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Teachers' Fidelity of Use of Selected Senior High School Subject Curricula

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Abstract

The study examined how faithfully senior high school teachers implemented selected senior high school subject curricula. Cross sectional survey design was used in the study. Using the level of use dimension of the Concerns-Based Adoption Model (CBAM), 111 senior high school teachers were randomly selected from the pool of accounting, business management, economics, geography and social studies teachers in the Central Region. Questionnaires were administered to the respondents and retrieved within 3 weeks. Data generated were analysed using frequencies and percentages. Results showed that senior high school teachers teaching accounting, business management, economics, geography and social studies in the Region failed to use the official curriculum in teaching. Accordingly, it is recommended that Ghana Education Service should politically engage teachers to willfully accept and use the curriculum instead of strengthening instructional supervision to ensure that teachers implement the official curriculum.

Key Words: Curriculum, fidelity, implementation, level of use, senior high school.

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Introduction

University education in Ghana has some positive appeal which attracts international clientele, compared to pre-tertiary education. Whereas there is almost absolute autonomy for tertiary institutions, senior high schools (SHSs) are heavily controlled by the national quarters of education. At the pretertiary level where SHS belong, curricula implementation is characterized by equating the ideal (centralized system) without any opportunity for manipulations and modifications of the content of the curricula in response to locale needs (Snyder, Bolin & Zumwalt, 1992). In Ghana, key curriculum decisions pertaining to the planning, content, and implementation of SHS curriculum is vested in a centralized body, National Curriculum and Assessment Council (NCAC) under the supervision of the Ghana Education Service (GES) and the Ministry of Education (MoE). This body has the mandate to develop a comprehensive curriculum document to guide teachers in teaching. There have been several curriculum modifications and changes to pretertiary education in Ghana. The most recent has been the erratic changes in the duration of the SHS programme. The initial move to make reforms in SHS education in 2007 was spear-headed by the Anamuah-Mensah committee, which was constituted by the Government. After the 2007 education reform that changed the number of years of SHS education from 3 years to 4 years, it was reversed in 2010 by the government.

It can be said that, even though most educationist identify the teacher as the most important variable in the implementation of the SHS curriculum, teachers' role in all these decisions are infinitesimal (Elbaz, 1991). This has raised a lot of concerns among teachers with respect to the implementation of the SHS curriculum.

It should be noted that, since Ghana practices the centralised school system, it adopts the fidelity of implementation in delivering curriculum. The argument for this position is summarised by Kwarteng (2013) that a minimum deviation might distort the true meaning of what is intended to be implemented. Some scholars in curriculum opine that no consensus exists on what exactly constitutes fidelity of implementation (Fullan & Pomfret, 1977; Scheire & Rezmovic, 1983). However, Kwarteng (2012) contends that it is the extent to which curriculum is delivered in accordance with its tested design. Similarly, Cobbold (1999) sees it as how "faithfully" teachers put the curriculum into practical use in accordance with the programme dictates. Thus, SHS teachers in Ghana are expected to implement the curriculum as planned with minimum degree of deviation. However, fidelity is not absolute but a matter of degree. It depends on enabling conditions to support its success rate (Kwarteng, 2013). The extent of teacher involvement in the production of the curriculum is key. Because the "curriculum knowledge is primarily created outside the classroom by experts who design and develop the curriculum" (Snyder et al., 1992, p. 404), its delivery might not be appreciable. The development of such "teacher-proof" curricula (Elbaz, 1991) for SHS teachers to implement might cause teachers to harbour some concerns in implementing the "wisdom" of some other persons who developed the curriculum. As intimated by Barnes (2005), though most teachers know what to do, they might not do it.

Several studies have been undertaken by researchers to assess the concerns of teachers and fidelity of implementation of school curriculum in Ghana. Cobbold and Ani-Boi (2011) investigated primary school teachers' concerns about implementing the 2007 educational reform in Ghana. Also, Owusu (2012) assessed the fidelity of implementation of the SHS French curriculum in Sekondi-Takoradi Metropolis. Kwarteng (2013) examined the degree of fidelity of the 2007 education reform implementation among basic school teachers in Ghana. Of all the studies undertaken, it is Kwarteng's (2009) study that provides a proof that accounting teachers in Central and Ashanti Regions of Ghana were non-users of the accounting curriculum as they mostly peaked at self and task concerns. However, it appears that little is known about the concerns of teachers teaching other subjects such as Economics, Geography, Management and Social Studies at the SHSs. Hence, the need to find out whether the passage of time has improved the concerns of accounting teachers to faithfully implement the curriculum and also assess the fidelity of Economics, Geography, Business Management and Social Studies teachers' use of the the various curricula they implement at the SHS.

