IMPLEMENTATION OF STANDARD-BASED CURRICULUM IN GHANA: THE CONCERNS OF BASIC SCHOOL TEACHERS

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Abstract
This study has investigated the concerns of public basic school teachers about the implementation of the standard-based curriculum in Ghana. A cross-sectional survey design was employed to conduct the study in ten schools in the ten Sub-Metropolitan Assemblies in Kumasi. The schools were selected by using a stratified sampling technique. All the regular teachers in the selected schools totalling 281 were selected to answer the questionnaire. The Stages of Concerns Questionnaire (SoCQ) as developed by Hall et al (1979) was adopted to assess the concerns level of the basic school teachers regarding the implementation of the standard-based curriculum. There were 35 items which were designed in seven-point Likert scale as per the seven stages of concern viz., Awareness, informational, personal, management, consequent, collaboration and refocusing as in the Concern Based Adoption Model (CBAM). The collected data were processed by SPSS version16.0 and analysed by using mean and standard deviation and arrived at the findings as per the CBAM. Based on the findings, a recommendation was made for modification for further improvement.

Keywords: standard-based curriculum, implementation, concern, basic education, teachers

Introduction

The education system in Ghana is highly centralized. Educational policies and decisions are subject to approval by the Ministry of Education (MoE) which is a political authority on top of educational management in the country. The MoE is responsible for formulating policies and framing of the pre-tertiary curriculum. These policies are subsequently implemented by autonomous agencies in the Ministry. The agencies are the Ghana Education Service (GES), National Council for Curriculum and Assessment (NaCCA), and the National Teaching Council. Pre-tertiary education in Ghana encompasses basic education and second cycle schools. Whereas the basic education comprises of kindergarten, primary school and Junior High School (JHS); the second cycle schools include senior high school (SHS), technical and vocational schools. This system of education was inherited from the British colonial system.

Successive governments in the post-colonial era in Ghana have prioritized education as key to national development. It has undergone several reforms in a quest for the appropriate model to mitigate the needs of the society. Some of the reforms and committees include; Accelerated Development Plan for Education in 1951, educational Act of 1961, Kwapong Committee of 1967,

Dzobo education committee of 1972, Free Compulsory Universal Basic Education (FCUBE) of 1995 and educational reform of 2007. These reforms have brought changes in the basic education curriculum, and the structure of the school system in the country (World Bank, 2004; CREATE, 2008).

In 2019, the Ghana Education Service (GES) introduced a standard-based curriculum at the primary schools thus from kindergarten to primary six (GES, 2019). This curriculum seeks to rebuild character, values, confidence and engages pupils in critical thinking skills to enable them to demonstrate the previous knowledge and skills in the subsequent stages as they ascend the educational ladder. The standard-based curriculum has come to replace the objective-based curriculum. It has restructured basic education to include SHS (GES, 2019). Thus, children would start basic school from kindergarten to SHS. Unlike the previous curriculum, final year students at the JHS would not write the Basic Education Certificate Examination (BECE). Rather, their learning outcomes would be determined by the National Standard Assessment Test (NSAT) which comprises group activities at each phase of the curriculum.

It is argued that curriculum reforms in many developing countries have achieved fewer outcomes during implementation (Minjeong and Youl-Kwan, 2013). Perhaps the outcomes have not truly reflected the needs of society. This suggests that the role of the teacher in the curriculum implementation cannot be underrated. The teacher translates the curriculum document to the understanding of the learners and all other groups who have an interest in the curriculum (Fullan, 2007; Lee 2000; McLaughlin, 1987). It is worth noting that teachers' affirmative to change may not be what the curriculum developers anticipated. This phenomenon is likely to arise in the classroom as responding to change is an interactive act, personal and continuous (Minjeong and Youl-Kwan, 2013; little, 1993).

