

TEACHERS' PERCEPTION OF STRATEGIES TO ENHANCE THE USE OF INSTRUCTIONAL MATERIALS IN TEACHING AGRICULTURAL SCIENCE IN SENIOR SECONDARY SCHOOLS IN GOMBE STATE, NIGERIA

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Abstract

The study examined Teachers' Perception of Strategies to enhance the use of Instructional Materials in Teaching Agricultural Science in Senior Secondary Schools in Gombe State, Nigeria. The study used descriptive survey design. The population of the study was 288 agricultural science teachers. The entire population was studied. A structured questionnaire was used for data collection. The instrument was validated by three experts from Modibbo Adama University, Yola Adamawa State. The data generated from the field trial were analyzed using Cronbach Alpha technique with the help of a Statistical Package for Social Science (SPSS) version 22 in which reliability index of 0.82 was obtained. Data collected were analysis using Mean and Standard deviation to answer the research questions, while linear regression was employed to test the hypotheses at 0.05 level of significant. The findings revealed that adequate motivation, good administrative approaches, training opportunities greatly influenced and encouraged the use of instructional materials for teaching of agricultural science in Senior Secondary Schools in Gombe State, Nigeria. It was concluded that motivation, administrative strategies, training opportunities and maintenance culture are the major strategies that positively encourage the use of instructional materials for the teaching of Agricultural Science in public senior secondary schools in Gombe state. It was recommended, amongst others, that Gombe State Ministry of Education, should motivate Agricultural Science Teachers for effective use of instructional materials using promotions and salary enhancement strategies, organize different forms of training such as workshops, conferences, seminars for upgrading and equipping agricultural science teachers in order to update their teaching skills.

Key words: Instructional Material, Motivation, Influence, Perception

Introduction

Secondary school education system serves as a crucial bridge between primary school level and the high institutions. It equips students with the fundamental knowledge and skills needed to succeed in universities, colleges, or other tertiary institutions. This phase builds upon the foundation set in primary education, as described in the National Policy on Education (FRN, 2014). The Nigerian secondary school system recognizes the importance of agriculture by offering agricultural science but one of the critical areas of difficulty has been the use of instructional materials which to a large extent depends on the handiness of the teacher in

choosing the material that can best connect classroom concepts to real-world agricultural practices. Nigerian secondary schools included agricultural science in the curriculum as a vocational subject; its effectiveness is often hampered by lack of practical application. Studies conducted by Mustapha et al. (2022) highlight that the subject is frequently taught theoretically, neglecting hands-on learning opportunities and the use of relevant instructional materials.

The success of agricultural science education hinges on the effective use of instructional materials. Research by Obidike (2021) emphasizes that these materials are a powerful tool for fostering active participation and critical thinking in learners, which are essential for achieving significant behavioral changes – the ultimate goal of the teaching and learning process. By providing students with engaging and informative resources beyond textbooks, agricultural science education can move beyond theory and equip students with the practical knowledge and skills they need to thrive in this field.

Effective strategies are the key to unlocking the full potential of instructional materials in the classroom. These strategies act as a roadmap, guiding teachers in utilizing these resources to achieve desired learning outcomes (Aliyu, 2018). The backbone of such a strategy should encompass several key elements. First, fostering a supportive environment through encouragement from school authorities, easy access to these materials and providing teachers with training and professional development opportunities equips them with the skills and knowledge to effectively utilize these resources.

Adeogun (2021) pinpointed a crucial aspect of successful agricultural science education: the effective use of instructional materials. This effectiveness hinges on two key factors: the technical knowledge and vocational skills of the teachers and the level of motivation fostered by the school management. On the teacher's side, possessing technical knowledge goes beyond simply understanding the curriculum. It involves familiarity with the various instructional materials available, from classic charts and models to modern technology like interactive simulations. Supportive administrators might allocate budget specifically for acquiring new and diverse resources, ensuring teachers have access to the latest tools. Additionally, they can encourage participation in workshops and training programs that equip teachers with the technical skills to effectively integrate these materials into their lessons. By addressing both teacher expertise and school management motivation, a powerful synergy can be created. Well-equipped and motivated teachers can then translate their knowledge and passion into engaging lessons that leverage the power of instructional materials. This ultimately benefits students by creating a dynamic learning environment that fosters deeper understanding and a love for agricultural science.

