



JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION

(JORDE)

VOL. 7, NO. 1, 2017

**AN OFFICIAL JOURNAL OF THE INSTITUTE OF EDUCATION
AND PROFESSIONAL DEVELOPMENT, UNIVERSITY
OF UYO, UYO AKWA IBOM STATE, NIGERIA.**

METHODS OF IMPLEMENTATION OF INTEGRATED CURRICULUM BY SCIENCE AND SOCIAL STUDIES TEACHERS IN SECONDARY SCHOOLS IN AKWA IBOM STATE, NIGERIA

Ukeme Ekpeme Umoh

Abstract

The study examined methods of implementation of integrated curriculum by science and Social Studies teachers in secondary schools in Akwa Ibom State. The population of the study consisted of 3210 teachers teaching Basic Science and Social Studies in Secondary Schools in Akwa Ibom State during the 2014/2015 Academic Session. Two research questions guided the study. Survey research design was used for the study. Simple random sampling technique was used to select the schools for the study while purposive sampling technique was used to select a sample of 622 teachers teaching Basic Science and Social Studies in both public and private secondary schools in Akwa Ibom State. The instrument used for the study was Basic Science Teachers' Methods of Implementation of Integrated Curriculum Questionnaire" (S-TMICQ) and Social Studies Teachers' Methods Implementation of Integrated Curriculum Questionnaire" (SS-TMICQ) developed by the researcher and were validated by curriculum experts and an expert in Test and Measurement in the University of Uyo. Cronbach's Alpha statistics was used to determine the reliability coefficients which yielded .71 and .78 respectively. Mean and Rank Order were used to answer the research questions. The results showed that there was a significant difference in methods of implementation of integrated curriculum among Science and Social Studies teachers. Based on the findings of the study, it was recommended that school administrators should organize periodic workshops and seminars for teachers of integrated curriculum to update their content knowledge and enhance skills of implementation.

Keywords: Methods of implementation, Integrated curriculum, Basic Science and Technology and Social Studies curricula

Introduction

Curriculum implementation is the interaction between the teacher, the students and the contents of the curriculum which embodies structure, organization, methods and evaluation. Afangideh (2009) defined curriculum implementation as the actual engagement of learners with planned learning opportunities. Ekpo and Osam (2009) viewed curriculum implementation as the various steps involved in achieving the desired goals and objectives of education. Offorma (2009) defined curriculum implementation as the stage in the curriculum process and system whereby all the relevant curriculum input are brought into direct contact with the learners through a wide variety of activities, so that learning experiences and mastery can be maximized at a minimal cost.

Ukeme Ekpeme Umoh lecturer in the Department of Curriculum Studies, Educational Management and Planning, Faculty of Education, University of Uyo, Uyo.

Obasi, Adaobi and Ajeka (2007) explained curriculum implementation as the ~~weaving together of~~ the subject matter and method to produce desired learning activities which ~~lead to relevant~~ learning outcomes. The authors believed that the main focus of curriculum implementation is the learner, while the most important person in curriculum implementation is the teacher.

Implementation is the instructional phase of the curriculum. Hence, curriculum ~~implementation is~~ the interpretation of the planned curriculum by the teacher, who is the implementer. It is ~~the stage~~ when in the midst of learning activities, teachers and learners are involved in negotiations aimed at promoting learning. Curriculum implementation usually implies the bringing together of curriculum elements such as aims and objectives, contents, methods and evaluation for effective teaching and learning to occur. Therefore in the implementation of any curriculum such as integrated curriculum the teacher pays attention to all these elements in order to change the planned curriculum into a functional curriculum.

Integration literally means to combine into a whole. Integration allows learning and teaching to be presented holistically in a way that reflects the real world. Integration implies wholeness and unity rather than separation and fragmentation. Curriculum integration helps the learners to confront personally meaningful questions and engage in experiences related to those questions and experiences they can integrate into their own system of meanings. Thus when integrating curricula, the emphasis is on a comprehensive understanding of a 'whole', rather than many unrelated 'parts'.

