

Extent of the Utilization of Indigenous Language (Igbo) in Teaching and Learning of Agricultural Science at The Upper Basic Schools in Ebonyi State

Nwakaego Nwigwe

Department of Arts and Social Science Education, Ebonyi State University, Abakaliki

doi: <https://doi.org/10.37745/ijeld.2013/vol13n51120>

Published June 25, 2025

Citation: Nwigwe N. (2025) Extent of the Utilization of Indigenous Language (Igbo) in Teaching and Learning of Agricultural Science at The Upper Basic Schools in Ebonyi State, *International Journal of Education, Learning and Development*, 13 (5), 11-20

Abstract: *This Study was carried out with the aim of ascertaining the extent of utilization of indigenous language (Igbo) in the teaching and learning of Agricultural science at the Junior Secondary Schools in Ebonyi State. Four research questions and two null hypotheses guided the study. The design of the study was descriptive survey research design and the population of the study was three hundred and thirty-six (336) agricultural science teachers and students. The sample for the study was 218 comprised 88 agricultural science teachers and 130 students. The instrument for data collection was the researchers' structured questionnaire designed in 4 – points rating scale, to elicit responses from the respondents. The data analysis was done using mean, standard deviation for the research questions and t-test was used to test the null hypotheses. The results of the study showed that the indigenous language (Igbo) is highly utilized in teaching and learning of Agricultural science at the Junior Secondary Schools. Based on the findings, it was recommended that Agricultural Science teachers should be encouraged more to facilitate agricultural science learning and teaching by using indigenous language at the Junior Secondary Schools. Secondly, the government of Ebonyi State should encourage and promote the indigenous languages in schools by motivating the Igbo language teachers.*

Key words: indigenous language, Igbo, agricultural science, utilization, upper basic schools.

INTRODUCTION

Language is an integral part of human behaviour and it serves as the primary means of interaction between people. It is paramount in any teaching and learning encounter. This is because the goal of education are not achievable without the instrumentality of language (Nwigwe,2021). Language, whether indigenous or foreign, are indispensable tools in the life of individual because there is no aspect of human activities that can be successful without the effective use of language. Equally, language brings people together and

promotes love and appreciation of each other. Understanding someone's language outside one's language tend to bring more cordial relationship with one another.

It is through language that one communicates with the world, define ones identity, express ones history and culture, learn, defend the human rights and participate in all aspect of the society. Through language, people preserve their community's history, customs and traditions, memory, unique mode of thinking, meaning and individual expression. People also use language to construct their future. Language is also a vehicle of thought and the expression of culture. It expresses people's way of life, their perception of things and their world view.

In Nigeria, there are over 500 indigenous languages (Ndem, Nwigwe & Eze, 2020), but English Language media dominates because it is used as an official language in Nigeria. Indigenous language is defined as a language spoken by a group of people that resides in a particular locality or region. It also signifies people's knowledge, culture and identity (Ndem et al. 2020). It is used as a medium of instruction in teaching and learning. That is why FRN (2014) states that the medium of instruction in the primary schools initially should be the child's mother tongue or the language of the immediate community and at a later stage, English could be used.

Despite this policy statement and the efforts of some Igbo scholars in promoting Igbo language and culture, most native speakers of Igbo language have not embraced Igbo language not even in schools. Ndem et al, (2020), opined that one of the greatest challenges Nigeria faces in her scientific and technological advancement is her total neglect of the use of indigenous language in education. They stated that this has not only slowed down educational development but has hindered the scientific and technological growth. Most countries that have advanced scientifically and technologically harness the full potential of science and technology through the use of their indigenous language.

In Nigeria, indigenous languages are not highly esteemed, as English which came with the Western education remain the vehicle of power and progress in life. English language has emerged as that privileged language without which the unity of Nigeria as a nation is most improbable, if not out rightly impossible. That explains why majority of Nigerians go through the primary, secondary and post-secondary schools being taught in English language while the use of the indigenous language is neglected. The indigenous language (Igbo) when properly harnessed will be used for teaching and learning of science subjects such as agricultural science and other related subjects at all levels of education in Nigeria.

