

IMPACT OF INFORMATION ON SECONDARY SCHOOL STUDENTS' KNOWLEDGE, PERCEPTION AND ATTITUDE TOWARDS AGRICULTURAL CAREER IN OGUN STATE, NIGERIA

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ABSTRACT

Youths' interest in Agriculture is daily declining due to lack of awareness and information about the prospects in agriculture, leaving the nation's agricultural sector in the hands of the ageing population. This study examined the impact of agricultural career information on the knowledge, perception and attitudes of secondary school students towards taking agriculture, as a career choice. A purposive sampling technique was used to select 136 school science students in senior secondary schools and structured questionnaire was used to elicit information on their knowledge, perception and attitudes with respect to career in agriculture. Data was collected for pre-test (baseline) and post-test (end-line) after the respondents had participated in an intervention tagged "Agricultural Career Information Program" and analyzed using descriptive and inferential (using t-test at $p \leq 0.05$) statistics. Result showed that the students had a significant change in attitude towards choosing agriculture as a career choice after being exposed to the intervention program, but no significant change in the students' knowledge and perception after being exposed to the program. Agricultural career counselling should be intentional in the education of the youths, in order to influence their attitude and eventual choice of a career in agriculture. The study recommends that career guidance be included in the curriculum of primary and secondary school students, with a focus on agricultural sector. Information sessions on the agricultural sector can also be organized to improve students' knowledge, attitude and perception in order to direct their choice towards agriculture.

Key words: Agricultural Career Information Program (ACIP), career choice and counselling, profession

INTRODUCTION

Agriculture being the main economic activity in the Nigerian rural sector has suffered a steady decline in its productivity over the years. It has suffered neglect from demographic shifts, characterized by the changes in the economic structure of the federation as fuelled by the huge revenues from crude oil exports (Adebo and Sekumade, 2013). Over the past twenty years, value added per capita in the agriculture has risen and Nigeria has lost USD 10 billion in annual export opportunity from some cash crops (FAO, 2020). This decline is largely heightened by increase in the rural-urban migration of youths and the ageing of the farmer population in the country (Adebo and Sekumade, 2013). A lot of young people migrate to the urban areas seeking for white-collar jobs and those already in the urban areas do the same by choosing career paths in law, medicine, ICT and other non-agricultural professions that they believe to be more stable and less back breaking, leaving the agricultural sector in the hands of old peasant farmers that are set in their ways and unwilling to learn new methods of carrying out farm operations. Alarima (2018)

opined that there are certain push factors that are responsible for youths not being interested in agriculture. This was earlier clarified by Adebo and Sekumade (2013), perceiving agriculture as an exclusive activity of the rural sector with lack of basic social infrastructure and amenities, electricity, pipe borne water, educational and health care institutes, good roads, financial institutions among others, making it unattractive to live in. There is need to re-engage youths in formation of agricultural policies, to be able to address the issues that are affecting them. Moreover, older farmers are not likely to adopt new technologies that are needed to suitably increase agricultural productivity that will allow most developing countries to compete effectively for food security (FAO, 2014).

Despite the enormous prospects offered by the agriculture profession in the country, enrolments in agriculture related programs are one of the lowest (Adebo and Sekumade, 2013). Job compensation and benefit has been identified as a significant determinant for career choice and job satisfaction especially among young people (Dlamini, 2017). Agriculture is worse hit by this phenomenon as

