

Examining Teachers' Role in the Development and Implementation of Curriculum Support Materials in Secondary School Curricula in Kenya

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ABSTRACT:

This study's purpose was to establish teachers' views towards their involvement in the choice and development of curriculum support materials and implementation of the secondary school curriculum in Kenya. The study involved 342 secondary school teachers and employed a descriptive survey research design. Data from principals and teachers was collected using an interview schedule and questionnaires, respectively. Analysis of the collected data was carried out using inferential and descriptive statistics. The study's findings showed that there existed a statically significant relationship between teachers' views on their involvement in the choice and development of curriculum support materials for secondary school curriculum. However, teachers' voice in the process of developing curriculum support materials was at the minimum: to a small extent ($M=1.97$). The study recommends that teachers who are key curriculum implementers should be engaged in planning and developing the curriculum in all stages for effective curriculum delivery in schools. KICD (Kenya Institute of Curriculum Development) should lay better strategies to involve teachers in the curriculum development process. The findings of this study will, hopefully, supplement government efforts directed towards the improvement of curriculum delivery in Kenyan secondary schools.

Key Terms: Teachers Voice, Curriculum Support Materials, Curriculum Implementation, Secondary School Curriculum

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Introduction

Curriculum development is a process that involves devising curricular materials and trying them out, deploying manpower, resources and time (Syomwene, Nyandusi, & Yungungu, 2017; Urerbu, 1990). It covers the entire scope of curriculum construction, ranging from the initial conceptualization and planning; to design, development and implementation, to evaluation and revision (Kobiah, 2015).

Curriculum support materials are the physical resources used to support the presentation and interaction with curriculum content. Kenya Institute of Curriculum Development Strategic Plan (2015-2020) defines curriculum support materials as materials used to facilitate curriculum implementation. Oluoch (1982) outlines Curriculum materials to include textbooks, teachers' guides, mass media programs, handbooks and manuals designed to help the school teachers undertake and implement the new curriculum. Also included are students' assessment guides and schemes to be used in assessing the progress made by students in their efforts to achieve the objectives set in the new curriculum (Githogo, 2012). Equipment to be provided includes those for teaching practical subjects such as agriculture and science subjects. At this stage of curriculum development, the existing materials and equipment that are appropriate to the new curriculum are determined and the development of new materials considered (Asiachi, & Okech, 1992; Oluoch, 1982). It would be necessary at this level for curriculum workers to decide on what materials can be found in schools, the ones which can be produced by teachers and students.

Curriculum implementation can be defined as the translation of the intended curriculum into an operational curriculum. It entails putting into practise the officially prescribed courses of study, syllabuses and subjects. According to Ojilong and Wafula (2017), curriculum

implementation involves making the new curriculum and accompanying materials and resources available to all institutions within the jurisdiction of the curriculum development project. The process takes place as the learners acquire planned experiences, knowledge, skills, values and attitudes with the aim of enabling the learner to function effectively in the society.

Great Schools Partnership (2014) defines teacher voice in education as the opinions, values, beliefs, expertise, perspectives, and the cultural histories of the teachers in a particular school. They further argue that the teacher's voice is an alternative to more hierarchical forms of decision-making in which school administrators may make unilateral decisions with little or no input from the faculty. Carl (2012) observes that the success of any curriculum project depends on the level of information that consumers are exposed to as well as being prepared for the envisioned change and whether they are prepared to be associated with it. When teachers are involved in designing the curriculum, they are likely to understand the various curriculum elements and hence effective implementation. While the degree to which teachers voice is both solicited and valued can vary considerably from country to country, educators today are considerably embracing teachers voice in decisions related to school leadership and governance, instruction, curriculum and professional development (Great Schools Partnership, 2014) This study therefore, sought to establish secondary school teachers' voice in development of curriculum support materials and effective implementation of secondary school curriculum in Kenya.

The curriculum development process in Kenya is a highly centralised activity that involves devising curriculum materials, trying them out and preparation of implementers before actualising the process in schools.

The Kenya Institute of Curriculum Development (KICD) is the principal government department charged with developing the curriculum through the course and subjects' panels. The agency develops the basic component of the curriculum, the syllabus, complete with curriculum support materials and instructional guides for teachers. The role of the teacher is viewed as that of a mere implementer of a curriculum development package. By the time teachers are hired and posted to various schools, every aspect of curriculum has already been made and in operation (Oliva, 2005). The teacher's task is to establish how to effectively apply the new curriculum because there is no chance for them to consider alternatives. Teachers then implement what they receive from the central office with many not relating it to the local situations. Such a scenario may prohibit the achievement of the national education goals because teachers' perception of the new curriculum may not be properly articulated with the curriculum as imaged at the policy and programmatic levels. Lack of involvement may result in a lack of ownership and commitment to innovation. The literature on teachers' views on their role in the choice and development of curriculum support materials in Kenya is scanty. It was with this in mind that this study sought to establish secondary school teachers' voice in the development of curriculum support materials and effective implementation of secondary school curriculum in Kenya.