In Ghana, just as other countries, a new curriculum would outline some core standards which will ultimately cause a change in the education system. The question of how the teachers receive the change is debatable. It is argued that teachers' characteristics such as attitude, knowledge and pedagogical skills are greater facilitators of curriculum implementation (Saloviita, 2020; Ramnarain and Hlatswayo; 2018; Ndirangu 2017). While a positive attitude leads to effective teaching and learning in schools, negative attitude retards the progress of students' academic achievement. This suggests that teachers concern about the implementation of standard-based curriculum is essential. Such concern of teachers can be effectively examined by using Change Model like Concern Based Adoption Model (CBAM) during implementation (Hord et al, 1980; Sarfo et al, 2017). The CBAM would provide an appropriate approach to understand and address teachers concern for a successful implementation of the curriculum in Ghana.

THEORETICAL FRAMEWORK

Concerns-Based Adoption Model (CBAM)

To achieve the objectives of this study, CBAM was adopted. This is an empirical model developed at the University of Texas in Austin to identify the experience of an individual during the implementation of innovation (Hord et al, 1980). The CBAM model operates on the following assumptions that; i) change is a process but not an event, and it takes time to effect change ii) change of the individual is crucial for changing institutions iii) the process of change is driven by personal experience and individual perception influence outcomes iv) change entails feelings and emotional development about innovation. These assumptions retain a critical stance in providing detailed information about what innovation may go through during the implementation process.

To assess the needs of the teachers amidst change, two concepts as asserted by Hord Shirley et al (1980), are critical. These concepts are; i) the teachers' stage of concern about the innovation. The concern stages include; awareness, informational, personal, management, consequence, collaboration, and refocusing; ii) the level of using the innovation in their classrooms. The levels include; renewal, integration, refinement, routine, mechanical use, preparation, orientation and non-use. These concepts provide basic information about the teachers on how they can facilitate change when becoming familiar with innovation. However, many authors prefer to use the teachers' stages of concern (see figure 1) in planning and assessing professional needs of teachers due to its high success rate (Sarfo et al, 2017; Yungwei et al, 2013; Hord, et al., 1987; Roger, 1996). Therefore in this study, the stage of concern was followed.

Hall and Rutherford (1976), posit that "stages of concern explain the kinds of concerns which the individual may experience across time, related to the innovation". This suggests that the learning process and level of development go through seven stages as shown in figure 1. Understanding the stages of concern, it may be thought that the first three stages at the bottom depict self-awareness and verifiable by using pronouns like 'I' and 'me' in a statement to express individual's frustration, disappointment and dissatisfaction in a given reform. The two middle stages of the model measure the ability of an individual in the mastery of skills to a doable extent. Roger (1996) asserts that a statement such as "prioritizing my use of time and the management of paperwork is killing me!" could be used to recognize a person who is struggling with tasks probably at the management level. The upper stage of the model measures the outcomes of the reform. Here, teachers refer to students by using statements such as "the students' are improving in their learning skills since I started applying this strategy in the classroom".