The principle that is linked to integrated learning is the transfer of learning. The acquisition of this ability to transfer learning is a central feature of integrated curriculum. Presenting the child with opportunities to explore the same knowledge, concepts and skills in different curriculum areas challenges the child to transfer the knowledge and skills previously gained to new contexts. The child's ability to relate his or her learning to unfamiliar situation is a good measure of the effectiveness of the learning process. The curriculum is integrated so that children's learning in all traditional subject areas occur primarily through projects and learning centres that teachers plan, and that reflect children's interests and suggestions. Teachers guide children's involvement in projects and enrich the learning experience by extending children's ideas, responding to their questions, engaging them in conversation, and challenging their thinking. Curriculum is integrated so that learning occurs primarily through projects, learning centres and playful activities that reflect current interest of children.

Darin (2014) stated that integrated curriculum is in response to one of the weaknesses of subject design. The movement towards integrated curriculum is a move away from memorization and recitation of isolated facts and figures to more meaningful concepts and the connections between concepts. The feeling of frustration for lack of time to cover curriculum content is also one of the motivations behind development of an integrated curriculum. The explosion of knowledge, fragmented teaching schedules, concerns about curriculum relevance, and lack of connections and relationships among disciplines have all been cited as reasons for a move towards an integrated curriculum. Integrated curriculum represents an effort to overcome the fragmentation and compartmentalization of the subject curriculum by combining two or more related subjects into a

single broad field of study. Integrated curriculum ensures that the subjects within the curriculum are connected.

According to Darin (2014) integrated curriculum designers try to collapse subjects with similar contents into a larger umbrella subject. Integrated curriculum has become a pattern of organization for most school curricula. Examples in Nigeria are Integrated Science (now Basic Science and Technology) and Social Studies. Lake (2006) maintained that there is a strong belief among those who support curriculum integration that schools must look at education as a process for developing abilities required by life in the twenty-first century, rather than discrete, departmentalized subject matter. The advocates of integrated curriculum prefer it for provision of comprehensive knowledge for those who have no intentions of specialization in any areas and for facilitation of the integration of related subjects.

Integrated curriculum approach is successful in making students more aware of content area connections, challenging students, providing a learning environment supporting academic and social needs, dissolving the boundaries among the disciplines, and fostering stronger student/teacher relationships. Also, students participating in an integrated curriculum have demonstrated a more positive attitude about themselves and school. Similarly, teachers are provided with new opportunity to work together thereby increasing collegiality and specialization. Teachers work together to provide enhanced learning experience and a variety of instructional approaches through integrated curriculum (Nowicki, 2012).

Lake (2006) maintained that there are problems associated with implementation or use of integrated curriculum approach. One of such problems is that some teachers teach areas they do not specialize in and are not also competent in (Czerniak, Weber & AlexaAhern, 2000). Those who oppose adoption of integrated programmes urge on the fact that most teachers see themselves as disciplinary specialists and may not have the confidence to cross the boundaries to the other disciplines they are not trained in. Hudson (2012) also noted that, despite this drawback, the needs of students are what determine the appropriateness of integrated curriculum design.

In Nigeria, the integrated curriculum approach was introduced as an innovation and has been adopted as a model for developing curriculum in Nigeria. In almost all curricula, the attention to integration is growing exponentially, and with such rapid growth comes confusion, uncertainty, and concern over what exactly is meant by integration and how schools ought to go about implementing such ideas. Although curriculum integration is a commonly used term, there is great deal of ambiguity regarding how the concept is used both by researchers and classroom teachers. Teachers who do not understand what it is all about will not be able to successfully implement the curriculum, if teachers are insufficiently informed about integrated curriculum, they may not apply it to their teaching, despite the fact that they think it is valuable. In order for teachers to plan properly and develop an effective integrated approach, they need to be prepared by being adequately informed and knowledgeable about integrated curriculum. Therefore teachers' role and understanding of integrated curriculum are crucial to its proper implementation.