METHODOLOGY

This study utilised a descriptive survey research design. The descriptive survey is used in exploratory studies to allow researchers to gather information, summarise, present and interpret for the purpose of clarification. The study involved 342 teachers, who included 194 males and 148 females. Stratified random sampling procedures were employed to arrive at a representative sample. The process involved dividing the population into homogenous subgroups and thereafter taking a simple random sample

proportional to their numbers in the population. Data collection involved use Questionnaires for teachers and Interview schedule for principals. A total of 272 questionnaires were successfully filled and returned while 19 interviews were conducted, giving a response rate of 85.09%. Data analysis was carried out with the help of descriptive and inferential statistics. Descriptive statistics included means, frequency counts and percentages. For inferential statistics, chi-square was used to test the hypothesis and was computed and tested for significance at $\alpha = 0.05$ level of significance. Qualitative data gathered from interviews was sorted out, organized to create categories, themes and patterns and presented in narrative and discussion form. Some excerpts giving the principals opinions were presented in themes and summaries.

REVIEW OF RELATED LITERATURE

The adoption of a new curriculum poses a number of challenges to teachers with regard to the roles they should assume. Researchers (Obai, 1999; Shiundu, & Omulando, 1992) opine that the participatory approach permits the involvement of various stakeholders (teachers included) when change is crucial in the curriculum.

One of the tasks of the curriculum development process includes the construction of curriculum support materials such as the syllabus, textbooks and teachers guides which must follow systematic and logical steps and procedures for the overall materials' quality. Marew (2000) opined that teachers can be involved in the development of curriculum materials and that teachers were best placed to advise on the appropriateness, relevance and feasibility of both teacher guides and pupil texts. Carl (2012) and Mosothwane (2012) avers that teacher involvement in curriculum development empowers them to use various teaching materials and methods that could promote effective learning can contribute by collaboratively and effectively working with curriculum development

specialists to arrange and compose materials, textbooks, and content (Merfat, 2016). Teachers could function as grassroots developers in their own schools by preparing curriculum units for use in their own classrooms (Ben-Peretz, 1990). Teachers could also construct alternative local versions of existing materials extending their uses through appropriate modifications for specific teaching situations. Curricular activities acquired through participation in the development projects could serve teachers in the implementation of externally developed curriculum materials, including commercially prepared textbooks (Ben-Peretz, 1990).

Shiundu and Omulando (1992) noted that teachers could produce materials which can support the curriculum. They can produce textbooks, teachers' guides, and audio-visual aids. Teachers can study the syllabus and make constructive comments which should be communicated to the central curriculum planners through the right channels. Nevertheless, although several studies have been carried out on teachers' voice in curriculum development in American countries (Alberta Education, 2011; Handler, 2010; Lauridsen, 2003); Europe (Eurydice Network, 2008); South Africa (Carl, 1995; 2002; 2009) among other countries, there has been little research if any done in Kenya on teachers' voice in the development of curriculum support materials and effective implementation of secondary school

curriculum. Young (1988) observed that teachers' use of new curriculum materials depends on their perceived practicality. Teachers may be constrained in their interpretation of different ways of using the educational potential of materials because of a perception of the authority of the text (Ben-Peretz, 1990). Teachers are more likely to use clear, easily understood materials, especially when they are developed by their colleagues (Fullan, & Pomfret, 1997; Young, 1988). This study set to find out teachers' views on their involvement in developing curriculum support materials and effective implementation of the secondary school curriculum.

