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EFFECTS OF ACTIVE LEARNING TECHNIQUES ON STUDENT'S ACADEMIC PERFORMANCE AND RETENTION IN AGRICULTURAL SCIENCE IN COLLEGE OF EDUCATION IN ANAMBRA STATE

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ABSTRACT

The main purpose of the study was to examine how the use of active learning techniques effects student's academic performance and retention in Agricultura; science. The study was conducted among 300 level final year students of the department of agricultural science Anambra state college of education Asugbe. The design of the study was descriptive survey design. The population of the study were mainly 24 male and 120 female students of Anambra state college of education from the department of agriculture who are 300 level final year students numbering 144. Due to the smallness of the population, the entire students were used for the study. There was no sampling. Three research questions and three null hypotheses were formulated for the for the study. A-15 item questionnaire titled effects of active learning techniques on student's academic performance in Agricultural science questionnaire was constructed by the researcher. A four-point Likert type questionnaire was constructed to elicit information on the research topic. The ratings were Very Great Extent (V.G.E) 4 points, Great Extent (G.E) 3 points, Little Extent (L.E) 2 points and Very Little Extent (V.L.E) 1 point. The administration and collection of data after filling in by the respondents was done by three trained research assistants whose qualification were not below N.C.E or N.D. The reliability test was done using Pearson moment coefficient correlation and a score of 0.76 was obtained and considered high enough for the study. Experts from department of measurement and evaluation and educational administration and planning validated the instruments and the comments and criticisms reshape the instrument. The study discovered amongst others that the use of active learning techniques will make students to be involved, engage, recall, develop interest, love and stimulate/arouse their interest in agriculture while the problem of how to manage transfer of skills and knowledge, use of instructional materials and various active learning skills is a big challenge. Adoption of strategies such as involvement strategy, critical thinking, collaborative efforts will help improve active learning while conclusions and recommendation were made.

Keywords: Active learning, Techniques, Retention, Academic, Performance, Students.

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Introduction

The Nigerian economy during the 1960 was dominated by agricultural production. During this time, agriculture was the main stay of Nigerian economy as it contributes about 63 percent of the Gross Domestic Product (Iwena 2019). This is because Agriculture is a primary industry that plays an important role in the development of the individual farmer and all nations. It provides food for the teaming population of the country. Through domestic food production, agriculture has helped nations, individuals and organization save money for their goods and services (Onokerhoraye,2005). Agriculture also provides food, shelter, income, clothing, employment for working population and serves as a source of foreign exchange.

Thus, agriculture has a significant impact in a nation's socio-economic development. It is in realization of its role in the society that the national policy on education included it as one of the important subjects to be studied at primary and secondary schools in the country. At the tertiary education level, it is also one of the compulsory courses at teacher's education curriculum at the nation's colleges of education and universities because of the general belief that students performance and education outcomes both directly and indirectly are influenced by what happens in the agricultural sector.

According to Obadan (2017) students from rural areas or families may have better access to nutrition from farm grown field which can improve their physical health, cognitive function and academic performance. This is because food security and nutrition are often times linked to economic challenges in agricultural communities, stunted growth, decreased in student's energy levels and poor academic achievement.

Another area which is identified as having effect on students learning is in income and socio-economic status of the student's parents. According to Anyanwuocha (2021) families involved in agriculture may have variable or seasonal incomes which can create financial instability and affect student ability to access educational resources, extra-curricular activities and basic needs. According to him, the socio-economic status of most parents is closely tied to agricultural livelihood which is a strong predictor of educational attainment and performance.

Access to education is another factor that tend to affect student's academic performance in rural agricultural communities as it may limit students access to equality schools, educational infrastructure and resources compared to urban areas, making it more challenging for students to receive a well-rounded distance to school can also limit student attendance and participation in school.

Related to this are cultural and social factors which the society believes in. This is because agricultural communities often have distinct cultural and social norms which tend to influence student's educational aspirations, expectations, perceptions of the value of education and overall engagement with the school system. This is why Uguru (2021) noted that traditional agricultural

practices and responsibilities may compete with or take priority over formal education for some students because both the students and their parents see education as a kind of investment that should be cost, weighed and analyzed against its projected future benefits because they consider education as a waste of time and source.

