

# **Disparity In The Perceptions Of Trainers', Graduates' And Supervisors' On Employability Skills Of Agricultural Science Teachers In Nigerian Secondary Schools.**

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**ABSTRACT :** The purpose of this study was to determine the disparity in the perception of the graduates, trainers and supervisors on the employability skills of graduates teaching Agriculture science in secondary schools. Two research questions and four hypotheses guided the study. The design of this study was a survey research design. The area for this study was Bauchi and Gombe States of Nigeria. The population for this study includes all Agriculture Education graduates teaching Agric Science in secondary schools, their supervisors and trainers. Stratified purposive sampling was used to select 50 graduates, 25 supervisors each from Gombe and Bauchi states and 17 trainers, totalling 167 respondents. The instrument was a structured questionnaire which was validated and pilot tested to obtain the 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 there was no significant difference between the perception of graduates, supervisors and trainers on the importance of employability skills need by the graduate to be successful in teaching Agricultural Science in Secondary School but there was a significant difference in their perception of competence, with trainers contributing more to the difference. 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:** *Disparity In Perception, Graduates And Supervisor, Skills Of Agricultural Science, Teachers*

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## **1.0 INTRODUCTION**

One purpose of higher education is to graduate students who will become productive citizens. An integral aspect of being a productive citizen is being gainfully employed. Finding a job requires the acquisition of skills that employers report they seek in university graduates. These skills are defined as employability skills, key skills, core skills, soft skills, interpersonal skills, leadership skills and/or transferable skills (Fallows & Steven, 2000). There are various ways that students can learn these skills. They can be learned in the classroom, and through extracurricular activities (Espinoza, 1999).

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 to provide job-ready and training-ready entry-level employees. 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).

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 employers and graduates. 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).

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. Employers want to employ only graduate that are ready for the workplace, but research has shown that graduates are usually not equipped with the general and transferable skills necessary for employment as teachers and thus are not prepared to enter the workforce (Brown, Hesketh, & Williams, 2003). Thus, understanding the skills and qualities required of a successful agricultural science teacher is critical (Roberts, Dooley, Harlin and Murphrey, 2006).

### **1.1 Statement of the Problem**

Martin, Milne-Home, Barrett, Spalding and Jones (2000) suggested that, in addition to graduates, further research should consider other stakeholders' perceptions especially supervisors and trainers concerning employability skills. Supervisors have the best knowledge of the workplace and can foster skill development in higher education and their own organizations by incorporating the basic competencies in the selection, training, development, and retention of graduate. Therefore, an additional need exists to assess the University graduate's immediate supervisor and trainers to determine which employability skills are most important and whether or not the University graduates are utilizing their skills to the best of their 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. Teachers of agriculture need to be current with agricultural development and technology so that they can prepare the students for entry into university studies without neglecting vocational or occupational education (Abolaji and Reneau, 1988).

## **1.2 Purpose of the Study**

The purpose of this study is to determine the the disparity in the perception of the graduates, trainers and supervisors on the employability skills of graduates teaching Agriculture science in secondary schools. Specifically the study will:-

1. Differentiate the degree of prioritization of importance of employability skills among graduates, supervisors and trainers.
2. Differentiate the degree of prioritization of competence of employability skills among graduates, supervisors and trainers.

## **1.3 Research Questions**

The following research questions were formulated to guide the study

1. What are the differences in the degree of prioritization of importance of employability skills among graduates, supervisors and trainers?
2. What are the differences in the degree of prioritization of competence of employability skills among graduates, supervisors and trainers?

## **1.4 Hypothesis**

The following six null hypothesis were formulated to guide the study

Ho1: There is no significant difference between the responses of graduates, supervisors and trainers on the importance of employability skills needed for teaching Agricultural Science in Secondary School.

Ho2: There is no significant difference between the responses of graduates, supervisors and trainers on the competence of Graduate on the employability skills needed for teaching Agricultural Science in Secondary School.

Ho3: There is no significant difference between the degree of prioritization in importance of employability skills among graduates, supervisors and trainers.

Ho4: There is no significant difference between the degree of prioritization in competency of employability skills among graduates, supervisors and trainers.

## **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 graduates of Agriculture Education that are currently teaching Agricultural Science in secondary schools of Bauchi (64 teachers) and Gombe states (87 teachers), supervisors (77 in Gombe state and 82 in Bauchi state) and

trainers of these teachers. The sampling technique for this study was stratified purposive sampling. The sample of the study was 50 graduates from each state (58% from Gombe and 78% from Bauchi), 25 supervisors from each state (32% from Gombe and 30% from Bauchi) and 17 trainers, totalling 167 respondents. In the employee's stratum, purposive sampling was used to select school that offer Agricultural Science. In each selected school, some graduate teachers purposively selected. 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 by three (3) experts 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 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 differences in the degree of prioritization of importance of employability skills among graduates, supervisors and trainers?