Motivation, that internal drive that pushes us towards achieving goals (Kingsley et al., 2022). Motivation plays a critical role in the success of any complex task, including the effective use of instructional materials by teachers. In the context of work, various psychological factors can fuel this motivation, including the desire for financial security, professional success, recognition from peers and superiors, a sense of accomplishment, and the satisfaction of teamwork (Imo, 2013).

The success of any educational initiative hinges on strong administrative support. This support goes beyond the principal's office and encompasses the collective effort of education supervisors, inspectors, and the Ministry of Education (as the overarching body). In the context of instructional materials, the role of school administrators is particularly critical throughout the entire implementation process (from acquisition to utilization). The attitudes and actions of school leaders play a crucial role in shaping teacher morale. Teachers are the primary implementers of a school curriculum, and the successful implementation of the curriculum is closely tied to their effectiveness. In-service teacher training is a key factor in bringing about the necessary changes in the teaching and learning process (Ayvaz-Tunce & Cobanoglu, 2018). It is essential to note those teachers' knowledge, skills, and attitude need to be advanced efficiently. According to Eniaiyegu (2018), training opportunities that are available to teachers include workshops, seminars, symposium, excursion/field trip, agricultural shows, induction/orientation, extensions agent demonstrations and long-term study leave or in-service training that equip teachers with new ideas, innovation, knowledge and skills for effective lesson delivery.

Statement of the Problem

Engaging students and ensuring their understanding in agricultural science hinges on the effective use of instructional materials. Unfortunately, a common observation is that many teachers in public secondary schools neglect these resources, relying solely on traditional lecture methods (chalk and talk) (paragraph). This approach fails to equip students with the vital vocational skills crucial for agricultural development in senior secondary schools. Instructional materials bridge the gap between theoretical knowledge and practical experience. By utilizing charts, models, objects, or even technology, teachers can create a dynamic learning environment that fosters deeper understanding for students. Additionally, these materials can alleviate the burden on teachers, reducing excessive talking and allowing for a more interactive learning experience. However, the successful implementation of instructional materials requires more than just their availability. Teachers need the support and encouragement of

school administrators and without this backing, the potential of these resources remains untapped. Therefore, fostering a culture that values and prioritizes the use of instructional materials, along with providing the necessary support for teachers, is essential for a thriving agricultural science program.

Instructional materials hold the potential to revolutionize agricultural science education, but their effectiveness hinges on proper utilization. Unfortunately, a gap often exists between this potential and reality. Both teachers and educational administrators may unintentionally neglect these valuable resources, often relying solely on traditional lecture methods (chalk and talk). This approach can hinder student learning, as it fails to provide a dynamic and engaging environment for acquiring the crucial vocational skills needed for agricultural development. The neglect of instructional materials in teaching agricultural science limits student engagement and the development of vital vocational skills. Despite their availability, lack of strategic use and administrative support hinders their effectiveness. This study seeks to explore teachers' perceptions and strategies to promote their use in Gombe State secondary schools. The purpose of the study was determined teachers' perception of strategies to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools (SSS) in Gombe State. Specifically the study sought to:

1. Ascertain the teachers' perception on motivators to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools
2. examine the teachers' perception on administrative practices to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools
3. determine the teachers' perception on training opportunities to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools
4. Determine teachers' perception on maintenance culture to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools

The following research questions were used to guide the study:

1. What are the teachers' perceptions on motivators to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools?

2. What are teachers' perceptions on administrative practices to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools?
3. What are the teachers' perceptions on training opportunities to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools?
4. What are the teachers' perceptions on maintenance culture practices employed to encourage the use of instructional materials for teaching agricultural science in public senior secondary schools?

The following null hypotheses were formulated and were tested at 0.05 level of significant

1. Motivational factors have no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools.
2. Administrative practices have no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools.
3. Training opportunities have no significant enhancing in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools.
4. Maintenance culture has no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools.