RESULTS AND DISCUSSION

The purpose of this study was to find out whether there was a statistically significant relationship between teachers' views on their role in choosing and developing curriculum support materials as well as implementing the secondary school curriculum in Kenya. Respondents were requested to rate the extent of their participation in the choice and development of curriculum support materials during the process of curriculum development. The information gathered from the teachers' questionnaires was analysed by determining the mean and standard deviation on six items on a 5-point Likert scale where: To a greater extent= 5, To Some Extent= 4, Undecided= 3, To a Small Extent= 2, Not at All = 1. Table 1 presents the findings

Table 1: Participation in Choice and Development of Curriculum Support Materials

Statement of participation	N	M	SD
Participated in workshops or seminars to analyse syllabus content	272	2.65	1.63
Participated in writing the syllabus	272	1.62	1.24
Developed textbooks and teachers guides	272	1.78	1.45
Participated in proposing general policy for textbooks	272	1.61	1.20
Participated in textbook evaluation and approval	272	1.76	1.26
Improvise locally available resources in schools	272	2.86	1.55
Participate in the preparation of e-learning materials	272	1.91	1.44
Participate in the development of radio programs	272	1.54	1.16

Participated in the review of recommended course books	272	1.89	1.54
Participated in seminars to review the subject content	272	2.11	1.46
Overall mean	272	1.97	1.05

Results from Table 1 indicate that despite the importance of teachers' participation in the choice and development of curriculum support materials, teachers indicated that they had participated in selection and development of curriculum support materials to a small extent ($M=1.97$). The findings also show that teachers were involved in improvisation of locally available resources in schools to a moderate extent ($M=2.86$). However, teachers indicated that they did not at all participate in the preparation of the syllabus ($M=1.62$); in proposing general policy for textbooks ($M=1.61$), and in preparation of radio programmes ($M=1.54$). Findings from the principals' interview further indicate that teachers were not fully involved in the development of support materials. Principals' descriptions are given in Excerpt 1.

Excerpt 1

Researcher: How are your teachers involved in the selection and development of support materials during the curriculum development process?

Respondent 3: Teachers are never given priority. We know of teachers who have written various textbooks, but the procedure followed so that your book is recommended as the class text is not known. Writing and publishing is the preserve of people in high offices.

Respondent 2: Teachers do not participate in this process. With all my experience, I have only been consulted once in recommending a textbook for use, ever since I was employed as a teacher over twenty years ago.

Respondent 4: Few teachers have in the past been engaged in seminars to review subject content at KICD. Teachers need skills in writing textbooks and preparation of other materials. They also need finances and time outside the classroom, which they rarely get. The MOE should avail opportunities for training teacher to author books in order to improve writing skills.

The information presented from both teachers and principals confirms that the majority of secondary school teachers did not participate in the selection and development of curriculum support materials. Their voices were not taken into consideration. The findings are consistent with research conducted by Mullick (2013), who notes that teachers were not involved in the curriculum development process in the Middle East. In the study, Mullick (2013) argued that curriculum in the Middle East is designed by an alliance of higher administrative staff and coursebook publishers and teachers are just receivers of one-way transmission of information that they were expected to impart in their classrooms. Mullick (2013) further noted that curriculum in the Middle East was owned by publishers who put down books, and they are taken wholesale. Ben-Peretz (1990) observed that teachers function as implementers of curriculum materials, which are developed by agents outside their classrooms. This raises the issue of adherence to the given versus teacher autonomy to introduce changes and modifications. An evaluation study of the KICD curriculum development to determine the effectiveness of its inputs, processes and outputs found out that a fairly good number of subject specialists at KICD were dissatisfied with the process as 32%

of them observed that they were not aware if their recommendations were taken into consideration while 33% of subject panellists were not sure if their examination reviews for Kenya National Examination Council (KNEC) were communicated to the relevant officials at Kenya National Examination Council (KICD, 2014). Further, some subject Panellists argued that they rarely saw any changes in the curriculum as per their suggestions.

According to Davis and Osborn (2003), teachers should be active in the process of choosing the textbooks during the textbook selection and preparation. This would enable teachers to use the textbook in the right way, providing their own individual touch. In a South African study by Carl (2005) on the voice of the teacher in curriculum development, teachers held a perception that curriculum

was developed elsewhere so that they simply needed some guidance for correct application of a curriculum which is handed down to them from the top. These studies confirm the importance of teacher participation in the selection and development of curriculum support materials during curriculum development.

The researcher sought information from teachers on the relationship between the selection and development of curriculum support materials and the implementation of the secondary school curriculum. The information analysis was done by evaluating the mean and standard deviation on eight items on 5-point Likert scale where: Strongly Agree= 5, Agree= 4 Undecided= 3, Disagree = 2 and Strongly Disagree= 1. The results are presented in Table 2.