Teaching according to Ndem (2020) is a deliberate act which involves development of skills, knowledge, ideas, norms, competencies and values by someone called the teacher in someone called the learner. Effective teaching results to learning. Therefore, learning is conceptualized as the acquisition of knowledge or skills through study, experience or being taught (Ndem, 2020).

The teaching and learning of science subjects like agricultural science at the junior secondary schools using indigenous language (Igbo) will enhance the proper apprehension of the subject and promote agricultural development in Nigeria. Agricultural science according to Ndem et al (2020) is explained as the science that deals with cultivation of crops and rearing of animals for utilization of man domestically and industrially. Upper Basic school on the other hand, in the Nigeria context and as well as the context of this study is one of the segments of the basic education after primary school level (Ndem et al, 2020).

Nwigwe (2021) reported that children learn better and faster-eagerly when instructed in their mother tongue, but this mother tongue has been relegated to the background and seen as language of the illiterate rural dwellers. The situation has made it extremely difficult for the young Igbo children not to embrace Igbo language as an important language in their life. The youth see indigenous language (Igbo) as less superior to English language. It has led to also the erosion of indigenous culture, customs and traditions of the indigenes (Igbos). If this situation is allowed to continue, there may be total extinction of indigenous language (Igbo) in the Nigeria society and especially in the area of instruction at the schools.

It is on the basis of the above that this study was designed to determine the extent of utilization of indigenous language (Igbo) in the teaching and learning of agricultural science at the upper basic schools in Ebonyi State.

Purpose of the study

The main purpose of the study was to determine the extent of utilization of indigenous language (Igbo) in the teaching and learning of agricultural science at the upper basic schools in Ebonyi State; Specifically, the study sought to determine:

1. The extent of utilization of indigenous language (Igbo) in teaching and learning of animal production at the upper basic school in Ebonyi State.
2. The extent of utilization of indigenous language (Igbo) in teaching and learning of crop production at the upper basic school in Ebonyi State.
3. The extent of utilization of indigenous language (Igbo) in teaching and learning of soil science at the upper basic school in Ebonyi State.
4. The extent of utilization of indigenous language (Igbo) in teaching and learning of agricultural mechanization at the upper basic school in Ebonyi State.

Research Questions

The following research questions were answered which guided the study.

1. To what extent do teachers utilize indigenous language (Igbo) in teaching and learning of animal production at the upper basic school in Ebonyi State?
2. To what extent do teachers utilize indigenous language (Igbo) in teaching and learning of crop production at the upper basic school in Ebonyi State?
3. To what extent do teachers utilize indigenous language (Igbo) in teaching and learning of soil science at the upper basic school in Ebonyi State?
4. To what extent do teachers utilize indigenous language (Igbo) in teaching and learning of Agricultural mechanization at the upper basic school in Ebonyi State?

Hypotheses

Ho₁: There is no significant difference between the mean ratings of the teachers and the students on the extent of utilization of indigenous language (Igbo) in teaching and learning of animal production at the upper basic Schools in Ebonyi State.

Ho₂: There is no significant difference between the mean ratings of the teachers and the students on the extent of utilization of indigenous language (Igbo) in teaching and learning of crop production at the upper basic Schools in Ebonyi State.

METHODOLOGY

This study was carried out in Ebonyi State of Nigeria. The study adopted descriptive survey research design. The population of the study was 336 agricultural science teachers and students in Ebonyi State. The sample for the study was 218, comprised 88 agricultural science teachers and 130 students.

The instrument for data collection was the researchers' structured questionnaire designed in 4- point rating scale, to elicit responses from the respondents. The response options were; Very High Extent (4 points), High Extent (3 points), Low Extent (2 points) and Very Low Extent (1 point). The instrument was validated by three experts in agricultural education and measurement and evaluation from Ebonyi State University. The reliability of the instrument was established using Cronbachs Alpha statistics which yielded a reliability coefficient of 0.80 which was considered highly reliable. The 218 copies of the questionnaire were administered to the respondents with the help of vice principals academic in each of the upper basic schools who served as research assistants. Out of the 218 questionnaires distributed, 208 were retrieved which represents 95.4% return rate. For data analysis, the research questions were answered using mean \bar{x} and standard deviation (sd.), while the null hypotheses were tested using t-test statistics. In taking decision, any item with the mean score between 3.59 – 4.00 was regarded as Very High Extent (VHE), any score between 2.59- 3.59 was regarded as High Extent (HE). Any score between 1.59 - 2.59 was regarded as Low Extent (LE) and any score between 0.59 – 1.59 was adjudged to be Very Low Extent (VLE). The null hypotheses were accepted when the t-tab was less then t-critical and not accepted when the t-cal was greater than t-tab.