interest in agriculture as a career choice is fast declining even among high school graduates and agriculture is burdened with misconceptions due to lack of information and awareness (Kruijssen, 2009; Olatunji *et al.*, 2012). Olatunji *et al.* (2012) blamed lack of information on agriculture on the low students' choice of a career path in agriculture. One of the mandates of the establishments of the Agricultural Development Program (ADP) in Nigeria is to educate and train the youths on agriculture, so that agriculture will not go into extinction. However, the situation currently facing the agricultural sector is one, where most youths prefer white-collar jobs and are not willing to face the crude ways of doing agriculture. Despite the fact, that agribusiness (which includes agricultural activities from farm to fork) is broader than just farming of crops and livestock, the young ones are so engrossed with the search of easier alternatives such as internet business, motorcycle transport popularly called "okada-riding" business, and other demeaning jobs that are not as prestigious as the different opportunities in agribusiness. Several researchers have concluded that it is imperative to educate our youths in order to effect a change in their attitude towards agriculture and ultimately attract them to pursue careers and/or invest in the agricultural industries (Luckey, 2012; Adebo and Sekumade, 2013; FAO, 2014; Ajani *et al.*, 2015).

Aging of farmers and lack of skilled labour has led to lower productivity, equally older farmers are resistant to new innovations, and the combination of these has therefore weakened the economy and poses a threat to food security (Ayinde, 2010). Interactions with the respondents of this study brings to bare that, it is imperative to educate and to broaden our youth's perspective of agriculture, and ultimately attract them to pursue careers or/and invest in the agricultural industry, though little work has been done on the ways/ methods that this can be achieved in Nigeria. This study was done to evaluate the impact of the Agricultural Career Information Programme (ACIP) on the knowledge, perception and attitude of in-school youth with respect to taking agriculture as a career.

MATERIALS AND METHODS

This study, using a quasi-experimental design, evaluated the knowledge, perception and attitude of secondary school students in Ogun State, Nigeria towards agriculture. It then administered an intervention (Agricultural Career Information Program), and then evaluated the participants' knowledge, perception and attitude towards agriculture again, after the intervention. The impact of the study was evaluated by administering questionnaires to the students before and after the intervention (ACIP), and the data obtained was compared, analyzed and then documented in order

to add to the body of knowledge for other future researches. The multi-stage sampling technique was employed in selecting the respondents for this study. First, Ikenne Local Government Area (LGA) was selected for its prevalence in agricultural activities, it was further stratified into three existing major towns: Ilishan, Ikenne and Iperu, permission was requested to survey students in two schools per selected city, for a total of six schools, however the local government education inspector gave approval to only four schools. The total number of students in science class in each of the four schools (148) was enumerated. The 148 students were invited and consented to participate in the intervention program which was hinged at exposing the young ones to various opportunities and prospects in the field of agriculture, but only 136 students eventually responded to the questionnaire. The training showcased successful entrepreneurs, farmers, agricultural engineers, lecturers in various disciplines of agriculture, sharing their success stories without leaving out their past failures, backgrounds, which did not eventually determine their successes. Primary data was collected from the students, using well-structured questionnaire, a week before and a week after they attended the training.

The instrument was developed and used to collect information from the respondents before (baseline) and after (endline) the intervention. The instrument was designed following a similar format used by Luckey (2012). However, modifications were made in order to make the survey instrument more suited to the current study. The research instrument included a demographic section, a knowledge assessment section, a perception assessment section and an attitude assessment section. The instrument was subjected to reliability test and the average Chronbach Alpha score of 0.79 was obtained, which indicated 79% reliability and thus adequate for the survey.

The demographic variables included sex, age, class, and respondent's prior experience with agriculture. The knowledge section of the pre- and post-test instrument directed the respondent to answer questions regarding basic agricultural knowledge that they were expected to know. The perception section was divided into two parts. In the first part, the students were expected to rank a given set of common occupations in Nigeria, on a three-point Likert scale, as *most prestigious*, *somewhat prestigious* and *least prestigious*. In the second part, the respondents were given a list of agricultural perception statements to which their responses were ranked on a five-point Likert scale as *strongly agree*, *agree*, *undecided*, *disagree*, or *strongly disagree*. In the attitude assessment section, respondents' attitudes were measured using a three-point scale. Knowledge level, attitude and perception

were measured using constructs. This study used a number of analytical tools based on its objectives. Data on participants' knowledge, perception and attitude from both the pre- and post-test instruments were used to examine the current knowledge, perception of the participants and young peoples' attitude towards taking agriculture as a career. The data also helped in comparing the knowledge, perception, and attitude of the students concerning agriculture as a career choice before and after exposure to the programme. This was done using descriptive statistics such as frequency distribution and percentages. The *t*-test was used to test the difference in the mean of the constructs measuring the respondents' knowledge, perception and attitude before and after the intervention. This was done to assess the whether the ACIP intervention made significant impact on the respondents' orientation regarding agriculture as a career choice.