Supporting this assertion by Uguru (2021), Agu (2021) noted that exposure to pesticides and other agricultural chemicals can negatively effect on student's health and social well-being, leading to cognitive and developmental challenges, climate change and extreme weather conditions.

To address the challenges and leverage on the opportunities presented by agriculture's influence on student's academic performance in colleges of education so as to produce highly motivated and conscientious teachers and students, Are, Igbokwe, Asadu, and Bawa (2019) a holistic approach to the teaching and learning of agricultural science as a course/subject in school is required. This may include investing in rural and agricultural educational infrastructure, implementing nutritional programs and food security initiatives, providing financial assistance, supporting agricultural families, promoting community based educational programs, integrate agricultural knowledge and skills and addressing environmental and health concerns related to agricultural process.

Having known the effect of agriculture on student's academic performance, the question now is what is the effect of using active learning techniques on students academic performance and retention in agricultural science in colleges of education in Anambra State

Active learning techniques is a process whereby learners (students) are actively involved or engaged in art of teaching and learning in the classroom. When students are actively involved in the materials needed to enhance learning, they are more likely to be interested in the lesson as it arouses the interest, expectation, aspirations and needs thereby helping them to recall the information so far made available to them by their teacher. This is because the activities of the lesson format that encourage student involvement are incorporated into the teaching plan (Anayanwuoha 2021)

Active learning techniques involve team-based learning as members of the group or class work together as a unit to solve both individual and group problems. This helps the students to understand the concepts and skills being covered. Active learning help weaker students to learn from brighter ones or group mates as this help to reinforce their knowledge and skills about the subject matter being delivered to them. This is why active learning techniques is regarded as a multi-directional learning experience in which learning occurs between the teacher to – student, student-to-teacher and student-to-student relationship. It involves classmates, small groups, trios, pains and individuals in talking, writing, dramatization, debates, reading, discussion, role-play, conferring, interviewing, building and creating. Thus, active learning

techniques can take different shapes, forms and active learning online (Agu 2021).

This means that active learning technique is not only a set of activities geared towards learning but also an attitude on both the part of the teacher (instructor) and the learner (student). The objective of active learning techniques is to stimulate students to learn, think about hoe as well as what to do thereby making the learner to take responsibility (Susan; 2012). This is different from memorization which can be lost in hours but active learning help the student to seek for something (answer) in order to solve a problem or a way to do the job. What a student is able to discuss with each other and others or what he teaches or learn from each other enable him to master and understand the lesson (Ezenduka; 2015).

Thus, active learning techniques increases the effectiveness and efficiency of the teacher in the classroom teaching and learning as no teacher will ever allow his students to go home empty handed without learning anything from him. When students learn meaningfully, they are able to recall and retain what they are been taught especially when they work in small group. This is because working together gives the students self-Confident to ask questions, brain storm, share ideas, understand concepts and improve their ability to learn (Brown and Compione; 2004). The teacher after designing the strategies to adopt so as to engage the students in learning skills, the teacher become a facilitator by the side while the students become the participate. This is an indication that is not passive learning but an exercise that will involve student's active participation and learning development of skills, exploration of attitudes and values as well as inspire student's academic performance.

According to Bonwell (2009), active learning involves students doing thing and thinking about how things are doing. It is the best way of teaching students to avoid any element of boredom. Students being taught using active learning techniques, learn more by getting involved, participating in decision - making process, writing, talking, thinking, listening, talking, asking questions, arguing, brain storming and walking in group physically active. Therefore, there is the need for the teacher and students to create a conducive atmosphere comfortable for learning to take place.

For teaching and learning to be conducted in an atmosphere devoid of greed, the teacher must make use of the following Active Manual Students tools in teaching and learning. According to Ezenduka (2015) These include; ask questions, pause procedure, vote, ungraded quizzes, think - pair - share and brain - storming. Teachers of agricultural science should therefore embrace active Learning technique in order to ensure that students studying agricultural develop interest on the course.