McDiamid (2005) maintained that wherever there is new curriculum, teachers **need to learn new** techniques not taught in teacher education programme; they need support, **resources, time and** mental space to learn what they need to know and change their practices in line **with the reforms** and new expectations for teachers. Also teachers need opportunities to learn and **work with one** another, share ideas and knowledge. They need support from the principals (those **who understand** the demands that reform places on teachers and what it takes to change teachers' **roles and** practices). Teachers also need people (researchers, curriculum planners, teacher **educators**) to observe, guide them in trying new practices and provide meaningful comments and **suggestions**. And it is important for teachers themselves to express willingness to change or unlearn old **ways** of doing things. In relation to integrated curriculum approach, there are worries that teachers **have** not yet imbibed the concept of integration or are not adequately informed about the philosophy.

Most studies reviewed have been concerned with the need and effectiveness of integrated curriculum, while some focus more on perceptions and attitudes of teachers towards integrated curriculum. A few exceptional studies have described teachers' experiences in implementing integrated textbooks. Also, Macmath (2012) noted that there is a dearth of research studies that focus on understanding, acceptance and implementation of integrated curriculum; rather most research studies focus more on students' achievement curriculum. None has addressed methods of implementation of integrated curriculum among teachers. There is therefore need to examine this areas and fill the gap. In Nigeria and specifically in Akwa Ibom State, the researcher is not aware of any effort to find out from the teachers who are implementing integrated curriculum whether they accept integrated curriculum as well as how they implement the curriculum.

This study therefore sought to determine the acceptance and methods of implementation of integrated curriculum among teachers at Junior Secondary Schools in Akwa Ibom State, specifically, Basic Science and Technology and Social Studies teachers. The study also considered the differences in implementation among public and private school teachers (if any) in Akwa Ibom State.

Statement of the Problem

Since the 1960s, the Nigerian educational system had adopted the policy of teaching subject matter in separate lessons based on various subjects. Single-subject curriculum has been heavily criticized mainly for three reasons: knowledge is constantly accumulating and fundamentally changing; there is discrepancy between the learner's holistic perceptions of the world and the fragmentation of content; and there is the serious problem of student alienation and lack of engagement with school. Due to these criticisms against single subject curriculum, almost every national reform is currently stressing the need to integrate or make connections among the curriculum. A number of programmes for curriculum integration have been planned and carried out in Nigeria, and numerous discussions and debates regarding curriculum integration have taken place. Curriculum development efforts in Nigeria have shifted from single subject curriculum approach towards curriculum integration. The Basic Science and Technology and Social Studies curricula being implemented in junior secondary schools in Nigeria are examples of integrated curricula.

The major problem associated with implementation of integrated curriculum is that most teachers are trained as single subject specialists; but at the school they are expected to implement integrated curriculum. It is reasonable to speculate that teachers who do understand the philosophy behind integration and what it is all about are likely not to accept or effectively implement the curriculum. Hence, there are pertinent questions to be asked, these are: How do Basic Science and Technology and Social Studies teachers implement the curriculum? In other words, do they implement the curriculum the way it is meant despite their varied disciplines or do they devise methods in which they implement the curriculum? How do teachers' methods of implementation of integrated curriculum differ based on type of school, teachers' subject specialization and teachers' years of teaching experience?

This study therefore sought to examine teachers' acceptance and methods of implementation of integrated curriculum among Basic Science and Technology and Social Studies teachers in Akwa Ibom State; Basic Science and Technology (formerly Integrated Science) and Social Studies curricula being the earliest integrated curricula in Nigeria.

Research Questions

The study provided answers to the following research questions:

1. How do methods of implementation of integrated curriculum by science teachers differ based on type of school?
2. How do methods of implementation of integrated curriculum among Social Studies teachers differ based on type of school?

Method

The design of the study was ex-post facto with a survey approach. The population of this study consisted of 3210 Science and Social Studies teachers in Akwa Ibom State for 2014/2015 Academic Session. A multi-stage sampling technique was used; stratified sampling technique was used for selection and grouping of teachers into strata where each stratum represented each of the 25 Local Education Committee in Akwa Ibom State. Thereafter, purposive sampling technique was used to select 20% of the entire population of teachers teaching Basic Science and Social Studies. Simple random sampling technique was used to select the schools used for the study.