RESULTS AND DISCUSSION

From Table 1, 39.0% of the respondents were male while 61.0% were female. Majority of the respondents were between the age ranges of 14-16 years and had some form of prior experience of agriculture. This implied that the students were in their productive ages and they are open to interventions that could shape their career choices.

A 2-point reference scale construct containing 7 items (Table 2) was used to measure knowledge both at the baseline and endline. Further results in Table 2, indicating the items computed to measure

respondents agricultural knowledge level show that 99.3% of the participants agreed that agriculture is the science and art of cultivating the soil for production of crops and raising of livestock, 97.8% believed that agriculture is the source of food, 89.7% believed that it is a source of clothing, 97.8% believed that it is a source of shelter, 80.1% stated that they had engaged in agricultural activities previously, 95.6% believed that there are many job opportunities in agriculture, while only 14.0% believed that agriculture impacted their daily lives. This implied that the students had a good understanding of agriculture and what they stand to benefit in the profession, further investigations, thereafter show the reasons why agriculture is not considered as a career choice. This corroborated with Mukembo *et al.* (2014) who opined in a study in Uganda that youths' understanding of practical agriculture does not necessarily determine their choice in it.

As shown in Table 3, the mean score for the respondents' pre-intervention knowledge was 12.80 ± 0.83 out of a possible score of 14 (indicating 91.4% level). Following the Ashur (1977) and Agbede *et al.* (2019) criteria which indicate that measurement scale and proportion or scores (for constructs) greater than 70% is considered high and an adequate level with respect to the variable being measured, the knowledge of agriculture among the respondents prior to exposure to the intervention (ACIP) is high as presented in Table 3. This observation is corroborated with the earlier submission that the respondents were well exposed to the knowledge of agriculture. This shows that knowledge after the exposure, did not really change even after the intervention program. Agriculture is an ancient profession whose benefits are seen and felt on a daily basis, but exposing the students to wider range of prospects in the field would do a lot of help in not sidelining the profession alongside other assumed rewarding careers.

Table 1: Demographic characteristics of respondents

Variable	Options	Frequency	Percent
Age	< 14	10	7.4
	14-16	111	81.6
	> 16	15	11.0
Sex	Male	53	39.0
	Female	83	61.0
Have participated in any form of agricultural activities	Yes	114	83.9

Source: Field Survey, 2019

Table 2: Summary of pre-intervention (baseline) responses to agricultural knowledge statements by respondents (*n* = 136)

Agricultural knowledge assessment questions	Yes (%)	No (%)	I do not know (%)
Agriculture is the science and art of cultivating the soil for production of crops and raising of livestock	99.3	0	0.7
Agriculture affects me daily	14.0	81.6	4.4
Agriculture is the source of food	97.8	0.7	1.5
Agriculture is a source of clothing	89.7	5.1	5.1
Agriculture provides shelter	97.8	1.5	0.7
I have engaged in agricultural activities previously	80.1	16.2	3.7
There are many job opportunities in agriculture	95.6	1.5	2.9

Source: Field Survey, 2019

Table 3: Descriptive result of the means of the various measured variable constructs before and after intervention (*n* = 136)

