International Journal of Education, Learning and Development
Vol.7, No.11, pp.12-21, November 2019
Published by *ECRTD-UK*
Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

INSTITUTIONAL ACADEMIC CULTURE AND EFFECTIVE IMPLEMENTATION OF EDUCATIONAL TECHNOLOGY CURRICULUM IN TERTIARY INSTITUTIONS IN CROSS RIVER STATE, NIGERIA

Ndifon, Rita A. (Ph.D) and **Igwebuike, Osedumme (Ph.D**
Department of Curriculum and Teaching,Faculty of Education University of Calabar.

ABSTRACT: *This study investigated institutional academic culture influences educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria. To achieve the purpose of the study, two research questions were posed and two null hypotheses were formulated and tested at 0.05 level of significance. The study adopted the ex-post facto research design. The population of the study comprises of two thousand seven hundred and seventy-one (2,771) students of educational technology studying in the University of Calabar, the Cross River University of Technology, Calabar College of Education Akamkpa and College of Education Obudu, all in Cross River State. A total sample of six hundred and eighty-two (682) students was used for the study. The collected data was analyzed using One-Way Analysis of Variance (ANOVA) with LSD Post-hoc analysis for the two hypotheses. The findings of the study revealed that institutional academic culture significantly influence educational technology curriculum implementation in tertiary institutions in Cross River State Nigeria, it was recommended among other things that every school should make it compulsory to have regular laboratory experience to enhance the learning experiences and also promote creative culture through adherence to students centered learning method.*

KEYWORDS: institutional academic culture, effective implementation, curriculum, educational technology, tertiary institutions, Cross River State

INTRODUCTION

Curriculum implementation is an important component of educational improvement. As a result, this process needs to be effectively managed for it to be successful and for the curriculum to be relevant to the target groups. Since the inception of western type of education in Nigeria, several attempts have been made to formulate policies in order to improve education practice. The problem facing our different levels of educational system is not the formulation of policy but the implementation. Even though large sums of money are spent on implementing new curriculum, several of these efforts have failed. According to Alade (2011), the main reason for the failure is the lack of understanding of the practices (academic culture) of the school by both experts outside the school system and educators in the system.

Successful implementation of curriculum requires understanding the power relationships, the traditions, the roles and responsibilities of individuals in the school system. The word implementation connotes operationalization of a well-articulated and well intentioned ideas packed as theory. Hence to implement is to put into action packed ideas or theories into reality. Mezieobi

(2003), conceptualized the term implementation simply as a process of putting an agreed plan, decision, proposal, idea or policy into effect. According to Mezieobi (2003), the bedrock of any plan is success or failure. Implementation is hence the moving force of any plan without which a plan is only good wish or intention. On the other hand, the word curriculum in a formal setting can be seen as the planned and guided learning experiences offered to the learner in school. Esu, Enukoha and Umoren (2004) conceived curriculum as all learning experiences a child has under the guidance of a teacher. According to Offorma (2005), curriculum is a programme which is made up of three components: programme of studies, programme of activities and programme of guidance. It is therefore the blue-print or instrument by which school seeks to translate the hope and values of the society in which it operates into concrete reality. However, the term curriculum implementation had been defined in different ways by different scholars.

Garba (2004) viewed curriculum implementation as the process of putting the curriculum into work for the achievement of the goals for which the curriculum is designed. Okebukola (2004) described curriculum implementation as the translation of the objectives of the curriculum from paper to practice. It is a stage in curriculum process when in the midst of learning activities, the teacher and learners are involved in negotiation aimed at promoting learning. This is the interactive stage of the curriculum process which takes place in the classroom through the combined efforts of the teachers, learners, school administrators and parents. It also integrates the application of physical facilities and the adoption of appropriate pedagogical strategies and methods. The quality of curriculum implementation of any society is the bedrock of its political, economic, scientific and technological wellbeing. Little wonder, it is always said that no society can rise above the standard of its education system.

Institutional Academic culture has to do with professional work which directly contributes to the generation and dissemination of knowledge towards effectively implementing of the programme curriculum. This includes effective teaching and learning, research, and supervising and managing research; laboratory experience and managing academic departments creativity, seminar/workshops, field trips and many others. Effective academic culture therefore connotes the process of completing ones academic work independently, honestly and in an appropriate academic style (Richey, 2008). The present study specifically deals with educational technology programme because of the unique nature of the department preparing student teachers to apply advanced technology in lesson delivery as well as being self-reliant in future.

