



Research Article

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## Challenges of Curriculum Design and its Implications on Policy: The Case of the Junior High School (JHS) Teaching Subjects in Ghana

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### Abstract

*The educational landscape though serves as the bedrock for human resource development, it still has challenging academic experiences in Junior High Schools in Ghana. The realization is that, transitional stages of schooling seem not to have curriculum alignment that reflect tertiary education programme. Yearning for flexibility, harmonization and synchronization of the curriculum, the paper seeks to explore missing interest areas, talents in order to discover inspired paths that underpin enrichment of the school curriculum. To deepen high school experience for appropriate and best practices in human capital development, the researchers examine curriculum design and its implications on policy, the case of the JHS teaching subjects in Ghana. This engagement adopts the combined approach using the discursive method and descriptive analysis. Participants of the study include 100 students, 10 teachers, 5 circuit supervisors, and 5 curriculum experts of the Cape Coast Metropolis. Interviews are the main instruments used for the qualitative analysis while graphical representations and achievement tests are conducted for students from the ten schools. In the investigations, the study discovers that, there is no curriculum alignment in some of the teaching subjects taught at the JHS level despite their potential areas for human capital development. It is recommended that, the curriculum at the JHS level should be revised to reflect the best practices, prospects and opportunities for students.*

**Keywords:** Curriculum design, curriculum alignment, policy, harmonization and synchronization.

### 1. Introduction

The study assumes the position that curriculum design should be responsive to the needs of individuals and society. It outlines the development of the Junior High School (JHS) curriculum and syllabus based on a curriculum statement (Anamuah-Mansah, 2008). This has the implication that curriculum developers should be knowledgeable about the antecedents of human development with its associated pedagogy that reflects contemporary education. In this study however, a number of challenges have been identified. First, how to ensure that teaching subjects have alignment and intellectual attainments achieved at higher levels of learning. Second, how to ensure that, specific curricula are authentic, reflecting students' talents, roles for purposes of identity, class as well as intellectual, attitudinal and psychomotor development. Furthermore, the challenge of addressing and accommodating non-examinable subjects which are missing links in harnessing the human resource potential. Finally, the article concludes by arguing for a holistic and integrated approach in which curriculum development is seen to create talents and potentialities among students and how it can open brighter avenues for school leavers. In crisply defining the spaces in which key stakeholders in education can establish what can be learned, the study notes that curriculum design must have correlation with career development. These are big questions posed to inform policy.

In Ghana, the exit point from junior high school to secondary school is 15 years where the child's position and status assumes certain level of vertical integration. That is, content and structure of the learning experiences place the child at another higher level for further education, perhaps to the tertiary level or in any business circle. It is important to say that, the historical perspectives of basic education in Ghana had undergone several reforms.

Currently, the highest level of basic education is three years, and referred to as Junior High School (JHS). The nature of the curriculum has its structure which consists of examinable and non-examinable subjects. What it means by

examinable is, most teaching subjects are made compulsory for certification. More so, they are mandatory subjects which serve as pre-requisite for admission into secondary education (GES, 2000). The subjects include: English Language, Mathematics, Integrated Science and Religious and Moral education. The others are Basic Design and Technology (BDT), Ghanaian language, Information and Communication Technology (ICT) and French as optional subject, which is not compulsory (GOG, 2002).

Invariably, the West African Examinations Council sets the basis for students' career development and also determines what programme a student is eligible to study at the Senior High Secondary level which subsequently defines the course the student will study at the University or any higher level (WAEC,2012). As to whether non-examinable subjects have such comparative and comparative advantages is another big question to inform policy. This is because of the ways assessment procedures and performance levels of students in examinable subjects help to provide eligibility criteria and more opportunities for those aspiring to secondary schools and the university.

The non-examinable subjects include; Physical education, Music and Dance and Arabic language (for only Islamic schools). Nonetheless, non-examinable subjects have less instructional periods and are largely extra-curriculum activities.

In a situation of curriculum alignment, there is a missing link where curriculum is not connected directly to same subjects in the secondary school and may be limited opportunities for tertiary education. The non-teaching subjects seem to have fewer advantages. This is because of curriculum inadequacy, content validity and reliability in teaching and learning of the subjects. More so, it has absolute disadvantages when it comes to secondary and further education. Analytically, this contextualization accounts for misplacement in the goals of education where Ghana Education Service (GES) has a policy that, children must be trained to acquire cognitive, affective and psychomotor skills (MOE, 1992).