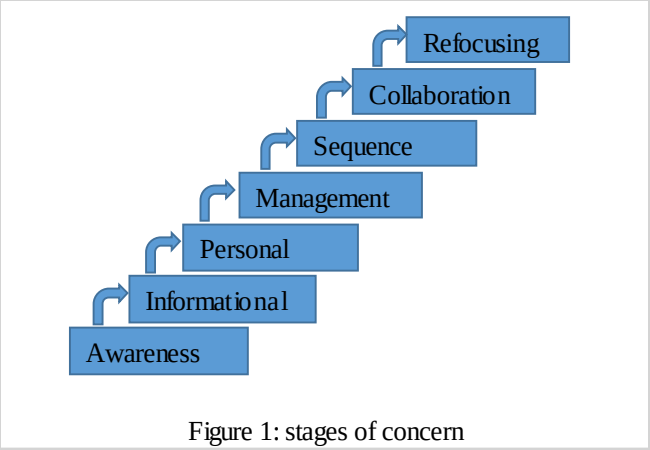

Figure 1: stages of concern

Implementation of Change

Change in an educational establishment is a complex phenomenon (Fullan, 2007). Its success lies in the attitude and perception and experience of the change agents particularly the teacher. Sarfo et al (2017) assumed that the teaching experience may have a positive effect on the implementation of the curriculum. The results of their study proved that teachers experience did not influence the implementation of ICT curriculum. Also, Hasan and Bichelmeyer (2016) investigated the effects of teacher professional characteristics on student achievement in Turkey and concluded that teaching experience of schools teachers yielded no significant result. Interestingly, Ndirangu (2017) attributed the successful implementation of a science education curriculum to the positive attitude of teachers and headteachers who had the requisite knowledge and skills to teach. Therefore, it is argued that the main task of the effective implementation of change is to equip the teacher with the required knowledge and skills (Klein and Knight, 2005). However, due to poor planning, many workers resist changing making it difficult for policymakers to implement educational reforms successfully (Hall and Hord, 1987). It is argued that educational change in most of the cases takes approximately five years to be completely implemented (Roger, 1996). This seems to take a long time as policymakers seldom recognize teachers' efforts regarding implementation of change (Mumtaz, 2000). This would consequently lead to time-consuming, waste of resources and futility

particularly at the initial stage of the implementation (Klein and Knight, 2005). In consideration of teachers' effectiveness in facilitating change, their attitude is mostly dominated by resistance. Studies have acknowledged the need to identify what kind of resistance that teachers entail and how they could be dealt with (Agyei, 2014; Roger, 1996).

Teachers' Attitude

In this study, an attitude refers to the teachers' concern and perception towards the implementation of standard-based curriculum. The findings of different studies conducted locally and internationally were reviewed in this study on teachers' attitudes. Thibaut et al (2019) found that teachers with more experience exhibit negative attitudes towards curriculum reform than their counterparts with less work experience. Perhaps this finding was revealed because the study was focused on teachers' attitude in Science, Technology, Engineering, and Mathematics (STEM) where specialization is required. Also, a similar finding was made by Porubsky et al, (2015) that majority of basic school teachers who had served for many years in the teaching profession in Slovakia showed a negative attitude towards a new curriculum. This was revealed because they felt the old curriculum that was operating in 1989 was appropriate than the new one. Khalid et al (2019) further found that school teachers' attitude towards education reform in Israel was inappropriate. This phenomenon was attributed to the limited timeframe and inadequate resource in the implementation process.

A study conducted by Liauh (2011) revealed that the attitude of teachers can be influenced by their gender and level of experience in education. Sweeley (2004) asserted that elementary teachers in Pennsylvania had a positive attitude towards the Danielson model then secondary school teachers. The reason was attributed to differences in grade level doubled with content specifics. Fox-Norwitz (2013) further found that some dimensions of educational leadership viz., the trust level, support system and structure are essential for developing teachers' attitude. Many studies have investigated teachers' attitude towards reforms and have concluded that educational reforms which aims were compatible with teachers' attitude were capable of achieving maximum outcomes (Brown, 1980; Haney et al, 1996; Levitt, 2001). Also, Sarfo el at (2017) examined 'concerns of teachers about the implementation of information and communication technology curriculum in basic education in Ghana' and concluded that female basic school teachers have more concerns about the implementation of ICT curriculum than male teachers. Also, Alshammari (2000) found that female teachers in Kuwait showed higher concern at collaboration and information stages and low concern at the awareness stage than their male counterpart.

It can be seen from the foregoing review of related literature that many countries have undergone different curriculum reforms. Many of the studies focused on teachers' attitude and perception towards the implementation of reform in an educational establishment. However, the researchers did not come across a study that investigated teachers' attitude toward standard-based curriculum particularly in Ghana. This suggests that the present study is essential. Perhaps the findings would help the policymakers and the curriculum developers to modify a successful implementation in schools in achieving quality education for all.

Research Questions

1. What concerns do basic school teachers have towards the implementation of standards-based curriculum?
2. To what extent the gender difference of basic school teachers influences their concerns towards the implementation of standards-based curriculum?

3. To what extent will qualification of basic school influence their concerns towards the implementation of standard-based curriculum?
4. To what extent does work experience of basic school teachers influence their concerns towards the implementation of standard-based curriculum?

METHODOLOGY

This section presents the plan and procedure adopted in conducting the study. It entails the population, the sample and sampling procedure, tools for data collection and how the collected data was analysed. The details are presented as follows.