Literature Review

This research work was hinged on Cognitive Load Theory propounded by Chandler and Sweller in 1988. This Theory suggests that effective use of instructional materials facilitates learning by directing cognitive resources towards activities that are relevant to learning rather than to processes that are adjunct to learning

Koku and Yemi (2022) assess the strategies for effective teaching of practical agriculture for self-employment in senior secondary schools in Bayelsa State, Nigeria. The study adopted descriptive survey research design. Mean and standard deviation were used to answer the research questions while independent t-test statistic was used to test the hypotheses at 0.05 level of significant. The findings revealed that, effective teaching of practical

agriculture enhances students' performance in the world of work. It was recommended that, Government should improve funding of secondary schools as practical remains the back-bone of agricultural knowledge acquired in schools. Similarly, Adesola et al, (2022) investigated the effects of instructional materials on biology instructions among high achieving secondary school students in SPED international secondary school, Oyo state, Nigeria. The population was 80 secondary schools with sample size of 30 secondary schools. The results showed that about 80% of the respondents did not appropriately make use of the instructional materials in the teaching and learning which had a negative impact on the students' performance in biology in secondary schools in the state. It was recommended that school administrators should encourage biology and teachers to use the instructional materials for effective teaching and learning.

Similarly, Munnir and Musa, (2020) examined the availability, utilization, and impact of instructional materials on performance of physics students in Katsina Metropolis, Nigeria. The study adopted survey research design. The target population was (100) secondary schools. 70 physics teachers were randomly selected. Using simple percentage and correlation, the results reveals that about 50% of the respondents made use of instructional materials effectively which had positive impact on the students' academic achievement in agricultural science in Katsina state. The study recommended regular supply and monitoring of instructional materials in all the secondary schools. In a related study, Kingsley et al, (2022), investigated the influence of motivation on the job satisfaction of teachers. The population of the study was Junior High School teachers in the Accra metropolis. The sample was drawn on two hundred Junior High school teachers in Accra with diverse socio-cultural backgrounds. A convenience sampling technique was used to select the teachers. The findings indicate a positive correlation between teachers' motivation and their job satisfaction.

Ugo and Obiyai (2021) conducted a research on the instructional-based strategies for stimulating secondary school students' career interest in agriculture in Bayelsa State. The research design used was descriptive. The data collected were analyzed using descriptive statistics for research questions and t-test in testing the hypothesis. The Findings among others revealed that teacher's competency-based, motivational based and instructional based strategies were required for stimulating students' career interest in agriculture. It was recommended that government should recruit competent and professional teachers of agriculture to take agricultural science instructions in our secondary schools.

Similarly, Dahiru et al (2021) assess the availability and usage of instructional facilities for effective teaching and learning of Agricultural Science in Nigerian Air force secondary

schools. The design of the study was survey research design. The population of the study was 820 Agricultural Science Teachers and Students of the (13) NAF secondary schools. Simple Random Sampling Technique was used to determine the sample size for the study. The sample size was 30 Agricultural Science Teachers and 120 Agricultural Science Students from SS3 were selected. The instrument for data collection was a structured questionnaire. The data collected were analyzed using mean and standard deviation, while the hypothesis was tested using t-test at 0.05 level of significant. The finding indicates that instructional facilities were inadequate and the available instructional facilities were not fully utilized in teaching Agricultural Science. The researcher recommended that NAF Directorate of Education should provide adequate instructional facilities for teaching of Agricultural Science. In another study, Ngbongha et al, (2021) conducted a study on the approaches to enhance instructional media utilization by senior secondary schools' agricultural science teachers. Descriptive survey research design was adopted for this study. The population was eighty-nine (89) agricultural science teachers in all the forty-three (43) public and private secondary schools in Makurdi Local Government Area. A questionnaire was administered to (89) agricultural science teachers. The data collected were analyzed using mean and standard deviation to answer question 1, 2 and 3 while chi-square was used to analyzed the hypotheses. The findings of the study shows that not all the instructional media materials were accessible. It was recommended that instructional materials available should be put to use to enhanced teaching and learning of agricultural science.

