

## INFLUENCE OF SCHOOL CLIMATE ON ADOPTION OF EDUCATIONAL INNOVATIONS FOR SUSTAINABLE DEVELOPMENT

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### Abstract

School climate is foundational in any Education system. An appropriate and dynamic climate is capable of assisting a system achieve its predetermined goals, as it is open to innovations, to attain societal needs at any given time and to ensure the sustainability of the system. This study reports the influence of open and closed school climate on the implementation of educational innovations by secondary schools in Nsukka Education Zone of Enugu state, Nigeria. Three research questions guided the study. The ex –post- factor or casual comparative design was adopted. A total of 1,488 teaching staff in 59 secondary schools formed the population for the study. A sample size of 375 teachers was drawn using simple random sampling technique. A 33 - item structured questionnaire titled ‘Influence of School Climate on Educational Innovations Questionnaire (SCIEQ) validated by experts with a reliability coefficient of 0.84 was used as instrument for data collection. Data was analyzed using mean. The findings revealed that Information and Communications Technology (ICT) is to a large extent implemented in secondary schools. The study also showed that the leadership style of a principal or administrator determines the school’s climate. It further revealed that teachers perform better and are more willing to implement educational innovations in an open school climate than in a closed school climate. The study recommended among others that since the open school climate has been found to influence educational innovation positively, school administrators should introduce this climate by adopting the democratic leadership style. The conclusion emanating from the study is that educational innovations can be made more effective and productive when a conducive school climate is provided.

**Keywords:** School climate, Innovation, Information and Communications Technology, Peace, HIV/AIDS, Sustainable Development

### Introduction

School climate is a general term that refers to the feel, atmosphere, tone, ideology, or milieu of a school. Just as individuals have personalities, so too do schools; a school climate may be thought of as the personality of a school. (Hoy, 2000). The climate of the school could be said to be closed or open and these climates also have some level of influence on the administration of schools which affect innovations. School climate is a relatively enduring character of a school that is experienced by its participants, affects their actions, and is based on the collective perceptions of behaviour in the school (Hoy, 2000).

School climate is defined by Bosah (1998) as the learning environment created through the interaction of human relationships, physical settings and psychological atmosphere. It is influenced by school leadership and is internally oriented. This means that school leadership determines the school its climate and school climate is particular to a school. Each school has her own climate. Examples of school climates found in schools as identified by Eneasator (1998) include the open school climate, autonomous school climate, controlled school climate, familiar school climate, paternal school climate and closed school climate. According to Eneasator (2008), the open school climate is an energetic lively school atmosphere, properly focused on realizing defined organizational goals, while providing satisfaction for members' needs. The closed school climate is a school atmosphere where the principal is not dynamic and does not cultivate the cooperation of his subordinates.

Kirsi and Seppo cited in Nwafor (2007) see educational innovation as a creative, new educational innovational policy, a creative way to renew education, a creative solution, a creation of new educational culture, a new opening and a new idea to overcome some problems in education. The authors also went on to define it as starting power, an idea that makes things move. Educational innovations therefore are new, creative ideas, which are meant to bring effectiveness and change in the educational sector.

Adoption of these educational innovations means to take up or accept the innovation and make use of them in the educational sector. It simply means having new creative ideas implemented. This is necessary because a healthy system should tend towards inventing new procedures, moving towards new goals, producing new kinds of products, diversifying itself and becoming more rather than less differentiated over sometime (Ochitwa 1996).

According to Nwafor (2007), it is necessary to adopt innovations because the needs and problems of the society change from time to time. Education therefore should change to meet the changes of society. The adoption of educational innovations offers educational institutions the opportunity of making changes or improvements in the educational sector. This is because it is when innovations are widely adopted that the reform that has always been desired in the educational sector will be achieved. The system should therefore be able to bring about corrective changes in it faster than the change cycle in its surroundings. One of the ways through which this can be achieved is through a conducive school climate. Readiness for change in the first place is in a good measure, the function of the school climate. There are many innovations in the Nigerian school system but this study limits itself to three, which include Information and Communication Technology Education, Peace education and HIV and AIDS education.

Information and communication technology is a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information. These technologies include computers, the internet, broadcasting technology (radio and television) and telephony, emerging technologies and social networking (Okoye & Omede, 2017). ICT can also be referred to as all the devices involved in information processing as well as communication (Haag & Keen 1996). ICT education therefore means to teach with and use ICT equipment in the administration of schools. An ICT education exposes students to the learning of basic communication skills, techniques and understanding of concepts. ICT can be applied in several ways to bring about far -reaching service delivery in secondary schools. ICT in secondary schools therefore involves developing computer literacy and the acquisition of various skills necessary for the 21<sup>st</sup> century workplace.

