

# Influence of Agricultural Public Relations on Secondary School Students' Interest, Choice and Achievement in Agricultural Science in Benue State, Nigeria

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## Abstract

Agricultural science taught in secondary schools is faced with challenges of lack of interest and low enrolment due to lack of awareness on the prospects it holds to students. The main purpose of this study was to investigate Influence of agricultural public relations on secondary school students' interest, choice and achievement in agricultural science in Benue State, Nigeria. The study was guided by four objectives, questions and null hypotheses. The study adopted correlation design. The total population for the study was 11,381 consisting of 347 teachers of Agriculture, 24 Guidance Counsellors and 11,010 Upper Basic 9 students with sample size of 386. The three instruments used for data collection were titled Agricultural Public Relations Questionnaire (APRQ), Agriculture Achievement Test (AAT) and Interest Inventory in Agriculture (IIA) were validated by five experts for face and content validity and were trial-tested on 30 respondents. Split-half, Cronbach-Alpha and Kuder Richardson 21 methods of reliability were used to obtain reliability coefficients of 0.988, 0.990 and 0.713 for APRQ and IIA /AAT respectively. The data were analyzed using Pearson Product Moment Correlation Coefficient-PPMCC ( $r$ ) to answer the research questions and null hypotheses tested at 0.05 level of significance. The findings of the study revealed moderate to high positive relationship between Agricultural Public Relations and choice/ students' interest in Agricultural Science. The study recommended creating ingenious activities that will pique students' interest in agriculture and presenting carefully package information to students and public that is very appealing to attract them to agricultural science.

**Keywords:** Agricultural Public Relations, Students' Interest, Pre-Vocational Studies, Upper Basic, Basic Education Certificate Examination

## Introduction

The inclusion of Agricultural Science into the secondary school curriculum is intended to; stimulate and sustain students interest in agriculture, enable students acquire useful knowledge and practical skills in agriculture, prepare students for further studies and occupations in agriculture Akanmu (2013). This perhaps has influenced the teaching of agriculture at both junior (Upper Basic) and senior secondary school in Nigeria (Nigerian Educational Research and Development Council-NERDC, 2008).

At the Junior Secondary School level, Agriculture is taught as a component of Pre-Vocational Studies (PVS) which is an elective subject. The teaching of agriculture at this level is nonetheless expected to expose Junior Secondary School students to agriculture preparatory to offering it at Senior Secondary level. Upon completion of Junior Secondary School III (Upper Basic 9) they are expected to either offer agriculture at the Senior Secondary School or where they fail to continue, take up an occupation in agriculture to become self-reliant. Pre-Vocational Studies comprised of Home Economics and Agriculture. That is, agriculture is taught as a theme under PVS as a subject. At the Senior Secondary

School level, agriculture is taught as Agricultural Science and is offered as a vocational elective (optional) subject with the objective of preparing students for various occupations in agriculture and to further in agriculture. At the moment, attainment of this objective looks delusional as there seem to be decline in students' interest in enrolling for agriculture at Senior Secondary School level.

Student interest connotes the serious attention, excitement, or passion one has towards a particular subject in which he or she can easily offer without much difficulty (Hornby, 2010). The information available to students about a particular subject and the prospects it holds for them tends to influence their level of interest. Igbabaka (2022) contended that students' interest in Agricultural science is declining hence few students are now willing to offer the subject at senior secondary school. Reasons attributed to the lack of interest are linked to the optional status of agriculture, non-inclusion of Agricultural Science as a requirement for admission to read even agricultural courses and most importantly the lack of awareness on the benefits to be derived from offering Agricultural Science. It is pertinent to employ deliberate ways capable of gaining and sustain students' interest in agriculture. When students develop positive interest in a subject, they become closely connected with the subject and in turn influence their choice.