Mashebe (2023) investigated the perspectives of Agricultural science teachers on the need for in-service teacher training. Survey research design was adopted for the study. Data were collected from Agricultural science teachers in the Zambezi region through face-to-face interviews. Twelve Agricultural science were interviewed using face-to-face interview guides. The study revealed that the in-service teacher training programs attended by Agricultural science teachers were relevant to their teaching roles. Furthermore, the study emphasized that to maintain the relevance of in-service teacher training programs, components such as practical activities, projects, investigations, and subject content knowledge should be the focus, in order to continually enhance the capacities of Agricultural science teachers. The study recommends that the regional education directorate in the Zambezi region establish a policy for continuous in-service teacher training programs, including them in their annual financial plan, to improve teacher performance in the region.

Methodology

Survey research design was used in conducting this research. The population for the study was 288 Agricultural Science Teachers from the 144 public Senior Secondary Schools from the three senatorial districts of the State that offers Agricultural Science as a subject. The entire population was studied hence; there was no sampling. The instrument for data collection was a structured questionnaire constructed by the researcher title: Teachers' Perception to enhance the use of Instructional Materials Questionnaire (TPEIMQ). Four point rating was used to generate data from the respondents. The questionnaire was grouped into four sections: A, B, C and D, with each section consisting of ten items each. Section 'A' focused on motivators for teachers to encourage the use of instructional materials for teaching Agricultural Science. Section B focused on administrative approaches to enhance use of instructional materials for teaching Agricultural Science. Section C centered on the training opportunities to enhance the use of instructional materials for teaching agricultural science and finally section D focused on the maintenance culture to enhance the use of instructional materials for teaching Agricultural Science in Public SSS in Gombe state. In all sections, the respondents were required to tick the appropriate option. The rating scale in section A to D had four options, namely; 'Strongly Agree' (4), 'Agree' (3), 'Disagree' (2) and 'Strongly Disagreed' (1).

The data collected from the respondents were analyzed using mean and standard deviation for the research questions while linear regression was used to test the hypotheses at 0.05 level of significant.

Results

Data collected were analysis using Mean and Standard deviation to answer the research questions, while linear regression was employed to test the hypotheses at 0.05 level of significant.

Research Question 1: What are the teachers' perceptions on motivators to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state?

Table 1: Mean and Standard Deviation of teachers' perceptions on motivators to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state

S/No.	Items	Mean	SD	Remarks
1.	Recommending teacher for adequate use instructional materials enhances productivity	3.21	1.69	Agreed
2.	Paying stipends to agricultural science teachers that use instructional materials enhances productivity	3.25	0.80	Agreed
3.	Promoting agricultural science teachers for adequate use instructional materials enhances productivity	3.14	1.43	Agreed
4.	Commending agricultural science teachers that use instructional materials enhances productivity	3.03	1.52	Agreed
5.	Merit pay for agricultural science teachers that use instructional materials effectively enhances productivity	3.04	1.03	Agreed
6	Enhancing salary of agricultural science teachers that use instructional materials will improve the use of instructional materials.	3.38	0.93	Agreed
7	Granting of in-service training to agricultural science will improve the use of instructional materials.	3.84	1.20	Agreed
8	Organizing agricultural shows and exhibitions in school on regular basis will improve the use of instructional materials.	3.03	1.52	Agreed
9.	Supporting agricultural science teachers to go on field trip with the students will improve the use of instructional materials.	2.99	1.69	Agreed
10.	Maintaining a standard school farm for practical experience of the students will improve the use of instructional materials	3.70	0.73	Agreed
Grand Mean		3.26	1.25	Agreed

The result revealed the mean of all items ranging from 2.99 to 3.84, this shows that the respondents agreed with all the items.

Research Question 2: What are teachers' perceptions on administrative practices to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state?