Sample and Sampling Technique

This study is a cross-sectional survey conducted in the Kumasi Metropolitan Assembly (KMA) in Ghana. The KMA is further divided into ten sub metropolitans (see table-1). These sub-metropolitans were considered as zones from which the basic school teachers were selected for the study. In each of the ten zones, stratified sampling technique was used to select one basic school. Each of the selected schools comprised primary school and Junior High School (JHS) whereby all the regular teachers and the headteachers were subsequently selected by using a purposive sampling technique. All the teachers were selected to ensure fairness in the department, work experience, gender and qualification. The details of the sample size are presented in Table 1 below.

Table-1: Number of Basic School Teachers selected from Kumasi Sub-Metropolitan Assembly

Sr. No.	Kumasi Sub-Metro Assembly	School selected	Number of head teacher selected	Number of teachers selected	Total
1	Bantama	Bantama SDA basic school	2	31	33
2	Suame	Suame Salvation Army basic school	2	27	29
3	Oforikrom	Umukura basic school, Oforikrom	2	23	25
4	Manhyia	Manhyia R/C basic school	2	21	23
5	Asawase	Nurudeen Islamic basic school,Asawase	2	26	28
6	Asokwa	Asokwa Presbyterian basic school	2	25	27
7	Nhyiaeso	Nhyiaeso state experimental basic 1	2	27	29
8	Subin	Subin M/A basic school	2	23	25
9	Kwadaso	Ohwimasi Anglican basic school, Kwadaso	2	26	28
10	Tafo	Tafo M/A basic school	2	32	34
Total			**20**	**261**	**281**

Tools for Data Collection

To collect the needed data, Stages of Concerns Questionnaire (SoCQ) as developed by Hall et al (1979) was adopted to assess the concern level of the basic school teachers regarding the implementation of the standard-based curriculum. In the SoCQ, Hall et al (1979) classified the concerns of teachers under seven categories viz., Awareness, informational, personal, management, consequent, collaboration and refocusing. There were five items in each of these categories which were designed in a seven-point Likert scale as per the seven stages of concern as stated above.

Validation of Tool for Data Collection

Though the SoCQ has been validated and used extensively by many researchers (Sarfo et al, 2017; Yungwei et al, 2013; Hord, et al., 1987), it was further given to five experts in the field of education for validation in terms of language clarity, content sequence and accuracy. The questionnaire was categorized into two parts; part 1 entails the biodata viz., gender, qualification and teaching experience while part 2 consists of a total of 35 items addressing the teachers' stage of concern regarding the implementation of standards-based curriculum.

Data Collection Procedure

The researcher administered the prepared questionnaire personally to the teachers in the selected schools after seeking permission from the respective headteachers. Their confidentiality was assured as the researcher intended to use the collected data for only research purpose. The presence of the researcher motivated most of the teachers to complete the questionnaire and returned on the same day. All the 281 questionnaires administered were successfully retrieved giving 100 per cent response rate.

Data analysis

The SPSS version 16.0 was used to process the collected data and analysed by using descriptive statistics viz., the mean and standard deviation in answering all the research questions in this study.

RESULT AND DISCUSSION

Concerns of Basic School Teachers towards the Implementation of Standards-Based Curriculum

The concerns of the basic school teachers about the implementation of standard-based curriculum in the Ghanaian basic schools are presented in table 2. It can be seen from Table 2 that the highest concern stage of the teachers is informational (M=3.77). This is a stage 1 of the stages of concern which suggests that a majority of the teachers who are the users of the standard-based curriculum, would like to have more information about what it entails, what it will do and what it will involve. This phenomenon is aligned with the assertion made by Hord Shirley et al (1980) that a high score of stage 1 indicates the intense interest of respondents in knowing the 'nitty-gritty' of a given innovation. This suggests that the basic school teachers were not having adequate information regarding what the standard-based curriculum entails. The second higher stage of concern of the teachers is management (M=3.56). This is stage 3 of the stages of concern where the teachers showed their intense concern about management about resources and time. This implies that a lot of time and resources are essential for a successful implementation of the standard-based curriculum. A similar finding was made by Khalid et al (2019) and (Klein and Knight, 2005) and can be referred in this situation. The reason for this similarity may be the quest for efficiency in education. The

third higher score of concern of the teacher is awareness (M=3.19). Awareness is stage 0 of the stages of concern indicating that the teachers were having little concern of getting involved in the standard-based curriculum. For a successful implementation of this curriculum, it critical to identify what is making teachers unconcerned and preventing them from involving fully in its activities. Collaboration (M=1.77) is a stage 5 of the stages of concern with the lowest score which indicates that the individual teacher was not focusing on cooperating with colleague teachers to acquire knowledge and skills concerning the curriculum. Roger (1996) concluded that collaboration stage is essential for helping an individual user of innovation to express concern by relating his or her work with others' to achieve a goal. This means that the basic school teachers were less motivated to develop themselves during the implementation process of the curriculum.