Therefore, to improve on academic performance if students and their retention in colleges of Education, active learning techniques such as hands-on activities, group discussions and problem-based learning can lead to significantly better academic performance of students in agricultural science. This is because active learning will help students in agriculture to

better understand and apply key agricultural concepts, rather than just memorizing information. According to Anyanwuocha (2021), this will lead to higher test scores, assignment grades and overall course achievement.

That is why active learning approach according to Udensi and Oteh (2023) is an instructional technique that encourages students to be actively engage with the material being taught to them at that particular time, rather than passively listening to lectures or simply memorizing information as in traditional methods approach. In an active learning environment, students are encouraged to participate in the learning process through activities that encourage manipulation of hands through the use of collaborative projects.

This is an indication that active learning will help students of agricultural science in colleges of education to understand and retention of the material being taught by actively engaging with the content, which will make the students to be more likely to be connected, by asking questions and apply what they have learned in their daily activities there by leading to deeper and more meaningful learning and improve learning out comes.

Using the method in agricultural will enhanced critical thinking and problem-solving skills. This means that active learning technique often involves analyzing, evaluating and creating which are higher-order cognitive skills. Therefore, active learning techniques will encourage students to think deeply and develop the mind of analytical abilities. This will help students in agricultural science to be highly motivated and engaged in the learning process. In other words, it will lead to greater interest, curiosity and a sense of ownership over their learning.

Active learning involves the use of various methods or varieties of diverse learning styles to cater for enhanced learning such as the use of visual, auditory and kinesthetic learners. By incorporating a wide range of activities and approaches, teachers of agricultural science can better accommodate the diverse needs and expectations of students (Uga, 1984).

Transferable skills are another way active technique enhances teaching and learning in the classroom. Agricultural lecturers in college of education in Anambra State can use active learning experiences to help students develop the important transferable skills to their students such as team work, communication skills and self-directed learning which is valuable to both academic and professional settings.

To know whether the student's knowns what is being taught to them and how the teacher should adopt feedback and assessment techniques to monitor their progress, identify areas of needs, weakness and strength so as to improve and adjust to their needs accordingly.

In summary, research studies have shown that Students taught using active learning methods/techniques tends to demonstrate higher level of retention rates on assessment given to them, when compared to passive approach learners because it promotes deeper understanding of facts, critical thinking, engagement and the

development of a variety of essential skills. By so doing Uga (1984) noted, actively involving students in learning process, can help teachers create more meaningful and effective learning experiences to students. In words active learning techniques tend to be more interactive, hands on and relevant to the student's needs and interest.

Although implementing active learning techniques in agricultural Science can lead to Significant improvement in Students academic achievement, knowledge, retention, critical thinking and overall outcomes, compared with traditional lecture-based instructions, it has some limitations. According to Ezenduka (2015), Susan (2012) and Brown and Canipione (2004), these include:

- Classroom management requires active planning.
- Time constraints
- Problem of large class size.
- Student resistance to participate in learning process.
- Teachers are not effectively trained on how to apply the active learning techniques in classroom teaching.
- It needs instructional materials.
- Assessment of Students can be challenging.
- Application cannot be done for all courses.
- Students need guidance to participate and succeed in the lesson.
- There must be room for flexibility and balancing of structure.

Despite these limitations, many educators find that the benefits of active learning far outweigh the challenges, and with careful planning and implementation, these limitations can be overcome.

Statement of the Problem

Research studies in recent years has indicated that implementing active learning techniques in agricultural science education can lead to significant improvements in student's academic achievement, knowledge retention, critical thinking and overall learning outcomes in schools when compared to traditional lecture-based instruction but a close observation of students when academic results in agricultural science are not seems to suggest that most students who pass see their pass as a result of their greater efforts made by them while those that most students who pass see their pass as a result of their greater effort made by them while those that fail see their failure as caused by teacher's poor methods of instruction, use of instructional materials, poor motivation of students, non-engagement of students in teaching and learning to enhanced knowledge retention, collaborative learning, critical thinking, problem-solving and decision-making in agriculture. Based on this, the researcher is interested in finding out the effects of active learning techniques on student's academic performance and retention in agricultural science in collages of Education in Anambra state.