Referring to the goals of education, the curriculum design at the JHS level indeed appears to have inadvertently omitted the psychomotor skills. Serious implications of this situation are that, there will be woefully inadequate personnel to handle such teaching subjects in schools. The short, medium and long term effects are that, a few students who are potentials in such fields will not have adequate opportunities to exhibit their naturally endowed talents. Therefore, placements and job opportunities will be major limitations for the youth. Ideally, all subjects are important within the national and international contexts and it is obvious to also explain that, there are other areas like sports and games, and swimming which need to be integrated into the JHS school curriculum. These missing links are areas that can be incorporated to open more opportunities for skills development, better placements, employment avenues and wealth creation. Contemporary education looks at the dynamic nature and dimensions of human development in a broader context, particularly considers how potentials at this level (JHS), all over the world are exhibiting their naturally endowed talents they have acquired in diverse fields. This is to suggest that the JHS curriculum requires structural changes.

These underpinnings go to interrogate the curriculum implementation policy in Ghana and perhaps other countries of similar characteristics. A cursory look at the curriculum design at the JHS level, vis-a-vis the SHS and the tertiary also suggest inadequate harmonization and synchronization in the learning processes. This therefore instigates an action by the researchers that, the JHS curriculum seems to have some deficiencies to be addressed. Curriculum design at the JHS level is part of contemporary education. It is dynamic, not static or restricted. Rather, it opens up more learning opportunities to meet societal needs. One way of meeting this is to have appropriate, relevant and holistic approach to modern curriculum that will serve as best practices in education and public life.

This calls for curriculum enrichment programme to be considered as project of modernization that is planned to meet the needs of children and society in a broader context. For these reasons the issues raised precisely, the curriculum in question significantly consider the proximate goals of students as individuals towards nation building, the mediate goals of organizations as role players in the implementation process, and the ultimate goal of government in fulfilment of quality education across all domains. Candidly, the JHS curriculum calls for diversity in order to meet modern trends in education and the job market, therefore sticking to only "traditional" designs without a reflective approach to structural changes nationally and globally may still limit the human capital development where societal growth and sustainability are likely to become enormous problems. The realization of these problems instigated the investigations. It is guided by the underlying research questions using a combined approach.

### 1.1 Research Questions

1. To what extent does the JHS curriculum reflect educational goals and aspirations in the Senior High Schools and Tertiary education?
2. What are the educational implications of the Junior High School (JHS) curriculum design on policy?

## 1.2 Significance of the Study

Considering the importance attached to the investigations, the study hopes to achieve the following.

1. The study serves as appropriate and relevant material for all stakeholders in education thereby prompt action for curriculum assessment and evaluation of the JHS teaching subjects.
2. The study brings to the fore essential subject areas for curriculum alignment and synchronization, and integration from Junior High School level to the tertiary level.
3. The investigations call for effective corroboration among key stakeholders in education, precisely policy makers, curriculum planners, experts in subject areas towards the development and planning of appropriate curriculum within the context of contemporary education.
4. Work hopes to unearth important areas towards student's needs, thereby create opportunities for students' motivation, placements, best practices and job marketability.
5. The new dimensions hope to portray culture of education and culture of human capital development for, growth and sustainability of society.

## 2. Review of Related Literature

The paper provides frameworks on conceptual, theoretical and empirical issues that underpin the study. Documentary sources deriving from various assumptions include articles, journals and accounts on the teaching syllabus, and also contributions from practitioners, students and researchers. Major concerns of this discourse first examine the theoretical basis of the school curriculum precisely with much emphasis on the Junior high school.

### 2.1 Perspectives of the Basic School Curriculum, policies and practices

The word curriculum is placed in a bounded context to mean the totality of learning experiences undertaken by learners within a programme of education (Behar, 1994). It has cultural and philosophical basis which clearly define its goals and objectives. These experiences are translated in to teaching syllabus where all stakeholders have major roles to play. The formalized structure of the curriculum however has the teacher and the student as the main actors who articulate the content knowledge requirement to a successful completion, thus the teacher helps to produce knowledge while the learner is expected to effect the behavioural changes. The context examines how the basic school curriculum at the Junior High School level meets quality education in relation to the best practices in the policy implementation process in Ghana.

Situational analysis on the systematic process of analyzing the school curriculum is very important and requires experts in the curriculum design and its implementation. Taba (1965) describes situational analysis as the diagnosis of curriculum needs. This entails the process of examining learning experiences that exist in the environment or society where the curriculum is being implemented.