THEORETICAL FRAMEWORK

The Level of Use (LoU) dimension of CBAM assesses the extent to which teachers are adopting intended curriculum changes. Here, questionnaire and interview guides help determine how well teachers are using the new curriculum. The LoU ranges from non-use to advanced use. There are eight (8) levels indicating the level of use of a curriculum. A Level 0 (nonuse) use of the curriculum means the teacher has little or no knowledge of that subject curriculum, has no involvement with it and not doing anything towards becoming involved. A Level I (orientation) use denotes a teacher seeking information about the curriculum. A Level II (preparation) denotes a teacher preparing to use the subject curriculum. Teachers operating at the LoU III (mechanical) focused most efforts on the short term, day – to – day use of the curriculum with little time for reflection. Their efforts are primarily directed toward mastering the tasks required of them in the use of the curriculum. LoU IVA (routine) the curriculum means teachers feel comfortable in using the curriculum but not putting in much effort to improve its consequence. LoU IVB (refinement) denotes teachers varying the use of the curriculum to increase expected benefits within the classrooms. Teachers operating at the LoU V (integration) of the curriculum combine their own efforts with related activities of other teachers and colleagues to achieve impact in the classroom. LoU VI (renewal) the curriculum denotes teachers re-evaluating the quality of use of the curriculum, seek major modifications of in addition with other activities all aimed at achieving increased impact on the students and exploring new ideas for the teacher. When combined with the Innovation Configuration and first-hand observations, this information can help teachers effectively implement a new programme.

Schiller (2002) posits that teachers operate at different levels of the implementation process. Individual characteristics of a teacher (Hopkins, 2011), the nature of the curriculum (Newhouse, 2015) and other possible factors responsible for the implementation process, determine the LoU of the curriculum. Dirksen (2002) reiterates that most teachers require 2-36 years of exposure through use of an innovation to become good users of that innovation, hence progressing beyond the mechanical use (LoU III). In view of this, Tunks and Weller (2009) investigated the curricular change process among some grade four teachers in a year-long Teacher Quality Grant innovation programme. The study focused on how teachers' LoU of the innovation changed during the course of the project. The study indicated that with continued support, most of the participating teachers achieved routine levels of use, which such teachers were able to sustain beyond the implementation of the programme.

Some evidence in Ghana have been provided by Kwarteng (2009) and Ankomah, and Kwarteng (2010), who investigated the concerns of accounting teachers in implementing the SHS accounting curriculum following the 2007 Education Reform. Each of these studies found that accounting teachers were nonusers of the accounting curriculum. Similarly, Wang (2013) examined the LoU of the new English language curriculum of teachers in a secondary school in Guangdong province of China. The study found that the teachers were implementing the new curriculum largely at two levels - mechanical use and routine use.

The study conducted by Ndirangu and Nyagah (2013) revealed that the majority (75%) of the teachers were partial (Mechanical and Routine) implementers whilst only 5% fully implemented (Refinement, Integration and Renewal) the innovation. Studies on first-time users of the curriculum indicated that most first time users are likely to be operating at the LoU III Mechanical Use (Hall, Dirksen & George, 2013).

Stiegelbauer (2014) further explained that teachers with higher LoU had extensive knowledge and expertise. With the passage of time, teachers will master the content of the curriculum to be implemented and be burdened with the responsibility of the students' successes. Thus, a teacher who has not acquired some added activity with the passage of time and learning, has the tendency of operating at a lower level of use of the curriculum. In a related study, Nawastheen, Puteh and Meerah (2014) measured the levels of teachers' participation in implementing the 5E instructional model in Sri Lanka. The study revealed that many teachers were either non-users or were at the initial stage of use. In Kenya, a study was conducted by Ndirangu, Nyangah and Kimani (2017) to investigate the level of implementation of classroom practices in Science subjects. Teachers' level of implementation based

on the teachers' self-assessment were categorized into three groups, ranging from full, partial, and not at all implementation. The study established that the majority of the teachers (75%) were partial implementers (Mechanical and Routine) with a few (5%) being full implementers (Refinement, Integration and Renewal) while 20% of the teachers were found not to be implementing at all (Non-use, Orientation and Preparation). This means that teachers were either discovering means of implementing the curriculum or have discovered a routinized way of handling matters.

METHODOLOGY

Study design

The study was a cross sectional survey design that aimed at unearthing the extent of use of selected subject curricula by SHS teachers. A number of SHS subject teachers provided evidence of their use the SHS curriculum to provide the opportunity for the researchers to gain valuable insight into the extent to which they had implemented the official curriculum. However, since it concentrated only in Central Region, the application of the results of the survey to the entire country is curtailed.