**Table 1:** Degree of Prioritization of Importance of Employability Skills Clusters among Graduates, Supervisors and Trainers.

S/ No	Employability Skills Clusters	Graduates		Supervisors		Trainers	
		X̄	Rank	X̄	Rank	X̄	Rank
1.	Instruction	3.35	1	3.36	1	3.27	2
2.	Supervised Agricultural Experience	3.15	4	3.03	4	3.29	1
3.	School and Community Relations	3.21	3	3.21	3	3.16	4
4.	Professional Growth and Personal Qualities	3.33	2	3.31	2	3.27	2
5.	Computer Skills	3.04	5	2.90	5	3.12	5

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)

In order to answer this research question, mean and the rank order of the questionnaire item were calculated for the graduates, supervisors and the trainers on the importance of the employability skills needed for teaching Agricultural Science in secondary schools as

tabulated below in Tables 1. From the Table graduates, supervisors and the trainers have ranked the five (5) employability skills construct in the order of their importance to the graduates in teaching Agricultural Science in secondary schools of the study area. The graduates and supervisors ranked equally “Instruction” as 1st, “Professional Growth and Personal Qualities” as 2nd, “School and Community Relations” as 3rd, “Supervised Agricultural Experience” as 4th and “Computer Skills” as the 5th. But the trainers the employability skill constructs in different order with Supervised Agricultural Experience ranked as 1st, “Instruction” and “Professional Growth and Personal Qualities” were ranked 2nd, “School and Community Relations” was ranked 4th and finally “Computer Skills” was ranked 5th. All the three respondents ranked “Computer Skills cluster” as the least important employability skill in teaching Agricultural science in secondary schools.

### 3.2 Research Question Two

What are the differences in the degree of prioritization of competence of employability skills among graduates, supervisors and trainers?

**Table 2:** Degree of Prioritization of Competences of Employability Skills Clusters among Graduates, Supervisors and Trainers.

S/ No	Employability Skills Clusters	Graduates		Supervisors		Trainers	
		X̄	Rank	X̄	Rank	X̄	Rank
1.	Instruction	3.35	1	3.17	2	2.96	1
2.	Supervised Agricultural Experience	3.15	4	2.89	4	2.94	2
3.	School and Community Relations	3.21	3	3.08	3	2.86	4
4.	Professional Growth and Personal Qualities	3.33	2	3.18	1	2.89	3
5.	Computer Skills	3.04	5	2.79	5	2.44	5

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)

In order to answer this research question, mean and the rank order was calculated of the questionnaire items responses by the graduates, supervisors and the trainers of the competence of the graduates in performing the employability skills needed for teaching Agricultural Science in secondary schools and tabulated below in Tables 2. From the table graduates, supervisors and the trainers’ have ranked the graduates competency in the employability skill constructs that are important to the graduates in teaching Agricultural Science in secondary schools of the study area. The graduates ranked Instruction as 1st, “Professional Growth and Personal Qualities” as 2nd, “School and Community Relations” as 3rd, “Supervised Agricultural Experience” as 4th and “Computer Skills” as the 5th. The supervisors ranked differently from graduates with “Professional Growth and Personal Qualities” as 1st, “Instruction” as 2nd, “School and Community Relations” as 3rd, “Supervised Agricultural

Experience” as the 4th and “Computer Skills” as the 5th. Then trainers also ranked their own different from the two above, with “Instruction” as 1st, “Supervised Agricultural Experience” as 2nd, “Professional Growth and Personal Qualities” as the 3rd, “School and Community Relations” as the 4th and finally “Computer Skills’ as the 5th. All the three respondents ranked “Computer Skills cluster” as the least important employability skills in teaching Agricultural science in secondary schools.

### 3.3 Hypothesis

**Ho1:** There is no significant difference among the perception of graduates, supervisors and trainers on the importance of employability skills need for teaching Agricultural Science in Secondary School.

**Table 3: One-way ANOVA Result of Graduates, Supervisors and Trainers Perception of the Importance of Employability Skills needed for Teaching Agricultural Science in Secondary School.**

Source	DF	SS	MS	F-Sig.
Factor	2	0.0292	0.0146	0.37 <sup>NS</sup>
Error	261	10.2654	0.0393	
Total	263	10.2946		

The ANOVA result for the three groups (graduates, supervisors and trainers) as presented in Table 16 gave F-Sig. value of 0.37<sup>NS</sup> which indicate that it is not significant. Therefore this implies that the null hypothesis was not rejected. There was no significant difference among the perception of graduates, supervisors and trainers on the importance of employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School.

