

INFLUENCE OF RESOURCES AND MATERIALS ON THE IMPLEMENTATION OF NON-FORMAL BASIC EDUCATION CURRICULUM AT THE NON-FORMAL EDUCATION CENTRES IN NAIROBI, MOMBASA AND KISUMU CITIES, KENYA

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Abstract

The purpose of this study was to assess the influence of resources and materials implementation of the Non-Formal Basic Education Curriculum (NFBEC) in Nairobi, Mombasa and Kisumu urban centres. The study employed cross sectional survey design. The target population consisted of 36 directors and 96 teachers. The sample size comprised of all the 96 teachers and 36 directors. Data was collected by use of questionnaires and observation checklist. The analysis used both descriptive statistics such as frequencies and percentages. Results indicated that the implementation of the NFE curriculum was hampered by unavailability, inadequacy and inappropriateness of the resources and materials in the centres. Regression analysis showed that the p value is -0.44931 which was lower than 0.05 which implied that availability of facilities was statistically significant in increasing completion rates. The study recommended that the government should provide resources and materials to enhance the implementation of the curriculum.

Key Words: Non-Formal Basic Education Curriculum, Non-Formal Education Curriculum Implementation, Completion Rates, Resources and Materials

1.1 Introduction

Education is a fundamental human right. It is critical to the attainment of the broader Millennium Development Goals and the fulfillment of every child's potential. It is central to the success of a whole range of other human endeavours (UNESCO, 2014). The Universal Declaration of Human Rights (UDHR) adopted by the United Nations General Assembly in December 1948, guaranteed for the individual a whole range of basic freedoms with education serving as a basic right necessary for the achievement of all other freedoms. Article 28 (1) of the United Nations Convention on the Rights of the Child (UNCRC), 1989, declares that all children have a right to education. The right to education requires that young people be given the opportunity necessary for the acquisition of knowledge, skills, attitudes and values that will enable them lead happy and productive lives as

individuals and discharge their social duties for the betterment of life in the society (UNESCO, 2006).

The Dakar Forum set 2015 as the year to achieve Education for All (EFA). The forum acknowledged that this goal cannot be achieved solely through formal education. It therefore, advocated for third channel approaches, including Non-Formal Education (Republic of Kenya, 2009). In the Kenya Vision 2030 (Republic of Kenya, 2012), Kenya recognises that education and training of all Kenyans is fundamental to the success of the Vision. The Vision by which the country hopes to become a middle income country by the year 2030 recognises that education equips citizens with understanding and knowledge that enables them to make informed choices about their lives and about the society. However, despite education being the cornerstone for economic and social development and an indispensable key to personal and social improvement, the UNESCO Global Monitoring Report (2012) acknowledges that globally, more than 61 million children fail to complete basic education programmes of whom 42% translating to 26,230 live in The Sub-Saharan Africa (Global Partnership for Education: Quality Education for all children (2013).

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Sessional Paper No. 1 of 2005 titled “Policy framework for the Education Sector for meeting the challenges of Education and Training in Kenya in the 21st Century”, recognises the important role played by non-formal education as a vehicle for transformation and empowerment of individuals and society. It further acknowledges that NFE offers opportunities for those outside the formal school system to access and benefit from education. Following this, there is a directorate in the Ministry of Education to oversee matters related to NFE and Adult Education (Republic of Kenya, 2005).

It was upon recognition of NFE as a viable means of providing education at basic level that the KIE in 2006 began preparation of Non-Formal Basic Education Curriculum (NFBE) to be used by the NFECs in Kenya. The NFBE curriculum is broad in nature and provides the learners with the opportunity to acquire knowledge, skills and attitudes necessary for individual and national development. The target group for this curriculum is out-of-school children and youth aged 6-17 years (GoK, 2006). The KIE in 2006 began preparation of Non-Formal Basic Education Curriculum (NFBE) to be used by the NFECs in Kenya. The target group for this curriculum is out-of-school children and youth aged 6-17 years (GoK, 2006). The NFBE curriculum is flexible in that it allows entry, dropping out and re-entry at any level.

1.2 Resources and materials and curriculum implementation

Resources and materials are critical ingredients in learning, and the intended programme cannot be easily implemented without them. No meaningful teaching and learning, which is a component of curriculum implementation, takes place without adequate resource materials (Lockheed, Marlaine & Verspoor, 1991). For curriculum to be fully implemented as per plan, schools should be supplied with adequate resource materials such as textbooks, teaching aids and stationery in order to enable teachers and learners to play their role satisfactorily in the curriculum implementation process. Resources and materials are designed to help teachers better enact the curriculum in practice (Ball & Cohen, 1996). They also play powerful roles in shaping teaching practice as well as practitioner ideas about teaching and learning.