Educational technology equips trainee teachers with necessary information on how to effectively implement teaching strategies through the production of instructional media and developing appropriate learning experiences to the learners. Educational technology covers every aspects of teaching. These aspects start with the designing of teaching, which include determining of the subject matter content, learners′ characteristics, and statement of behavioural, instructional or specific objectives and selection of appropriate instructional media. It end with the logical implementation of the aspects topping with evaluation to ascertain the extent of coherent implementation. Educational Technology is a courses that brings together all the educational course in a practical manner. Through the exhibition of pedagogic principles; an aspect of Educational Technology, teachers display proficiencies in lesson delivery, classroom management, effective developmental

evaluation in tandem with theories of learning. Presumably, the inclusion of the study of Educational Technology on the curriculum of teacher training programmes is a well thought out decision. In its simplest, Educational Technology is a discipline that facilitates the total process of teaching and learning through the application and utilization of theories of learning, human and non-human resources and integration of other devices with a sole aim of achieving effective learning and successful teaching (Engberg, 2007).

Based on the views of past scholars with regards to institutional academic culture in our various institutions and their perceived influence on academic performance of undergraduate, the researchers were moved to look at if there is any significant influence of institutional academic culture on curriculum implementation in tertiary institutions in Cross River State with specific reference to Educational technology programme in the tertiary institutions within Cross River State. The major independent variable in this research study is institutional academic culture in our tertiary institutions, with the sub-variables as: laboratory experience and creativity.

Bell (2004), theoretically examined school science laboratory: Considerations of learning, technology, and scientific practice in Education University of Washington. The work explores the role of laboratory and field-based research experiences in tertiary science education by summarizing research documenting how such activities promote science learning. Classroom and field-based "lab work" is conceptualized as central components of broader scientific investigations of the natural world conducted by students. Considerations are given to nature of professional scientific practice, the personal relevance of student's understanding of the nature of empirical scientific research, and the role of technology to support learning.

According to Craft (2000), fostering the climate of creative purpose and challenge appears to act to disperse a culture of blame. Encouraging creativity in organizations may well not only enhance market share but also serve to ensure higher levels of commitment from employees.Despite the wide recognition and acceptance accorded the role of curriculum as a tool for economic development and global competition, there seems to be problems in the implementation of this important educational blue-print. Many laudable goals of the curriculum have failed to pass the planning stage of the curriculum due to faulty implementation. Well-conceived curriculum ideas have remained virtually inert and dysfunctional. The outcome of this is the production of graduates of higher institution who are found to be grossly deficient in practical and professional competences**.**

The result of this state of affairs according to Idaka and Joshua (2005) is the production of half-baked, ill-trained and sometimes confused graduates. This problem and other related problems should be a cause for concern to all patriotic and serious minded stake holder of the educational sub-sector. Sequel to the aforementioned limitations and challenges of proper curriculum implementation in Nigeria, and having seen that institutional academic culture has a part to play in curriculum implementation, this researcher is poised to investigate the influence of institutional practices on educational technology curriculum implementation in tertiary institutions in Cross River State of Nigeria.

Purpose of the study

The purpose of the study was to examine the influence of institutional practices on educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria.

Specifically the study sought to:

1. Ascertain the extent to which the culture of laboratory experiences influence educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria
2. Examine the extent to which institutional creative culture influence educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria.
3.

Research questions

1. To what extent does laboratory experience influences educational technology curriculum implementation in tertiary institutions in Cross River State Nigeria?
2. How does level of institutional creative culture influences educational technology curriculum implementation in tertiary institutions in Cross River State Nigeria?

Statement of hypotheses

1 Laboratory experience does not significantly influences educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria.

2 There is no significant influence of Institutional creative culture on educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria.

LITERATURE REVIEW

Laboratory experience and curriculum implementation in tertiary institutions

One widespread approach to laboratory instruction has focused students on the confirmation of established scientific concepts, principles, and relationships through the execution of straightforward procedures fully specified by the curriculum developers with provided materials. Laboratory instruction focused on the unthinking confirmation of settled scientific knowledge amounts to what Schwab referred to as a 'rhetoric of conclusions' approach to science instruction (Schwab, 2002)

To have laboratory experiences that incorporate ongoing student discussion and reflection and that focus on clear, attainable learning goals, teachers require pedagogical content knowledge. This is knowledge drawn from learning theory and research that helps to explain how students develop understanding of scientific ideas. Pedagogical content knowledge may include knowing what theories of natural phenomena students may hold and how their ideas may differ from scientific explanations, knowledge of the ideas appropriate for children to explore at different ages, and knowledge of ideas that are prerequisites for their understanding of target concepts (Shulman, 1986).