Variable	<i>n</i>	Maximum	Minimum	Mean \pm standard deviation
Knowledge: Baseline	136	14	11	12.80 \pm 0.83
Knowledge: End-line		14	10	12.93 \pm 0.80
Perception: Baseline	136	72	40	61.21 \pm 9.13
Perception: End-line		72	38	62.08 \pm 9.32
Attitude: Baseline	136	10	2	6.82 \pm 2.46
Attitude: End-line		10	4	8.54 \pm 2.01

Source: Field Survey, 2019

A 4-point reference scale construct containing 18 items was used to measure perception both at the baseline and endline. As shown in Table 4, the mean score for the respondents' pre- intervention perception was 61.21±9.13 out of a possible score of 72 (indicating 85.0% level which is apparently high/good). Further result in Table 4, indicating the items computed (and dichotomized) to measure respondents' agricultural perception show that majority of the respondents had positive perception with regards to agriculture as a career. Most of them perceived agriculture to be an interesting profession (98%), which provides employment security (89%), give room for self-employment (92%), important to national development (91%), ensure food security (93%) and a career that literate youth can thrive in (84%). This implies that the participants have an idea of the prospects that are in the field of agriculture and if properly guided, their paths could be tailored towards choosing agriculture as a career. Given that attitudes are more likely to correspond with behaviour; and in most cases, attitude influences a broad range of human behaviours (Aphunu and Atoma, 2010), the likelihood, that the respondents of this research, will pursue a career in agriculture in the nearest future is very high; all things being equal.

A 2-point reference scale construct containing 5 items was used to measure respondents' attitude at both the baseline and endline. As shown in Table 5, the mean score for the respondents' pre- intervention

Table 4: Summary of pre-intervention (baseline) responses to agricultural perception assessment statements by respondents (n = 136)

S/N	Agricultural perception assessment questions	Agree (%)	Disagree (%)
1.	When I hear the word agriculture, I see it as positive	90.5	9.5
2.	Agriculture is an interesting topic	97.8	2.2
3.	Practicing agriculture is a great way of life, i.e., it is rewarding	95.6	4.4
4.	Agriculture provides employment security	89.0	11.0
5.	Agriculture provides travel opportunities	75.0	25.0
6.	It provides opportunity for career development	90.5	9.5
7.	It gives room for self-employment, i.e., you can be your own boss	91.9	8.1
8.	It is important for national development	91.2	8.8
9.	Agriculture builds character	77.2	22.8
10.	It is important for national and world food security	93.4	6.6
11.	When I hear the word agriculture, I see it as negative	19.2	80.8
12.	It provides low income	15.4	84.6
3.	It is dirty work and includes manual labour	26.4	73.6
14.	It is a job for the poor, less-privileged, dropouts, and illiterates	19.2	80.8
15.	It is a job for old people	16.2	83.8
16.	It reduces social status	24.3	75.7
17.	It is boring	14	86
18.	It is a form of punishment	8.1	91.9

Source: Field Survey, 2019

attitude was 6.82 ± 2.46 out of a possible score of 10 (indicating 68.2% level which is a bad attitude). Further result in Table 5, indicating the items computed to measure respondents attitude towards agriculture as a career showed that 86.0% of the respondents stated that they would like to learn more about agriculture, 80.1% felt that it was important for youths like themselves to learn about agriculture, 52.9% stated that they would like to invest in agriculture in the future, 55.9% stated that they would like a career in agriculture, and 64.0% stated that they would like to own a farm in the future. These are pointers to the turn of events at graduation of non-agriculture degree students that, as they now diversify into agriculture as a career even without formal training in agriculture. This follows a submission by Nlerum and Babatunde (2019) that young adults who venture in agriculture are not necessarily trained in such.