The availability of teaching and learning materials is very crucial in the advancement of education. On this note, Republic of Kenya (1976) states, books and other materials are the basic tools of educational development. They must therefore be available to the learner in adequate quality and quantities. They must also be available at the time they are required. Materials and resources form the medium through which teaching is carried out. Teaching/ learning materials can be divided into two categories; those used by the students and those used by the teachers.

Materials used by the teachers are important because they help teachers prepare schemes of work and lesson notes which guide them in the course of teaching. They include the syllabi, the teachers' guides, chalkboard, maps, globe, and pictures. Once a school has got enough text books, a teacher can give many exercises to the learner without writing them on the chalkboard. This saves him/her time of talking and making too many preparations. Most of the materials arouse learners' instructions once they appear interesting (Ellington, 1986). The school therefore requires resources to enable it implement its various educational tasks.

The school's physical facilities or the school plant as it is sometimes called contributes an important component of the learning environment. The facilities include the administrative offices, classrooms, libraries, stores and the school playground. According to Bell and Rhodes (1996), these resources are important because the school uses them to advance the learning opportunities offered to the pupils. Anandu (1990) asserts that physical facilities are vital for both teachers and pupils in the teaching/ learning situations. Any trace of inadequacy leads to frustration and the motivating factor in terms of comfort diminishes. Nafula and Ngoma (1998) add that modern teaching environment entails some key characteristics in its physical setting. Resource and materials important in curriculum implementation include classrooms, libraries, sanitary facilities and play grounds.

The importance of teaching and learning materials is further highlighted by Mungai (1992) who stated that resources have been in use from the earliest times. This view is echoed by Nyamok (1997) who states that if a teacher uses the teaching materials effectively, he will be able to use the time thus created for other educational activities. Adequate resources take care of the learners' individual differences and they encourage learners to participate during the teaching learning process. This makes learning more interesting to the learners and the learners are made active during the learning process. Ouma (1987) supports this view by stating that, resources encourage learners to participate in the learning process, motivates them, cater for individual differences and enable learners to gain experience by using their senses.

Resources are vital inputs needed to effectively conduct instructional activities at all levels of the educational system. Material resources include, 'those items so designed, modified and prepared to assist teaching/ learning operations. This is an indication that adequate teaching / learning resources are vital if the quality of education has to improve. According to the study by (UNESCO, 2005) provision of instructional materials including textbooks was identified as one of the major achievements of the FPE programme, particularly through reducing the cost burden of education on parents and thus leading to an influx of pupils to school. Though the above literature focuses on formal education, resources and materials will in the same way affect curriculum implementation in a NFE setting.

Successful implementation is affected by the nature of the particular school's physical and human resources (Rogan & Grayson, 2003). Resources in terms of human, material, and financial has been considered indispensable in determining the successful implementation of a curriculum (Carless, 1999a; Li, 1998). Fullan and Miles (1992) assert that implementation demands resources for training, for substitutes, for new materials, for new space, and, above all, for time. Kritek (1976) contended that the problems of resource insufficiency are not likely to be solved by providing only more money. More importantly, human support in terms of personnel training and administrator and peer support are believed to maximally increase the smooth implementation of innovations.

One of the prerequisite for running NFE programme for out-of-school children is the availability of appropriate and local-based curricula packages. They are important inputs for learning. Without them, it would be very difficult to ensure the transmission and acquiring of knowledge and skills and the development of desired attitudes (IIZ/DVV, 2000, No.7; MoE/Ethiopia, 1999). The availability of resources and materials is, thus, one of the most powerful and consistent determinants of learning achievement. Inequality in access to such materials is a major source of rural/urban and regional differences in achievement. Particularly where teacher quality is poor, the value of curricula materials is even more important.

The availability and use of resources and materials in developing countries, of course, have not been widely documented (Lockheed, et al, 1991). Ajayi (1999) in a study on *Relationship between infrastructure availability and curriculum implementation in Nigerian schools* and using 250 respondents found that no significant relationship exists between availability of school facilities and curriculum implementation in those schools. But in a review of this study, Anyakogu (2002) opined that a relationship did exist between the availability of school facilities and implementation of school curriculum. This study was carried out in formal schools. The current study will establish how resources and materials influence curriculum implantation in NFE centres.