Table: 2 Mean and Standard Deviation of teachers' perceptions on administrative practices to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state

S/No.	Items	Mean	SD	Remarks
1	Provision of adequate time for practical use of agricultural science instructional materials	2.67	1.43	Agreed
2	Installation of technological related agricultural science instruction	3.64	0.53	Agreed
3	Drawing regulation to govern the proper usage of instructional materials	3.93	1.14	Agreed
4	Supervising agricultural science teachers that use instructional materials in the classroom	3.93	1.14	Agreed
5	Allocation of fund for the purchase of instructional materials in SSS	3.38	0.93	Agreed

6	Introducing instructional materials levy in the SSS will improve the use of instructional materials.	3.81	1.19	Agreed
7	Ensuring adequate supply of needed instructional materials to agricultural science teachers	2.9	1.49	Agreed
8	Making the use of instructional material by agricultural science teachers to form part of the condition for their promotion	2.99	1.69	Agreed
9	Acquisition of agricultural science instructional materials through organizations such as; PTF and PTA	3.7	0.73	Agreed
10	Setting of instructional materials task fund to be funded by companies and NGOs in all the Senior Secondary Schools	3.64	0.53	Agreed
Grand Mean		3.46	1.08	Agreed

The result revealed the mean of all items ranging from 2.67 to 3.93 this shows that the respondents agreed with all the items.

Research Question 3: What are the teachers' perceptions on training opportunities to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state?

Table 3: Mean and Standard Deviation of teachers' perceptions on training opportunities to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state

S/No.	Items	Mean	SD	Remarks
1.	Provision of in-service training for agricultural science teachers improve their usage	2.93	1.14	Agreed
2.	Organizing workshops for agricultural science teacher on the use of instructional materials	3.38	0.93	Agreed
3.	Organizing conferences for agricultural science teachers on the use of instructional materials	2.81	1.19	Agreed
4.	Organizing orientation programmes for newly recruited agricultural science teachers on the use of instructional materials	2.95	1.51	Agreed
5.	Organizing symposiums for agricultural science teachers on the use of instructional materials	3.64	0.53	Agreed
6	Proper ICT training for agricultural science teachers	3.79	1.23	Agreed
7	Reviving the culture of field trip in all senior secondary schools in Gombe	3.26	1.47	Agreed
8	Organizing seminars for agricultural science teachers on the use of instructional materials in all the senior secondary schools	2.83	1.16	Agreed
9.	Regular massive mobilization programs to educate agricultural science teachers on the use of instructional materials in public SSS	2.9	1.03	Agreed
10.	Organizing group discussion and sharing of ideas among agricultural science teachers on the use of instructional materials	3.79	1.23	Agreed
Grand Mean		3.23	1.14	Agreed

The result revealed the mean of all items ranging from 2.81 to 3.79 this shows that the respondents agreed with all the items.

Testing Hypotheses

The following hypotheses were tested at 0.05 level of significant in this study:

H₀₁: Motivational factor has no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

Table 4: Regression of Motivational factor and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.290	1	22.290	32.150	.000 ^b
	Residual	198.288	286	.693		
	Total	220.578	287			

Table 5: Model summary of Motivational factor and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.318 ^a	.101	.098	.83265

The linear regression in Table 4 and 5 show significant differences between the various R values, $F = 32.15$ (df 1, 287), $P < 0.05$. Since the p-value (0.00) is less than 0.05 level of significant. From the results, the study concludes that there is significant influence of Motivational factor in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

H₀₂: Administrative practices have no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

Table 6: Regression of administrative practices and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.514	1	25.514	37.408	.000 ^b
	Residual	195.064	286	.682		
	Total	220.578	287			

Table 7: Model summary of administrative practices and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.340 ^a	.116	.113	.82586

The linear regression in table 6 and 7 show significant differences between the various R values, $F = 37.41$ (df 1, 287), $P < 0.05$. Since the p-value (0.00) is less than 0.05 level of significant. From the results, the study concluded that, there is significant influence of administrative practices in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

H₀₃: Training opportunities has no significant influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

Table 8: Regression of Training opportunities and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.966	1	17.966	25.360	.000 ^b
	Residual	202.612	286	.708		
	Total	220.578	287			

Table 9: Model summary of Training opportunities and its influence in enhancing agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285 ^a	.081	.078	.84169

The linear regression in table 8 and 9 show significant differences between the various R values, $F = 25.36$ (df 1, 287), $P < 0.05$. Since the p-value (0.00) is less than 0.05 level of significant. From the results, the study concluded that, there is significant influence of training opportunities in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state.