Population, sample and sampling procedure

The target population for the study was all SHS teachers teaching Accounting, Economics, Geography, Social Studies and Business Management in the Central Region of Ghana. Given our budget, we deemed it more convenient to concentrate on teachers in this catchment area. Also, the above listed participants were selected because it is the mandate of the Department of Business and Social Sciences Education to train teachers in these subject areas. The focus of the study was teachers teaching the listed subjects, irrespective of the teaching subjects they had been certified to teach. The accessible population was teachers who were at post at the time of the study.

To ensure that all the subject area teachers were captured, from the participating schools, only the schools that had teachers in all the specified subject areas were involved. Further, the schools were classified on the basis of the recognized categories depicting the level of resources each school had (as indicated by the Ghana Education Service register of programmes and courses for public and private SHSs, technical and vocational institutes, 2015), namely: categories A (6 schools), B (13 schools) and C (35 schools). Since the sampling frame could not easily be determined, 50% of schools in each category were randomly selected.

Instrumentation

This study's design involved administering the Levels of Use (LoU) questionnaire. In addition, a demographic instrument was designed to collect data to aid the testing of the hypotheses. This was made up of a set of items relating to demographic information of the respondents. The key demographic information of interest to the researchers were teaching experience, number of subjects taught as well as academic qualification of teachers. The use of these demographic characteristics was not only to assist in describing the sample but also to help in the testing the hypothesis formulated for the study. The second part of the instrument was used to elicit responses on the Levels of Use of the curriculum. This was an adaptation of the conventional LoU interview guide and the checklist designed for the CBAM. This facilitated data collection on teachers' use of the curriculum. The goal of the Levels of Use (LoU) instrument was to gather enough information from an individual's use of an innovation to assign a level of use. In its completion, the LoU portrays individual variations in the use of an innovation. To ensure face validity of the measurement tool, it was forwarded to a professor in the Department of Arts Education who is independent of the study

for a professional opinion. The questionnaire was then pilot-tested where it was given to 30 SHS teachers in the Sekondi Takoradi Metropolis in the Western Region of Ghana to complete. Cronbach alpha was used to determine the degree of reliability. The reliability test yielded an alpha of 0.85. Since reliability coefficient is more than 0.7 the instrument was valid to elicit the required data (Fraenkel & Wallen, 2000).

Data collection, ethical considerations and data analysis

A request for permission to engage SHS teachers in the data collection process was sent to the headquarters of the Ghana Education Service (GES) in the Central Region of Ghana. With the permission letter obtained from GES, the researchers visited the district offices of GES and Heads of SHSs whose teachers were selected to participate in the study. The visit was to inform the school authorities about the permission granted by the GES for the researchers to engage the teachers in data collection.

The questionnaire was administered by the researchers to the participants. This was to enable the researchers to assist respondents to understand exactly what the items meant and also to clarify possible issues respondents found difficult to comprehend. This was done to obtain the right responses. The participants were given a week to complete the questionnaire. Respondents whose questionnaires were not ready at that time were given extra time to fill them. The researchers employed phone calls as follow up. Five research assistants were recruited and given the necessary training to assist with the administration of the instruments.

A consent form was attached to the questionnaire for participants to study and complete before participating in the study. The respondents were informed about the purpose of the investigation and they had the freedom to withdraw from the study at any time they so wished because participation was on voluntary basis. No pressure, intimidation or fear was put on any respondent to elicit compliance. For the sake of confidentiality and anonymity, no respondent was requested to write their names, phone numbers or anything that might link the completed form to them or their schools. The resulting data generated were analysed into frequencies and percentages and organized in tables and line graph. Also, the hypothesis was tested using Chi-Square.

RESULTS

Demographics

Some background data (subject majored at the university, subject taught, highest educational and teaching qualifications, number of years in teaching the subject) of the respondents were gathered to facilitate drawing inferences from the responses they provided to address the research questions. Table 1 presents the demographics of the respondents surveyed.