**Ho2:** There is no significant difference among the perception of graduates, supervisors and trainers on the competence of employability skills need for teaching Agricultural Science in Secondary School.

**Table 4: One-way ANOVA Result of Graduates, Supervisors and Trainers Perception of the Competence of Employability Skills needed for teaching Agricultural Science in Secondary School.**

Source	DF	SS	MS	F-Sig.
Factor	2	6.8371	3.4186	92.84 <sup>***</sup>
Error	261	9.6105	0.0368	
Total	263	16.4476		

\*\*\* = significant at 0.001 level

**Table 5: Multiple Comparisons Using Scheffe's Test**

(I) mean	(J) mean	Mean Difference (I-J)	Std. Error
Graduates	Supervisors	.17984*	.02893
Graduates	Trainers	.39370*	.02893
Supervisors	Trainers	.21386*	.02893

\*The mean difference is significant at the 0.05 level.

**Table 6: Scheffe's Test Mean Order**

Scheffe <sup>a</sup>		Subset for alpha = 0.05		
Mean Order	N	Graduates	Supervisors	Trainers
Trainers	88	2.8805		
Supervisors	88		3.0943	
Graduates	88			3.2742

a-Uses Harmonic Mean with Sample Size = 88.

The One-Way ANOVA result for the three groups (graduates, supervisors and trainers) as presented in Table 4 gave F-Sigificant value of 92.84 at ( $P < 0.001$ ) which indicate significant difference. Therefore this implies that the null hypothesis was rejected. Since a significant difference existed among the perception of graduates, supervisors and trainers on the competence of graduates in performing the employability skills need by the graduates, there is need for further test to determine the source of the difference. This can be done by using a post-hoc test like Scheffe's Test. The multiple comparisons scheffe's test result among the three groups (graduates, supervisors and trainers) as presented in Table 5 gave a mean difference value of Graduates - Supervisors (.17984\*), Graduates - Trainers (.39370\*) and Supervisors - Trainers (.21386\*) which indicate significant differences at ( $P < 0.05$ ). This also shows that the source of difference is significant among the groups. There was a significant difference in favour of trainers to the contribution of graduates, supervisors and trainers on the differences that existed in the competence of graduates in performing the employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School. This was further confirmed by Scheffe's Test Mean Order result for the three groups (graduates, supervisors and trainers) as presented in Table 6 which gave a means value of Trainers (3.2742), Supervisors (3.0943) and Graduates (2.8805) at ( $P < 0.05$ ) which indicate that Trainers significantly contributed more to the source of difference that existed in the competence of graduates in performing the employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School.

**Ho3:** There is no significant difference between the degree of prioritization in importance of employability skills among graduates, supervisors and trainers.

**Table 7: T-test Result of Graduates, Supervisors and Trainers degree of prioritization on importance of Employability Skills needed for teaching Agricultural Science in Secondary School.**

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	df	t-Sig
Pair 1	graduates - supervisors	.010	.183	.020	87	0.493 <sup>NS</sup>
Pair 2	supervisors - trainers	.016	.222	.024	87	0.673 <sup>NS</sup>
Pair 3	graduates - trainers	.026	.191	.020	87	1.255 <sup>NS</sup>

NS = No Significant Difference between the paired groups

The t-test result for the three groups (graduates, supervisors and trainers) as presented in Table 7 gave t-Sig. value of 0.493NS for Pair 1, 0.673 NS for Pair 2 and 1.255 NS for Pair 3 which indicate not significant. Therefore this implies that the null hypothesis was not rejected. There was no significant difference between the degree of prioritization of graduates, supervisors and trainers on the importance of employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School.

**Ho4:** There is no significant difference between the degree of prioritization in competency of employability skills among graduates, supervisors and trainers.

