



PERCEIVED TEACHER'S CULTURE AND TEACHING OF ENVIRONMENTAL EDUCATION AT THE UNIVERSAL BASIC EDUCATION (UBE) LEVEL IN CROSS RIVER STATE, NIGERIA

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ABSTRACT

This study investigated perceived influence of teachers' culture and Teaching of Environmental Education at the UBE Level in Cross River State. One hypothesis was used to guide the study. A sample of 450 teachers was used from the 3 education zones of the state. Proportionate stratified random sampling was used to select the sample size of the teachers. The researcher designed and administered an instrument titled, Perceived Influence of Teachers' Culture and Teaching of Environmental Education questionnaire (PITCTEEQ) which was the main instrument used for data collection. An Ex-post Facto design was adopted for the study. The reliability estimate of the instrument was established through Cronbach Alpha Reliability Method with reliability index of 0.81. ANOVA was the statistical techniques employed to test the null hypothesis under study. 10 items questionnaire was adopted. Each was tested at .05 level of significance. The result of the analysis revealed that: There was no statistically significant difference between male and female teachers in their teaching of Environmental Education with respect to TCC, KSM, TCM, TCWS and TEC. Teachers' culture showed significant influence on the teaching of EE in the study area. By these findings, the study recommended among others that UBE teachers must be aware that culture and the concept of EE are two different ways of knowing, and therefore, their attitudes towards the teaching of EE have to be unrelated to their cultural beliefs.

KEYWORDS: Teachers, Culture, Teaching, Environmental Education

INTRODUCTION

Cultural values may determine teachers' behaviour in the area of the cultural practices in the classroom. They may determine teacher-student relationship more especially in a strange environment and their response to some infused themes of Environmental Education especially when it contradicts with their cultural values and norms.

The inadequate environmental ethics, ignorance and inadequate environmental awareness, knowledge and skills in pupils and students in particular, can only be removed through such education. That stirs the force of participation in decision-making, community action, and / or problem solving on environmental issues, which is a step towards future sustainable development (Ogueri, 2004). According to Jakayinfa and Yusuf (2008) the Environmental Education Curriculum

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of UBE, drafted by the Nigerian Educational Research and Development Council (NERDC), has the scope of environmental education structured into four main themes:

- i. Ecological foundation
- ii. Human environment/Development

- iii. Environmental change/impact
 - iv. Sustainable development
- The Environmental Education Curriculum of U.B.E. as drafted by Nigerian Educational Research and Development Council (NERDC) is presented in Table 1.

TABLE 1: The Environmental Education Curriculum of U.B.E. Basic education (Primary 1-3)

Minimum of 6 subjects, maximum of 7 subjects

Subjects	Explanatory notes
English studies	i. Official National Language
	ii. Medium of Instruction in schools
	iii. The subject predisposes itself for the infusion of the following: Road Safety Education, Disaster Risk reduction Education, and Consumer Education
	iv. Subject include literature-in-English
Mathematics	i. Fundamental discipline for science and technological development
	ii. Important for everyday life
Nigerian language	i. National Policy on Education (NPE) stipulates that the medium of instruction should be the language of the immediate environment of the child.
	ii. Schools are free to select such Nigerian Language to be taught
Basic Science and Technology (BST)	i. Each of the listed components will serve as themes for the Basic Science and Technology curriculum
	ii. Climate change is part of Basic Science theme
	iii. Disaster Risk Reduction Education and Consumer Education are infused into Basic Science and Technology Curriculum
	iv. Create enabling environment for the subject in all schools by making computers available in schools
Religion and National Values (RNV)	i. Listed components will serve as themes in the Religion and National Values Curriculum
	ii. Contents are planned for all children to take Social Studies, Civic Education and Security Education themes
	iii. Separate classes should be run for Christian Religious Studies (CRS) theme and Islamic Studies (IS) theme
	iv. Consumer Education, Disaster Risk Reduction Education and Peace and Conflict Resolution curricula are infused into the Civic Education, Social Studies and Security Education Themes
	v. Create enabling environment for the subject in all schools
Cultural and Creative Arts (CCA)	i. Important for preservation of our Cultural Heritage and fostering Creativity
Arabic Language	i. Optional

Source: Nigerian Educational Research and Development Council (NERDC, 2017) www.nerdc.org.ng/e-curriculum.