RESULTS

Research Questions 1

What is the extent of utilization of indigenous language (Igbo) in teaching and learning of animal Production at the Junior Secondary Schools in Ebonyi State?

Table 1. Mean and Standard Deviation of the Respondents on the extent of utilization of indigenous language (Igbo) in teaching and learning of animal Production at the upper basic Schools in Ebonyi State.

S/N	Item Statements	\bar{x}	Sd.	Decision
1.	Concept of Animal Production	3.19	0.69	HE
2.	Types of Farm Animals	3.17	0.71	HE
3.	Characteristics of Farm Animals	3.17	0.71	HE
4.	Housing Construction in Farm Animals	3.23	0.60	HE
5.	Feeding of Farm Animals	2.60	0.64	HE
6.	Disease Control in Farm Animals	2.67	0.55	HE
7.	Pest Control in Farm Animals	2.65	0.63	HE
8.	Slaughtering of Farm Animals	3.25	0.58	HE
9.	Abattoir Management.	2.71	0.78	HE
10.	Storage of meat and Animal by-products.	3.47	0.76	HE
11.	Marketing and Distribution of Farm Animals.	3.16	0.75	HE
Grand Mean		3.02		

Key: HE = High Extent

Table 1 reveals that the mean scores of the respondents ranged between 3.47 and 2.60 which are within the category of high utilization and the standard deviation ranged between 0.78 and 0.55. This implies that the respondents agreed that indigenous language (Igbo) is highly utilized in teaching and learning of animal production at the upper basic school in Ebonyi State. The scores of the standard deviation indicates that the opinions of the respondents did not deviate from the central mean.

Research Question 2:

What is the extent of utilization of indigenous language (Igbo) in teaching and learning of Crop Production at the upper basic Schools in Ebonyi State?

Table 2: Mean and Standard Deviation of the Respondents on the extent of utilization of indigenous language (Igbo) in teaching and learning of Crop Production at the upper basic Schools in Ebonyi State.

S/N	Item Statements	\bar{x}	Sd.	Decision
1.	Concept of Crop Production	3.18	0.72	HE
2.	Different types of crop plants	3.16	0.68	HE
3.	Site selection for planting of crops	3.12	0.73	HE
4.	Land preparation in crop planting	3.28	0.60	HE
5.	Nursery establishment in crop planting	3.20	0.60	HE
6.	Planting of seeds, tubers, cuttings	3.25	0.62	HE
7.	Weed control in crop production	3.18	0.67	HE
8.	Application of manure in crop production	2.82	0.94	HE
9.	Disease control in crop production	3.25	0.78	HE
10.	Pest control in crop production	3.17	0.71	HE
11.	Harvesting of crops	2.85	0.66	HE
12.	Processing of crops	2.92	0.58	HE
13.	Storage of farm products	2.94	0.56	HE
14.	Marketing and distribution of farm products	2.89	0.55	HE
Grand Mean =		3.09		

Table 2 reveals that the mean score of the respondents ranged between 3.28 and 2.82 and the standard deviation ranged between 0.94 and 0.55. This signifies that the respondents agreed that indigenous language (Igbo) is utilized at high extent in teaching and learning of Crop production at the upper basic schools and the opinions of the respondents revolves around the central mean based on the standard deviations.

Research Question 3

What is the extent of utilization of indigenous language (Igbo) in teaching and learning of Soil Science at the upper basic Schools in Ebonyi State?

Table 3: Mean and Standard Deviation of the Respondents on the extent of utilization of indigenous language (Igbo) in teaching and learning of soil science at the upper basic Schools in Ebonyi State.