Table 1

Demographics of teacher respondents

| Variable | Subscale | Frequency | Percentage |
|-----------------------|------------|-----------|------------|
| Major Subject Studied | Accounting | 30 | 26.5 |

| | | | |
|-------------------------------------|-----------------------------------|----|------|
| at the University | Economics | 26 | 23.0 |
| | Geography | 15 | 13.3 |
| | Management | 22 | 19.5 |
| | Social Studies | 16 | 14.2 |
| | Economics | 2 | 1.8 |
| | Sociology | 2 | 1.8 |
| Subject Taught at SHS | Accounting only | 24 | 21.2 |
| | Economics only | 24 | 21.2 |
| | Geography only | 11 | 9.7 |
| | Business management only | 15 | 13.3 |
| | Social Studies only | 26 | 23.0 |
| | Economics & Social studies | 4 | 3.5 |
| | Economics & Management | 3 | 2.7 |
| | Accounting & Business management | 1 | .9 |
| | Economics & Geography | 3 | 2.7 |
| | Accounting, Economic & Management | 1 | .9 |
| Highest Educational Qualification | Bachelor's Degree | 78 | 69.6 |
| | Master's Degree | 34 | 30.4 |
| Highest Teaching Qualification | None | 1 | .9 |
| | Cert A | 6 | 5.4 |
| | Diploma in Education | 8 | 7.2 |
| | PGCE/PGDE | 10 | 9.0 |
| | Bachelor of Education | 65 | 58.6 |
| | MED/M.Phil. | 21 | 18.9 |
| Number of Years of Teaching Subject | 1-5years | 39 | 35.1 |
| | 6-15years | 57 | 51.4 |
| | 16years+ | 15 | 13.5 |

Source: Field Survey, 2017

The results shown in Table 1 suggest that subject teachers possessed relevant knowledge for the specific subjects that they teach. This implies that they have adequate background to teach at the various SHSs. With this background, it is expected that they implement the curriculum the way the developers expect from them. However, it is assumed at this point that, their background in the various subjects studied in the university could influence the way they perceive the components of the curriculum. If their training deviates from what the curriculum provides, then fidelity is likely to suffer.

The results indicated that all the teachers have higher educational qualification. In details, majority (n = 78; 69.9%) of the teachers in the senior high schools were Bachelor's Degree holders. Relatively few teachers (n = 34; 30.4%) held Master's Degree. Similarly, demographic characteristics of the teachers revealed that almost all the teachers had the basic qualification to teach in the SHSs. It revealed that the majority (n = 65; 58.6%) of the teachers had a Bachelor of Education qualification to teach in the various subject areas. Teachers with Masters of Education or Masters of Philosophy degrees in Education were found to be relatively higher (n = 21; 18.9%) than teachers with post graduate diploma in education (n = 10; 9.0%) and Diploma in Education (n = 8; 7.2%) qualifications. A further indication was that few (n = 6; 5.4%) teachers were teaching based on the Cert 'A' qualification.

The number of years a teacher has been teaching the current subject was a demographic characteristic of major concern to the study. It was revealed that a greater portion (n = 57; 51.4%) of the teachers had been on their current subject teaching for a period of half a decade and beyond (but not more than 15 years). This suggests that teachers in a particular teaching field (subject area) had accumulated

much experience in teaching such subject areas. Teachers who have been in the teaching profession on a particular subject for one year to not more than five years (n = 39; 35.1%) were comparatively more than teachers more than teachers who had 16 years and above teaching experience in teaching a particular subject.

Teachers' levels of use of the SHS curriculum

The result of levels of use of the various subject curricula from various subject (Accounting, Economics, Geography, Social Studies, and Business Management) teachers are presented in Figure 1 and Table 2.