Creativity and curriculum implementation in tertiary Institutions.

The concept of creativity has traditionally proved an elusive one to pin down. Most of the dominant writers on creativity acknowledge a broad spectrum of activity which can be described as creative; even studies focusing on so-called creative people, such as Spiel and Korff's (2001) study of politicians, scientists, artists and school teachers, produce a wide variety of descriptions. One major

distinction made by analysts is that between 'high' creativity and ordinary, everyday, creativity. Another of the distinctions is between creativity within specific domains as opposed to creativity as a separate process, applied within domains. Robert (2009), carried out a study on teaching creativity and inventive problem solving in science. According to the author, engaging learners in the excitement of science, helping them discover the value of evidence-based reasoning and higher-order cognitive skills, and teaching them to become creative problem solvers have long been goals of science education reformers. But the means to achieve these goals, especially methods to promote creative thinking in scientific problem solving, have not become widely known or used. In this essay, the author reviewed the evidence that creativity is not a single hard-to-measure property.

METHODOLOGY

This study was carried out to evaluate the influence of institutional academic culture on effective educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria. To achieve the purpose of the study, two research questions were posed and two null hypotheses formulated and tested at 0.05 level of significance. The study adopted the ex-post facto research design, while purposive and accidental sampling technique was adopted in in securing the sample of the study. The population of the study comprises of two thousand seven hundred and seventy one (2,771) students of educational technology studying in the University of Calabar, the Cross River University of Technology, Calabar College of Education Akamkpa and College of Education Obudu, all in Cross River State. in the above population a total sample of six hundred and eighty-two (682) students was used for the study. The instrument for data collection was a questionnaire titled "Institutional Practices and educational technology Curriculum Implementation in Tertiary Institutions Questionnaire (IPCITIQ)". Cronbach Alpha coefficient was used to test the reliability of the instrument which ranges from 0.78 to 0.86. The data gathered were analyzed using One-Way Analysis of Variance (ANOVA) with LSD Post-hoc analysis for both hypotheses.

RESULTS

Hypothesis 1: The result of the first hypothesis showed that there is a significant influence of laboratory experience on Educational technology curriculum implementation in tertiary institutions. The independent variable n this hypothesis is laboratory experience categorized as adequate experience, moderately adequate and not adequate experience while the dependent variable is on Educational technology curriculum implementation. To test this hypothesis, one-way analysis of variance (ANOVA) was used and the result is presented in Table 1

TABLE 1
One way analysis of variance result of the influence of laboratory experience on Educational technology curriculum implementation in tertiary institutions in Cross River State

Variable	N	x̄	S.D
Not Adequate experience	232	14.9009	4.31885
Moderately adequate	270	18.1667	3.91997
Adequate	180	18.9889	3.05808
Total	682	26.2727	4.22691

Source of variation	SS	Df	MS	F	Sig.
Between Groups	2051.075	2	1025.538	68.834	.000
Within Groups	10116.198	679	14.899		
Total	12167.273	681			

*significant at .05 level, F-crit.=3.00

The analysis of variance (ANOVA) in Table 1 shows that the calculated F-ratio of 68.834 (F=68.834, p<.05), is greater than critical F-ratio of 3.00 tested at .05 level of significance and 2 and 679 degrees of freedom and since p(.000) is less than p(.05), it implies that there is a significant influence of laboratory experience on Educational technology curriculum implementation in tertiary institutions. Hence, the null hypothesis is rejected. Since F-ratio is significant, a post hoc test was conducted and the result is presented in Table 2.

TABLE 2
Fishers LSD result on the influence of laboratory experience on Educational technology curriculum implementation in tertiary institutions in Cross River State.

Variable	Not adequate (N=232)	Moderately adequate (N=270)	Adequate (N=180)
Not adequate	14.900	-3.266	-4.08
Moderately adequate	4.123*	18.166	-0.814
Adequate	3.221*	5.12*	18.98
MS_{within} =14.899			

Where a= group means along the principal diagonal
b= group means differences above the principal diagonal
c= critical t-values below the principal diagonal
*= significant values

The result as presented in Table 2 showed that the mean value (x̄=18.98) for those with adequate programme laboratory experience is greater than the mean value (x̄=18.166) for those moderate experience and those with no experience at all (x̄=14.900). This implies that those with adequate

Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

programme laboratory experience can enhance the implementation of Educational technology curriculum in tertiary institutions in Cross River State.