S/N	Item Statements	\bar{x}	Sd.	Decision
1.	Concept of Soil Science	3.16	0.68	HE
2.	Types of soil	2.70	0.61	HE
3.	Soil Profile and environment	2.53	0.65	HE
4.	Soil micro-organisms	2.54	0.57	HE
5.	Properties of soil	3.06	0.79	HE
6.	Soil erosion control	3.05	0.73	HE
7.	Soil management practices	3.11	0.72	HE
8.	Soil P.H	3.06	0.79	HE
9.	Nutrient Content of the soil	2.68	0.62	HE
10.	Soil Macro-organisms	2.36	0.63	HE
Grand Mean =		2.82		

Table 3 reveals that the mean scores of the respondents ranged between 3.16 and 2.36 and the standard deviation ranged between 0.79 and 0.57. This was an indication that the respondents agreed that indigenous language (Igbo) is highly utilized in teaching and learning of soil science at the upper basic Schools in Ebonyi State. And also that the opinions of the respondents were within the central mean.

Research Question 4

What is the extent of utilization of indigenous language (Igbo) in teaching and learning of Agricultural Mechanization at the upper basic schools in Ebonyi State?

Table 4: Mean and Standard Deviation of the Respondents on the extent of utilization of indigenous language (Igbo) in teaching and learning of Agricultural Mechanization at the upper basic Schools in Ebonyi State.

S/N	Item Statements	\bar{x}	Sd.	Decision
1.	Concept of Agricultural Mechanization	2.70	0.69	HE
2.	Importance of Agric-Mechanization	2.92	0.58	HE
3.	Types of farm tools and equipment	2.77	0.58	HE
4.	Farm machines	2.49	0.72	HE
5.	Types of farm machines	2.44	0.71	HE
6.	Maintenance of farm tools & equipment	2.50	0.65	HE
7.	Maintenance of farm machines	2.41	0.64	HE
8.	Uses of farm tools, equipment & machines	2.44	0.71	HE
Grand Mean =		2.50		

Table 4 shows that the mean scores of the respondents ranged between 2.92 and 2.41 and the standard deviation ranging between 0.72 and 0.58. This signifies that the respondents agreed that indigenous language (Igbo) is highly utilized in teaching and learning of agricultural mechanization at the Junior Secondary Schools in Ebonyi State. The scores of the standard deviations indicates that the opinions of the respondents did not deviate far from the central mean.

Hypotheses

Ho₁: There is no significant difference between the mean ratings of the teachers and the students on the extent of utilization of indigenous language (Igbo) in teaching and learning of animal production at the upper basic Schools in Ebonyi State.

Table 5: t-test Analysis on the extent of utilization of indigenous language (Igbo) in teaching and learning of animal production at the upper basic Schools in Ebonyi State.

S/N	Item Statements	Group	N	\bar{x}	Sd.	Df.	t-cal	t-tab	Interpretation
1.	Concept of animal production	Teachers	78	3.06	0.62				
		Students	130	3.30	0.91	206	-0.21	1.96	Nsd
2.	Types of farm animals	Teachers	78	2.72	0.57				
		Students	130	3.07	0.83	206	-3.18	1.96	Nsd
3.	Characteristics of farm animals	Teachers	78	2.70	0.57				
		Students	130	3.03	0.81	206	-3.00	1.96	Nsd
4.	Housing Construction in farm animals	Teachers	78	2.79	0.60				
		Students	130	3.13	0.75	206	-3.11	1.96	Nsd
5.	Feeding of farm animals	Teachers	78	2.46	0.84				
		students	130	2.84	0.66	206	-3.11	1.96	Nsd
6.	Disease control in farm animal s	Teachers	78	2.60	0.84				
		students	130	2.69	0.72	206	-0.73	1.96	Nsd
7.	Pest Control in farm animal	Teachers	78	2.65	0.75				
		students	130	2.72	0.68	206	-0.63	1.96	Nsd
8.	Slaughtering of farm animals	Teachers	78	2.46	0.84				
		Students	130	3.38	0.96	206	-7.07	1.96	Nsd
9.	Abattoir Management	Teachers	78	2.65	0.75				
		students	130	3.23	1.05	206	-4.46	1.96	Nsd
10.	Storage of meat and animal by-products	Teachers	78	2.53	0.84				
		Students	130	3.23	1.05	206	-5.38	1.96	Nsd
11.	Marketing and distribution of farm animals.	Teachers	78	2.46	0.84				
		Students	130	3.11	0.85	206	-5.41	1.96	Nsd

Key: Nsd = Not Significant different.

