

Original Research Article

Management of Innovative Education in Secondary Schools for Sustainable Development Goals in Rivers State

Dr. U.J. Nwogu^{1*}, Dr. Cynthia A. Ineye-Briggs¹, Nwankpa¹, Lawrence Ezewoko¹¹Department of Educational Management, Faculty of Education, University of Port Harcourt**Article History**

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Abstract: This study examined management of innovative education in secondary schools for sustainable development goals in Rivers State. Two research questions and two corresponding null hypotheses in line with two objectives guided the study. The theoretical framework was based on the “Goal Theory” propounded by Edwin Locke in (1986) as cited in Kpee (2015). This study adopted a descriptive survey design with a population of all the 268 principals in public senior secondary schools across the 23 Local Government Areas in Rivers State. A stratified random sampling technique was used to draw a sample size of 130 principals from the population. A self-designed questionnaire tagged “Management of Innovative Education in Secondary Schools for Sustainable Development Goals in Rivers State Questionnaire (MISSSDGQ)” was used for data collection. Test-retest technique was used to determine the reliability of the instrument which yielded a coefficient index of 0.61 through Pearson Product Moment Correlation Coefficient (r). Mean and rank order was used in answering the research questions while z-test statistics was used in testing the hypotheses. The findings revealed among others; computer assisted instruction and staff capacity building is innovative education strategies for sustainable development goals. Based on the findings, it was recommended among others that regular and periodic maintenance culture of computer assisted instruction should be encouraged for sustainable development goals in secondary schools in Rivers State.

Keywords: Management, Innovative education, Secondary schools, Sustainable Development Goals.

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INTRODUCTION

The seventeen Suitable Development Goals (SDGs) also known as Universal Goals were developed in 2012. In 2016, they replaced the eight Millennium Development Goals (MDGs), which previously provided the blueprint for worldwide poverty reduction and elimination. SDGs continue the goals of MDGs by providing a framework for reducing and eliminating poverty worldwide by 2030. MDGs provide a shared language among nations that allowed them to communicate and monitor the progress of mutually agreed upon goals.

Despite the progress that has been made, the achievement of MDGs was not uniform among nations and was not consistent. MDGs also received criticism from countries that were excluded from the development process (United Nations, 2015). SDGs sought to be more inclusive of all stakeholders; additionally, an emphasis was placed on environmental sustainability, social inclusion and economic

development (United Nations, 2015). Furthermore, the need for secondary education has become critical for the attainment of sustainable development goals in Rivers State.

Education all over the world is generally regarded and recognized as the most effective apparatus for the understanding of situations, analyzing circumstances and participation in events for the purpose of development, correction, advancement and sustainability. Such an educational system is also expected to adequately serve its customers (students, parents, employers of labour and the society). Teachers are the direct vehicles through which the educational objectives are transmitted to the students. The principals on the other hand are vested with the responsibility of managing both the teachers and students for the achievement of the educational objectives of the nation. Therefore, if education must move along with the trend of development recorded in recent times, then school managers have no option but to be innovative. In this context, a leader continuously scans the environments

noticing where innovativeness is needed. In other words, leaders or school managers who are agents of change must be proactive in their effort to introduce innovations and improve situations around them and their schools. Lack of innovativeness by school managers is one of the factors responsible for the degenerating standard in secondary education.

Invention, innovation and creativity are always the defining features of human existence. All over the world, societies, businesses and technologies are changing rapidly and the development had led to the creation of what is today commonly labeled “the knowledge society”. Innovative issues, either in an explicit or implicit manner are inextricably linked to current thinking and action on educational concerns and reforms around the world. The word innovation is derived from the Latin word “innovatus” meaning altered. It is an aspect of educational change that involves the alteration of some aspects of educational programmes and practices. It applies to radical or incremental changes to products, processes or services. There have been several changes over the years in the way education is designed and delivered in many parts of the world. Educational innovations are the holistic changes of educational system and management eventually leading to the use of system for faster and easier resolution of issues and concerns. Though, it is not comprehensive like reforms, the main aim of innovations is the renewal of input, processes and outputs. It brings about change of initiating new things in a place or organization. Hence, the study critically examines the aspect of innovative education such as computer assisted instruction and capacity building in secondary schools for sustainable development goals in Rivers State.

Computer assisted instruction is the most recent method used in teaching learning process in secondary schools for sustainable development goals in Rivers State. Meziobi in Okoringa (2016) opined that computer assisted instruction is a “system of individual computer learning where computer is used in instructional activities.