The instruments used for the study were two researcher - developed questionnaire namely: Science Teachers' Methods of Implementation of Integrated Curriculum Questionnaire' (S-TMICQ) and 'Social Studies Teachers' methods of Implementation of Integrated Curriculum Questionnaire' (SS-TMICQ) The instruments were divided into two sections A and B. Section A elicited personal information from the respondents while section B measured Acceptance and methods of implementation of integrated curriculum by the teachers. The S-TMICQ and SS-TMICQ consisted of 11 items each which were drawn on a four – point rating scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). Scores of 4, 3, 2 and 1 were assigned to SA, A, D and SD respectively. Scores of 1, 2, 3 and 4 were assigned Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) for negatively worded questions. The instruments were validated by an expert in Curriculum Studies and an expert in Measurement and Evaluation in the University of Uyo. Initially, the instruments had 16 items each but five items

which were not correct were removed from each of the instruments. The remaining 11 items which were approved by the validators were used by the researcher for the study. The instruments were face validated in terms of appropriateness, clarity of language and content coverage. The reliability of the instruments was determined by administering the instruments to thirty teachers who were part of the target population but did not take part in the study. The scores obtained from their responses were analyzed using Cronbach's Alpha statistics and the result yielded a reliability coefficient of .71 and .78 for S-TMICQ and SS-TMICQ respectively.

The researcher and two research assistants who were briefed by the researcher on how to interact with the teachers and administer the copies of the questionnaire assisted the researcher to visit the different schools used for the study. The researcher and the two research assistants administered the instruments to the target teachers in the different schools sampled. In each school, the consent of the principal was sought. The teachers sampled were fully briefed before copies of the questionnaire were given to them. They were also assured that their responses were used only for research purposes. The respondents were given sufficient time to study and respond appropriately to the items. Thereafter, the questionnaires were retrieved and data generated were analyzed. A total of 642 copies of the questionnaires were administered, 622 copies of the questionnaire were returned by the respondents. Therefore, 97% of the questionnaires were retrieved; while 3% were not retrieved. Mean and Rank Order were used in answering research questions.

Results

Research Question One

How do methods of implementation of integrated curriculum by science teachers differ based on type of school?

Table 1: Mean and Rank order of methods of implementation of integrated curriculum by Science teachers based on type of school

S/N	Item	Private school Mean	Rank	Public school Mean	Rank
1.	Teachers seek assistance from colleagues.	3.50	5	3.50	4
2.	Teachers teach following the topics as arranged in the curriculum.	3.80	2	3.60	3
3.	Teachers read up topics outside their areas of specialization on their own.	3.90	1	3.80	1
4.	Teachers avoid topics that they are not competent to teach.	2.80	7	3.30	6
5.	Teachers modify the curriculum to suit their competence.	3.60	4	3.40	5
6.	Teachers modify the curriculum to suit examination requirements.	2.70	8	3.00	7
7.	Teachers carryout team teaching with other teachers.	3.70	3	3.70	2
8.	Teachers modify the curriculum to suit students' abilities.	2.50	9	2.60	10
9.	Teachers refer to the curriculum mostly when they are preparing students for external examinations.	2.40	10	2.70	9
10.	Teachers do not use the curriculum at all.	2.20	11	2.50	11
11.	Teachers use the curriculum as reference guide.	3.40	6	2.90	8

Results in Table 1 reveal that among Science teachers in private schools, reading up of topics outside area of specialization ranks first ($\bar{x} = 3.90$); teaching following the topics as arranged in the curriculum ranks second ($\bar{x} = 3.80$); team teaching ranks third ($\bar{x} = 3.70$); modification of the curriculum to suit teachers competence ranks fourth ($\bar{x} = 3.60$); seeking assistance from colleagues ranks fifth ($\bar{x} = 3.50$); using the curriculum as reference guide ranks sixth ($\bar{x} = 3.40$); avoiding topics teachers are not competent to teach ranks seventh ($\bar{x} = 2.80$); modification of the curriculum to suit examination requirements ranks eighth ($\bar{x} = 2.70$); modification of the curriculum to suit students' abilities ranks ninth ($\bar{x} = 2.50$); referring to the curriculum mostly when preparing students for external examinations ranks tenth ($\bar{x} = 2.40$); and not using the curriculum at all and the least ranks eleventh ($\bar{x} = 2.20$).