**Table 8: T-test Result of Graduates, Supervisors and Trainers degree of prioritization on Competence of Employability Skills needed for teaching Agricultural Science in Secondary School.**

		Paired Differences				
		Mean	Std. Deviation	Std. Error Mean	df	t-Sig
Pair 1	graduates - supervisors	.180	.140	.015	87	12.088 <sup>***</sup>
Pair 2	supervisors - trainers	.394	.165	.018	87	22.428 <sup>***</sup>
Pair 3	graduates - trainers	.214	.210	.022	87	9.552 <sup>***</sup>

\*\*\* = There is Significant Difference between the paired groups at 0.001

The t-test result for the three groups (graduates, supervisors and trainers) as presented in Table 8 gave t-Sig. value of 12.088\*\*\* for Pair 1, 22.428\*\*\* for Pair 2 and 9.552\*\*\* for Pair 3 which all indicated significant difference. Therefore this implies that the null hypothesis was rejected and the alternate hypothesis retained. There was a significant difference between the degree of prioritization of graduates, supervisors and trainers on the competence of graduates in performing the employability skills needed by the graduates to be successful in teaching Agricultural Science in Secondary School.



#### 4.0 DISCUSSION OF FINDINGS

The result also revealed that there was no significant difference between the perceptions of graduates, supervisors and trainers on the importance of employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School. This finding agreed with Arensdorf (2009) who describes the results of his analysis of variance on the perceived importance of employability skills by construct according to participants, which shows that there was no statistical significant difference between the control and two treatment groups of participants were shown for the constructs with regard to importance. Therefore, research hypothesis one is rejected.

The result also revealed that there was a significant difference between the perception of graduates, supervisors and trainers on the competence of graduates in performing the employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School. This finding agreed with Robinson (2006) who reported that Graduates rated 60 of the 67 employability skills higher on the important scale than the competence scale. This finding is consistent with Radhakrishna and Bruening's (1994) conclusion that entry-level graduate deem employability skills more important than their ability to perform the skills. Arensdorf (2009) also reported that using one-way analysis of variance (ANOVA) revealed that there were no significant differences in the perceived competence of the six employability skills between the three groups of the study participants.

There was a significant difference in favour of trainers to the contribution of graduates, supervisors and trainers on the differences that existed in the competence of graduates in performing the employability skills identified as needed by the graduates to be successful in teaching Agricultural Science in Secondary School. This finding was supported by the finding of (Sabaci, 2009) who reported that the results of the Scheffe test showed that managers and teachers with pre-license degrees express lower levels of emotional exhaustion than those with first degrees and masters degrees. Neathery (No Date) also reported that the Scheffe test applied to the results of achievement among the three ability groups produced significant difference. The students in the high ability group performed with greater success than the average and low ability groups. The performance by the high ability group showed a difference in mean scores from the performance of the low ability groups.

Trainers significantly contributed more to the source of difference that existed in the competence of graduates in performing the employability skills identified as needed by the graduates to be successful in teaching Agricultural Science in Secondary School. This finding agreed with that of (Brasil, 2011) that compared the contribution of each ethnic group on the social adjustment of teenagers and Ogoni seem to have the highest influence on the teenagers' social adjustment. (Omenyi , Agu, and Odimegwu, 2011) also reported that the post hoc (scheffe) test carried out to find out the direction of the difference, revealed significance value .000 for both comparison of college and polytechnic, and college and university. The significance value is less than the significance level 0.05, as such; the hypothesis of no difference was rejected, indicating that there is a significant difference between college students' connectedness and polytechnic students' connectedness on one hand and between the College and the university students on another

The result also revealed that there was no significant difference between the degree of prioritization of graduates, supervisors and trainers on the importance of employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School. This has agreed with the finding of Arensdorf (2009) who reported that, the t-test revealed that even though differences occurred with respect to participants' and their supervisors' perceptions of problem-solving and teamwork skills, they were not statistically significant. This is a positive non-significant finding because we can conclude that participants and their supervisors are consistent in their interpretation of what skills are important to the employee's

current position. He therefore concluded that employers and employees are also consistent in their interpretation of the employability skills most important to the employees' current jobs. The result also revealed that there was a significant difference between the degree of prioritization of graduates, supervisors and trainers on the competence of graduates in performing the employability skills need by the graduates to be successful in teaching Agricultural Science in Secondary School. These findings are inconsistent with employer perceptions that graduates were ill-prepared for their first job (Graham, 2001a).

## **5.0 CONCLUSION**

Graduates, supervisors and 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. Therefore by continuing to solicit feedback particularly from supervisors, the curriculum can be modified to provide agricultural education students the skills and abilities necessary to be employable ready graduates.

## **6.0 RECOMMENDATIONS**

Based on the findings of the study it is recommended that

1. A competency-based approach to University education is necessary and it should be feasible to meet the workplace demands.
2. All the employability skills should be retained or included in the curriculum.
3. Agricultural Education students must be given the opportunity to apply the science they have learned in their course work. That means more "hands-on" should be incorporate in the class room teaching.

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