Table 6 shows the result of the *t*-test at 5% level of significance. After the intervention, the mean values for the construct measuring respondents' knowledge, perception and attitude increased to 12.94±0.80, 62.08±9.32 and 8.54±2.02, respectively. The result shows an insignificant change in the respondents' knowledge and perception towards agriculture, at *p* = 0.948 (0.35) and 0.895 (0.38), respectively, and a significant change in their attitude towards agriculture as a career choice, at a level of *p* = 0.02. Most of the respondents have been exposed to agriculture prior to this study and this influenced their knowledge and perception of agriculture. This may be the reason why the values for these variables were high and the intervention did not make much difference. This is unsurprising given that Ikenne LGA is an agrarian community.

The respondents' perception of agriculture did not also change significantly after the intervention, although the intervention had an obvious impact on the respondents' perceived assessment of selected agriculture-related professions. The attitude towards agriculture among the respondents, prior to exposure ACIP intervention is relatively low irrespective of their knowledge and perception. The respondents' demographics may be a contributing factor to the attitude since majority of them are females and generally agriculture is regarded as a male-oriented profession. The intervention had a significant positive impact on the attitudes of the respondents.

Table 5: Summary of responses to pre-intervention (baseline) to attitude assessment statements (n = 136)

S/N	Attitude assessment statements	Yes (%)	No (%)	Maybe (%)
1.	I would like to learn more about agriculture	86.0	6.6	7.4
2.	I feel that it is important for youths like me to learn about agriculture	80.1	5.1	14.7
3.	I would like to invest in agriculture in the future	52.9	18.4	28.7
4.	I would like a career in agriculture	55.9	18.4	25.7
5.	I would like to own a farm in the future	64.0	11.0	25.0

Source: Field Survey, 2019

Table 6: Inferential table (result of paired sample *t*-test)

Variable	Maximum point on scale of measure	Mean	<i>t</i> -value	Sig. (2-tailed)	N	SD
Knowledge: Baseline	14	12.8043	0.948	0.348	136	0.83319
Knowledge: End-line		12.9348				0.80006
Perception: Baseline	72	61.2174	0.895	0.375	136	9.13337
Perception: End-line		62.0870				9.32101
Attitude: Baseline	10	6.8261	2.265*	0.028	136	2.46129
Attitude: End-line		8.5435				2.01887

*Significant at $p < 0.05$; Source: Field Data 2019

CONCLUSION

Assessing how effective the curriculum is in determining the economic relevant career choice (such as agriculture) of the secondary school level students in Nigeria has become pertinent and a subject for research focus. In this study, selected in-school youth were exposed to career counselling intervention and assessed for its impact on their knowledge, perception and attitude towards agriculture as a career. The respondents showed good knowledge and perception but poor attitude towards agriculture as a career at baseline; however, their attitude improved after intervention. This shows a challenge with the mindset of the participants and has nothing to do with their exposure to prospects in agriculture. The study concluded that career counselling and mentoring that is deliberately focused on agriculture, has a significant effect on the attitudes of secondary school students and in changing their orientation about agriculture and its career opportunities especially for female youth.

Therefore, career counselling, mentoring and guidance should be intentional in the education of the youth, especially before the senior secondary school level, in order to influence their attitude, and eventual choice of a career in agriculture. This could be done in-school, by including agricultural career counselling/mentoring/guidance in the curriculum of primary and secondary school students, or out of school by organizing programs that focuses on the exposure of high school students and youths on the prospects and opportunities in agriculture, that are similar and even better than the one used in this research, to which these students would be invited.

For policy action, the government, via the ministry of education, should include career counselling/guidance focused on agriculture in the curriculum of primary and secondary schools. Promoting agriculture to the youths from primary school level would ensure that we have youths who would grow up to replace the aged-farmer population and thus contribute to food security, reduce rural-urban migration and unemployment.

Future interventions should, beyond ACIP, focus on mentoring programmes, agro-tourism and exposure to modern agricultural technologies to facilitate the promotion of agriculture as a fulfilling career to youth. There should also be showcasing of other possible units/niches of agriculture that are unexplored or under-explored in Nigeria, and that the willing youth could venture into and become successful in. The benefits of agriculture as a fulfilling career path needs to be promoted.

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