Capacity building is a conceptual approach to development which focuses on understanding the obstacles that inhibit people, institution, government and international organizations from realizing their development goals while enhancing the abilities that will enable them achieve quantifiable and sustainable results (Okoringa, 2016).

Statement of the Problem

One of the most significant factors in working towards achieving sustainability is the capacity of a nation to meet sustainable development goals. Several issues impact whether or not achieving sustainability across all seventeen interrelated goals is possible. For example, is a nation with a high rate of poverty focused

on education for all or will they be focused on providing better agricultural methods to eradicate hunger? How can one eradicate hunger without educating farmers? It is clear that education has the potential to contribute to the attainment of SDGs in Rivers State.

A glance at Rivers State has shown that principals’ innovativeness for sustainable development goals is lacking, many people have mentioned some factors are responsible for this ugly development. Many put blame on the state government, based on poor funding of the schools, some blamed the principals outrightly for this due to complete incompetence, negligence or non-challant attitude of some in the course of performing their duties. When principals are not upgraded, that is not following the modern trends in education, the student suffers, and consequently there would be unpleasant outcome. This will result to decline in the standard of academic achievement on the part of the students and renders the achievement of sustainable development goals unrealizable. It is on this premise that the study examines management of innovative education in secondary schools for sustainable development goals in Rivers State.

AIM AND OBJECTIVES OF THE STUDY

The aim of the study is to examine management of innovative education in secondary schools for sustainable development goals in Rivers State. Specifically, the objectives were to:

1. Determine how computer assisted instruction innovative education is managed for sustainable development goals in secondary schools in Rivers State.
2. Examine how staff capacity building innovative education is managed for sustainable development goals in secondary schools in Rivers State.

RESEARCH QUESTIONS

The following research questions were posed to guide the study.

1. What are the strategies for managing computer – assisted instruction innovative education for sustainable development goals in secondary schools in Rivers State?
2. What are the ways for managing staff capacity building innovative education for sustainable development goals in secondary schools in Rivers State?

Research Hypotheses

The study was anchored on the following hypotheses

1. There is no significant difference between the mean ratings of male and female principals on the strategies for managing computer – assisted instruction innovative education for sustainable development goals in secondary schools in Rivers State.

2. There is no significant difference between the mean ratings of urban and rural principals on the ways staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State.

This study is anchored on the goal theory as propounded by Edwin Locke (1986), as cited in Kpee (2015). The theory states that to encourage high levels of motivation, goals must be specific and difficult to attain. When goals are specific, there is the tendency for individuals or groups to become focused, having a defined path way towards the realization of such goals. Also, when goals are difficult, individuals are challenged to explore different avenues towards achieving such goals. The premise of the goal theory is that “conscious ideas regulate a person’s actions”. Locke identified two major functions of goals as directing behaviours and provides the basis for motivation. To Locke, intention to work towards a goal is a major source of motivation to work; since goals influence performance when such goals are accepted by the individual to be worth working for.

Adieme (2011) further stressed that goals need to be S.M.A.R.T before they can be achieved.

S	-	Specific
M	-	Measurable
A	-	Attainable
R	-	Relevant
T	-	Time Bound

Thus, the SMART requirements, is a necessary condition that goals generally, are accepted to meet. The theory also states that goals should have the capacity of being measured, it should be difficult, but not impossible to attain, it should also have a specific time frame for the goal accomplishment.

This theory is related to this study in that the SDGs are specific with its targets and indications. It enables individuals and groups to know what is expected of them. It is very challenging, as it covers a broad spectrum of global issues. Thus, making nations to be focused and channeling their efforts in the right direction towards achieving them. They are attainable, and as such requirement, which according to Locke (1986), commitment to a goal is proportional to its difficulty, therefore more difficult goals implies more commitment to their attainment.

The importance of computer assisted instruction for enhancing innovative education in secondary schools for sustainable development goals cannot be overemphasized. Computer assisted instruction is the recent method used in the teaching learning process. It involves the use of computer in teaching and learning.

Meziobi in Okoringa (2016) opined that computer assisted instruction is a “system of individual computer learning where computer is used in instructional activities. The computer stores the instructional materials and controls its sequence while the student is in direct interaction process with the computer and lesson programmed into the computer system.