Results in Table 1 also show that among Science teachers in public schools, reading up topics outside areas of specialization ranks first ($\bar{x} = 3.80$); team teaching ranks second ($\bar{x} = 3.7$); following the topics as arranged in the curriculum ranks third ($\bar{x} = 3.6$); seeking assistance from colleagues ranks fourth ($\bar{x} = 3.50$); modification of the curriculum to suit teachers' competence ranks fifth ($\bar{x} = 3.40$); avoiding topics teachers are not competent to teach ranks sixth ($\bar{x} = 3.30$); modification of the curriculum to suit examination requirement ranks seventh ($\bar{x} = 3.00$); using the curriculum as a reference guide ranks eighth ($\bar{x} = 2.90$); referring to the curriculum mostly when preparing students for external examinations ranks ninth ($\bar{x} = 2.60$); modification of the curriculum to suit students' abilities ranks tenth ($\bar{x} = 2.70$); and not using the curriculum at all ranks eleventh ($\bar{x} = 2.5$).

Research Question Two

How do methods of implementation of integrated curriculum among Social Studies teachers differ based on type of school?

Table 2: Mean and Rank order of methods of implementation of integrated curriculum by Social Studies teachers based on type of school

S/N	Item	Private school Mean	Ranks	Public school Mean	Ranks
1.	Teachers seek assistance from colleagues.	3.50	5	3.60	4
2.	Teachers teach following the topics as arranged in the curriculum.	3.70	3	3.80	2
3.	Teachers read up topics outside their areas of specialization on their own.	3.90	1	3.90	1
4.	Teachers avoid topics that they are not competent to teach.	2.90	7	2.60	10
5.	Teachers modify the curriculum to suit their competence.	2.50	10	3.40	6
6.	Teachers modify the curriculum to suit examination requirements.	3.40	6	2.90	7
7.	Teachers carryout team teaching with other teachers.	3.80	2	3.70	3
8.	Teachers modify the curriculum to suit students' abilities.	2.60	9	2.70	9
9.	Teachers refer to the curriculum mostly when they are preparing students for external examinations.	2.70	8	3.50	5
10.	Teachers do not use the curriculum at all.	2.40	11	2.50	11
11.	Teachers use the curriculum as reference guide.	3.60	4	2.80	8

Result in Table 2 shows that among Social Studies teachers in private schools, reading up topics outside areas of specialization ranks first ($\bar{x} = 3.90$); team teaching ranks second ($\bar{x} = 3.80$); following the topics as arranged in the curriculum ranks third ($\bar{x} = 3.70$); using the curriculum as a reference guide ranks fourth ($\bar{x} = 3.60$); seeking assistance from colleagues ranks fifth ($\bar{x} = 3.50$); modification of the curriculum to suit examination requirements ranks sixth ($\bar{x} = 3.40$); avoiding topics teachers are not competent to teach ranks seventh ($\bar{x} = 2.90$); referring to the curriculum mostly when preparing students for external examinations ranks eighth ($\bar{x} = 2.70$); modification of the curriculum to suit students' abilities ranks ninth ($\bar{x} = 2.6$); modification of the curriculum to suit their competence ranks tenth ($\bar{x} = 2.50$); and not using the curriculum at all ranks eleventh ($\bar{x} = 2.40$).