Nigeria is a country with many ethnic tribes and diverse culture. Some are the original inhabitant of the country while others are believed to be freed slaves that voluntarily decided to settle in Nigeria. A good example is the Aborigines who are believed to have been settled in Nigeria after the abolition of the slave trade in the late 19th century. For many years, Nigeria has been a country occupied with desperate people in terms

of national identity. By this, we mean culture. This identity creeps into teaching sector and affects classroom teaching in our educational system (Faloye, 2005).

In some cultural settings, parents are actively involved in their children's classrooms, and are visible in the classrooms, as volunteers who assist teachers. These cultural differences in value and belief may cause some teachers to

make inaccurate judgments regarding the value that other tribes place on education. While it is important to keep in mind that different tribal groups tend to follow particular language and interaction styles, there is tremendous variability within tribal groups (Rogoff, 2003). Thus, teachers need to understand individual students' histories and ideologies regarding education and learning as well as the cultural patterns and beliefs of groups.

The socio cultural characteristics which the teachers from Hausa Fulani society, for example, bring into the classroom from their environment into Efik cultural environment, for example, does not blend and can create a wedge between what they teach and the pre knowledge of what the students bring into the classroom for learning Environmental Education themes in the prescribed subjects. A teacher who is not positively disposed to, or has a socio-cultural background that is indifferent to classroom teaching would find it difficult to teach effectively.

Jegede (2008) investigated whether teaching through the use of the socio-cultural mode has any significant effect on students' attitude towards learning. The sample consisted of 600 senior secondary year-one students (442 boys, 158 girls) from 15 secondary schools in Nigeria. The Socio-Cultural Environment Scale (SCES) and the Biology Achievement Test (BAT) were used to measure the change in attitude and achievement of subjects in a pretest-posttest situation after a six-week treatment. Evidence was found to support the hypothesis that science teaching which deliberately involves the discussion of socio-cultural views about science concepts engenders positive attitudes towards the study of science. The findings also indicated that anthropomorphic and mechanistic views can be presented in such a way as to promote positive attitudes towards the study of science in traditional cultures.

Teachers share their culture, which is diversified into beliefs, values, and norms within their classroom teaching of environment, with their students. Hofstede (2001) identified behavioral trait as cultural dimensions among various communities. According to the author, teachers from the same community share similar beliefs and behaviors. He categorically placed these shared values into four cultural dimensions: (a) individualism and collectivism; (b) power distance; (c) uncertainty avoidance and acceptance; (d) and masculinity and femininity.

From his opinion, Hofstede (2001) suggested that low power distance cultures view teachers

and students as equals. Education in these countries center on the student. Moreover, these cultures find it acceptable for students to initiate discussion in the classrooms. In this educational setting, learning is a collaborative process between the teacher and student. Conversely, it indicates that high power distance countries viewed teachers as the experts and the center of education. Teachers in high power distance cultures initiated all communication in the classroom. It is the responsibility of the teacher to disseminate information to the student and the student to accept it without collaboration. High power cultures consider student-initiated questions to the teacher as offensive (Hofstede, 2001). This therefore explains that the culture of a teacher can significantly influence his classroom teaching of environmental education.

Mavuru and Ramnerain (2017) explored teachers' knowledge and views on the role of learners' socio-cultural background when teaching Natural Sciences to Grade 9 learners at three South African township schools. Within a socio-cultural framework, the research investigated how teachers accommodate learners' cultural norms and values, and beliefs, in their science lessons. In a qualitative case study, three teachers were interviewed five times using a semi-structured interview schedule. Through a constant comparative data analysis method, the themes emerged that firstly, teachers use their knowledge about learners' socio-cultural practices and beliefs, to create learning opportunities to harmonize the conflict between learners' worldviews and science. Secondly, the findings showed that teachers' incorporation of learners' socio-cultural background in lessons provides authentic learning situations that promoted the development of critical and analytical thinking skills in learners. This study affirms the call for teacher education institutions to review their science teacher education programmes with a view of incorporating and emphasizing knowledge of learners' socio-cultural background as an important teacher knowledge domain in teacher preparation.