Choice simply has to do with an individual's careful decision or preference in selecting between two or more alternatives available to him (Hornby, 2010). The success students' record in their academic pursuit to some extent is attributed to choice of subjects to offer in line with career aspirations. Wombo and Igbabaka (2019) noted choices made at this point will become part of the student life and if wisely made him/she can obtain maximum satisfaction otherwise it will lead to future regrets. Choice here connotes students' decision to select Agricultural Science and its related occupations over other subjects. Igbabaka (2022) asserted many factors influence choice of subjects to offer but students are more willing to offer subjects they strongly feel can lead them to greatness. This explains the reason the responsibility of making choice of subjects must not be left solely in the hands of students as they are prone to making wrong decisions. For example, some of them erroneously hold the view that certain occupations are gender based, that is exclusive reserve for either males or females (Amoor & Aliyu, 2014). For reasons best known to students, agricultural occupations are not prestigious, it does not hold a good future for them and is meant for the less intelligent has seriously affected it choice, but what an error? There is no doubt those students who genuinely choose subjects of their interest to offer would definitely attain higher achievement than when coerced to offer it.

Achievement describes academic outcomes that indicate the extent to which a student has achieved a learning goal and it is usually measured through examinations or continuous assessment. Kpolovie, Joe and Okoto (2014) submitted that academic achievement is the ability of a student to study and remember facts and being able to communicate his knowledge orally or in written form even in an examination condition. It is pertinent to note that students' academic achievement at the Junior Secondary School level is connected to the quality of students at Senior Secondary School level. It is however sad to note that students performance in examinations such as Basic Education Certificate Examination- BECE, West African Examination Council-WEAC, National Examination Council-NECO and National Board for Technical Education-NABTEB are on the decline over the years (Ige, Abiodun & Temitope, 2016). In the views of Kpolovie, Joe and Okoto (2014); Mbajjorgu, Oguttu, Maake, Heerala, Ngoepe, Masafu and Kaino (2014); Abdullahi, Mlozi and Nzalayaimisi (2015) and Abaidoo (2018) students' academic achievement is influenced by several factors broadly attributed to students', home and school factors. In order to pique students' interest, choice and achievement in agriculture, Agricultural Public Relations should be made functional in secondary schools.

Public relations-PR is a deliberate, planned, sustained effort to establish and maintain mutual understanding and goodwill between an organization and its public (Keghku, 2005). Agricultural Public Relations implies an effective and purposeful way through which the teacher of agriculture communicates opportunities inherent in offering Agriculture to the public and inspiring or motivating students to enroll for Agricultural Science (Phipps, 1980). This is all about winning and gaining parents' approval and support that agricultural science holds key to their children's future.

Agricultural Public Relations is capable of influencing students' decisions through publications in school magazines, the display of attractive posters and pictures within and around the school premises and the use of social media to promote agricultural activities. For the teacher of agriculture to effectively educate the public and sustain students interest in agriculture, his familiarity with various methods of carrying out public relations like face-to-face interaction, photography, exhibitions/trade

fair, conferences, flyers, social media (face book, twitter, whatsapp, instagram) demonstration, print and electronic media among others remains sacrosanct. It is important to point out that there is no single medium that is adjudged the best, the best seems to be the one or combination of methods that meet the objectives of agricultural public relations of the secondary school. Once parents are convinced of the prospects of agriculture and interest of students is won, enrolment and achievement in the subject will be greatly enhanced. Hence the researchers motivation to investigate into Influence of agricultural public relations on secondary school students' interest, choice and achievement in agricultural science in Benue State, Nigeria.