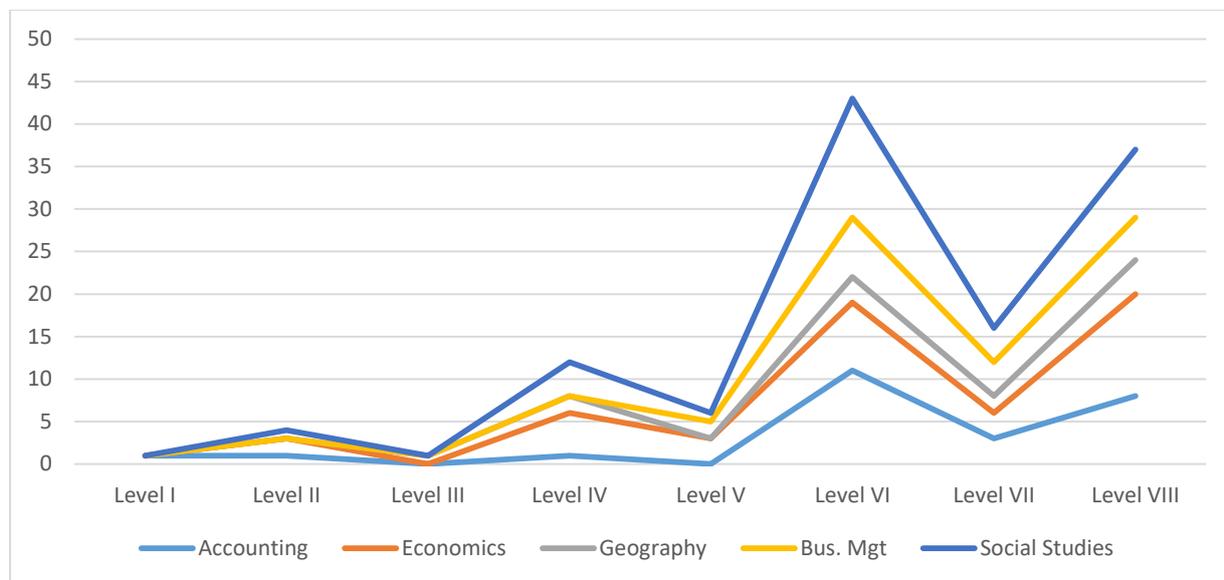


Figure 1: Level of use of the curriculum among all five subject teachers

Table 2

Level of use of the curriculum

| Subject Taught at the SHS | Dominant LoU | n | % | Interpretation |
|---------------------------|--------------|----|------|---|
| Accounting | Refinement | 11 | 44.0 | The largest user cohort of the accounting curriculum vary the use of the curriculum to increase the expected benefits within the classroom. Such cohort are working on using the curriculum to maximize the effects with my students |
| Economics | Renewal | 12 | 36.4 | The largest user cohort of the Economics curriculum re-evaluate the quality of the use of the curriculum, seek major modifications of, or alternatives to, present innovation to achieve increased impact, examine new development in the field, and explore new goals for themselves and school. |
| Geography | Renewal | 4 | 33.3 | The largest user cohort of the Geography curriculum re-evaluate the quality of the use of the curriculum, seek major modifications of, or alternatives to, present innovation to achieve increased impact, examine new development in the field, and explore new goals for themselves and school. |
| Business Management | Refinement | 7 | 38.9 | The largest user cohort of the Business Management curriculum vary the use of the curriculum to increase the expected benefits within the classroom. Such cohort are working on using the curriculum to maximize the effects |

| | | | | |
|----------------|------------|----|------|--|
| | | | | with my students |
| Social Studies | Refinement | 14 | 43.8 | The largest user cohort of the Social Studies curriculum vary the use of the curriculum to increase the expected benefits within the classroom. Such cohort are working on using the curriculum to maximize the effects with my students |

Source: Field survey, 2017

It is evident in Table 2 that all subject teachers operated at an above average level of use. All five subject teachers operated at either LoU IVB or LoU VI of the curriculum. LoU 0 to LoU II of the curriculum show teachers who are not using the curriculum at all and now in the preparatory stages to use it. LoU III and LoU IVA of the curriculum can be seen as teachers using the curriculum and merely mastering and executing the tasks required of them in the curriculum. They intend adding no activities to it in improving its positive impact on the students. Teachers at these levels of use are considered to be doing what is required of them in the curriculum without adding new ideas to the implementation of the curriculum.

However, these requirements are coupled with teachers' own innovations with the main aim of improving the impact the curriculum has on the students. Thus, teachers operating at LoU IVB of the curriculum will vary the use of the curriculum, teachers at LoU of the curriculum will add to the expectations of the curriculum, their own efforts with related activities from other colleagues and resource persons, and teachers at the LoU VI, go the extra mile of re-evaluating the quality of use, seek redress to certain issues, present innovations to such issues, examine any new development in such field, and explore new goals for themselves. All these additional elements of teachers operating at the LoU IVB to LoU VI of the curriculum are aimed towards enhancing the positive consequence the curriculum has on the students.

In Table 2, it could be seen specifically that Economics and Geography teachers ($n = 12$; 36.4% and $n = 4$; 33.3%) were implementing the curriculum at LoU VI. This means that Economics and Geography teachers in the quest for ensuring an enhanced curriculum for their students, explore new goals for themselves. Also these teachers re-evaluate the quality of the use of the curriculum, seek for major modifications of and alternatives to the curriculum. As a result of implementing the curriculum identify areas to be revisited. They merely do not implement the curriculum "hook-line and sinker", but there is a periodic evaluation of the whole curriculum to suitably align it to the interest of the student. In addition, such Economics and Geography teachers in the SHS present innovations to achieve increased impact. Such teachers do not only submit "loop holes" in the curriculum after their re-evaluation, they also present innovative ideas in "filling these holes". It is indicative that Economics and Geography teachers are interested in aligning the curriculum in the interest of enhancing its consequence on the student. Such teachers are likely to have students go through a thorough curriculum of instruction. It could, also, be said that Economics and Geography students are going through an improved curriculum. Students undergoing such curricula are indirectly encountering a full implementation of the curriculum with added benefits from their teachers.