Tarnate (2001) in his study on *Extent of Implementation of Non-Formal Education (NFE) Program in Elementary Schools in Catanduanes*, revealed that facilities and materials were inadequate, namely: textbooks; teaching guides; chalkboards; and cassette tapes which negatively affected curriculum implementation. The findings indicated that there were great shortages of curricula materials at government-NFBPE centres. Only 16%, 37%, and 2% of the respondents indicated that adequate textbooks, facilitators' guides, and supplementary (source) curricula materials respectively were available at government-implemented centres. On the other hand, 43%, 49%, and 13% of the respondents who filled for the NGO-implemented centres indicated that adequate textbooks, facilitators' guides, and supplementary (source) curricula materials respectively were available. The study was carried out in Catanduanes. The current study aimed at establishing how resources and materials influence curriculum implementation in the Kenyan context.

The above literature has established the influence of resources and materials in curriculum implementation. Though the review of literature has focused on formal education in secondary or primary education, resources and materials as a key component in teaching and learning will influence the implementation of NFE curriculum. In many NFE centres in Kenya, shortage of resources and materials is a major constraint. For example, a study carried out by the GoK and UNICEF (1995), revealed that the NFE centres had inadequate resources and facilities which negatively affected NFE curriculum implementation. This study will therefore establish how resources and materials influence NFBECC in the NFE centres.

1.3 Research methodology

The study employed cross sectional survey design. The target population consisted of 36 directors and 96 teachers. The sample size comprised of all the 96 teachers and 36 directors. Data was collected by use of questionnaires and observation checklist. The analysis used both descriptive statistics such as frequencies and percentages. Regression analysis was done by use of Predictive Analytics SoftWare (PASW).

2.1 Result and discussions

To establish the adequacy of resources and materials at the centres, the observation checklist was used together with an item in the teachers' questionnaire which sought teachers' responses on adequacy of resources and materials. Data showed that most of the centres did not have facilities for technical subjects, for example only 1 (1.3%) had agricultural land, 2 (5%) had agricultural equipment, 5 (6.3%) had Art and Craft tools, 6 (7.5%) had wood work tools, 6 (7.5%) had welding and fabrication equipment and only 1 (1.3%) centre had motor vehicle mechanic and equipment. While it is a requirement by the NFBECC that the centres have these equipments, it implies that the curriculum cannot be implemented in the centres since the facilities were missing.

The study also sought to establish the appropriate and availability of the resources and materials. Data revealed that out of 22(73.3%) of the available classroom roofing 15 (68.18%) were appropriate. Although 30 (100.0%) of the classroom doors were available only half 15 (50.0%) were appropriate. It was also noted that 22(73.3%) available windows, desks and chairs were appropriate. Data further shows that 26 (86.6%) of the administration blocks available, 25(96.1%) were appropriate. All the staffrooms which were available were appropriate. Toilets were deemed available as indicated by 30 (100.0%) while 25 (83.3%) were appropriate. Only 1 (3.33%) of the agriculture land, welding and fabrication room and motor vehicle mechanics were available and appropriate. Data further shows that 2(66.6%) Art and craft rooms were available and all were deemed appropriate. Garment making rooms were available with only 5 (16.6%) deemed as appropriate. The directors were asked to indicate whether they had the required teaching and learning resources. Data is indicated as shown in Table 1.