Developing an awareness of cultural identity and how it affects teachers and interactions with others in school can be challenging. Teachers must be aware of how much cultural identity influences the education of students. In addition, teachers must be cognizant that their classroom teaching, their interactions with students, and their own ideas about identity influence the academic success and social development of

their students. The concept of identity is a complex one, shaped by individual teachers' characteristics, family dynamics, historical factors, and social contexts. These cultural identities of teachers are constructed from their experiences with the twelve attributes of culture identified by Cushner, McClelland, and Safford (2000) as ethnicity/nationality, social class, sex/gender, health, age, geographic region, sexuality, religion, social status, language, ability/disability, and race. Teachers' cultural identities are defined by these experiences and teachers learn these identities within a culture through socializing agents (Campbell, 2004). Therefore, teachers must understand that these cultural identities can help them define who the students are.

Teachers can discover and share their cultural identities through citing examples related to what they teach that focuses on their cultural heritage. The resulting examples can trigger other lessons that incorporate the cultures of students. By developing lessons that highlight students' cultures, the teacher actively engages them in learning. Therefore, teachers are meeting the students where they are. In this way, an awareness of the cultural identity of the teacher and that of the students affects how well the teacher will interact with the students, how well the students will interact with his or her peers, and how the students view his or her acceptance within the cultural group and within the classroom (Campbell 2004).

Cultural disconnect can occur when teachers from different cultures interact. Schools in which the cultural backgrounds of teachers differ significantly from that of the students because of tribal, racial, linguistic, social, religious, or economic reasons are especially vulnerable to cultural disconnect. This disconnect can negatively influence the teaching of environmental education concept in UBE curriculum. For example, consider a situation in which both a teacher and the family of one of her students value education and family. The teacher's beliefs include a principle that children should always attend school because of the learning and continuity that takes place in the classroom. The family, however, takes the student out of school for two weeks in order to visit a grandmother who lives out of the country. The family feels the trip is important for the student to learn and connect with the family's elders. For them, this trip is part of their child's education and does not hinder their child's education. Conflict arises between the teacher

and the student's family even though both value education and family. So, who is to say one is wrong and the other is right? The dominant cultural perspective will prevail unless teachers are able to create space to understand and explore a variety of values, beliefs, and expectations with the family. Teachers, students, and families may disagree on the nature and value of schoolwork; work ethics may differ in definition; and the role of home, family, and community may diverge in respect to understanding your own cultural background and connecting that background to the students in your classroom creates a rich learning environment in which the teacher and students value each other (Gay, 2000).

Following the introduction of Environmental Education (EE) into the Nigerian education system, based on the philosophy of education contained in the National Policy on Education (2013), the nine year basic education curriculum was reviewed to infuse EE into several subjects. It is believed that the infusion of Environmental Education into different U.B.E. subjects will help learners develop knowledge, skills and positive attitudes towards the environment from a very early stage.

Although Environmental Education has been included in the school curriculum in Nigeria as a whole and in Cross River State in particular, the condition within the school environment in particular in terms of littering of waste, mismanagement of schools' waste bin, filthy school toilets, walking and making a pathway on school fields (the green area), dirty classrooms, noise making (pollution), personal hygiene among others have not improved. Evidence of these problems can still be observed in many schools and also in the communities around the schools. The school is part of the community within where it is situated, therefore it is expected that what the teachers teach in schools, should be reflected in the society. This suggests, in this context, that there is a problem as far as the teaching of Environmental Education is concerned. In other words, it is an indication that there is a vacuum between theory and practice.

A great deal of efforts has been devoted to investigating teacher's culture and the ineffectiveness of teaching of Environmental Education in schools. None of such investigations to the knowledge of the researcher has simultaneously investigated these alongside with the same variables adopted for this study at the UBE level in Cross River State.

Therefore, the problem which this study seeks to address may be encapsulated in the following question: what influence does teachers' perceived culture have on teaching of Environmental Education at the UBE level?

Purpose of the study

The main purpose of this study is to investigate how perceived teacher's culture influences teaching of Environmental Education at the UBE level in Cross River State, Nigeria. Specifically, this study is designed to investigate;

1. How teachers' perceived culture influences teaching of Environmental Education

Hypothesis

1) There is no significant influence of teachers' perceived influence of culture on teaching of Environmental Education.