In furtherance, teachers of Accounting ($n = 11$; 44.0%), Social Studies ($n = 14$; 43.8%) and Business Management ($n = 7$; 38.9%) operated at LoU IVB of the curriculum. These subject teachers, also, are concerned with achieving higher impacts on the students as they go through the curriculum. These teachers operating at the LoU IVB of the Curriculum means that they vary the use of the curriculum within the classrooms. They were assiduously working on using the curriculum to maximise the effects with their students. These teachers, although, implement the curriculum as it is, they might change the use of some teaching activities indicated in the curriculum to suit what the learner ought to benefit at a given time. The teachers operating at this level are said to have had improved on the other five previous levels of use of the curriculum. They were very much comfortable using the curriculum at this LoU IVB and are even putting in huge efforts to make the curriculum have its intended impact on the students. At this level of use, they were considered as implementing the curriculum above the average level of use. By implications, this meant that students going through

curriculum being used at this level are enjoying the enhanced positive consequences of the curriculum. In effect, such students are fully benefiting from the intended purpose of the curriculum and also are exposed to several activities in the implementation of those curricular.

The SHS subject teachers were operating at the level of use where they were concerned about improving the consequence of the curriculum on students. This meant that the teachers considered the students as the top most priority and wanted to ensure that students reaped all the intended impact of the curricula. However, in specifics, Business Studies subjects (Accounting and Business Management) teachers were seen to be operating at LoU IVB while typically associated General Arts subjects (Economics and Geography) teachers were operating at LoU VI. This projects that although both programme teachers were interested in improving the effect of the curriculum on the students, Business Studies' teachers were not interested in re-evaluating the curriculum and suggesting innovative ideas as the General Arts teachers were. Also, comparatively, General Arts teachers had a higher LoU of their subject curriculum than the Business Studies teachers.

Test for influences on teachers' level of SHS curriculum use

Also, the study examined the influence (if any) of some identified teachers' demographics on their levels of use of the various SHS subject curricula. The results were generated using chi square tests at 5% significance level and presented in Table 3. The test indicated that the number of subjects taught by a teacher did not have [$\chi^2 (14) = 6.151, p = 0.963$] any influence on teachers' level of use of the curriculum. Similarly, the subject taught [$\chi^2 (28) = 23.604, p = 0.702$] by teachers, academic qualification of the teacher [$\chi^2 (7) = 7.372, p = 0.391$], teaching qualification of the teacher [$\chi^2 (35) = 40.000, p = 0.258$] and teaching experience [$\chi^2 (14) = 17.079, p = 0.252$] were all independent of teachers' level of curriculum use. These results imply that there was no statistically significant influence of the number of subjects taught, the kind of subject taught, teachers' academic qualification, teaching qualification and teaching experience on their level of use of the curriculum.

In spite of the results of the test, descriptive statistics showed that teachers with Bachelor's and Master's degree tended to use the various subject curricula, mostly at the Renewal, Refinement and Integration levels. Those with Bachelor of Education and M.Ed. or M. Phil in education mostly implemented the curriculum at the Refinement, Renewal and Integration levels. With respect to teaching experience, it was found that most teachers with 6-15 years of teaching experience tended to use the various subject curricula at the Renewal, Refinement and Integration levels. This was followed by teachers with 1-5 years of teaching experience who used the various subject curricula at the Refinement and Renewal levels. However, teachers teaching two subjects mainly operated at renewal, refinement and mechanical levels respectively. Teachers teaching only one subject operated mainly at refinement, renewal and integration levels whilst those teaching three subjects implemented the curriculum at refinement level of use.

Table 3
Chi square results of teachers' demographics and level of subjects' curricula use

| Variables | Level of Use of subject Curriculum | | | | | | | | | X ² | df | p-value |
|-----------|------------------------------------|---------------------|---------------------|--------------------|-----------------|--------------------|---------------------|-----------------|-------|----------------|----|---------|
| | Level 0 Non-Use | Level 1 Orientation | Level 2 Preparation | Level 3 Mechanical | Level 4 Routine | Level 5 Refinement | Level 6 Integration | Level 7 Renewal | Total | | | |
| | f(%) | f(%) | f(%) | f(%) | f(%) | f(%) | f(%) | f(%) | f(%) | | | |