### **Statement of the Problem**

The teaching of Agriculture either as a pre-vocational or vocational subject is intended to attract students' interest in agriculture and its various occupations to be self-employed. In recent time, students no long show interest in agricultural science (Mukembo, Edwards, Ramsey & Henneberry, 2014; Aneke & Ndem, 2017). The preference for other subject over agricultural science has seriously affected students' enrolment for the subject. This is not peculiar to Nigeria alone, elsewhere in Africa and beyond, the story is same. In Sierra Leone, Kenya and in United State of America the apathy on agriculture is also reported (Johnson, Johnson & Macauley, 2015; Kagwiria, 2013; Esters & Bowen, 2005). The non-willingness to enrol for Agricultural Science is blamed on lack of awareness on its prospect (Igbabaka, 2022). This implies that many secondary school students will certainly make wrong choices and might not have opportunity of making a successful career in agriculture to be self-reliant (income generation) and create job opportunities. Awareness can better be created with functional agricultural public relations in place. Many available studies on attracting students to agriculture seem to focus mainly on their demographical factors without considering the critical role agricultural public relations play in creating awareness to gain and sustain students' interest in the subject hence the researchers are spurred to investigate into Influence of agricultural public relations on secondary school students' interest, choice and achievement in agricultural science in Benue State, Nigeria.

### **Objectives of the Study**

Specifically, the study determined the relationship between;

- 1 Agricultural Public relations and students interest in Agricultural Science;
- 2 Agricultural Public relations and students' choice of Agricultural Science;
- 3 Agricultural Public relations and students' achievement in Agricultural Science;
- 4 Relationship between male and female students' choice of Agricultural Science.

### **Research Questions**

The study answered the four (4) under listed research questions;

1. What is the relationship between Agricultural Public relations and students interest in Agricultural Science?
2. What is the relationship between Agricultural Public relations and students' choice of Agricultural Science?
3. What is the relationship between Agricultural Public relations and students' achievement in Agricultural Science?
4. What is the relationship between male and female students' choice of Agricultural Science?

### **Statement of Hypotheses**

The study formulated four (4) null hypotheses and was tested at 0.05 level of significance.

1. There is no significant relationship between Agricultural Public relations and students interest in Agricultural Science.
2. There is no significant relationship between Agricultural Public relations and students' choice of Agricultural Science.
3. There is no significant relationship between Agricultural Public relations and students' achievement in Agricultural Science.
4. There is no significant relationship between male and female students' choice of Agricultural Science?

### **Methodology**

The study was conducted in Benue state, Nigeria. It adopted correlation design. The total population for the study was 11,381 consisting of 347 teachers of Agricultural Science, 24 Guidance Counsellors and 11,010 Upper Basic 9 students (Benue State Teaching Service Board-TSB, 2020). The sample size of 386 was drawn from the population using Taro Yamane's formula for sample size determination. This sample size is made up of 289 Upper Basic 9 students, 73 teachers of Agricultural Science and 24 Guidance Counsellors. The study employed multistage sampling technique. This

allowed the researcher to purposively choose two local governments each from zone A, B and C and a secondary school with functional guidance and counselling unit. Proportionate sampling was carried to determine the number of respondents representing each group. Simple random sampling technique gave each member equal opportunity of being selected. Three instruments used for data collection were self structured questionnaire titled: Agricultural Public Relations Questionnaire (APRQ), Agriculture Achievement Test (AAT) and Interest Inventory in Agriculture (IIA) adopted from Basic Education Certificate Examination (BECE) Pre-Vocational Studies question paper for 2018, 2019 and 2021 agriculture component. The APRQ had twenty-nine (29) items anchored on 4 point response options of Strongly Agree (SA=4), Agree (A=3), Disagree (D=2) and Strongly Disagree (SD=1). The APRQ was subdivided into two sections. Section A on Agricultural Public Relations were made up of 14 items and section B on choice of Agricultural Science has 15 items.