Taba (1964) and Wheler (1965) in their propositions identify five criteria for content and learning experiences in schools. First, they explain validity under this criteria referring to the appropriateness and relevance of activities between content and goals intended to provide learning outcomes for students. Second, they highlight on the significance that relate to the importance of materials chosen to determine significance and logical presentation of interrelationship that can be used in diverse fields. This in the junior high school level may require appropriate curriculum planning and implementation.

In the framework of both classical and modern theories, learnability is a conceptual framework in selecting content of curriculum that experts should consider, that is, according to students and societal needs. Again, consistency with social realities is yet another framework to be considered. Subject matter should be chosen to provide the most useful orientation to the environment in a broader context. Therefore, all subjects in the implementation process must be equally placed on the same scale. Since education is aimed at changing learners' attitudes, behaviours and thinking, the curriculum will only be effective if the learners' interests are put into consideration.

Further, Bishop (1985) argues that situational analysis should also involve members of the general public and not only experts. This is because education itself is not a discipline like English and Mathematics only but an area involving a wide variety of society with different backgrounds. That is different backgrounds denote different talents and different potentialities among students. It is very important to allow students and all stakeholders in education to make many exploits in education and hence cultural diversities so as to create enabling environment.

According to Dewey (1952), curriculum is a bridge between the child and the culture. But this bridge has different construction, length, duration and for different societies and times. This bridge primarily means concentration on organizing learning and not on control and testing. Taba (1962) opines that there are different curriculum models. However, no one model is ideal and no one model may suit a full programme. However, identifying and being consistent with these models will help support cohesion and clarity of approaches in the school programme. A holistic approach to this is to identify which curriculum models fit into the junior high school contexts. Of course, diverse political ideologies and power positions of different countries become decisive factors in decision making about educational curriculum and issues. That is why the need for curriculum evaluation.

Curriculum evaluation in our view is the process of collecting data that enables one to decide whether to accept, change or to eliminate certain aspects of the curriculum. It may also be concerned with relative values and statements of worth. Worthen (1991) looks at evaluation as the determination of the worth of a thing or material. Relating this to the curriculum, it means that curriculum evaluation is the determination of the worth of curriculum, determining whether the expected plan has occurred or is occurring. Also, Cronbach (1963) posits that evaluation is collecting and use of information to make decisions about an educational programme. This situation allows curriculum to be under critical and situational analysis.

The development of an effective curriculum guide therefore is a multi-step and cyclical process. The process progresses from evaluating the existing programme, to designing an improved programme, to implementing a new programme and back to evaluating the revised programme. For an effective curriculum, there should be planning, articulating, developing, implementing and evaluating of all learning experiences. Relating this to our school curriculum, the adaptation of these criteria is very significant for new knowledge and skills development.

## 2.2 Framing the Empirical Issues

In framing the empirical issues, it is important to state that, the ministry of education is responsible for the administration and co-ordination of public action regarding education in Ghana (MOE, 1960). However, its multiple agencies from private and public sectors effect the appropriate and concrete implementation of policies. This coverage indeed includes local authorities and religious organizations. The state to a large extent manages the training of teachers with the Ghana Education Service (GES) providing the implementation policies of the school curriculum (GOG, 1961).

Education in Ghana is divided into three phases. That is, from the basic education level (KG, primary, JHS, thus, lower secondary), secondary education (upper secondary school, technical and vocational) and tertiary education (Universities, polytechnics and colleges). Education is compulsory between the ages of four and fifteen years (basic education). The language of instruction is mainly English but in some cases particularly at the basic level, language use as medium of instruction tends to be monolingual, bi-lingual and multi-lingual. This phenomenon in "common language" usage is due to geographical locations where certain areas can be classified as multi-cultural environments with others more indigenous having seemingly homogeneous character.

The JHS ends at the basic level with Basic Education Certificate Examination. The attainment level when achieved prepares the student towards education. Secondary education can be defined as general or vocational senior high school which lasts for three years and ends on the West African School Certificate Examination (WASSCE). Other secondary institutions however lead to various certifications and diplomas.

The Senior High school curriculum is composed of core subjects and elective subjects with substantive range of learning experiences referred to as programme. This covers areas notably; General Arts, Business, Science and Agric. Others are Home Economics, Visual Arts and ICT (CRDD, 2015).

All programmes run have their elective subjects which are examinable. Except music and dance, and physical education which are non-examinable to reflect similar pattern of curriculum design at the JHS. The pattern of curriculum development and implementation at the JHS and SHS levels though establishes some relationships; there is rather clear alignment of programme at the SHS level and tertiary education where students can easily locate interest areas in terms of choice making. It is also clear that curriculum expands and advances as content and structure also changes from the basic level to the higher level in learning. This vertical integration questions why some important subjects like music and dance, and physical education at the JHS and SHS levels have been obliterated as examinable subjects.