Table 2: Development of Curriculum Support Materials and Curriculum Implementation

Statement of participation	N	M	SD
Participation increases ability to relate curriculum content with the developed curriculum materials	272	4.47	0.72
Participation in the writing of the syllabus may increase teachers' ability to interpreted the content properly	272	4.34	0.76
Participation may increase teachers' ability to use a range of teaching and learning resources and technologies to support students learning	272	4.34	0.79
Participation increases teachers' ability to relate the developed curriculum materials with subject objectives	272	4.28	0.88
Participation may lead to proper improvisation of curriculum materials and equipment in schools	272	4.18	0.95
Participation in the development of support materials keeps teachers up to date with changes in their subjects	272	3.88	1.19
Effectiveness is affected by lack of participation in the development of curriculum support materials and equipment	272	3.50	1.50
Overall mean	272	4.03	0.60

The results in Table 2 show that teachers agreed that participation in the development of curriculum support materials had a significant relationship with the effectiveness of curriculum implementation ($M=4.03$).

Teachers also strongly agreed that participation increases the ability to relate curriculum content with the developed curriculum materials ($M=4.47$). The mean score of 3.50 suggests that teachers agreed that their effectiveness was affected by lack of participation in the selection and development of curriculum support materials. From the interview with the principals, the findings indicated that it was necessary to involve teachers in the development of the curriculum support materials during the curriculum development process. Excerpt 2 shows the descriptions of the principals.

Excerpt 2

Researcher: In your opinion, do you think that teachers should play a role in the selection and development of curriculum support materials for secondary schools? Please explain your answer

Respondent 1: Yes... Involving teachers in this process will enable them to have prior knowledge of materials to use during implementation. It will be easier for them to know what improvisation will be needed in advance and hence prepare for them

Respondent 5: It will definitely lead to ownership of the resources used and increased understanding of how to handle them. This will reduce complaints from teachers.

Respondent 6: Will keep teachers up to date with any changes in their teaching subjects or areas of expertise. It will also contribute to the professional growth of teachers. Students will be inspired when they read books authored by their teachers.

Respondent 13: It helps teachers to relate what they are teaching with the developed curriculum materials. The teacher becomes a true

authority in his/her field; this raises their status.

The information gathered from teachers and principals shows the importance of involving teachers in the selection and development of curriculum support materials as this lead to ownership of resources produced and an increased understanding on how to use them. Further, principals argued that participation would enable teachers to relate the content with the resources produced and have prior knowledge of local materials that can be used in improvisation of learning resources; improve teachers' professional growth and status. These sentiments tend to agree with Mullick's study findings (2013) on 'the voice imprisoned within classrooms' that all curricula materials are subject to the interpretation and individual application of the teacher. Having known the target group studying at the institution; teachers know which materials best works with that group and can determine what supplementary materials are needed and prepare them. Teachers understanding of the curriculum and their enthusiasm, or boredom with various aspects of it, colours its nature; hence the curriculum enacted in the classroom differs from the one mandated by curriculum experts. Teachers should, therefore, be part of the process of choosing books.

Yero (2010) noted that many course books offer teachers advice about what they should do on the assumptions that every teacher will use this information in the same way and with the same results. While education theorists address individual difference among students, teachers are assumed to be a constant in the educational equation rather than what is arguably the important variable (Yero, 2010). It is what the teachers think and do at the classroom level that ultimately shapes the kind of learning that young people get. Thus, involvement in decision making and planning will perhaps influence teachers positively to implement it in the classroom.

Chi-square test was carried out to establish whether there existed a statistically significant relationship between

teachers' participation in the curriculum support materials development and implementation of the secondary school curriculum. The results are presented in Table 3.

Table 3: Chi Square Test Results on Participation in Selection and Development of Curriculum Support Materials

Statement	Chi-Square	Df	Asymp. Sig.
Participation increases ability to relate curriculum content with the developed curriculum materials	357.82	4	.000
Participation in the writing of the syllabus may increase teachers' ability to interpreted the content properly	310.54	4	.000
Participation may increase teachers' ability to use a range of teaching and learning resources and technologies to support students learning	298.33	4	.000
Participation increases ability to relate the developed curriculum materials with subject objectives	288.85	4	.000
Participation leads to Proper improvisation of curriculum materials and equipment in schools	231.27	4	.000
Participation in the development of support materials keeps teachers up to date with changes in their subjects	130.54	4	.000
Effectiveness is affected by lack of participation in the development of curriculum support materials and equipment	50.28	4	.000
Overall Chi-Square	135.912	17	0.000

The findings in Table 3 indicate that there was a statistically significant relationship between teachers' participation in selection and development of curriculum support materials and curriculum implementation [$\chi^2(4, N=272) = 135.91, p=0.00<0.05$]. For instance, results indicate that there was a statistically significant relationship between teachers' participation in developing the syllabus and teachers' ability to interpret the content of the curriculum and relate it to the subject objectives [$\chi^2(4, N=272) = 357.82, p=0.00<0.05$]. The null hypothesis, which stated that there was no statistically significant relationship between teachers' participation in the selection and development of curriculum support materials and the implementation of the secondary school curriculum in Kenya, was therefore rejected.