Agriculture Achievement Test (AAT) were made up of fifty (50) multiple choice questions covering Upper Basic 7-9 Agriculture theme of Pre-Vocational Studies with response options lettered A, B, C and D. The Interest Inventory in Agriculture (IIA) contained seventeen (17) items with response options of High Interest (HI=4), Moderate Interest (MI=3), Low Interest (LI=2) and No Interest (NI=1). The three instruments used for data collection were subjected to face and content validity by five (5) experts. One expert each, in Public Relations and Measurement and Evaluation, Departments of Mass Communication and Education respectively, University of Mkar, Mkar. Other two experts in Agricultural Education and one expert in Guidance and Counselling in the Departments of Vocational Agriculture and Technology Education, and Educational Foundations and General Studies accordingly, from Joseph Sarwuan Tarka University, Makurdi. In order to determine the internal consistency of the instruments, they were pilot-tested on 30 respondents (25 upper basic 9 students, 3 teachers of agricultural science and 2 guidance counsellors) from Government Science Secondary School, Lafia in Nasarawa State. The study used Split-half, Cronbach-Alpha and Kuder Richardson 21 methods of reliability to obtain reliability coefficients of 0.988, 0.990 and 0.713 for APRQ and IIA/AAT respectively. Clearance and approval to administer the instruments on the respondents (students, teachers of agricultural science and guidance counsellors in secondary schools) was sought and granted by the Directorate Research and Statistics, Benue State Teaching Service Board in the state through the Head, department of Vocational Agriculture and Technology Education, Joseph Sarwuan Tarka University, Makurdi. A total of 386 copies of the questionnaire and AAT were administered on Upper Basic 9 students, teachers of Agricultural Science and Guidance Counsellors with 100% retrieval rate. This was achievable because the researchers administered many more copies of the instruments where only the number required was used. Also, on the spot method of administration was employed.

The data were analyzed using Pearson Product Moment Correlation Coefficient-PPMCC ( $r$ ) to answer the research questions and null hypotheses tested at 0.05 level of significance by comparing p-value and alpha value. The null hypotheses of no significant relationship were not rejected when p-value (Sig.) was greater than the alpha-value (0.05). The alternative hypotheses of significant relationship were however upheld when p-value (Sig.) was less than the alpha-value (0.05).

## Results

**Research Question 1:** What is the relationship between Agricultural Public Relations and students' interest in Agricultural Science?

**Table 1: Correlation analysis for relationship between Agricultural Public Relations and students interest in Agricultural Science**

Variable	N	Mean	r	Remark
Agricultural Public Relations	386	3.339		
Students' interest	289	3.333		

*N = Number of Respondents, r = Pearson Correlation Coefficient, MPR = Moderate Positive Relationship*

The result in Table 1 showed a Pearson Product Moment Correlation Coefficient ( $r$ ) of .405 which falls within the range of 0.41 - 0.60 for a moderate relationship with mean value of 3.339 for Agricultural Public Relations and mean value of 3.333 for students' interest. This result revealed that there was a moderate positive relationship between Agricultural Public Relations and students' interest in Agricultural Science.

**Research Question 2:** What is the relationship between Agricultural Public Relations and students' choice of Agricultural Science?

**Table 2: Correlation analysis for relationship between Agricultural Public Relations and students' choice of Agricultural Science**

Variable	N	Mean	r	Remark
Public Relations	386	3.339		
Students' choice	386	3.393		

*N = Number of Respondents, r = Pearson Correlation Coefficient, HPR = High Positive Relationship*

The result in Table 2 showed a Pearson Product Moment Correlation Coefficient (r) of .798 which falls within the range of 0.61 - 0.80 for high relationship with mean value of 3.339 for Agricultural Public Relations and mean value of 3.393 for students' choice. This result indicated that there was a high positive relationship between Agricultural Public Relations and students' choice of Agricultural Science.

**Research Question 3:** What is the relationship between Agricultural Public Relations and students' achievement in Agricultural Science?

**Table 3: Correlation analysis for relationship between Agricultural Public Relations and students' achievement in Agricultural Science**

Variable	N	Mean	r	Remark
Agricultural Public Relations	386	3.339		
Students' achievement	289	35.873		

*N = Number of Respondents, r = Pearson Correlation Coefficient, VLNR = Very Low Negative Relationship*

The result in Table 3 revealed a Pearson Product Moment Correlation Coefficient (r) of -.170 which falls within the range of 0.10 - 0.20 for a very low relationship with mean value of 3.274 for Agricultural Public Relations and mean value of 35.873 for students' achievement. This result indicated that there was a very low negative relationship between Agricultural Public Relations and students' achievement in Agricultural Science.