Table-2: Concerns of Basic School Teachers towards the Implementation of Standards-Based Curriculum

Stages of concern	N	Mean	Std. Deviation	Std. Error Mean
Awareness	281	3.19	2.078	.124
Informational	281	3.77	1.869	.111
Personal	281	3.15	1.916	.114
Management	281	3.56	2.026	.121
Consequence	281	2.79	1.897	.113
Collaboration	281	1.77	1.416	.084
Refocusing	281	2.57	1.749	.104

Stages of Concern Relating to Gender

To study how the gender of the basic school teachers influenced their concern about the implementation of the standard-based curriculum, the collected data were categorized into gender-wise as presented in table 3. It was revealed that the mean scores of female basic school teachers in information (3.78) stage was higher than the male's mean score. This indicates that female teachers required more information about what the standard-based curriculum entails. These findings are aligned with the findings of Alshammari (2000) that female basic school teachers in Kuwait have high concern at the information stage. This similarity implies that both local and international female basic school teachers deserve to have fundamental information about what innovation entails, what it seeks to achieve and what it will involve. Also, female (M=3.24) and male (M=3.11) basic school teachers expressed high concern at the awareness stage. Though the mean score of female (3.24) was higher, both had little concern about the implementation of the standard-based curriculum. They were of the view that other tasks were more important. The results further showed that the concern of male basic school teachers was higher at management (M=3.70) stage and many other stages like a consequence, collaboration and refocusing than their female counterpart regarding the implementation of the standard-based curriculum. The male teachers expressed more concern about time and logistics needed to enhance curriculum implementation, the effects of the curriculum on the students, and how to work with other teachers to develop some ideas that would work even better in implementing standard-based curriculum a success in schools. This finding contradicts the finding made my Sarfo et al (2017) that female basic school teachers in Ghana have more concern about the implementation of ICT curriculum than male teachers. Perhaps, this was because their study was conducted about the ICT curriculum.

Table-3: Basic School Teachers' Stages of Concern Relating to Gender

Stages of concern	Gender	N	Mean	Std. Deviation	Std. Error Mean
Awareness	Male	115	3.11	2.184	.204
	Female	166	3.24	2.007	.156
Informational	Male	115	3.75	1.973	.184
	Female	166	3.78	1.799	.140
Personal	Male	115	3.13	1.940	.181
	Female	166	3.17	1.906	.148
Management	Male	115	3.70	2.027	.189
	Female	166	3.46	2.026	.157
Consequence	Male	115	2.93	1.900	.177
	Female	166	2.69	1.894	.147
Collaboration	Male	115	1.85	1.416	.132
	Female	166	1.72	1.418	.110
Refocusing	Male	115	2.83	1.975	.184
	Female	166	2.39	1.556	.121

Stages of Concern Relating to Qualification

The certificate that qualified most of the teachers to teach at the basic school includes Master of Education (M.Ed), Bachelor of Education (B.Ed) and Diploma in Basic Education (DBE). To study how these certificates can influence teachers concern on the implementation of standard-based curriculum, data were categorized into certificate wise as presented in table 4. It was revealed that teachers with DBE expressed more concern at the management (M=3.52) stage, informational (M=3.48), stage and awareness (M=3.39) stage. Also, teachers who were teaching with B.Ed certificates expressed more concern at the information (M=3.81) stage, and management (M=3.59) stage while a teacher with M.Ed certificate expressed intense concern at informational (M =3.76) stage, personal (3.47) stage, and management (M=39) stage. The high score in management indicates intense concern about time and resources, a high score in informational stage indicate the quest for more information while the high score in awareness stage indicate that other activities were of high priority to the basic school teachers. However, the low mean score was recorded at consequence stage, collaboration stage and refocusing stage. The lower the score, the less intense concern at that stage (Roger, 1996). Generally, these results suggest that the level of qualification of the basic school teachers had little influence over the concern of basic school teachers about the implementation of the standard-based curriculum.