| <hr/> | | | | | | | | | | | | |
|------------------------------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|------------|-------|---|------|
| No of subjects taught | | | | | | | | | | | | |
| 1 | 1 (1.0) | 2 (2.1) | 1 (1.0) | 8 (8.2) | 6 (6.2) | 33 (34.0) | 14 (14.4) | 32 (33.0) | 97 (100) | | | |
| 2 | 0 | 1 (8.3) | 0 | 2 (16.7) | 0 | 3 (25.0) | 1 (8.3) | 5 (41.7) | 12 (100) | 6.151 | 1 | 0.96 |
| 3 | 0 | 0 | 0 | 0 | 0 | 1 (100) | 0 | 0 | 1(100) | | 4 | 3 |
| Sub. taught | | | | | | | | | | | | |
| Accounting | 1(4.50) | | | | | | | | 22 (100.0) | | | |
| Economics |) | 1(4.50) | 0 | 1(4.50) | 0 | 9(40.90) | 2(9.10) | 8(36.40) | 24 (100.0) | | | |
| Geography | 0 | 1(4.20) | 0 | 3(12.50) | 3 (12.50) | 6(25.00) | 3(12.50) | 8(33.30) | 11 (100.0) | | | |
| Bus. Mgt. | 0 | 0 | 1(9.10) | 1(9.10) | 0 | 3(27.30) | 2(18.20) | 4(36.40) | (100.0) | 23.60 | 2 | 0.70 |
| Social Studies | 0 | 0 | 0 | 3(12.00) | 2(13.30) | 5(33.30) | 3(20.00) | 5(33.30) | 15 (100.0) | 4 | 8 | 2 |
| | 0 | 0 | 0 | 1(4.00) | | 10(40.00) | 4(16.00) | 7(28.00) | 25 (100.0) | | | |
| Academic qua | | | | | | | | | | | | |
| Bachelor's | 0 | 1(1.50) | 0 | 6(9.10) | 3(4.50) | 23(34.80) | 9(13.60) | 24(36.40) | 66(100.0) | | | |
| Master's | 1(3.30) | 1(3.30) | 1(3.30) | 1(3.30) | 3(10.00) | 10(33.30) | 5(16.70) | 8(26.70) | 30(100.0) | 7.372 | 7 | 0.39 |
| Teaching qua. | | | | | | | | | | | | |
| None | 0 | 0 | 0 | 0 | 1(100.0) | 0 | 0 | 0 | 1(100.0) | | | |
| Cert A | 0 | 0 | 0 | 1(20.00) | 0 | 0 | 1(20.00) | 3(60.00) | 5(100.0) | | | |
| Diploma | 0 | 0 | 0 | 1(14.30) | 0 | 0 | 2(28.60) | 4(57.10) | 7(100.0) | | | |
| PGCE/PGD | 0 | 0 | 0 | 1(16.70) | 0 | 1(16.70) | 1(16.70) | 3(50.00) | 6(100.0) | | | |
| E | 0 | 1(1.70) | 1(1.70) | 3(5.20) | 2(3.40) | 26(44.80) | 7(12.10) | 18(31.00) | 58(100.0) | 40.00 | 3 | 0.25 |
| BEEd | 1(5.30) | 1(5.30) | 0 | 1(5.30) | 3(15.80) | 6(31.60) | 3(15.80) | 4(21.10) | 19(100.0) | 0 | 5 | 8 |
| M.Ed/M. Phil |) |) |) |) |) |) |) |) |) |) |) |) |
| Teaching exp. | | | | | | | | | | | | |
| 1-5 yrs | 1(2.90) | 2(5.90) | 0 | 2(5.90) | 1(2.90) | 14(41.20) | 3(8.80) | 11(32.40) | 34(100.0) | | | |
| 6-15 yrs |) | 0 | 1(2.20) | 3(6.50) | 2(4.30) | 14(30.4) | 7(15.20) | 19(41.30) | 46(100.0) | 17.07 | 1 | 0.25 |
| 16 yrs or more | 0 | 0 | 0 | 2(13.30) | 3((20.00) | 5(33.30) | 3(20.00) | 2(13.30) | 15(100.0) | 9 | 4 | 2 |

Source: Field survey, 2017

DISCUSSION

It is established that Social Sciences (Economics, Geography and Social Studies) and Business teachers in the SHSs have an above average level of use of their various subject curricular. However, Business Studies teachers are measured as operating at LoU IVB of the curriculum. This means the Business Studies' (Accounting and Management) teachers vary the use of the curriculum to increase the expected benefits within the classroom. Social Science (Economics and Geography) teachers also re-evaluate the quality of use of the curriculum, seek major modifications or, provide alternatives to, present innovative ideas to achieve increased impact on the achievement of students. Social Studies teachers were also seen to be operating on the LoU IVB of the curriculum as the Business Studies teachers.