Table 1: Directors' Responses on Availability of Teaching and Learning Resources

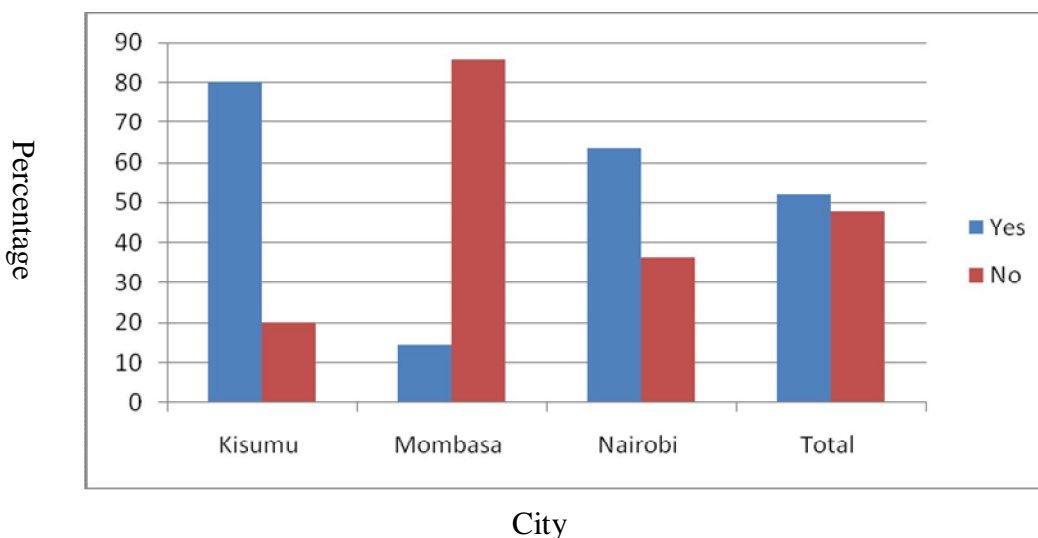
Availability	Region						Total	
	Kisumu		Nairobi		Mombasa		f	%
	f	%	F	%	f	%		
Yes	8	80.0	6	54.5	4	57.1	16	57.1
No	2	20.0	5	45.5	3	42.9	12	42.9
Total	10	100	11	100	7	100	28	100

Data on the directors' responses on availability of teaching and learning resources indicated that slightly more than half, 16 directors (57.1%) had the required resources with Kisumu having the highest availability as recorded by 8 (80%). In Mombasa and Nairobi urban centres less than half the directors indicated they did not have the resources (42.9%) and 45.5% respectively. In general the directors were of the feeling that their centres did not have the required resources and materials which affected curriculum implementation. These results indicate that the implementation of the NFE curriculum was hampered by unavailability and inappropriateness of the resources.

The findings further concur with Ottevanger (2001) who states that in examining the complex relationship between teacher knowledge, beliefs and contexts with regard to curriculum implementation, use of materials are viewed as a catalyst in a chemical reaction hence contributing to curriculum implementation. To establish how appropriateness of the teaching learning resources influenced curriculum implementations, the teachers and the directors were asked to indicate how appropriate the resources and materials were in their centres. The directors were therefore asked whether the resources and materials were appropriate. Their responses are presented in Figure 1.

Figure 1

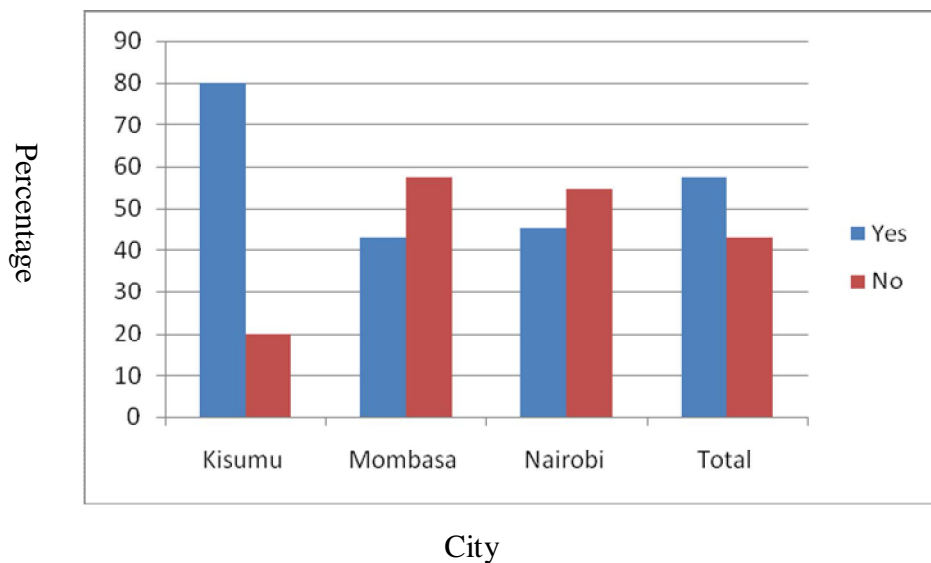
Directors' Responses on Appropriateness of the Resources and Materials



Data on whether the centres had the appropriate teaching and learning resources indicated that Mombasa experienced the highest percentage of inappropriate resources and materials as recorded by 6 directors or 85.7% with Nairobi following at 4 (80%). The directors were further asked to

indicate whether they had the appropriate teaching learning resources for the technical subjects. The data is presented in Figure 2.