**Research Question 4:** What is the relationship between male and female students' choice of Agricultural Science?

**Table 4: Correlation analysis for relationship between male and female students' choice of Agricultural Science**

Variable	N	Mean	r	Remark
Male students' choice	145	3.247		
Female students' choice	144	3.642		

*N = Number of Respondents, r = Pearson Correlation Coefficient, VLNR = Very Low Negative Relationship*

The result in Table 4 revealed a Pearson Product Moment Correlation Coefficient (r) of -.210 which falls within the range of 0.10 - 0.20 for a very low relationship with mean value of 3.247 for male students' choice and mean value of 3.642 for female students' choice. This result indicated that there was a very low negative relationship between male and female students' choice of Agricultural Science.

**Hypothesis 1:** There is no significant relationship between Agricultural Public Relations and students' interest in Agricultural Science.

**Table 5: Test of significant relationship between Agricultural Public Relations and students interest in Agricultural Science**

Paired variables	r	p-value	alpha-value	decision
Agricultural Public relations and students' interest	.405	.000	0.05	SR

*r = Pearson Correlation Coefficient, SR = Significant Relationship*

The result in Table 5 revealed the p-value of .000 is less than the alpha-value of 0.05. This implies that the Pearson correlation coefficient (r) of .405 is statistically significant. Thus the null hypothesis that "there is no significant relationship between Agricultural Public Relations and students' interest in Agricultural Science" was not accepted. In other words the alternative hypothesis that "there is a significant relationship between Agricultural Public Relations and students' interest in Agricultural Science" was upheld.

**Hypothesis 2:** There is no significant relationship between Agricultural Public Relations and students' choice of Agricultural Science.

**Table 6: Test of significant relationship between Agricultural Public Relations and students' choice of Agricultural Science**

Paired variables	r	p-value	alpha-value	decision
Agricultural Public Relations and students' choice	.798	.000	0.05	SR

*r = Pearson Correlation Coefficient, SR = Significant Relationship*

The result in Table 6 revealed the p-value of .000 is less than the alpha-value of 0.05. This implies that the Pearson correlation coefficient (r) of .798 is statistically significant. Thus the null hypothesis that "there is no significant relationship between Agricultural Public Relations and students' choice of Agricultural Science" was not accepted. In other words the alternative hypothesis that "there is a

significant relationship between Agricultural Public Relations and students' choice of Agricultural Science" was upheld.

**Hypothesis 3:** There is no significant relationship between Agricultural Public Relations and students' achievement in agricultural Science.

**Table 7: Test of significant relationship between Agricultural Public Relations and students' achievement in Agricultural Science**

Paired variables	r	p-value	alpha-value	decision
Agricultural Public Relations and students' achievement	-.017	.778	0.05	NSR

*r = Pearson Correlation Coefficient, NSR = No Significant Relationship*

The result in Table 7 revealed the p-value of .778 is greater than the alpha-value of 0.05. This implies that the Pearson correlation coefficient (r) of -.017 is not statistically significant. Thus the null hypothesis that "there is no significant relationship between Public Relations and students' achievement in Agricultural Science" was not rejected.

**Hypothesis 4:** There is no significant relationship between male and female students' choice of Agricultural Science.

**Table 8: Test of significant relationship between male and female students' choice of Agricultural Science**

Paired variables	r	p-value	alpha-value	decision
Male and female students' choice	-.020	.809	0.05	NSR

*r = Pearson Correlation Coefficient, NSR = No Significant Relationship*

The result in Table 8 revealed the p-value of .809 is greater than the alpha-value of 0.05. This implies that the Pearson correlation coefficient (r) of -.020 was not statistically significant. Thus the null hypothesis that "there is no significant relationship between male and female students' choice of Agricultural Science" was not rejected.