The results of the study revealed that all the subject teachers in the SHSs were operating at the refinement and renewal levels of use of the curriculum. This implies that they had gone passed routine and mechanical use of the curriculum. At the refinement stage, the subject teachers varied their use of the curriculum to increase the impact on students within their sphere of influence. At this level, they are likely to make variations in the curriculum based on their knowledge of the short and long term consequences of this variation on their students. At the renewal stage, the subject teachers reevaluated the quality of use of the curriculum, sought major modifications or alternatives to present the curriculum to achieve increased impact on students. Also, they examined new developments in their various specialties and explored new goals for themselves and the entire discipline they teach. These two observations point to the fact that the subject teachers surveyed were not using the officially prescribed curriculum for instructional intercourse. Accordingly, fidelity of use of the various SHS subject curricula is profoundly affected. This clearly indicate a gap between the intended and implemented curriculum.

Although majority of the subject teachers were operating above the mechanical and routine levels of use for all the subject curricula, the results showed that teachers of the different subjects expressed difference in their levels of use. Business Studies teachers (Accounting and Business Management) were concerned with just refining the use of the curriculum and Social Sciences teachers (Economics, Geography and Social Studies) were concerned with renewing the use of the curriculum. This finding is consistent with that of Schiller (2002) that teachers operated in different levels of the implementation process. However, the finding contradicted those of Kwarteng (2009) and Ankomah and Kwarteng (2010) who found that Accounting teachers (part of business teachers) were nonusers of the Accounting curriculum. Other studies which findings contradicted the findings obtained in this study include Nawastheen et al. (2014), Ndirangu and Nyagah (2013), Onchong'a (2013), Ndirangu, et al. (2017). All these studies revealed that teachers were nonusers, operating at the first level of use of the curriculum.

The test for any statistically significant influence teachers' demographics had on their levels of use of the various subject curricula revealed that number of subject taught, the kind of subject taught, teachers' highest academic qualification, teaching qualification and teaching experience did not have any statistically significant influence on teachers' level of curriculum use (See Table 2). The implication of this finding is that the subject taught, academic qualification, teaching qualification and teaching experience were independent of teachers' levels of use of the SHS curriculum. The finding is inconsistent with those of Hopkins (2011) who observed that reasons for differences teachers' levels of use of curriculum could be attributed to the personal characteristics of teachers. Also, the findings failed to agree with that of Newhouse (2015) which revealed that differences in curriculum implementation is brought about by the nature of the curriculum. Since the study found that teaching experience is independent of teachers' level of use of the curriculum, the observation by Dirksen (2002) that most teachers require 2-3 years with an innovation to become good users of it has been challenged.

IMPLICATIONS

Teachers refined the use of the SHS curriculum with good intentions. They aimed at improving students' understanding by offering students relevant content they (teachers) thought the centrally developed curriculum was lacking. However, that action defeated the purpose and spirit of fidelity with which they were required to implement the curriculum. Good intentions do not replace adherence to rules and policies of practice. Fidelity dictates compel strict compliance to guidelines as codified in the curriculum document. Therefore, any departure from it gave teachers the opportunity to enact their own or modify the national curriculum in delivery. Thus teachers varied the use of the curriculum and reduced the uniformity, the hallmark of fidelity, by projecting supposed relevance of desired content to the logic of the implementation. Accordingly, the purpose of the fidelity of implementation of the SHS curriculum was not achieved.

Patrons and supporters of fidelity of implementation should be ready to tolerate minor deviations of the ideal. After all, school specific contexts may bring some variations in the curriculum implementation efforts and thus impede the efforts of fidelity. Accordingly, one hundred percent fidelity of implementation should not be expected, rather a margin of deviation should be tolerated. If the departure from the ideal enhances the quality of students' learning, the margin of tolerance should be wider than where it is inimical to students' progress. Rethinking fidelity of curriculum implementation with such considerations will inure to the benefits of stakeholders of education.

Supporters of curriculum implementation fidelity should beware that humans will revolt where they appear subservient to authority. Even the strictest supervision for compliance might fail if the curriculum for implementation creates a sense of indoctrination without any room for participation. The intended plans of the curriculum were not achieved because teachers' level of consultation in developing the curriculum was not motivating. To push any such agenda of fidelity, political tactics instead of military coercion should be resorted to get teachers to buy into what they have not been a party in developing. Threat of queries and reprimand in cases of noncompliance breed resentment and

taint relationship. However, selling the curriculum to teachers generates some positive appeal to elicit forced willful commitment.

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