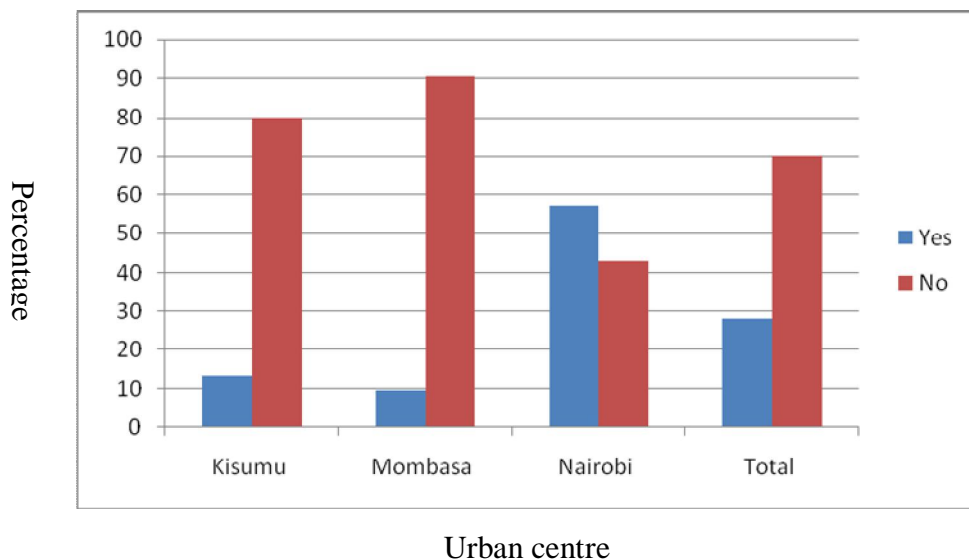
Figure 2: Directors’ Responses on Availability of Resources for Technical Subjects



Data on the directors responses on availability of teaching and learning resources for technical subjects indicated that slightly more than half of the centre directors, 12 (52.17%), had the required resources with Kisumu having the highest availability as recorded by 4 (80%). Directors in Mombasa and Nairobi cities indicated they had inadequate resources at (14.3%) and 85.7% respectively.

The teachers were also asked to indicate whether the teaching and learning resources were adequate for the teachers and learners in the centres. The data is presented in Figure 3

Figure 3: Teachers’ Responses on Adequacy of Teaching and Learning Resources



Data showed that all the centres did not have adequate resources as indicated by 40 (70.2%) teachers. Mombasa and Kisumu were the most affected areas with 90.5% and 80% inadequacy. To establish how facilities influenced curriculum implementation regression was carried out. The results are presented in Table 2.

Table 2: Regression analysis of influence of facilities and curriculum implementation

Ordered probit regression		Number of obs = 20				
Log likelihood = -304.92257		Pseudo R2 = 0.0091				
LR chi2(1) = 0.00						
Prob > chi2 = 1.0000						
Log likelihood = -40.506524		Pseudo R2 = 0.0000				
			[95% Confidence Interval			
completeall	Coef.	Std.	Err.	z	P>z	Interval
facilities	-4.67E-17	0.229244	0	1	-0.44931	0.44931

Data showed that Prob>chi2 =1.000. The p value is -0.44931 which is lower than 0.05. The data implied that availability of facilities which was a categorical variable was statistically significant in increasing completion rates. This implied that the regression model definitively determine a relationship between the completion rate and the said variable. The coefficient is basically 0 meaning that the model defined that facilities have a minimal influence in completion rates.

2.2 Conclusions and recommendations

The study therefore concluded that inadequacy and inappropriateness of resources and materials hindered the curriculum implementation. The study therefore concluded that this could as a result of inadequate professional training making teachers unable to prepare and to use schemes of work hence, affecting curriculum implementation. The study also concluded that although there were some factors that negatively affected curriculum implementation, there were also positive aspects that facilitated curriculum implementation. The model summary showed that learners positive attitude towards the NFE had a linear relationship with completion rates at the NFE. It was therefore concluded that learner attitude should be enhanced for effective curriculum implementation. The study recommends that the government and other stakeholders such as the community, NGOs and well wishers should come up with ways of providing such facilities. The government should have a clear policy on financing NFE centres for example, payment of teachers so as to minimise teacher turnover.

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