Methodology

Expost Facto research design was adopted. The study was conducted in Cross River State. The sample size of the study consisted of 450 UBE teachers across the three education zones of the state. A self-developed questionnaire was used as instrument for data collection titled Perceived Influence of Teachers Culture and Teaching of Environmental Education Questionnaire (PITCTEEQ) designed by the researchers. The questionnaire has two sections (A and B). Section A consisted of personal data while section B consisted of 10 items in the form of four point Likert scale of Strongly Agree – SA, Agree – A, Disagree – D, and Strongly Disagree – SD designed to elicit information from the respondents to indicate their level of agreement or disagreement with the item. The instrument was validated by three experts while Cronbach Alpha was used to test the reliability and the coefficient yielded 0.79. The copies of the questionnaire were administered by the researchers with three research assistants trained for the purpose. The data collected for the study were analysed using one-way analysis of variance (ANOVA).

Results

There is no significant perceived influence of teachers' culture on teaching of EE. The independent variable in this hypothesis is teachers' culture, while the dependent variable is teaching of EE in terms of TCC, KSM, TCM, TCWS and TEC. The highest score, a respondent was expected to have for the items measuring teachers' culture is 40 while the minimum score is 10 and the average score is 20. The respondents were therefore categorized into three as follows: below 20 (low), 20-30 (moderate) and 31- 40 (high). The statistical analysis technique deployed to test this hypothesis was the one-way analysis of variance (ANOVA). The results of the analysis are presented in Table 2.

The upper part of Table 2 shows the sizes, means and standard deviations for the three groups of respondents based on their culture. The critical results of ANOVA shows calculated F-ratios at .05 alpha as follows: TCC (51.86*), KSM (56.90*), TCM (20.94*), TCWS (93.55*) and TEC (735.74*).

From the obtained results, the calculated F-ratio of the five sub-variables are each (significant) higher than the critical F-ratio of 3.02 at .05 alpha level with 2 and 487 degrees of freedom. With these results, the null hypothesis was therefore rejected for each of the sub-variables of TCC, KSM, TCM, TCWS and TEC. This means that there is significant influence of teachers' culture on the teaching of EE in all the five sub-variables of the dependent variable.

Given the significant F-ratio for the five sub-variables, a multiple comparison analysis using Fisher's Least Square Difference (LSD) was done to determine exactly which group, those who score below 20, 20-30 and 31-40 differed significantly from others in terms of the five sub-variables. The results of the analysis are presented in Table 3. The pattern of the influence of teacher' culture on the teaching of EE is as follows:

TABLE 2: Analysis of variance of perceived influence of teachers' culture and their teaching of Environmental Education

Sub variables	Group	N	\bar{X}	SD
Teacher communicative competence	1. Low level	60	22.00	2.01
	2. Moderate level	240	23.25	2.38
	3. High level	150	25.20	2.32
	Total	450	23.73	2.57
Knowledge of the subject matter	1. Low level	60	20.50	1.51
	2. Moderate level	240	19.62	2.39
	3. High level	150	21.80	1.17
	Total	450	20.46	2.18
Teacher classroom management	1. Low level	60	20.50	1.51
	2. Moderate level	240	21.50	1.87
	3. High level	150	22.00	.63
	Total	450	21.53	1.58
Teachers capacity to work with teachers	1. Low level	60	20.00	.00
	2. Moderate level	240	17.12	1.61
	3. High level	150	17.80	1.47
	Total	450	17.73	1.73
Teachers' evaluation capacity	1. Low level	60	18.00	.00
	2. Moderate level	240	22.62	1.11
	3. High level	150	23.20	.075
	Total	450	22.20	1.90

Sub variables	Source of variation	Sum of squares	Df	Mean square	F-ratio	Sig
Teacher communicative competence	Between groups	559.00	2	279.50	51.86*	.000
	Within groups	2409.00	447	5.38		
	Total	2968.00	449			
Knowledge of the subject matter	Between groups	436.75	2	218.37	56.90*	.000
	Within groups	1715.25	447	3.83		
	Total	2152.00	449			
Teacher classroom management	Between groups	97.00	2	48.50	20.94*	.000
	Within groups	1035.00	447	2.31		
	Total	1132.00	449			
Teachers capacity to work with teachers	Between groups	397.75	2	198.87	93.55*	.000
	Within groups	950.25	447	2.12		
	Total	1348.00	449			
Teachers' evaluation capacity	Between groups	1251.75	2	625.87	735.74*	.000
	Within groups	380.25	447	.85		
	Total	1632.00	449			

