and covariance indicate no significant difference at ($P < 0.05$). Therefore this implies

that the null hypothesis was not rejected. There was no significant variability within graduates' perception of employability skills construct of a successful Agricultural Science teacher in secondary school.

Ho₂: There is no significant relationship between the mean perceptions of graduates on employability skills constructs needed for teaching Agricultural Science in secondary school.

Table 3: Correlation Coefficient of Graduates Mean Perception on Employability Skills Construct needed for teaching Agricultural Science in Secondary School.

	Instruction	Supervised Agricultural Experience	School & Community Relations	Professional Growth & Personal Qualities	Computer Skills
Instruction	1				
Supervised Agric Experience	.771**	1			
School & Community Relations	.540**	.663**	1		
Professional Growth & Personal Qualities	.726**	.752**	.682**	1	
Computer Skills	.645**	.704**	.620**	.773**	1

** = There is significant relationship between construct at 0.005

The correlation (between the constructs) coefficient result on the graduates mean perception on the employability skills needed for teaching Agricultural Science in Secondary School as presented in Table 20 shows that all the values of the correlation between construct indicate significance at ($P < 0.005$). Therefore this implies that the null hypothesis was rejected. There was a significant positive relationship between graduates' mean perception on the five employability skills construct needed to successfully teach Agricultural Science in secondary school. That means as one construct is increasing, the other is also increasing.

Summary of the Findings

The following are the major findings of this study

1. The graduates have accepted that the employability skills identified needed for teaching agricultural science in secondary schools are important.
2. The graduates have accepted that they are competent in performing the employability skills identified as needed for teaching agricultural science in secondary schools.
3. There was no significant variability within graduates' perception of employability skills construct of a successful Agricultural Science teacher in secondary school.
4. There was a significant positive relationship between graduates' mean perception on the five employability skills construct needed to successfully teach Agricultural Science in secondary school. That means as one construct is increasing, the other is also increasing.

Discussion of Findings

The result also revealed that the graduates have perceived the employability skills needed for teaching agricultural science in secondary schools as important. This finding was supported by Davies (2008) reported that apart from certifications and a university degree, you need other skills for a successful career switch to a teaching job. Robinson (2008) also conducted a study to identify the employability skills deemed most important by Agriculture University graduates and their supervisors using a survey, the results showed that newly-hired graduates perceived problem-solving and motivation as most important to their jobs. All 67 skills evaluated by graduates were perceived to be “moderately important” to workplace success. Three of the four most important skills comprised the motivation-personal strengths construct. Specifically, “solving problems” is of major importance to graduates, while “identifying political implications of the decisions to be made” is the least important. Roberts,

Dooley, Harlin, and Murphrey, (2006) reported that respondents identified responsibility, internal motivation, creativity, enthusiasm, time management, patience, caring/understanding, planning/organizing skills, resourcefulness/flexibility, open-mindedness, and people skills as important traits of an effective Agricultural Science teacher.

The result also revealed that the graduates have perceived that they are competent in performing the employability skills needed for teaching agricultural science in secondary schools. This finding is consistent with Robinson (2006) who reported that Graduates perceived themselves to be at least competent at performing all 67 employability skills. Graduates were most competent with their “ability to work independently,” while they were least competent at “identifying political implications of the decisions to be made.” This finding was similar to the importance scale, as graduates perceived the political implications of their decisions to be of least importance to their success in the workplace. Roberts, Dooley, Harlin, and Murphrey, (2006) also reported that successful agricultural science teachers are competent in instructional knowledge, instructional skills, and instructional attributes. Career success is aided by competency in communication, character, and interpersonal skills (Zekeri, 2004). Robinson (2008) also reported the competence levels of employability skills that he also studied. Newly hired graduates saw themselves most competent at working independently, while their supervisors perceived motivation to be the newly hired graduates’ strongest skill. Both the graduates and their supervisors perceived identifying political implications of the decision to be made as being the weakest skill that new hires possess.

The result also revealed that there was no significant variability within graduates’ perception of employability skills construct of a successful Agricultural Science teacher in secondary school. This result implies that there was no significant variability within graduates’

perception of each of the employability skills construct as presented in the model. Instruction construct have a mean of 2.961, Supervised Agricultural Experience construct have a mean of 3.269, School & Community Relations construct have a mean of 3.173, Professional Growth & Personal Qualities construct have a mean of 3.283 and Computer Skills construct have a mean of 3.306. This implies that the graduates have agreed that each of the employability construct is equally important and contribute to the total employability skills required by a successful Agricultural science teacher of secondary school. This finding agree with that of (Roberts, Dooley, Harlin, and Murphrey, 2006) who reported in their findings that, a visual model was constructed to provide greater understanding of the competencies and traits required of successful agricultural science teachers. Given that seven categories were identified (Instruction; Student Organization; Supervised Experience; Program Planning and Management; School and Community Relations; Personal Traits; and Professionalism), a heptagon was chosen for the general shape of the model. The newly identified competency, “working with diverse groups” was deemed by the research team to transcend and interact with all seven categories. Thus, this competency was placed in the center of the heptagon with double arrows extending to each category.

The result also revealed that there was a significant positive relationship between graduates’ mean perception on the five employability skills construct needed to successfully teach Agricultural Science in secondary school. That means as one construct is increasing, the other is also increasing. This finding was in agreement with (Neathery, No Date) who reported that the analysis revealed significant correlations; the rating of each attitude toward science significantly correlated with science achievement beyond the .01 level of confidence. But the finding disagreed with that of (Sabaci, 2009) who reported that his results showed that there was

negative and low correlation between emotional exhaustion and organizational leadership ($r=-.178$), but when the other variables were controlled, the correlation between the variables was calculated to be ($r=-.111$). There was negative and low correlation between depersonalization and organizational leadership ($r=-.102$) but when the other variables were controlled, the correlation between the variables was calculated to be ($r=.046$).

Conclusion

Graduates 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 the influencing factor for their success.

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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