Table-4: Basic School Teachers' Stages of Concern Relating to Qualification

Qualification		Awareness	Informational	Personal	Management	Consequence	Collaboration	Refocusing
DBE	Mean	3.39	3.48	3.06	3.52	3.00	1.39	1.74
	N	31	31	31	31	31	31	31
	SD	2.092	1.730	1.806	2.189	2.160	1.407	1.264
B.Ed	Mean	3.16	3.81	3.11	3.59	2.69	1.83	2.67
	N	212	212	212	212	212	212	212
	SD	2.084	1.861	1.901	1.975	1.818	1.402	1.780
M.Ed	Mean	3.18	3.76	3.47	3.39	3.13	1.79	2.66
	N	38	38	38	38	38	38	38
	SD	2.078	2.046	2.102	2.212	2.095	1.492	1.775

Stages of Concern Relating to Work Experience

To study the concern of basic school teachers relating to their work experience in terms of years, collected data were further categorized into years of work experience as presented in table 5. It was revealed that the mean score of teachers who had taught from 15 to 20 years showed high concern at information (M=4.00) stage and management (M=3.41) stage. Also, teachers who taught from 20 years and above had the highest mean score at awareness (M=4.46) stage, information (M=4.19) stage, and management (M=4.15) stage. The high mean score at the awareness stage indicates the teachers' lack of concern in the implementation of standard-based curriculum. The mean scores at informational stage and management stage indicated that the basic school teachers who had more teaching experience had an intense concern about knowing more about standard-based curriculum and management in terms of time and available resources to achieve its objectives. The results further revealed that all the categories of teaching experience of the basic school teachers expressed similar stage of concern in the implementation of the standard-based curriculum. This suggests that the teaching experience of the teachers did not influence the concerning stage of the basic school teachers regarding the implementation of the curriculum. This finding is similar to the finding of Hasan and Bichelmeyer (2016) finding that teaching experience of schools teachers in Turkey yielded no significant result in the implementation of the curriculum.

Table-5: Basic School Teachers' Stages of Concern Relating to Work Experience

Work Experience In years		Awareness	Informational	Personal	Management	Consequence	Collaboration	Refocusing
0 To 5	N	31	31	31	31	31	31	31
	Mean	2.97	3.81	2.48	3.26	2.68	1.52	1.81
	SD.	2.137	1.990	1.749	2.190	1.939	1.387	1.250
	Std. Error	.384	.357	.314	.393	.348	.249	.224
5 To 10	N	89	89	89	89	89	89	89
	Mean	3.01	3.76	2.85	3.44	2.70	1.66	2.35
	SD	2.092	1.919	1.787	1.889	1.830	1.314	1.523
	Std. Error	.222	.203	.189	.200	.194	.139	.161
10 To 15	N	90	90	90	90	90	90	90
	Mean	3.04	3.50	3.22	3.58	2.57	1.88	2.58
	SD.	2.098	1.730	1.953	2.044	1.830	1.421	1.836
	Std. Error	.221	.182	.206	.215	.193	.150	.194
15 To 20	N	44	44	44	44	44	44	44
	Mean	3.18	4.00	3.41	4.23	3.07	1.68	2.86
	SD	2.015	2.080	1.933	2.010	1.993	1.410	1.984
	Std. Error	.304	.314	.291	.303	.300	.213	.299
20 & above	N	26	26	26	26	26	26	26
	Mean	4.46	4.19	4.15	3.23	3.38	2.19	3.69
	SD	1.606	1.600	1.891	2.122	2.021	1.744	1.761
	Std. Error	.315	.314	.371	.416	.396	.342	.345

Conclusion

This study has investigated the concern of public basic schools teachers about the implementation of standard-based curriculum in Ghana. The results indicate that a majority of the teachers expressed high concern at the awareness stage, information stage, and management stage. This implies that most of the teachers are unconcerned about the implementation of the curriculum but at the same time need to know more about it. These teachers also believe that time and resources are largely required for a successful implementation of the curriculum. The male teachers expressed intense concern at the management stage and at many other stages like a consequence, collaboration and refocusing than their female counterparts. The male teachers expressed more concern about time, logistics to enhance team work with other teachers for a successful implementation of the standard-based curriculum in schools. The results further revealed that the level of qualification of

the basic school teachers had little influence over the concern of basic school teachers whereas teaching experience did not influence the concerning stage of the basic school teachers regarding the implementation of the standard-based curriculum.