Peace education is aimed at inculcating in learners the knowledge, skills and attitudes necessary for harmonious relationships. Peace Education aims at elimination of group prejudice,

stereotypes and hatred which make people prefer war to peace, violence to non-violence, exclusion to cooperation, discrimination to acceptance and destruction to construction. Peace education opposes all forms of oppression and conformity while appreciating highly cultural minorities. Nigeria is a multicultural and multi- ethnic society, there is therefore need for integration and unity to be inculcated into the citizens and one of the best ways of doing this is through Peace Education.

Acquired Immune Deficiency Syndrome (AIDS) is a disease of the human immune system caused by the Human Immuno deficiency Virus (HIV). This condition gradually reduces the effectiveness of the immune system and leaves an individual susceptible to opportunistic infections and tumours. HIV is transmitted through direct contact of the mucus membrane or the bloodstream with a bodily fluid, semen, vaginal fluid, pre-seminal fluid and breast milk. (Nwajei, 2003) HIV transmission can involve anal, vaginal or oral sex, blood transfusion, contaminated hypodermic needles, exchange between mother and baby during pregnancy, childbirth, breastfeeding or other exposure to one of the above body fluids. Due to the difficulty in treating HIV infection, preventing infection is a key aim in controlling the AIDS pandemic. One of the ways of doing this is through education, thus the need for HIV/AIDS education. HIV/AIDS education aims at providing accurate information, providing awareness and tackling stigma and discrimination (Avert 2010), as well as instilling knowledge, life skills and attitudes that can lower the risk of HIV and AIDS. It is necessary to expose secondary school students to HIV/AIDS education because at this stage of their lives, most surprisingly, some are sexually active while many others are nursing the desire to explore. It is only when there are healthy learners that sustainable educational development becomes a subject of discourse.

The influence of school climate on educational innovations is the effect or impression the school climate has on the implementation of educational innovations. A school with a healthy school climate would be ready to naturally adopt educational innovations. Educational innovation will not thrive in any resistant environment. Therefore, school climate is an integral part of the school improvement process which includes the implementation of educational innovations. This study examined the influence of school climate on adoption of educational innovations in secondary schools in Nsukka Education Zone of Enugu state.

### **Research Questions**

The study addressed the following research questions.

1. To what extent are the selected educational innovations implemented by schools in Nsukka Education zone?
2. How does open school climate influence adoption of educational innovations?
3. How does closed school climate influence adoption of educational innovations?

### **Materials and Methods**

The study utilized ex –post- factor or casual comparative design. The population for the study comprised all the one thousand four hundred and eighty-eight (1,488) teaching staff in the fifty-nine (59) secondary schools in Nsukka Education Zone of Enugu State. The sample size was three hundred and seventy- five (375) teachers in sixteen (16) secondary schools, drawn using random sampling technique. To constitute this sample, eight schools were randomly selected from Nsukka Local Government Area, and four each from Igbo Etiti and Uzo-Uwani Local Government Areas. To ensure uniformity and adequacy of sample size, twenty- five percent of the teachers in each school was used, bringing the sample size to 375. A 33 - item questionnaire titled ‘Influence of School Climate on Educational Innovations Questionnaire ‘(SCIEQ) was the instrument used for data collection. The instrument which was adopted from the

Organisational Climate Description Questionnaire (OCDQ) comprised of items designed to elicit teachers' responses on the influence of school climate on the adoption of educational innovation. The instrument contained two sections A and B. Section A comprised of the respondents' background information, while Section B had items designed to obtain data from the teachers on the influence of school climate on educational innovations. Section B had three clusters. Cluster one comprised 3 items designed to obtain data on the educational innovations adopted in schools in Nsukka Educational Zone. Cluster two had 11 items designed to obtain data on how the open school climate influences the adoption of educational innovations, while cluster three with 13 items sought to find out how the closed school climate influences the adoption of educational innovations. The SCIEQ was validated by three experts: two in Educational Administration, and another one in Measurement and Evaluation. Using Cronbach Alpha, the reliability of the SCIEQ was found to be 0.78 and this was considered adequate. The research questions were answered using mean. For cluster 2, a four-point response scale of Very High Extent (VHE-3.50- 4.49), High Extent (HE-2.50-3.49), Low Extent (LS-1.50 - 2.49) and Very Low Extent, (VLE-0.00-1.49) while for cluster 3 a four-point options of Strongly Agree (SA-3.50-4.49), Agree (A-2.50-3.49), Disagree (D-1.50-2.49) and Strongly Disagree (SD-0.00-1.49) was used in rating responses to the questionnaire items. Any item with a mean response value of 0.00-2.49 was regarded as Very Low Extent/Disagree, while any item with a mean response value of 2.50 and above was regarded as Very High Extent/Agreed.