The introduction of computer assisted instruction (ICT) into educational practices has widened the scope of opportunities in secondary schools for sustainable development (Nwabueze, 2010). Its usage in secondary school has a lot to contribute in achieving the sustainable development goals through global partnership for secondary school development. Secondary schools can collaborate with partners elsewhere through ICT. ICT would promote the opportunity to mirror educational systems elsewhere through information generation and exchange on areas like training and retraining of teachers, and equipping them with basic modern technology, choice of content, and distribution of teaching and learning materials as well as sharing information and linking other development partners.

Accordingly, the use of computer – assisted instruction is also useful in the area of poverty alleviation; it creates job opportunities for secondary school leavers. Students can run their own call centers and recharge card sales. School leavers could also start up business centers where computers are used for documentation, typing, internet service. A knowledge of computer helps to address goals 1 – 12 which is in line with the goal of secondary school education.

Research has shown that the combination of conventional and computer assisted instruction has been most effective in raising student achievement scores. Computer assisted instruction is used through the entire range of education from pre-school to professional school. It has been offered to a wide variety of fields including all the main school subjects taught in secondary schools.

Merits of Computer – Assisted Instruction

The following are some merits of computer assisted instruction.

1. It encourages creativity on the part of the learner which leads to positive thinking and mental development
2. It exposes learners to varieties of materials that could motivate them to learn more.
3. It helps to improve educational technology thereby leading to improved learning.
4. It allows student work at their own pace, and ability
5. It provides learners the freedom to experiment with different options
6. Privacy helps the shy and slow learners learn

7. Computer assisted instruction helps students' understand difficult concepts through sensory approach.
8. The computer provides immediate feedback to the student when there is error or misconception (Okeke – Oti, 2010).

Capacity building is a conceptual approach to development which focuses on understanding the obstacles that inhibit people, institutions, government and international organizations from realizing their sustainable development goals while enhancing the abilities that will enable them achieve quantifiable and sustainable results. One of the goals of secondary education is to deliver both physical and intellectual skills that will enable individuals to be creative and useful members of the society. Consequently the teacher may not adequately be abreast of the new techniques and technology that may be available to execute these formidable goals. Nevertheless, this can only be achieved through a qualitative capacity building programmes for teachers in secondary education system. Capacity building programmes are the activities intended to increase the skills and capabilities of personnel in the institutions. Capacity building programmes could also be seen as a process of developing qualities in human resources that will enable them to be more productive and thus contribute more to sustainable development goals achievement. It is essentially to increase the productivity of teachers by influencing their behaviours.

According to Okorie (2009), regardless of an employee's pre-service training level, there is need for staff to constantly review, upgrade and update their knowledge, skills and capabilities in order to keep pace with the rapidly changing society. Azikiwe (2008) in his contribution maintained that in-service education programme are needed to intimate teachers on new developments, new teaching techniques, and organizational procedures, such as the conceptual approach, the open plan and the use of a wide range of audio-materials. In-service education has much role to play in fulfilling this great responsibility due to rapid growth of knowledge as well as technological, social and cultural revelation of our time. In the light of this, Ebong (1995) in Okoringa (2016) added that capacity building programmes is a man's continuous attempt to create a conducive environment for survival. To this end, Health Filed (2009) said that "human resources development is the framework for helping employees develops their personal and organization skills, knowledge and abilities". He further reiterated that human resources development includes such opportunities as employee training, employee career development, performance mentoring, succession planning, key employee identification, tuition assistance and organizational development.

Umunna (2010) in her work on teacher development programmes in the effective administration pointed that "it is of great interest to note that the business of teacher development involves a cost before its benefits can be reaped". Okeke (2007) opined that "education raises the level of production of a people" and that the natural resources of a country are not likely to be developed and effectively utilized for the benefit of the people unless there is a good programme (teacher development programmes). In specific terms, he maintained that today's investment in education is tomorrow's wealth. He suggested that since educational programmes are usually expensive ones, government should adequately fund such programmes in order to enhance its sustainability.