These flaws indeed appear to be deficiencies because the universities and other tertiary institutions though admit students in such areas, the intake as compared to other programmes is low. Another realization is that, there is a huge gap between content validity and reliability at JHS level referring to same programmes at the SHS levels and the universities. This inappropriate correlation is another big question that borders around synchronization and harmonization

of the curriculum.

A lot of talents who could have aspired to pursue equally important programmes have been restricted in a non-examinable category of courses and are being deprived of their education rights and opportunities, hence a big gap existing between education opportunities at certain levels and the job market.

Universal basic education requires quality, efficiency in management and access to education (GOG, 1992). Therefore curriculum as it stands will require structural changes to reflect current needs of students as well as society. Another dimension is the shortage of teachers that will be needed to teach certain subjects though made non-examinable but taught as compulsory subjects at the basic school and the SHS levels. It raises much concern where teachers are not trained for that but are made to teach such subjects. Obviously, competency levels of teachers in some of the subjects will be lacking and there is the possibility of feeding students with superficial knowledge. It is seen from this analytical perspective that, there is insufficient content and pedagogical knowledge in certain curriculum areas of the classroom situation which adversely is affecting human capital development and culture of education. The issue of teaching subjects raise several questions as to whether the JHS curriculum must be restructured. This restructuring may not only affect the content but also the structure considering the duration of the JHS programme and perhaps the SHS too. A policy implication is that human resource development is at a disadvantaged end of potential individuals whose career developments are essential for nation building and international collaboration.

At the tertiary level, curriculum is structured into University (more academic) and polytechnics for technical and vocational education. With reference to the activities and programmes at the tertiary levels, the universities have well defined and structured curriculum. This is designed by team of experts with contents scrutinized and approved by the national accreditation board. To a greater extent, curriculum alignment at the degree or diploma level to advance degrees has precise, adequate and appropriate relationships. The practice as in the case at the pre-tertiary level appears that experts in the field of curriculum design and development are required.

### 3. Methodology

The main text of this methodology is about curriculum design and its implications on policy, the case of the Junior High School teaching subjects in Ghana. It is an action research which focuses on how students' learning experiences reflect the leaning outcomes, precisely examining how the teaching subjects meet the best practices in fulfilling goals of education. The paper adopts the combined approach, using Basic Education Certificate Examination (BECE) results and teacher-made test analysis. Also, mock examinations result from ten selected schools in the Cape Coast metropolis in Ghana was used. The JHS 3 Students were used as the main target group since their experience in teacher-made test towards their final examination will help provide substantive evidence on the case under investigation. Accordingly, 10 results each from 10 schools have been assessed, using a sample of 100 students, by the use of the simple random technique. Graphical representation includes the bar graph and pie chart. In order to adduce more evidence, aggregate scores of Achievement Test, that is, by intervention have been used to find out how all teaching subjects (examinable and non-examinable) reflect the curriculum process and its impact assessment on placement, prospects in further education and career opportunities. This aspect of the analysis however adopts the quantitative approach to measure how the learning outcomes finally affect students' behaviours.

The next part of the methodology presents a qualitative analysis based on the educational implications of the junior high school curriculum design on policy. This aspect is exploratory, narrative and interpretive part of the investigation to capture views from 10 teachers of the selected schools. Also, 5 circuit supervisors and 5 curriculum experts, directly connected to the school curriculum have been captured from the Cape Coast metropolis, using purposive sampling procedure for the data required. Interviews are employed to elicit information from participants. As a form of ensuring trustworthiness, appropriateness and relevance of data, the five curriculum experts' assertion is used as triangulation through focus group discussion. This is also to ensure validity of evidence and consistency levels of the analysis (Morgan, 1990). The discursive method is used for the data analysis. To place the debate on the level of objectivity, to arriving at appropriate and relevant answers, constructivism as paradigm for the study is applied. It is to assess whether metha-physical knowledge (Marshall & Rossman, 1989), thus, knowledge-based industry meets the needs of students.

### 4. Findings and Discussion

This aspect provides evidence generated from the descriptive analysis of the quantitative methodology. It discusses the

examinable subjects and performance levels in BECE, mock examination results of the JHS 3, achievement test results of students in the 10 schools and mean of mean scores of both examinable and non-examinable subjects.

Definition of terms:

Junior High School implies JHS.

Senior High School refers to SHS.