## Results

**Research Question 1:** To what extent are the selected educational innovations implemented in your school?

**Table 1: Mean ratings of the responses of teachers on the extent of implementation of selected educational innovations in their schools.**

S/N	Item	$\bar{X}$	SD	Decision
Extent of Implementation of:				
1	Information and Communication Technology	2.59	1.08	HE
2	HIV/ AIDS Education	2.47	.987	LE
3	Peace Education	2.43	.915	LE

Data in Table 1 shows that Information and Communications Technology educational innovation is implemented to a high extent, as indicated in item 2, while the implementation of HIV/AIDS Education and Peace Education is low as indicated in item1 and 2.

**Research Question 2:** How does the open school climate influence the adoption of educational innovations?

**Table 2: Mean Ratings of the responses of teachers on the influence of open school climate on the adoption of educational innovations**

S/N	Item	$\bar{X}$	SD	Decision
In an open climate;				
1.	Cordial relationship among teachers facilitates the implementation of educational innovations.	3.23	.614	Agree
2.	Friendly interactions among teachers help them to discuss on better ways of implementing educational innovations	3.36	.830	Agree

3.	Availability of instructional resources facilitate educational innovations.	3.49	.772	Agree
4.	Giving teachers chances to decide on their methods of teaching facilities educational innovation	3.05	.881	Agree
5.	Availability of school supplies for classwork facilitates educational innovations	3.27	.674	Agree
6.	A happy atmosphere during the formal gathering of teachers facilitates implementation of educational innovation	3.41	.734	Agree
7.	Teachers accept extra responsibilities in ensuring the implementation of educational innovations	3.06	.767	Agree
8.	Freedom of teachers to give their suggestions during staff meetings facilitates educational innovations	3.51	.699	Agree
9.	Teamwork among staff fosters educational innovations.	3.40	.673	Agree
10.	Assistance from the principal encourages teachers to implement innovations	3.44	.644	Agree
11.	The enthusiasm with which teachers do their work fosters the implementation of educational innovations	3.27	.663	Agree
12.	The principal's example of hard work boosts the morale of teachers.	3.48	.601	Agree
13.	Principal's interest in the welfare of teachers motivates the teachers to work harder	3.54	.657	Agree
14.	Principal's willingness to share information on new ideas facilitates educational innovations	3.48	.641	Agree
15.	Students easily accept innovations in an open climate	2.98	.829	Agree

Data in Table 2 reveals the mean ratings of respondents on the influence of open school climate on educational innovations. Teachers were found to agree with all the 15 statements, with mean value of 3.23, 3.36, 3.49, 3.05, 3.27, 3.41, 3.06, 3.51, 3.40, 3.44, 3.27, 3.48, 3.54, 3.48 and 2.98. The finding shows that the respondents agree that an open school climate influences educational innovations positively.

**Research Question 3:** How does a closed school climate influence educational innovations?

**Table 3: Mean ratings of the responses of teachers on the influence of closed school climate on educational innovations**

S/N	Item	$\bar{X}$	SD	Decision
<b>In a closed school climate:</b>				
1.	Opposing factions among teachers help facilitate educational innovations.	2.16	.845	Disagree
2.	Teachers staying on their own and not visiting one another negatively affects educational innovations.	2.30	1.03	Disagree
3.	The unavailability of instructional resources and lack of operational knowledge facilitate the implementation of educational innovations.	2.21	.963	Disagree
4.	Restricting teachers to particular teaching methods facilitates the implementation of educational innovations	1.89	.922	Disagree