Table 5 revealed that all items had their t-calculated less than the t-table at 206 degree of freedom at 0.05 level of significance. Therefore the null hypothesis was accepted on the extent of utilization of indigenous language (Igbo) in teaching and learning of animal production at the upper basic Schools in Ebonyi State.

Ho₂: There is no significant difference between the mean ratings of the teachers and the students on the extent of utilization of indigenous language (Igbo) in teaching and learning of Crop production at the upper basic Schools in Ebonyi dtate.

Table 6: t-test Analysis on the extent of utilization of indigenous language (Igbo) in teaching and learning of Crop Production at the upper basic Schools in Ebonyi State.

S/N	Item Statements	Group	N	\bar{X}	Sd.	Df.	t-cal	t-tab	Intep
1.	Concept of Crop Production	Teachers	78	3.19	0.68				
		Students	130	3.00	0.78	206	1.72	1.96	Nsd
2.	Different types of crop plants	Teachers	78	3.00	0.78				
		Students	130	2.61	0.74	206	0.39	1.96	Nsd
3.	Site selection for crop planting	Teachers	78	3.38	0.92				
		Students	130	2.69	0.72	206	5.47	1.96	Sd
4.	Land preparation in crop planting	Teachers	78	3.42	0.88				
		students	130	2.61	0.74	206	6.42	1.96	Sd
5.	Nursery establishment in crop planting	Teachers	78	3.53	0.93				
		students	130	3.07	0.83	206	3.53	1.96	Sd
6.	Planting of seed, tubers, cuttings	Teachers	78	3.57	0.88				
		Students	130	3.15	0.72	206	3.33	1.96	Sd
7.	Weed control in crop production	Teachers	78	3.63	0.75				
		Students	130	3.10	0.81	206	4.34	1.96	Sd
8.	Application of manure in Crop Production	Teachers	78	3.38	0.92				
		Students	130	2.92	0.73	206	7.61	1.96	Sd
9.	Disease control in Crop Production	Teachers	78	3.00	0.78				
		Students	130	2.61	0.74	206	0.39	1.96	Nsd
10.	Pest control in crop production	Teachers	78	2.54	0.66				
		Students	130	2.79	0.77	206	0.43	1.96	Nsd

Key: Nsd = Not Significant different; Sd = Significant different

Table 6 shows that items 1, 2, 9 and 10 had their t-calculated less than t-table while items 3,4,5,6,7,8, had their t-calculated greater than the t-table. Therefore the null hypothesis was accepted on items 1,2,9 and 10 and items 3,4,5,6,7, and 8 were not accepted at 206 degree of freedom and 0.05 level of significance on the extent of utilization of indigenous language (Igbo) in teaching and learning of crop production at the upper basic Schools in Ebonyi State.

FINDINGS

Based on the analysis of the data, the following findings emerged:

1. Indigenous language (Igbo) is highly utilized in teaching and learning of animal production at the upper basic Schools in Ebonyi State.
2. Indigenous Language (Igbo) is utilized at a high extent in teaching and learning of crop production at the upper basic Schools in Ebonyi State.
3. Igbo language is highly used in teaching and learning of Soil Science at the upper basic Schools in Ebonyi State.
4. Indigenous language (Igbo) is used at a high extent in teaching and learning of Agricultural Mechanization at the upper basic Schools in Ebonyi State.

5. There was no significant difference between the opinions of the teachers and the students on the utilization of indigenous language (Igbo) in teaching and learning of agricultural science at the upper basic schools in Ebonyi State.