Mullick (2013) opined that teachers should be involved in curriculum development design process as teachers have first-hand knowledge regarding what is taking place in the classroom, the practicality of using the material within the allotted time and the suitability of the material to both the level of learners and the achievement of the course objective. Teachers store a rich knowledge of curriculum content, classroom social process, academic tasks and students understanding and intentions (Carter, 1993). This makes teachers important mediators of the learning process. Other researchers observe that when developing curriculum materials, valuing teachers' opinions, and having teachers' cooperation will not only have the support by teachers but also take the teachers into partnership (Yi-Ting, Huey-Por, Wen-Yu, & Juy-yi, 2009). In this way, a cooperative relationship can be established to improve the

contents of the new textbooks, and the implementation of the new curriculum will be more successful.

Involving Teachers in Development of Curriculum Support materials

Teachers were requested to indicate how they could be involved in the selection and development of curriculum support materials. Table 4 presents the findings.

Table 4: Involving Teachers in Selection and Development of Curriculum Support Materials

Suggestion	Frequency	Percentage
Adaptation of professional documents and visuals such as CDs and book manuals prepared by teachers for use	49	18.01
Giving teachers financial support to prepare new and training to improve the existing materials.	64	23.53
Through workshops to discuss and exchange ideas on relevant materials by teachers.	57	20.96
Allow teachers to suggest materials that work best in the localities they work in	71	26.10
Use DEOs office to channel their views.	34	12.50
Give research papers on curriculum materials for consideration.	21	7.72

From the findings in Table 4, 26.10% of the teachers indicated that teachers should be allowed to suggest materials that work best in the localities they work in while 23.53% indicated that giving teachers support in terms of finances and training to prepare new and improve the existing materials could ensure teachers are involved in the development of curriculum support materials. A small proportion of teachers (7.72%) suggested that teachers could submit research papers on materials they thought were of importance for consideration by curriculum specialists. This would create ownership of the curriculum support materials used in secondary schools. Gatawa (1990) proposed two strategies for teacher involvement in the selection and development of curriculum support materials: workshop approach and contracting individual teachers. Gatawa (1990) further argues that groups of teachers could be assembled for a given period to develop materials on aspects of the curriculum or individual teachers could be contracted to develop materials on

specific aspects of the curriculum. In this way, materials would be produced directly by the teachers themselves.

CONCLUSION

The study revealed that there was a statistically significant relationship between teachers' participation in the selection and development of curriculum support materials and implementation of the curriculum in secondary schools in Kenya. The findings of the study indicated that teachers participated in improvisation of locally available resources in schools to a moderate extent. However, teachers indicated that they did not participate in writing the syllabus, in proposing general policy for textbooks, and in the development of radio programs.

To enable teachers to carry out their curriculum implementation activities effectively, teachers should be given opportunities to take part in curriculum construction so as to familiarise themselves with curriculum

development and other curriculum-related issues. The implication here is that the curriculum development process must involve a change of decision-making to the periphery from the centre, which will cause a change in teachers' and administrators' roles, involving them in greater decision-making regarding curriculum construction. A bottom-up approach would enable the creation of school-based committees, Sub-county, County and then national committees which would provide teachers with opportunities to air their opinions about curriculum issues. The result would be a greater understanding of and participation in curriculum elements, thereby creating a sense of curriculum ownership by teachers which may lead to effective implementation. This would probably enhance the quality of education in Kenya.

RECOMMENDATIONS

The study's recommendation is that teachers should be engaged in the planning and development of the

curriculum in all stages. The policymakers need to appreciate the teachers' talents and experience more regarding the process of curriculum development. Moreover, the KICD needs to widen the range of its recruitments and put in place better strategies to engage teachers in the process of curriculum development. This can be achieved by reestablishing the curriculum development unit at KICD as part of the school system, consequently providing more teachers to serve in it for a period of time. The MOE should also look for ways of retraining teachers to equip them with skills needed for the production of curriculum support materials. Research should also be carried out on other factors impeding the effective implementation of both primary and secondary school curriculum like the lack of infrastructure, absenteeism, low morale amongst students and teachers with the aim of correcting the situation.

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