Purpose of the Study

The main purpose of this study was to examine how the use of active learning techniques affects students' academic

performance and retention in Agricultural science in colleges of Education. Specifically, the Study sought:

- Examine the extent active learning techniques affects students' academic performance and retention in Agricultural science.
- Ascertain the extent the challenges and leverage on agriculture influence retention of students' academic performance in colleges of Education.
- Identify ways for improving active learning techniques on students' academic performance and retention in agricultural science in colleges of Education.

Research Questions

This study was guided by the following research questions:

- To what extent does active learning technique affect student's academic performance and retention in agricultural science in colleges of Education?
- To what extent do the challenges and leverages on agricultural influence retention of students' academic performance in Agricultural science in colleges of Education?
- What are the ways for improving active learning techniques on students' academic performance and retention in agricultural science in colleges of Education?

Hypotheses

The following null hypotheses were formulated at 0.05 level of significance guided the study.

Ho1, there is no significant difference in the mean scores of male and female students on the extent active learning techniques affects student's academic performance and retention in agricultural science in colleges of Education.

Ho2, there is no significant difference in the mean scores of male and female students on the extent challenges and leveraged on agricultural influence retention of student's academic performance in Agricultural science in colleges of Education.

Ho3, there is no significant difference in the mean scores of male and female students on the ways for improving active learning techniques on student's academic performance and retention in agricultural science in colleges of Education?

Research Method

The area of study is Nwafor Orizu College of Education, Nsugbe. The design employed in this study was descriptive survey design. The population consisted of students of the department of Agricultural science, Anambra state college of Education, Nsugbe who are mainly 300 level final year students numbering 144. The entire population of the study made up of male and female students was used due to the smallness of the population of the study. The instrument designed was a researcher's structured questionnaire with A-15 item

questionnaire titled "Effects if Active Learning Techniques on Students Academic Performance and Retention Questionnaire, E.A.L.T.S.A.P.R.Q". The instrument had three sections A, B and C with section A sought to elicit information on the extent active learning techniques affects student's academic performance and retention in agricultural science, B on the extent the challenges and leverage on agriculture influence retention of student's academic performance and C on ways for improving active learning techniques on student's academic performance and retention. A reliability score of 0.76 was obtained and considered high using Pearson's correlation coefficient. It was validated by three experts, two from the department of measurement and evaluation, Alvan Ikoku Federal College of Educational Administration and Planning of the same institution. It was administered to 144 final year male and female students of the department of Agricultural science, Anambra state college of Education by three trained research assistants whose qualification was not below National Diploma (ND) or National Certificate in Education (NCE). Each completed questionnaires were collected on the spot thus eliminating loss of the instrument. The instrument was framed and weighed on a modified four-point Likert-scale of Very Great Extent (V.G.E) 4 points, Great Extent (G.E) 3 points, Low Extent (L.E) 2 points and Very Low Extent (V.L.E) 1 point. The data obtained were analyzed using mean scores and standard deviations (SD). A mean score of 2.50 was used as cut-off point and any item mean of score of 2.50 and above was accepted while items with a mean score below 2.49 value was as good as using rejected and a reliability test of 0.76 was obtained; Cronubalb Alpha. The hypotheses were tested using the z-test statistics at 0.05 level of significance.

Research Question 1: To what extent does active learning technique affect students' academic performance and retention in agricultural science in collages of Education?

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Table 1, Mean responses of male and female and students on the Extent to which active learning techniques affects student's academic performance and retention in agricultural science in collages of Education.