Based on the findings, it is recommended that the CBAM is essential for assessing the concern of basic school teachers regarding standard-based curriculum implementation. It provides appropriate concern of teachers that would help the policymakers to marshal adequate resources towards the preparation of teachers in ensuring effective curriculum implementation. It is also recommended that teachers should be consulted properly and be involved in the curriculum design process. The curriculum can be successfully implemented when teachers are fully involved and get familiarized with the contents that would be transacted in the classroom. Finally, attention needs to be paid to professional development in helping teachers to adjust feverishly in reform. They need to receive rigorous training continuously on teaching methodology in all the affected subjects to be able to adjust effectively in the classroom.

References

Alshammari, B. S. (2000). *The developmental stages of concern of teachers toward the implementation of the information technology curriculum in Kuwait*. Unpublished doctoral dissertation, University of North Texas.

Agyei, Douglas D. (2014). Analysis of Technology Integration in Teacher Education in Ghana. *Journal of Global Initiatives: Policy, Pedagogy*, Perspective 8 (1 & 2), 69-86.

Brown, M. A. (1980). Attitudes and social categories: complementary explanations of innovation adoption behavior. *Environment and Planning A*, *12*(2), 175–186.

Create (2008). Educational access in Ghana. Country policy brief. Available at http://www.create-rpc.org

Fox-Norwitz, S. K. (2013). Charter school teacher attitudes toward the implementation of the Rhode Island model of the educator evaluation system. *Retrieved from ProQuest on 13th May 2020,* UMI Dissertations Publishing.

Fullan, M. (2007). *The new meaning of educational change* (4thed.). New York: Teachers College Press.

GES (2019, April 12). Primary schools get new curriculum, KG subjects reduces from 7 to 4. Graphic online. Retrieved from https://www.graphic.com.gh/news/general-news/ghana-news-primary...

Haney, J. J., Czerniak, C. M. & Lumpe, A. T. (1996). Teacher beliefs and intentions regarding the implementation of science education reform strands. *Journal of Research in Science Teaching*, *33*(9), 971–993.

Hasan Çakır and Barbara A. Bichelmeyer (2016) Effects of teacher professional characteristics on student achievement: an investigation in blended learning environment with standards-based curriculum. *Interactive Learning Environments*, 24 (1), 20-32, DOI:10.1080/10494820.2013.817437.

Hord, Shirley H., Loucks, Susan F.k (1980. *Concerns-Based Model for the Delivery of in-service*. Texas Univ., Austin. Research and Development Center for Teacher Education.

Jenni, S., Kirsi p., Janne T., P. (2019). Trajectories of Teachers' Perceived Curriculum Coherence in the Context of Finnish Core Curriculum Reform. *Curriculum and Teaching*, 34 (2), pp27-49.

Khalid Arar, Emanuel Tamir & Jamal Abu-Hussain (2019) Understanding reforms, school reactions to major changes: the case of Israel, *Journal of Educational Administration and History*, 51:4, 402-418, DOI: 10.1080/00220620.2019.1624511.

Klein, K. J. and Knight A. P. (2005). Innovation implementation: Overcoming the challenge. *Curr. Dir. Psychol. Sci*., 14(5), 243-246.

Lee, C. K. J. (2000). Teacher receptivity to curriculum change in the implementation stage: The case of environmental education in Hong Kong. *Journal of Curriculum Studies,* 32(1), 95–115. doi: 10.1080/002202700182871.

Levitt, K. (2001). An analysis of elementary teachers' beliefs regarding the teaching and learning of science. *Science Education*, *86*(1), 1–22.