Hypothesis 2: The result of hypothesis two revealed that **t**here is a significant influence of institutional creative culture on Educational technology curriculum implementation in tertiary institutions. The independent variable in this hypothesis is creativity categorized as high, moderate and low creativity while the dependent variable is Educational technology curriculum implementation. While testing the hypothesis, one way analysis of variance (ANOVA) was used and the result as presented in Table 3

TABLE 3

One-way analysis of variance result of the influence of institutional creative culture on Educational technology curriculum implementation in tertiary institutions

Level of creativity	N	Mean	SD
Low	273	15.5568	4.45953
Moderate	242	17.9711	4.09169
High	167	19.0659	2.75973
Total	682	26.2727	4.22691

Source of variation	SS	df	MS	F	Sig.
Between Groups	1458.830	2	729.415	46.251	.000
Within Groups	10708.443	679	15.771		
Total	12167.273	681			

*significant at .05 level, F-crit. =3.00

The analysis of variance (ANOVA) in Table 3 shows that the calculated F-ratio is 46.251($F=46.251$, $p<.05$), is greater than critical F-ration of 3.00 tested at .05 level of significance and 2 and 679 degrees of freedom. Sequel to the fact that p (.000) is less than p(.05), it implies that there is a significant influence of creativity on curriculum implementation in tertiary institutions. Hence the null hypothesis is rejected. Since the result is significant, a post hoc test was carried out using Fishers Least Significant Difference Test (LSD). The result as presented in Table 4.

TABLE 4

Fishers LSD result on the influence of influence institutional creative culture on Educational technology curriculum implementation in tertiary institutions

Variable	Low (N=273)	Moderately (N=243)	High (N=167)
Low	15.55	-2.42	-3.51
Moderately	-4.09*	17.97	-1.09
High	-2.98*	-3.11*	19.06
MS_{within} =15.771			

Where a= group means along the principal diagonal

b= group means differences above the principal diagonal

c= critical t-values below the principal diagonal

*= significant values

The result in Table 4 showed that the mean value ($\bar{x}$=19.06) for those with creativity is greater than the mean value ($\bar{x}$=17.97) for those moderate level of creativity and those with low level of creativity ($\bar{x}$=15.55). This implies that those with high level of creativity can enhance the implementation of Educational technology curriculum in tertiary institutions in Cross River State.

DISCUSSION OF FINDINGS

The discussion of findings obtained in the study is presented based on each hypothesis formulated to guide the study.The result of hypothesis one clarify that there is a significant influence of the culture of regular laboratory experience on Educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria. The conclusion was sequel to the fact that F-calculated value of 68.834 is greater than F-critical value of 3.00 tested at .05 level of significance and 2 and 679 degrees of freedom. Thus the null hypothesis was rejected and the alternate hypothesis retained meaning that there is a significant influence of laboratory experience on the implementation of Educational technology curriculum in tertiary institutions in Cross River State.

The above assertion is in line with Bell (2004), explaining that with respect to laboratory experiences, instructional units share two key features. The first is that specific laboratory experiences are carefully selected on the basis of research-based ideas of what students are likely to learn from them. For example, any particular laboratory activity is likely to contribute to learning only if it engages students' current thinking about the target phenomena and is likely to make them critically evaluate their ideas in relation to what they see during the activity. The second is that laboratory experiences are explicitly linked to and integrated with other learning activities in the unit. The assumption behind this second feature is that just because students do a laboratory activity, they may not necessarily understand what they have done. Recent research on integrated instructional units suggests that both framing a particular laboratory experience ahead of time and following it with activities that help students make sense of the experience are crucial in using a laboratory experience to support science learning. In contrast to the conclusion in this hypothesis, Adel (2003) in his study on challenges, advantages, and disadvantages of instructional technology in the community college classroom, stated that with the advancement of mechanization, teachers are not equally trained with its proper implementation. Thus learners are just using laboratory technology instead of gaining knowledge from it. Using applied science to achieve education in the proper way is a good thing but to transform it into an active set of skills is a matter of time.

The result of hypothesis two showed that there is a significant influence of institutional creative culture on Educational technology curriculum implementation in tertiary institutions in Cross River State, Nigeria. The conclusion was sequel to the fact that F-calculated value of 46.251 is greater than F-critical value of 3.00 tested at .05 level of significance and 2 and 679 degrees of freedom. Thus the null hypothesis was rejected and the alternate hypothesis retained meaning that creativity to a greater extent influences Educational technology curriculum implementation in tertiary institutions in Cross River State.