		Male teachers			Female teachers		
S/N	**Item Questionnaire.**	**$\bar{X}$**	**SD**	**Dec**	**$\bar{X}$**	**SD**	**Dec**
1	It helps students to understand the concepts being covered.	3.28	0.90	A	3.34	0.79	A
2	It benefits weaker students as materials presented by stronger group mates help to reinforce their knowledge and ability to explain the materials to others.	3.41	0.91	A	3.18	0.81	A
3	It makes students to think critically, recall and retain all they are learning.	3.45	0.93	A	3.10	0.80	A
4	Active learning increases the efficiency and effectiveness of teaching through teacher-to-students, teacher-to-teacher and students-to-student's relationship.	3.58	0.94	A	3.34	0.71	A
5	It helps the student to seek for information in order to solve problems and re-shape their attitudes on the part of both sides.	3.45	0.92	A	3.51	0.60	A
Grand mean		3.43	0.91	A	3.29	0.74	A

Table1 shows that all the male's items in table 1, 2, 3, 4 and 5 had mean scores of 3.28, 3.41, 3.45, 3.58 and 3.45 with standard deviation (SD) scores of 0.90, 0.91, 0.93, 0.94 and 0.92 with the grand mean and SD score of 3.43 and 091. The female's items in table 1, 2, 3, 4 and 5 had mean scores of 3.34, 3.18, 3.10, 3.34 and 3.51 with SD mean scores of 0.79, 0.81, 0.80, 0.71 and 0.60 with their grand mean score of 3.29 and 0.74. This shows all the items are accepted.

Research Question 2: To what extent do challenges and leverages on agricultural influence retention of student's academic performance in Agricultural science in collages of Education?

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Table 2, Mean responses of male and female students on the extent to which challenges and leverages on Agriculture influence retention of student's academic performance in Agricultural science in collages of Education.

S/N	Item Questionnaire.	Male teachers			Female teachers		
		$\bar{X}$	SD	Dec	$\bar{X}$	SD	Dec
6	How to tackle the problem of making student's learning meaningful when they work in small group.	2.84	0.80	A	3.22	0.88	A
7	How to design strategies that will stimulate and motivate students to become a facilitator of learning instead of depending on teachers to guide them.	3.58	0.94	A	3.34	0.71	A
8	The problem of how to procure enough instructional materials and equipment to be used to teach larger classes.	3.28	0.90	A	3.17	0.82	A
9	How to make students develop skills, exploration attitudes and values more than being passive listeners.	2.84	0.84	A	3.23	0.87	A
10	How to reduce the time it takes to prepare and teach the same number of materials to students.	3.11	0.90	A	3.26	0.90	A
Grand mean		3.25	0.89	A	3.45	0.83	A

Table 2 shows that all the items on serial number 6, 7, 8, 9 and 10 are rated high. Each item has a rating of 2.84, 3.58, 3.28, 2.84 and 3.11 with standard deviation (SD) of 0.08, 0.94, 0.90, 0.84 and 0.90 with grand mean of 3.25 and SD of 0.89 for male final year agricultural students. The female final year agricultural students rated the same items 6, 7, 8, 9 and 10, 3.22, 3.34, 3.17, 3.23 and 3.26 with SD score of 0.88, 0.71, 0.82, 0.87 and 0.90 with the SD grand mean score of 3.45 and 0.83 meaning accepted as all the item score is above 2.50.

Research Question 3: What are the ways for improving active learning techniques on student's academic performance and retention in Agricultural science in collages of education?

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Table 3, Mean responses of male and female students on the ways for improving active learning techniques on student's academic performance and retention in agricultural science in collages of education.