Liauh, Y.E., (2011). A study of the perceptions of English faculty and students of exit English examinations at Taiwan's technological and vocational higher education institutions. *Retrieved from ProQuest on 13th May 2020*, UMI Dissertation Publishing.

Little, J.W. (1993). Teachers' professional development in a climate of educational reform. *Educational Evaluation and Policy Analysis,* 15(2), 129–151.

McLaughlin, M.W. (1987). Learning from experience: Lessons from policy implementation. *Educational Evaluation and Policy Analysis*, 9(2), 171–178.

Minjeong Park & Youl-Kwan Sung (2013) Teachers' perceptions of the recent curriculum reforms and their implementation: what can we learn from the case of Korean elementary teachers? *Asia Pacific Journal of Education*, 33:1, 15-33, DOI: 10.1080/02188791.2012.756391

Mumtaz, S. (2000). Factors affecting teachers' use of information and communications technology: A review of the literature. *Journal of Information Technology for Teacher Education, 9*(3), pp319–342.

Nabie, M.J., Raheem, K., Agbemaka, J.B., & Sabtiwu, R. (2016). Multiple solutions approach (MSA): Conceptions and practices of primary school teachers in Ghana. *International Journal of Research in Education and Science (IJRES), 2*(2), 333- 344.

Ndirangu, C. (2017). Teachers' attitude towards implementation of learner-centred methodology in science education in Kenya. *Education research review,* 12 (20) pp 996-1007.

Okyere, M. (2018) Curriculum and its implementation in the lens of Ted Aoki: Implications for Ghanaian mathematics education. *African Educational Research Journal,* 6(2), pp. 94-98, *DOI*: 10.30918/AERJ.62.18.026.

Porubsky, Trnka, Poliach Cachovanova (2015). Curricular Reform in Slovakia Regarding the Attitudes of Basic School Teachers. *Pedagogická orientace,* 25(6), 777–797.

Ramnarain, U., Hlatswayo M. (2018). Teacher beliefs and attitudes about inquiry-based learning in a rural school district in South Africa. *South African Journal of Education,* 38(1), 1-10.

Rodger, B. (1996). *The Concerns-Based Adoption Model (CBAM): A model for change in individuals.* Dubuque, Iowa: Kendall/Hunt Publishing Co. Ltd.

Saloviita, T. (2020). Attitudes of teachers towards inclusive education in Finland. *Scandinavian journal of educational research,* vol. 64, no. 2, 270–282

Sarfo, K. F., Amankwah F., Baafi-Frimpong F., Asomani J. (2017). Concerns of Teachers about the Implementation of Information and Communication Technology Curriculum in Basic Education in Ghana. *Contemporary educational technology,* 8(2), 103-118.

Sweeley, T. M. (2004). Teachers' attitudes towards charlotte danielson's four domains of teacher evaluation. *Retrieved from ProQuest on 13th May 2020*, UMI Dissertations Publishing.

Thibaut, L., Knipprath H., Dehaene W., Depaepe F., (2019) Teachers' Attitudes Toward Teaching Integrated STEM: the Impact of Personal Background Characteristics and School Context. *International Journal of Science and Mathematics Education,* 17 (5), pp 987–1007.

Torto, G., A. (2017). The Implementation of the Basic School English Curriculum: The Case of the Cape Coast Metropolis in Ghana. *Journal of Education and Practice*, Vol.8, No.8, pp166-175.

Tunceri, M., Akmence A., E., Adams J., B., (2019). The Philosophy of Turkish and Ghanaian Curriculum Design Orientations of Teacher Candidates. *International Journal of Progressive Education,* 15 (3), pp 44-58.

World Bank (2004) Books, Buildings and Learning Outcomes: An impact evaluation of World Bank support to Basic Education in Ghana. Washington, DC: World Bank

World Bank (2006) Basic Education Sector Improvement Program, Staff Appraisal Report. Population and Human Resources Division, West Central Africa Department, Africa Region, Washington DC: World Bank

Yungwei, H., Shiou-ling W., Su-jen C., Yin-hung H., and Ren-yen T. (2013). The investigation of pre-service teachers' concerns about integrating web 2.0 technologies into instruction. IADIS International Conference on Cognition and Exploratory Learning in Digital Age.