Discussion of Findings

The first purpose of this study is to determine teachers' perceptions on motivators to enhance the use of instructional materials for teaching agricultural science in public senior secondary schools in Gombe state, the result revealed that motivators has high influence in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state. The hypothesis tested showed that there is significant influence of Motivational factor in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state. The findings of this study corroborated with that of Akilu & Olatunbosun (2022), Aliyu (2018), John (2016), Kingsly (2023), whom in their separate study opined that promotion/implementation of promotions, regular payment of monthly salaries, granting them in-service studies, incentives, remunerations, conducive working conditions, verbal praise/appraisal which serve as reinforcement that enhances job performance and by giving tangible reward for accomplishment of learning purpose. Also in their separate findings, some asserted that motivated teacher is one who not only feels satisfied with his or her job, but also is empowered to strive for excellence and growth in instructional practice.

The findings of the second purpose which was further affirmed by the second hypothesis revealed that administrative approaches have significant influence in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state. This finding is in conformity with the study of Nneka (2022), Dahiru et al. (2021), Adesola, et al, (2022) in their distinct study stated

that administrative approaches that encourage teachers to use instructional materials are the supply of needed instructional materials, equipment, classrooms, laboratories, library, text books, financial allocation for the provision of instructional materials by the subject teachers, staff support/team work, allowing teachers to have access to sensitive materials and ICT gadgets has significant influence and support in encouraging the use of instructional materials for teaching and learning process. They further observed that, leadership must foster on environments where teachers are encouraged to be creative and innovative to explore instructional materials.

The findings of the third purpose revealed that training opportunities has influence in encouraging agricultural science teachers on the use of instructional materials for teaching Agricultural Science in public Senior Secondary Schools in Gombe state. The hypothesis revealed that there is significant influence of training opportunities in encouraging agricultural science teachers on the use of instructional materials for the teaching of Agricultural Science in public Senior Secondary Schools in Gombe state. The findings of this study agree with the study of Aliyu (2018), Mashebe (2023), Eniaiyaju (2018) who in their unique studies revealed that training opportunities that encourage the use of instructional materials include; organizing workshops, seminars, conferences, symposium, agricultural show, computer training, networking, excursion/field trips and also granting in-service studies or study leave for agricultural science teachers has greater influence in facilitating the use of instructional materials due to new knowledge obtained.

Conclusion

Based on the finding, the study concluded that, regular motivation, administrative strategies and training opportunities are the major strategies that positively encourage the use of instructional materials for the teaching of agricultural Science in public senior secondary schools in Gombe state. It was recommended that Financial and Recognition Incentives, sufficient funding for procuring instructional materials, expansion of training opportunities and promote maintenance Culture by providing adequate storage facilities should be put in place.

References

- Adesola, M. O., Olorode, G. B., & Aranmolate, T. R. (2022). Effect of instructional materials on biology instructions among high achieving secondary school students in SPED international secondary school, Oyo, Nigeria. *Journal of Educational Research in Developing Areas*, 3(2), 237-245.
-