* P <.05; critical F_{2,447} = 3.02

TABLE 3: Results of Fisher's least significant difference (LSD) multiple comparison analysis of the significant influence of teachers' culture on their teaching of Environmental Education (EE) at the UBE level (Knowledge of the subject matter, Teacher classroom management and Teachers' evaluation capacity) Multiple Comparisons

Sub dependent Variables	(I) CUL	(J) CUL	Mean Difference (I-J)	Std. Error	Sig.
TCC	Below 20	20-30	-1.25000(*)	.33508	.000
		31-40	-3.20000(*)	.35461	.000
	20-30	Below 20	1.25000(*)	.33508	.000
		31-40	-1.95000(*)	.24163	.000
	31-40	Below 20	3.20000(*)	.35461	.000
		20-30	1.95000(*)	.24163	.000
KSM	Below 20	20-30	.87500(*)	.28274	.002
		31-40	-1.30000(*)	.29923	.000
	20-30	Below 20	-.87500(*)	.28274	.002
		31-40	-2.17500(*)	.20389	.000
	31-40	Below 20	1.30000(*)	.29923	.000
		20-30	2.17500(*)	.20389	.000
TCM	Below 20	20-30	-1.00000(*)	.21963	.000
		31-40	-1.50000(*)	.23244	.000
	20-30	Below 20	1.00000(*)	.21963	.000
		31-40	-.50000(*)	.15838	.002
	31-40	Below 20	1.50000(*)	.23244	.000
		20-30	.50000(*)	.15838	.002
TCWS	Below 20	20-30	2.87500(*)	.21045	.000
		31-40	2.20000(*)	.22272	.000
	20-30	Below 20	-2.87500(*)	.21045	.000
		31-40	-.67500(*)	.15176	.000
	31-40	Below 20	-2.20000(*)	.22272	.000
		20-30	.67500(*)	.15176	.000
TEC	Below 20	20-30	-4.62500(*)	.13313	.000
		31-40	-5.20000(*)	.14089	.000
	20-30	Below 20	4.62500(*)	.13313	.000
		31-40	-.57500(*)	.09600	.000
	31-40	Below 20	5.20000(*)	.14089	.000
		20-30	.57500(*)	.09600	.000

i. TCC
The significant mean difference of 1.2500, 3.20000 and 1.95000 indicates that the teaching of EE with respect to TCC for teachers with high cultural beliefs is significantly higher than those teachers with low and moderate cultural beliefs. Furthermore, those with moderate cultural beliefs are significantly higher than those with low cultural beliefs in the teaching of EE.

ii. KSM
The significant mean difference of 0.87500, 1.30000 and 2.17500 indicate that the teaching of EE with respect to KSM for teachers with high cultural beliefs is significantly higher than those of teachers with low and moderate cultural beliefs.

However, the teaching of EE of teachers with low cultural beliefs is significantly higher than those with moderate cultural belief.

iii. TCM
The significant mean difference of 1.00000, 1.50000 and 0.50000 indicate that the teaching of EE with respect to TCM for teachers with high cultural beliefs is significantly higher than those of teaches with low and moderate cultural beliefs. Furthermore, teachers with moderate cultural beliefs were significantly higher than those with low cultural beliefs in their teaching of EE.

iv. TCWS

The significant mean difference of 2.87500, 2.20000 and 0.67500 indicate that the teaching of EE with respect to TCWS for teachers with low cultural beliefs is significantly higher than those of moderate and high cultural beliefs. However, the teaching of EE of teachers with high cultural beliefs is significantly higher than those with moderate cultural beliefs.

v. TEC

The significant mean difference of 4.62500, 5.20000 and 0.575000 indicates that the teaching of EE with respect to TEC for teachers with high cultural beliefs is significantly higher than those of teachers with low and moderate cultural beliefs. Furthermore, the teaching of EE for teachers with moderate cultural beliefs is significantly higher than those of low cultural beliefs.