METHODOLOGY

This study adopted a descriptive survey design. The population of the study comprised all the 268 principals in public senior secondary schools in Rivers State. A stratified random sampling technique was used for this study. A sample size of 130 principals representing 30% of the study's population was used. The instrument used for data collection was a 12 item questionnaire tagged: "Management of Innovative Education in Secondary Schools for Sustainable Development Goals in Rivers State Questionnaire (MIESSSDGQ)". The instrument was validated by experts in the field of Educational Management and Measurement and Evaluation of the University of Port Harcourt. Test-retest technique was used to determine the reliability of the study using data from the pilot study carried out on 20 participants outside the same size. Reliability index of 0.67 were established using Pearson Product Moment Correlation Coefficient which is high, reliable and adequate for the study. The instrument was administered personally by the researcher and all the copies distributed were retrieved without loss. Research questions were analyzed using tables, mean and standard deviation and the mean scores of 2.50 and above were seen as agreed, while below 2.50 was seen as disagree. The null hypotheses formulated were tested using z-test at 0.05 alpha level of significance. The weighted mean scores are as follows:

SA	=	4 points
A	=	3 points
D	=	2 points
SD	=	1 point

$$\text{Thus, } 4 + 3 + 2 + 1 = \frac{10}{4} = 2.50.$$

RESULTS

Research Question One: What are the strategies for managing computer assisted instruction innovative education for sustainable development goals in secondary schools in Rivers State?

Weighted mean, standard deviation and rank order statistics of male and female principals on the ways computer assisted instruction innovative education

are managed for sustainable development goals in secondary schools in Rivers State.

S/No	Items	n = 70			Rank order	n = 60		Rank	Remarks	order
		Male principals Remarks		Female Principals						
		\bar{X}	SD			\bar{X}	SD			
1.	Encouraging regular and periodic maintenance of infrastructural facilities	2.95	1.72	Agreed	3 rd	2.88	1.69	3rd	Agreed	
2.	Applying good supervisory technique	2.88	1.69	Agreed	1 st	3.01	1.73	1st	Agreed	
3.	Putting adequate security measures in the schools	3.0	1.78	Agreed	2 nd	2.86	1.69	2nd	Agreed	
4.	Involving trained staff to help identifying risk	2.88	1.69	Agreed	4 th	2.88	1.69	4th	Agreed	
5.	Provision of adequate funding	2.93	1.71	Agreed	5 th	2.78	1.67	5th	Agreed	
6.	Enforcement of school code of conduct	2.02	1.42	Disagreed	6 th	1.47	1.21	6th	Disagreed	
	Grand mean	16.66	9.96	Agreed		15.88	9.68	Agreed		
		2.78	1.66	Agreed		2.65	1.63	Agreed		

From table 1 above, items 2, 3, 1, 4 and 5 with a mean scores of 3.01, 3.0, 2.95, 2.88 and 2.78 respectively were accepted as their mean is above 2.50, the respondents agreed that the ways computer assisted instruction innovation education are managed include among others; encouraging regular and periodic maintenance of infrastructural facilities, applying good supervisory technique, putting adequate security measures in the schools, provision of adequate funding and involving trained staff to help in identifying risk. While item 6 with a mean score of 2.02 was rejected because the mean falls below 2.50 in the final analysis. The grand mean of 2.78 and 2.65 shows that computer assisted instruction innovative education is managed

for sustainable development goals in secondary schools in Rivers State.

Research Question Two: What are the ways staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State?

Weighted mean, standard deviation and rank order statistics of urban and rural principals on how staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State.

S/No	Items	n = 70			Rank order	n = 60		Remarks	Rank order
		Male principals Remarks		Female principals					
		\bar{X}	SD			\bar{X}	SD		
6.	Training and public enlightenment of staff	3.04	1.74	Agreed	3 rd	2.92	1.71	Agreed	3 rd
7.	Motivating staff to be at their best	3.03	1.74	Agreed	2 nd	3.03	1.74	Agreed	2 nd
8.	Effective leadership delivery	3.01	1.74	Agreed	4 th	2.92	1.71	Agreed	4 th
9.	Creating mutual understanding	2.94	1.71	Agreed	5 th	2.93	1.71	Agreed	5 th
10.	Regular payment of staff salaries	3.14	1.77	Agreed	1 st	2.97	1.72	Agreed	1 st
12.	Overstaffing	1.62	1.28	Disagree	6 th	1.65	1.28	Disagreed	6 th
	Grand mean	16.78	9.99	Agreed		16.42	9.87	Agreed	
		2.79	1.67	Agreed		2.74	1.66	Agreed	

From table 2 above, items 11, 8, 7, 9 and 10 with the mean scores of 3.14, 3.03, 2.98, 2.97 and 2.94 respectively were accepted because their mean was above 2.50. While item 12 was rejected because the mean falls below the mean of 2.50 in the final analysis.

Test of Hypotheses

The null hypotheses formulated for the study were tested by the means of z-test analysis, which is a test of difference of mean.