- Adeogun A. A (2021). The principal and the financial management of public secondary schools in Osun State. *Journal of Educational System and Development*.5 (1): 1-10.
- Akilu, I.& Olatunbosun M.L. (2022). Availability and Utilization of Instructional Materials in Teaching and Learning of Biology in Senior Secondary Schools in Talatan Mafara, Zamfara state. *Aquademia*, 6(2):22-31
- Aliyu, G. (2018).Analysis of Teachers' Perception of Strategies for improving the use of Instructional Materials in senior secondary schools in Kano State, Nigeria. Unpublished Thesis, M.Sc. Ed. Amadu Bello University, Zaria Kaduna state.
- Ayvaz-Tuncel, Z., & Çobanoğlu, F. (2018). In-service teacher training: Problems of the teachers as learners. *International Journal of Instruction*, 11(4), 159-174.<https://rb.gy/pnwly>
- Dahiru, D.A., Akinpade B.O. & Aluko O.O.(2021). Assessment of the Availability and Usage of Instructional Facilities for Effective Teaching and Learning Agricultural science in Nigerian Airforce Secondary Schools. *International Journal of Research and Scientific Innovation*. 8(2): 23-27
- Damilare, T. O. & Akinyemi, O.O. (2016). Development of equipment maintenancestrategy for critical equipment. Retrieved on 24 June, 2023 from <https://www.researchgate.net/publication/280804155>
- Eniayewu, A. J. (2018). Effective of instructional materials on teaching and learning of economics in secondary schools. *Journal of School of Education, College of Education, Ikwere-Ekiti*, 1 (3): 1-17
- Federal Republic of Nigeria (2014). *National policy on education (6thed.)*. Lagos, NERDC Press.
- Imo, U. A. (2013). The influence of motivation of teachers" and their incentives in Akwa Ibom State, Nigeria. *International Journal of Modern Management Sciences Florida*, 7 (5): 210-219
- John, L.T. (2016). Role of Instructional materials in Academic Performance in Community Secondary Schools in Rombo District. Unpublished M. Ed Thesis, Open University, Tanzania.
- Kathuri, N.J. (2016). The Effect of Inadequate Facilities and Resources on Students' Performance. A Paper Presented to I.A.E. Nairobi, Kenya. October 20, 2015.
- Kingsly, N., Dilys A.T. & Kobina I.A. (2022). The Influence of Motivation on the Job Satisfaction of Junior High School Teachers in Ghana. *Journal of Education and practice*. 5(5): 45-48.
- Koku, K.O,& Yemi, P.O.(2022).Strategis for effective teaching of practical agriculture for self-employment in senior secondary school in Bayelsa state, Nigeria. *International Journal of Secondary Education*.10(1); 59-65.

-
- Mashebe, P. (2023). Views of Agricultural science teachers on in-service training needs in the Zambezi region, Namibia. *Journal of Research, Policy and practice of teachers and teacher education*. 13(2):86-97. <https://doi.org/10.37134/jrppte>
- Munnir, A., & Musa, L. (2020). Assessment of availability, utilization, and impact of instructional materials on performance of physics students in Katsina Metropolis, Nigeria. *Journal of the General Studies Unit Federal University Wukari*, 2(3), 44-54.
- Mustapha, A., Aminu, B. K., Abdu, S. B., & Dauda, A. (2022). Availability of instructional materials on students' academic performance in senior secondary schools in Maiduguri Metropolis, Borno State. *Asian Journal of Advanced Research and Reports*, 14(2), 11-17.
- Ngbongha, I.O; Aka'a, C.W. & Anthony Y.(2021) Approaches to enhance instructional media utilization by senior secondary school agricultural science teachers in makurdi L.G.A; Benue state Nigeria. *World Journal of Innovative Research* 10 (4); 135-140.
- Nneka, N.W. (2022). Demand and Supply of Educational Resources: Implication on the National policy on Education. *International Journal of institutional Leadership, Policy and Management*. www.ijilp.com.ng
- Obidike, I. V. (2021). Production and improvisation of instructional materials for effective teaching and learning in early childhood care and education in Nigeria. *Sapientia Foundation Journal of Education, Sciences and Gender Studies (SFJESGS)*, 3(2), 243 – 255
- Sodangi, U., Isma'il, A., & Abdulrahman, A. (2022). Perception of secondary school science and mathematics teachers on professional development participation in Zamfara State, Nigeria. *Integrity Journal of Education and Training*, 6(2), 37-45. <https://doi.org/10.31248/IJET2022.138>
- Ugo, P. & Obiyai K.K. (2021). Instructional based Strategies for Stimulating Secondary School Students' career Interest in Agriculture in Bayelsa state. *International Journal of Innovative Education Research*. 9(4): 71-79.
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