## Discussion

The finding revealed that there is a moderate positive relationship between Public Relations and students' interest in Agricultural Science and also a significant relationship between Agricultural Public Relations and students' interest in Agricultural Science respectively. The finding of the study is in support of an earlier study by Igbabaka, Shimave and Onuh (2018) who reported that the use of attractive pictures/posters and video on different occupations in agriculture is capable of winning students' interest. Wardlow, Johnson, Mueller, and Higenberg (2012) noted that it is only when students interest is gained that it can influence their choices and consequently their level of achievement. It is pertinent that if Agricultural Public Relations in agriculture continue to receive the attention thus far given it, more students will continue to develop positive interest in Agricultural Science at their senior secondary school level. Teachers of agriculture heading the Agricultural Public relations units of their schools should always adopt modern and attractive means of presenting in a manner that will appeal and inspire students to offer Agricultural Science.

The study revealed that there is a high positive relationship between Agricultural Public Relations and students' choice of Agricultural Science and that there is a significant relationship between Agricultural Public Relations and students' choice of Agricultural Science respectively. The finding of the study is in consonance with Igbabaka *et al*, (2018) whose study found that effective public relations has a positive relationship with choice of agricultural science. The authors noted that home visits/ conversation with parents, use of photography, and display of posters, social media, exhibitions and tours among others tend to exert a significant influence on students choices. Sustaining the Agricultural Public Relations in secondary schools will entail attracting students who are more willing to opt for Agricultural Science at the Senior Secondary School level. Otherwise, choice of Agricultural Science will witness a decline because of lack of proper attention accorded Agricultural Public Relations.

The finding of the study revealed that there is a very low negative relationship between Agricultural Public Relations and students' achievement in Agricultural Science and that there is no significant relationship between Agricultural Public Relations and students' achievement in Agricultural Science respectively. This contradicts Igbabaka, Shimave and Onu (2018) finding that there is a significant relationship between Agricultural public relations and students achievement in Agricultural Science. This implies that Public Relations available to secondary school students almost have no relationship with their achievement. It seems the public relations in secondary schools in the state have failed in adopting the right techniques that could have positively impacted on students' achievement. The low achievement of students in Agricultural Science despite the provision of Public Relations may have

been due to non approval of parents for their children to offer the subject which they have failed to provide them with relevant textbooks and sponsorship needed to excel. The implication of this finding on students academic achievement seem to suggest that many students who may have develop positive interest in Agricultural Science may not be able to actualize their career aspirations since their level of achievement to a large extent dictates their educational mobility in Agriculture

The finding also revealed that there is a very low negative relationship between male and female students' in the choice of Agricultural Science and no significant relationship between male and female students' in the choice of Agricultural Science. This finding seems to have confirmed the finding by Adejoh, Edoka and Shaibu, (2016) that there is no relationship between male and female students choice of Agricultural Science. The unwillingness by female students to offer Agricultural Science may not be unconnected with perceived notion that agriculture is laborious in nature and as such considered not being suitable for them but for the male students thus accounting for low female students enrolment in Agricultural Science. This stereotype is capable of discouraging both genders from offering subjects they would have excelled in. The wrong notion that Agricultural occupations are not for the female students but for male students may have seriously accounted for the very low relationship as revealed by the finding. This stereotype implies that certain subjects and occupations will continue to witness male gender dominance over the female gender.

### **Conclusion**

No matter how good the prospects of offering a particular subject may be, students cannot be aware of it except when information about the subject is made available to them. Agricultural Public Relations in our secondary schools has demonstrated the capacity of informing, inspiring and sustaining students' interest and choice of Agricultural Science. School management have the onerous responsibility of not just ensuring that Agricultural Public Relations unit is established in their school but making it functional if students' interest in agriculture is to be sustained but where the unit is non-existent, enrolment in agriculture will continue unabated thereby producing a generation of students that cannot be self-reliant.

### **Recommendations**

Based on findings of the study, the following recommendations are made:

1. Teachers of Agricultural science should always create ingenious activities that will pique students' interest in Agricultural science.
2. Students should be given opportunity to visit relevant agricultural sites that relate to classroom experience so as to improve their achievement in agricultural science.
3. The teacher of agriculture should carefully package and make information to be presented to students and the public very appealing to attract them to agricultural science and its related occupations.

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