Result in Table 2 also shows that among Social Studies teachers in public schools, reading up topics outside areas of specialization ranks first ($\bar{x} = 3.90$); teaching following the topics as arranged in the curriculum ranks second ($\bar{x} = 3.80$); team teaching ranks third ($\bar{x} = 3.70$); seeking assistance from colleagues ranks fourth ($\bar{x} = 3.60$); referring to the curriculum mostly when preparing students for external examinations ranks fifth ($\bar{x} = 3.50$); modification of the curriculum to suit their competence ranks sixth ($\bar{x} = 3.40$); modification of the curriculum to suit examination requirements ranks seventh ($\bar{x} = 2.90$); using the curriculum as a reference guide ranks eighth ($\bar{x} = 2.80$); modifying the curriculum to suit students abilities ranks ninth ($\bar{x} = 2.70$); avoiding topics they are not competent to teach ranks tenth ($\bar{x} = 2.60$); and not using the curriculum at all ranks eleventh ($\bar{x} = 2.50$).

Discussion of Findings

The result of the analysis showed that there was a remarkable difference in the methods of implementation of integrated curriculum among Science and Social Studies teachers. Various methods were used in implementing integrated curriculum. From the result of the analysis, methods of implementation of integrated curriculum among teachers were grouped into two, namely: the most popularly used methods (mean of methods of implementation ≥ 3.0) and the less popularly used methods (mean of methods of implementation is ≤ 2.9).

The most popular methods of implementing integrated curriculum by Science and Social Studies teachers include: reading up topics outside areas of specialization on their own, team teaching, following the topics as arranged in the curriculum, seeking assistance from colleagues, modification of the curriculum to suit their competence in that order. The less popularly used methods of implementing integrated curriculum by Science and Social Studies teachers include modification of the curriculum to suit students' abilities, referring to the curriculum mostly when preparing students for external examinations. Using the curriculum only as a reference guide, modification of the curriculum to suit examination requirement, avoiding topics outside teacher's competence to teach and not using the curriculum at all, in that order. The most popularly used method of implementation of integrated curriculum by teachers was reading up topics outside area of specialization. This result is consistent with expectation. It is expected that anyone who is to teach outside area of specialization would read up topics in that area.

Integrated curriculum is a broad field of study that combines topics and contents from various disciplines in which teachers may have had background knowledge without specialization. The teachers read up topics outside their areas of specialization to remind themselves of the background knowledge they acquired on these topics at their lower levels of education before obtaining specialization in specific disciplines. It is usually expected and assumed that teachers are all rounders and can teach any topic as assigned provided there had been a background knowledge which can be revised through reading. This result is therefore consistent with expectations.

The second most popularly used method of implementing integrated curriculum is team teaching method. When team teaching method is used in implementing integrated curriculum, it creates and promotes collaborative learning among teachers and students. The use of team teaching method in implementing integrated curriculum fosters teacher-teacher and teacher-learner relationships. It allows for shared experiences among teachers and students. This is supported by the opinion of Nowicki (2000) who explained that the use of team teaching method in an integrative learning promotes team spirit among teachers, provides teachers with the opportunity to work together thereby increasing collegiality and specialization. Team teaching method allows teachers to work together to provide enhanced learning experiences and a variety of instructional approaches through integrated curriculum. This method promotes collaborative learning among students and fosters teacher-learner relationships. Integrated curriculum provides teachers with the opportunity to work together thereby increasing collegiality and specialization. Teachers work together to provide enhanced learning experiences and a variety of instructional approaches through integrated curriculum.

The third most popularly used method of implementing the curriculum among teachers is teaching following the topics as arranged in the curriculum. This could also be said to be consistent with expectations. Curriculum contents (topics) are organized based on principles of continuity, sequence and integration which teachers must follow. Integration refers to the horizontal relationships of curriculum contents and experiences. It is the bringing together of related content and experiences of different areas in one area of knowledge. Continuity has to do with vertical organization of curriculum contents. It refers to the reoccurrence of the major curriculum elements organized to show relationship over time but at the same level of difficulty. The same kinds of experiences are repeated so as to produce cumulative effect. Sequence is another aspect of vertical organization. It is related to continuity but it has to do with the reoccurrence of curriculum content at different levels of difficulty based on the levels of learners. It emphasizes the importance of having each successive experience built upon the preceding one and at a broader and deeper scope. It is ensured that the difficulty level of contents matches the chronological age and mental abilities of learners. Based on these principles guiding the organization of curriculum content and experiences, it is expected that teachers follow the topics as arranged in the curriculum. Therefore, following the topics as arranged in the curriculum is consistent with the expectations of the planners.