The finding agreed with Simonton (2006) that, opined that creative thinking is not so much an individual trait but rather a social phenomenon involving interactions among people within their

specific group or cultural settings. According to the author, creativity isn't just a property of individuals, it is also a property of social groups. Sawyer (2006) introduced his brainstorming method because he was convinced that group creativity is always superior to individual creativity. The author drew evidence for this conclusion from activities that demand collaborative output. Such expertise is often lacking in the traditional classroom. For students attempting to grapple with new subject matter, many kind of problems that are presented in high school or college courses or that arise in the real world can be solved merely by applying newly learned algorithms or procedural knowledge.

CONCLUSION

Based on the result of the study, it was therefore concluded that successful implementation of Educational technology curriculum requires understanding the power relationships, the traditions, the roles and responsibilities of individuals in the school system. That is institutional academic culture enhances the Educational technology curriculum implementation of such institution. This conclusion was made from the result of the study as all the variables under study (variables of institutional cultural practices) were seen to have a significant influence on Educational technology curriculum implementation in tertiary institutions in Cross River State.

Recommendations

From the findings obtained from the study, the following recommendations were made:

1. More effort should be made by the management of tertiary institutions in providing laboratory facilities and personnel in their institutions and students should be encouraged to make a proper use of these facilities in handling assignment and projects. The lecturers on the other hand should be enforcing the use of laboratory facilities by exposing the students to these facilities and teaching them their uses in order to enhance their academic carrier
2. There is need for school administrators to enhance creative learning by encouraging a constructivist problem based learning where the students are giving the opportunity to research and guided by the teachers

REFERNCES

Adel, A. (2003). Challenges, advantages, and disadvantages of instructional technology in the community college classroom. Community College. *Journal of Research and Practice*, 27: 473–484.

Alade, I. A. (2011).Trends and issues on curriculum review in Nigeria and the need for paradigm shift in educational practice. *Journal of emerging trends in educational research and policy studies, 2 (5), 325-333.*

Brown, J.S., Collins, A. & Duguid, S. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.

Craft, A. (2000). *Creativity across the primary curriculum*. Routledge, London, 2000

Engberg, M. E. (2007). Educating the workforce for the 21st Century: A cross disciplinary analysis of the impact of the undergraduate experience on students' development of pluralistic orientation. *Research in Higher Educatio*n, 48(3), 283-317.

Esu, A. E. O., Enukoha, O. I. & Umoren, G. U. (2006). *Curriculum development in Nigeria for colleges and universities*. Calabar: Media Mark Associates.

Garba, M. (2004). *The critical role of educational resources on curriculum* implementation. In Noah, A. O.K., Shonibare, D.O., Ojo, A.A. & Olujuwon, T. (eds). Curriculum implementation and professionalizing teaching in Nigeria. Lagos: Central Education Service.

Hall, H. A. (1987). Perceived peer context and adolescent adjustment. *Journal of Research on Adolescent*. 10, 291-211

Idaka, I. I. & Joshua, M. T.(2005). Assessment of the preparedness of Nigerian academics for evaluation by students. *Education for today*, 5(1), 17-28

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, UK: Cambridge University Press.

Mezieobi, D. I. (2003). Effect of instructional materials on the teaching Social Studies in secondary school in Edo State. *Unpublished M.Ed thesis.* Delta State University, Abraka.

Offorma, G.C. (2005). Curriculum issues, resource provision and use in the arts and language teaching. *Curriculum and media technology research*, 1 (1), 162 –178.

Okebukola, P. A. O. (2004). *Curriculum implementation in Nigeria*: Strategies for the 21st Century in Noah, A.O. K., Shonibare, D. O., Ojo, A.A. & Olujuwon, T. (eds). Curriculum implementation and professionalizing teaching in Nigeria. Lagos: A Publication of Central Education Service

Richey, R.C. (2008). Reflections on the 2008 AECT definitions of the field. *Tech Trends,* 52(1) 24-25.

Robert, L. D. (2009). *Teaching Creativity and Inventive Problem Solving in Science.* Retrieved from ttps://www.ncbi.nlm.nih.gov/pmc/articles/PMC2736021

Sawyer, R. K. (2006). *Explaining creativity: The science of human innovation.* New York: Oxford University Press

Schwab, J. (2002). *The teaching of science as enquiry*. Cambridge, MA: Harvard University Press

Simonton, D. K. (2006). Sociocultural context of individual creativity: a trans historical time-series analysis. J. *Pers. Soc. Psychol*. 1975; 32:1119– 1133

Slavin, R. E. (2003). *Educational psychology: Theory and practice (7th Ed.).*Boston: Allyn and Bacon

Suchman, L. (1988). *Plans and situated actions: The problem of Human/Machine communication.* Cambridge, UK: Cambridge University Press.