S/N	Item Questionnaire.	Male teachers			Female teachers		
		X^-	SD	Dec	X^-	SD	Dec
11	By encouraging students to participate in the learning process through activities that intend to encourage manipulation of hands through the use of collaborative projects.	3.28	0.90	A	3.10	0.80	A
12	By promoting engagements, transferable skills and development of variety of essential skills through team work, communication skills and self-directed learning.	3.03	0.86	A	3.26	0.90	A
13	By rewarding students that perform well in classroom activities.	3.35	0.73	A	3.47	0.92	A
14	By providing financial support to teachers to procure instructional materials and equipment for teaching and learning.	3.22	0.80	A	3.10	0.80	A
15	By using holistic approach to the teaching and learning of agricultural science as a course of study in schools.	3.45	0.69	A	3.48	0.92	A
Grand mean		3.46	0.77	A	3.28	0.86	A

Table 3 shows that all the items 11, 12, 13, 14 and 15 with mean scores of 3.28, 3.03, 3.35, 3.22, 8.45 and 3.46 with mean standard deviation of 0.90, 0.86, 0.73, 0.80 and 0.69 with grand mean score of 3.46 and 0.77 were rated high above 2.50. The female agricultural science students rated the same items 11-15, 3.10, 3.26, 3.47, 3.10, 3.26, 3.47, 3.10 and 3.48 with SD ratings of 0.80, 0.90, 0.92, 0.80 and 0.92 with grand mean score of 3.28 and 0.86 meaning acceptance having score above 2.50.

Hypotheses

Table 4, z-test analysis of the responses of male and female students on the extent active learning techniques effects student's academic performance and retention in Agricultural science in collages of education

Variables	N	X^-	SD	Df^o	Level of sig	z-cal	z-tab	Dec
Extent of effects of learning techniques.				142	0.05	-4.34	1.96	*Accept*
Males.	24	3.43	0.91					
Females.	120	3.29	0.74					

From the results in the table 4, the null hypothesis of no significant difference in the mean score of male and female students on the extent active learning techniques effects

student's academic performance and retention in Agricultural science in collages of education is accepted. In other words, the calculated z value at 142 degree and 0.05 level of significance is -4.34. Since the calculated value of -4.34 is less than the critical value of 1.96, the null hypothesis is accepted.

Table 5, z-test analysis of the mean responses of male and female students on the extent challenges and leverages on agricultural influence retention of student's academic performance in Agricultural science in collages of education

Variables	**N**	**X̄**	**SD**	**Df°**	**Level of sig**	**z-cal**	**z-tab**	**Dec**
Extent of challenges and leverage.				142	0.05	0.0346	1.96	*Accept*
Males.	24	3.25	0.89					
Females.	120	3.45	0.83					

From the results in table 5, the null hypothesis of no significant different in the mean score of male and female students on the extent challenges and leverages on agricultural influence retention of student's academic performance in agricultural science in collages of education is accepted. In other words, the calculated z value at 142 degree and 0.05 level of significance is 0.0346. Since the calculated value of 0.0346 is less than the critical value of 1.96, the null hypothesis is accepted.

Table 6, z-test analysis of the mean responses of male and female students on ways for improving active learning techniques on student's academic performance and retention in Agricultural science in collage of education.

Variables	**N**	**X̄**	**SD**	**Df°**	**Level of sig**	**z-cal**	**z-tab**	**Dec**
Ways of improving active learning techniques.				142	0.05	1.559	1.96	*Accept*
Males.	24	3.46	0.77					
Females.	120	3.28	0.86					

From the results in table 6, the null hypothesis of no significant different in the mean score of male and female students on the ways for improving active learning techniques on student's academic performance and retention in Agricultural science in collages of education is accepted. In other words, the calculated z value at 142 degree and 0.05 level of significance is 1.559. Since the calculated value of 1.559 is

less than the critical value of 1.96, the null hypothesis is accepted.

Summary of Findings

Based on the analysis of the data collected, the following findings were made:

1. That the extent of active learning techniques effects student's academic performance and retention in agricultural science in colleges of education in Anambra state.
2. That the extent of challenges and leverages on agriculture influence retention of student's academic performance in collage of education in Anambra state.
3. That the ways of improving active learning techniques on student's academic performance and retention in Agricultural science in colleges of education aids student's learning in colleges of education in Anambra state.
4. There was no significant difference in the mean score of male and female final year (300 level) students on the extent active learning techniques effects student's academic performance and retention in agricultural science in college of education.
5. There was no significant difference in the mean score of male and female final year (300) level students on the challenges and leverage on agriculture influence retention of student's academic performance in Agricultural science in collages of education.
6. There was no significant difference in the mean score of male and female final year (300) level students on the ways for improving performance and retention in agricultural science in collages of education.