DISCUSSION OF FINDINGS

Considering the highest score, a respondent was expected to have for the items measuring teachers' culture as 40, minimum score is 10 and the average score is 20. The respondents were therefore categorized into three as follows: below 20 (low), 20-30 (moderate) and 31- 40 (high).

The critical results of ANOVA shows calculated F-ratios at .05 alpha as follows: TCC (51.86*), KSM (56.90*), TCM (20.94*), TCWS (93.55*) and TEC (735.74*). From the obtained results, the calculated F-ratio of the five sub-variables are each (significant) higher than the critical F-ratio of 3.02 at .05 alpha level with 2 and 487 degrees of freedom. With these results, the null hypothesis was therefore rejected for each of the sub-variables of TCC, KSM, TCM, TCWS and TEC. This means that there is significant influence of teachers' culture on the teaching of EE in all the five sub-variables of the dependent variable.

This finding is in line with the view of Jegede (2008); Mavuru and Ramnerain (2017); and (Campbell 2004). These authors are of the opinion that teachers must be cognizant that their own ideas about cultural identity can influence teaching of EE. Similarly, Banks and McGee, (2005); Gay (2000) and Bennett, (2003) asserted that teachers position themselves and their cultures to teach subjects in which Environmental Education is infused. Culture, and personality are just part of who teachers are, and they go wherever teachers go.

CONCLUSION

Based on the findings, it was concluded that perceived influence of teacher's culture has a significant influence on the teaching of Environmental Education at the Universal Basis Education in the study area. However, on teachers; differences in values and belief may cause some teachers to make inaccurate judgment regards the values of Environmental Education they have to teach.

RECOMMENDATIONS

One the basis of the findings of this study, the following recommendations were made

1. Seminars and workshops should to be organized for teachers. Also government should intensify efforts in effective supervision of teachers to acquaint them with new ideas in the implementation of the universal basic education programme.

2. Not fully appreciating distinction between culture and science may result in interference of personal culture values of UBE teachers on their attitude towards the teaching of EE. It therefore implies that UBE teachers must be aware that culture and the concept of EE are two different ways of knowing, and therefore, their attitudes towards the teaching of EE have to be unrelated to their cultural beliefs.

REFERENCES

- Campbell, D. E., 2004. Choosing democracy: A practical guide to multicultural education, Upper Saddle River, NJ: Merrill.
- Cushner, K., McClelland, A. and Safford, P., 2000. Human diversity in education: An integrative approach, Boston: McGraw-Hill.
- Faloye, T., 2005. Nigerian history, politics and affairs: the collected essays of Adiele Afigbo Classic authors and texts on Africa. Lagos: Africa World Press.
- Gay, G., 2000. Culturally responsive teaching: Theory, research, and practice. New York: Teachers College Press.
- Hofstede, G., 2001. Culture's consequences: Comparing values, behaviours, institutions and organizations across nations. Thousand Oaks, C. A.: Sage.

- Jegade, O. J., 2008. The effects of instruction on science students. Socio-cultural attitudes and achievement. Retrieved from <https://www.researchgate.net/publication>. Retrieved March, 2018 from <http://www.nerdc.org/e-curriculum>.
- Jekayinfa., A. A. and Yusuf, A. R., 2008. Teachers' opinions on the Incorporation of Environmental Education in Nigerian Primary School Curriculum. *Educational Research and Review*, 11(3), 334-338.
- Mavuru, L. and Ramnarain, U., 2017. Teachers' knowledge and views' on the use of learners socio-cultural background in teaching natural science in grade 9 township classes. *African Journal of Research in Mathematics, Science and Technology Education*, 21(4), 176-186.
- N.E.R.D.C., 2017. National Educational Research and Development Council.
- N.P.E., 2013. National policy on education. Federal Government of Nigeria
- Ogueri, A. C., 2004. The need for education in secondary education level in Nigeria: Problems and challenges. Master's thesis, Roskilde University, Denmark.
- Rodriguez, D. and Zavodny, M., 2003. Changes in the age and education profile of displaced workers. *Industrial and Labour Relations Review*, 56(3), 498-510.
- Rogoff, B., 2003. The cultural nature of human development. New York: Oxford University press.