Principals	N	\bar{X}	SD	Level of sig	Df	z-cal	z-crit	Decision
Male	70	2.78	1.66					
Female	60	2.65	1.63	0.05	128	0.45	+1.96	Not Significant

The table showed that the calculated z is 0.45 and the table z is +1.96 at the degree of freedom of 128. Since the calculated z is less than the critical z, the null hypothesis was not rejected, which means, there is no significant difference between the mean rating of male and female principals on how computer – assisted instruction enhances innovative education in secondary schools for sustainable development goals in Rivers State.

H₀₁: There is no significant difference between the mean ratings of male and female principals on how computer – assisted instruction innovative education are managed for sustainable development goals in secondary schools in Rivers State.

Summary of z-test analysis on the mean ratings of male and female principals on how computer assisted instruction innovative education are managed for sustainable development goals in secondary schools in Rivers State

H₀₂: There is no significant difference between the ratings of urban and rural principals on how staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State.

Summary of z-test analysis on the mean ratings of urban and rural principals on how staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State

Principals	N	\bar{X}	SD	Level of sig	Df	z-cal	z-crit	Decision
Urban	66	2.79	1.67					
Rural	64	2.74	1.66	0.05	128	9.17	+1.96	Not Significant

The table showed that the calculated z is 0.17 and the table z is +1.96 at the degree of freedom of 128. Since the calculated z is less than the critical z, the null hypothesis was not rejected, which means, there is no significant difference between the mean rating of urban and rural principals on how staff capacity building enhances innovative education in secondary schools for sustainable development goals in Rivers State.

of opportunities in secondary schools for sustainable development.

What are the ways staff capacity building innovative education are managed for sustainable development goals in secondary schools in Rivers State

The result of the analysis signified that training and public enlightenment of staff, motivating staff to be at their best, effective leadership delivery, creating mutual understanding and regular payment of staff salaries. This finding is in consonance with Okorie (2009) who stated that regardless of an employee’s pre-service training level, there is need for staff to constantly renew, upgrade and update skills and capabilities in order to keep pace with the rapidly changing society.

DISCUSSION OF FINDINGS

What are the strategies for managing computer – assisted instruction innovative education for sustainable development goals in secondary schools in Rivers state?

It was accepted that computer – assisted instruction innovative education are managed for sustainable development goals in secondary schools in Rivers State through encouraging regular and periodic maintenance of infrastructural facilities, applying good supervisory technique, putting adequate security measures in the schools, involving trained staff to help identifying risk and provision of adequate funding. This finding is supported by Nwabueze (2010) who opined that the introduction of computer assisted instruction (ICT) into educational practices has widened the scope

CONCLUSION

Based on the findings of the study, it was concluded that innovative education such as computer assisted instruction and staff capacity building are managed for sustainable development goals in secondary schools in Rivers State.

RECOMMENDATIONS

Based on the findings of this study and as well as the conclusion, the following recommendations were offered for implementation.

1. There should be regular and periodic maintenance culture of computer equipments for sustainable development goals in secondary schools in Rivers State.
2. Government and other stakeholders in education should through in-service training such as seminars, conferences and workshops enlighten secondary school managers to enhance the achievement of sustainable development goals in Rivers State.

REFERENCES

- Azikiwe, U. (2008). *Standard in education: Capacity building and sustainable development in Nigeria*. www.ikdife@yahoo.com. Assess November, 29th 2014.
- Healthfield, S.M. (2014). *What is human resource development?* Retrieved January 15, 2010 from: <http://humanresource.about.com/od/glossary/f/hr/d/evlopment.htm>
- Okeke – Oti. (2010). *Leadership characteristics that facilitate school change*. Retrieved July 5, 2003 from <http://www.sedl.org/change/leadership/characteristics>
- Okeke, B.S. (2007). *Teaching in Nigeria: The Bureaucracy and professionalism*. Port Harcourt: Peal Publishers International Ltd.
- Okorie, N.C. (2009). *Organizational setting of leadership: Theory into practice in educational organizations*: Giebon and sons pres, Port Harcourt.
- Okoringa, N. (2016). *Innovative practices of principals for effective administration of public secondary schools in Bayelsa State*. Unpublished M.ED Dissertation, Department of Educational Management, University of Port Harcourt.
- Umunna, C. (2010). *Staff development programmes for secondary school teachers performance in Rivers State*. Unpublished Ph.D Thesis Department of Educational Management, University of Port Harcourt.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for sustainable development*. United Nations. New York. Available at <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>.

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