DISCUSSION OF FINDINGS

The results of data analysis presented above in table 1,2,3,4, revealed that indigenous language (Igbo) is highly utilized in teaching and learning of animal production, crop production, soil science and agricultural mechanization at the upper basic Schools in Ebonyi State. This agrees with the views of Ugboh (2004), Adenegan (2014), Lawal (2015) and Ondondo (2020) who asserted that the use of local languages by the facilitators and extension agents in teaching of adult farmers enhance their understanding of Agricultural technologies, ensures the flow of information on fertilizer and pesticides use for high yield variety of crops. The study also revealed that there is no significant difference in the mean responses of teachers and students on the extent of utilization of indigenous language (Igbo) in the teaching and learning of agricultural science at upper basic Schools. This means that there is a general agreement among the teachers and students that indigenous language (Igbo) is being utilized at high extent in the teaching and learning of Agricultural Science at the upper basic Schools. Consequently, there are lots of benefits being derived which include among others; improved effectiveness of instruction, students feel more at home and comfortable with learning, bridging the gap between learning activities (Theory) and practice of farming activities.

CONCLUSION

From the findings of this study, it has been established that indigenous language (Igbo) is highly utilized in teaching and learning of animal production, crop production, soil science and agricultural mechanization at the Junior Secondary Schools. They are lots of benefits to be derived using the local languages in teaching of agricultural science which include; improved effectiveness of instruction, students feeling more at home and comfortable with learning. It makes difficult agricultural words easy to be understood, bridging the gap between learning activities, and finally, there will be a natural approach to learning of farming techniques and new innovations.

Recommendations

Based on the finding of the research, the following recommendations are put forward.

1. Teachers should be encouraged to learn and facilitate agricultural science teaching and learning by using the indigenous language always in their schools.
2. The government of Ebonyi State should always promote the indigenous languages in schools by organizing seminars, conferences and workshops for the agricultural science teachers
3. The government of Ebonyi State should also encourage the agricultural science teachers by giving the incentives for the use of indigenous language (Igbo) in teaching of agricultural science
4. The Agricultural science teachers should be encouraged to write agricultural science textbooks using Igbo language to interpret some basic concepts

REFERENCES

Adenegan, K.E., Raji, S.M. and Adenegan, T.S. (2017). "The use of Yoruba Indigenous language in teaching and learning of Mathematics in Nigeria Schools. <https://www.academia.edu>.

- Federal Republic of Nigeria (2014). *National Policy on Education*. N.E.R.D.C. Lagos, Nigeria.
- Iduma, C.I; Ogbu, J.E; Ndem, J.U and Obiana .V. (2019). Influence of chemical modification on kenaf fiber on Xgnp-pp-bio composites. *SN Applied Science*. DOI: 10.1007/S42452-019-1319-1.
- Lawal, O.A. (2015). Indigenous Languages as Tools for Effective Communication of Science and Technology for Food production in Nigeria. *Theory and practice in language studies*. 5(3), 463-468.
- Ndem, J.U and Akubue, B.N (2016). Status of teaching pre-vocational subjects in Junior Secondary School level. *Journal of Education and practice* 7(4), 103-109
- Ndem, J.U and Akubue, B.N (2018). Income generating opportunities available to widows in Agriculture and Home Economics related trade in Ebonyi State. *Journal of Home Economics Research Association of Nigeria* 25(2) 1-9.
- Ndem, J.U. (2020). *Basic Teaching Methodology in Education and Social Sciences*. Ave Maria Academic publishers. Abakaliki Nigeria
- Ndem, J.U.; Nwigwe, N. and Eze, J.N (2020). Application of Indigenous language (Igbo) for improving the Teaching of Vocational Agriculture at the Junior Secondary Schools in Ebonyi State, Nigeria. *Journal of Education and Practice*, 11(36), 24-29.
- Nwigwe, N. (2020). Availability and Utilization of Instructional Materials for teaching of indigenous language (Igbo) in public Junior Secondary Schools in Ebonyi State, Nigeria. *Journal of education and practice*. 11(5), 19-23.
- Nwigwe, N. (2021). Effectiveness of Story Telling on Reading Comprehension and written production of Indigenous Language (Igbo) learners in primary Schools in Ebonyi State, Nigeria. *Journal of Education and Practice*, 12(23), 37 – 41.
- Odondo, E.A. (2020). An indigenous Language Model for Innovations and Technology Transfer in Agriculture. *Journal of Applied Linguistics and Translation* 6(2), 52-58.
- Ugboh, O. (2004). Benefits of Indigenous Language in the teaching and learning of Adult farmers in Delta State, Nigeria. *Journal of Agriculture and social Research*, 4(2), 54-60.