Discussion of Findings

From research table 1, the test items shows that the two respondents (male and female 300 level final year) agricultural science students were in agreement (acceptance) that using active learning techniques effects student's academic performance and retention in agricultural science in college of education in Anambra state. These findings are in agreement with Anyanwuoha (2021), Uguru (2020) assertion that active learning techniques will assist agricultural students to recall information so far made available to them by their teachers, arouse student's interest to learn, work together as a team and help them to understand the concepts and skills being covered in the classroom. It is also in line Agu (2021) observation that active learning techniques help weaker students to learn from brighter ones or group mates as it helps to reinforce their knowledge (students) and skills about the subject matter being delivered to them. This is why active learning is regarded as multi- directional learning experience in which learning occurs between the teacher to student, student to teacher and student- to-student relationship.

Research question two, table 2 above shows that the two respondents (male and female students) were in agreement (acceptance) on the extent to which

challenges and leverages on agriculture influence retention of student's academic performance in Agricultural science in collages of education. This is in line with Uga (1984), position that one of the challenges facing the use of active learning techniques on student's academic performance and retention in agricultural science is how to apply the various or varieties of diverse learning styles to cater for enhancing learning such as visual, auditory and kinesthetic learners, how to transfer the skills to classroom learning and the mechanism to adopt in order to get acceptable feedback to monitor the student's needs, weakness and strength so as to improve and adjust to their needs accordingly. The resultant effect of this Ezenduka (2015), Susan (2012) and Brown and Campione (20040 noted is time constraints, management of large class size, student's resistance to participate in learning process, teachers not effectively trained, needs to use correct instructional materials and how to tackle the problem of student's assessment and how to plan and guide students to succeed.

Research question 3, table 3 shows that the two respondents (male and female) 300 level agricultural students agreed that the ways to was improve active learning techniques in the classroom while teaching agricultural students in the use of different styles of active learning to teach the students. This is in line with Uga (1984), who noted that active involvement of students in learning experience to students. Also, this is in line with Udensi and Oteh (2023) findings that to improve student's academic performance and retention, that the use of such activities as hands-on activities, group discussion and problem-based learning can lead to significantly better encourage student's engagement using materials and better academic performance of students in agricultural science. This is because it will help students to understand agricultural concepts, rather than duel in endless memorizing information which Anyanwuocha (2021) believe will lead to higher test scores, assignment grades and overall course achievement.

Conclusions

Using active learning techniques in teaching is now the best new approaches in basic sciences because its use is helping to promote student's interest in agriculture because it helps to arouse student's interest, recall ability, reduce competition and isolation in the classroom as involving and engaging students to learn cooperatively will make each student have self-confidence. Secondly, it will help them to acquire knowledge and skills of interaction, communication skills and promote the needed skills in conflict management and decision-making process. Finally, it will inspire and motivates students to become self-directed lifelong learners.

Recommendations

Based on the findings and conclusions, it is recommended that:

- Teachers should embrace active learning techniques in order to ensure that student's interest in agricultural science.

- To create classroom environment that is completely students centered.
- To reduce competition and isolation among students while in the classroom.
- To encourage teachers to involve and engage students in classroom activities so as to stimulate and arouse their interest to learning, through effective communication skills.
- To promote the needed skills that will enhance education of the students.
- To help them recall and retain ideas, share ideas, understand concepts, develop self-confidence, brainstorms and take responsibility.

Thus, active learning techniques will increase efficiency and effectiveness of the teacher in the classroom teaching and learning as no home empty handed without learning anything from him.

Contribution to Knowledge

This study will serve as a too/strategies that teachers of collages of Education will use t teach agricultural science to students to enhance their knowledge, skills and concepts of agricultural science. Moreso, the findings will add value to the importance of studying agriculture as a course through active involvement and engagement of students in active learning techniques and act as a spring board for further studies and existing literature.

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