Another popular method is seeking assistance from colleagues. Most teachers who implement integrated curriculum are disciplinary specialists who do not possess adequate knowledge and skills of other disciplines. This may make them not to have confidence to cross the boundaries of other disciplines (Nowicki, 2012). Thus, they may resort to seeking assistance from colleagues who are specialists in those disciplines to teach them topics outside their fields of specialization to be able to teach the students. Seeking assistance from colleagues enhances cooperation among teachers.

The less popular method of implementing integrated curriculum used by Science and Social Studies teachers are modification of the curriculum to suit their competence, modification of the curriculum to suit students' abilities, referring to the curriculum only when they are preparing students for examination, using the curriculum as their reference guide, avoiding topics they are not competent to teach and not using the curriculum at all. Although it has been speculated that teachers avoid topics they are not competent to teach, it can be said that a few teachers use this method on rare occasions. Avoiding topics is not an effective method to be used. Avoiding some topics outside teacher's competence deprives the learners the opportunity to learn what should be learnt. It also results in producing graduates who are half baked without the necessary skills and knowledge expected to be possessed. The least popularly used method is 'teachers do not use the curriculum, at all'. This may be because teachers know that they are expected to use the curriculum all the time. This result shows that only a few teachers do not make use of the curriculum for implementation of integrated curriculum.

Result of the analysis also revealed that there is a remarkable difference in the methods of implementation of integrated curriculum among Science and Social Studies teachers based on school type. Among Science teachers, private school teachers had a higher mean value than their public schools counterpart. The finding is not surprising as private schools have better equipped laboratories and workshops than public schools. Science teachers in private schools therefore enjoy a more conducive and enriching teaching/learning environment than their public school counterparts and so could implement the Basic Science and Technology curriculum using more acceptable methods. Also in the private schools, the class sizes are much smaller usually not more than 30 students in the class as against public school class sizes which range between 60 and 100.

Conclusion

From the findings of this study it is concluded that methods of implementation of integrated curricula differ among Basic Science and Technology and Social Studies teachers in public and private schools.

Recommendations

Based on the findings of this study the following recommendations are made:

1. The State Universal Basic Education Board (SUBEB), proprietors and administrators of private schools should ensure that only teachers who specialize in the integrated curricula should teach the subject to guarantee effectiveness of curriculum implementation at the foundation level.

2. School administrators at the secondary school level should organize periodic workshop and seminars for teachers of integrated curriculum to update content knowledge and enhance skills of implementation.
3. School administrators should encourage the use of team teaching method so as to enhance specialization and collegiality among teachers of integrated curriculum.

References

- Afangideh, M. E. (2009). Curriculum implementation at the Basic Education level. *Curriculum Theory and Practice*. Nigeria: Curriculum Organization of Nigeria.
- Czeniak, C. M., Weber, W. S., & AlexaAhern, J. (2000). *School Science and Mathematics*, 99 (8): 421-430.
- Darin (2014). *Curriculum design, curriculum development, education concepts*. Available at www.educationalresearchtechniques.wordpress.com/2014/06/19/types_g.curriculum-design-subject-center. Accessed on 23rd January, 2015.
- Lake (2006). Integrated curriculum. *School Improvement Research Series (SIRS)*, 5 (7), 157-196.
- McDiamid, G. W. (2005). *Realizing new learning for all students: A framework for the professional development of Kentucky teachers*. A special Report of the National Center for Research on Teacher Learning. Available at <http://education.msu.edu/NCRTL/specialreport/sr495.pdf>. Accessed on 11th March, 2015.
- Nowicki, J. (2012). *Integrated curriculum. A group investigation project*. Available at www.users.miamet.edu/shermalaw/edp603_group3-foo.html. Accessed on 17th August, 2015.