5.	The unavailability of school supplies for classwork facilitates the implementation of educational innovation	2.14	.981	Disagree
6.	Tense atmosphere during staff gatherings facilitate educational innovations	2.04	.876	Disagree
7.	A closed school climate makes teachers accept extra responsibilities in ensuring the implementation of educational innovations	2.05	.876	Disagree
8.	Restriction of teachers from giving suggestions during staff meetings helps in the implementation of educational innovations.	1.89	.860	Disagree
9.	The lack of teamwork among staff fosters the implementation of educational innovation.	1.81	.885	Disagree
10.	Lack of assistance from the principal encourages the teachers to persist in the implementation of educational innovations	1.96	1.02	Disagree
11.	Lack of enthusiasm among teachers hinders the implementation of educational innovation	2.55	1.10	Agree
12.	The inability of a principal to work hard demoralizes teachers	2.54	1.10	Agree
13.	The Principal's lack of interest in the welfare of teachers makes them work harder	1.80	.959	Disagree
14.	Principal's failure to share information on new ideas facilitates the implementation of educational innovation.	1.91	.945	Disagree
15.	Students find it difficult to respond to innovations in a closed school climate	2.43	1.00	Disagree

Data in Table 3 shows the mean ratings of respondents on the influence of a closed school climate on educational innovations. Teachers were found to agree with statements in items 11 and 12, with mean value of 2.55 and 2.54 respectively, and disagreed with statements in items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14 and 15 with mean value of 2.16, 2.30, 2.21, 1.89, 2.14, 2.04, 2.05, 1.89, 1.81, 1.96, 1.80, 1.91 and 2.43 respectively.

### Discussion

The findings of the study revealed that out of the three educational innovations studied, only one (ICT), is to a large extent implemented in secondary schools in Nsukka Education zone. This finding agrees with the observation of the researchers, that ICTs knowledge is inculcated into secondary school students in Nigeria through a school subject called Computer Studies. Unfortunately, Okoye & Omede (2017) reported the unavailability and non- utilization of ICT gadgets for instruction in schools in Dekina Local Government Area of Kogi state. According to the authors, even where the ICT gadgets are available, they are inadequate and scarcely utilized by teachers for lesson delivery, including for Computer Studies. The teachers also indicate that Peace education and HIV/AIDS education are implemented to a low extent in their schools. The researchers are aware that these innovations are not taught as school subjects, but are captured in Civic Education and Health Education respectively. Hopefully, these innovations would be accorded more attention as expected.

Findings also revealed that teachers agreed that all the fifteen identified indicators of open school climate engender the implementation of educational innovations. Friendly interactions among teachers help them to discuss better ways of implementing educational innovations and

cordial relationships among teachers, availability of instructional resources facilitate the implementation of educational innovations. The findings further revealed that in a closed school climate, there is a lack of enthusiasm among teachers and the inability of principals to work hard, all of which demoralizes teachers and hinders the implementation of educational innovations. Furthermore, teachers disagreed that in a closed climate, opposing factions among teachers, teachers staying on their own, each living in isolation, unavailability of instructional resources and lack of their operational knowledge, restricting teachers to particular teaching methods and tense atmosphere during staff gatherings facilitate educational innovations. Teachers also disagreed that in a closed system the lack of assistance from the principal encourages teachers to persist in the implementation of educational innovations, Principal's failure to share information on new ideas facilitates the implementation of educational innovation, the Principal's lack of interest in the welfare of teachers makes teachers work harder and that students find it difficult to respond to innovations in a closed school climate.

### **Recommendations**

Based on the findings of this study, the following recommendations are made.

1. School administrators should have adequate knowledge of the influence of school climate on educational innovations through workshops and seminars.
2. Since the open school climate has been found to influence educational innovation positively, the administrators should introduce this climate by adopting the democratic leadership style.
3. On the other hand, administrators should avoid being autocratic in their leadership so that innovations can thrive in their schools.
4. Intensive in-serve programmes should therefore be organized to get school principals and teachers trained on how to create a conducive climate in their schools.
5. Teachers should be allowed to visit schools with innovative practices to observe new methods and materials in action.
6. More educational innovations, beyond those captured in this study should be considered and adopted in schools, especially, those that would foster sustainable educational development.

### **Conclusion**

Sustainable Development Goal 4 (SDG4) focuses on quality education and aims to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” As lofty as this goal is, it cannot be achieved in a closed school climate; one which says no to innovations. Inclusive and lifelong learning opportunities are made possible only by leveraging ICTs. Again, an undisrupted school calendar can be achieved when there is peace in the society, as against insecurity which manifests as terrorism and kidnapping of school children among others. Finally, it is only a healthy individual that can present himself to be educated. The leadership style of a principal or administrator determines the school climate. A democratic leadership style produces an open climate which can foster sustainable education. It is therefore expedient that the foundation of secondary education be rethought, so that schools will embrace innovations that will ensure the achievement of SDG4.

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