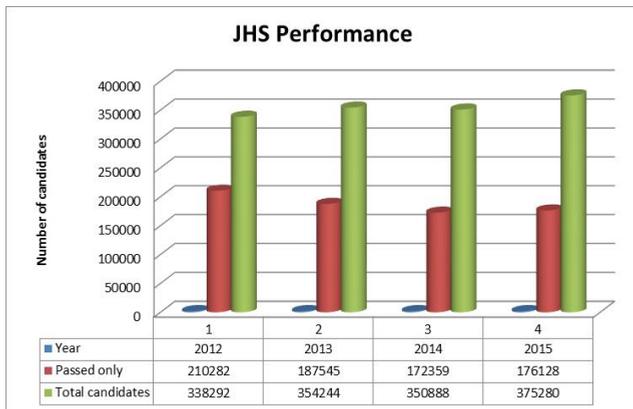


Figure 1: Examinable subjects and performance levels: BECE (WAEC)

Source: MoE, (2016). Annual Report on BECE Results

Figure 1 gives indications of performance levels of JHS 3 students in the Ghana. The analytical procedures carried are to find out the extent at which students' percentage pass influence placement, career opportunities and the job market. The pattern of results though shows significant difference in all the teaching subjects, students have a comparative advantage than those subjects that are non-examinable. Curriculum alignment therefore shows higher level of subject correlation to reflect the SHS and tertiary education. This dichotomy in curriculum alignment is a diversion for the goals of education (MOE, 1961) which spells out cognitive, affective and psychomotor skills development in education. The data also identifies some areas of the examinable subjects that may not have adequate synchronization of content knowledge. These indeed are critical questions to inform policy.

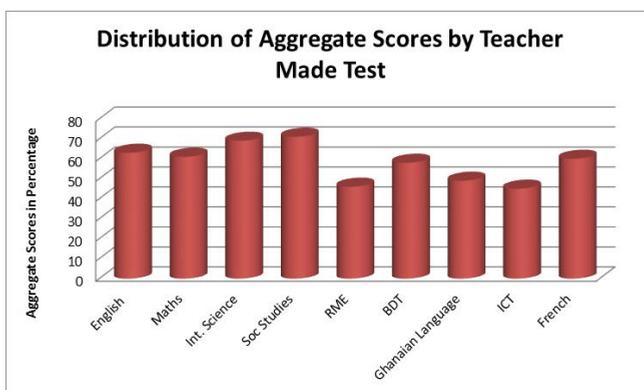
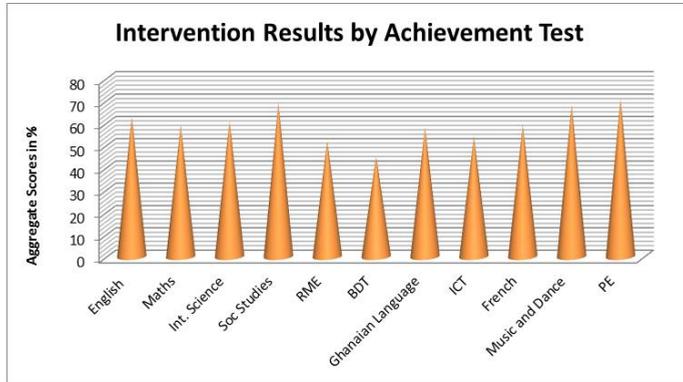


Figure 2: Distribution of Aggregate Scores by Teacher Made Test

Source: Fieldwork, 2016

From Figure 2, it is evident that the data identify similar characteristics of teaching subjects and performance levels at the JHS. However, the observation made from teacher made test is that, aggregate scores are higher. This raises another

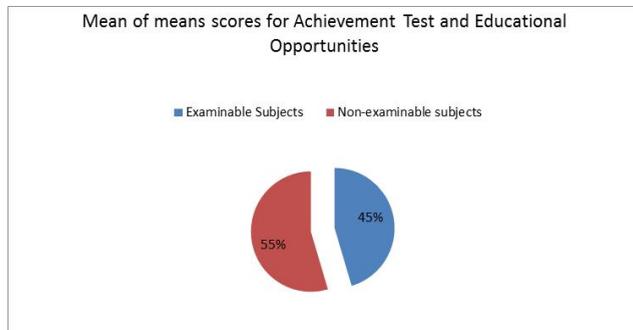
question of assessment scores from teacher made test as to whether it meets the criteria for standardized test in terms of content and construct validity.



**Figure 3:** Intervention Results by Achievement Test

**Source:** Fieldwork, 2016

The realization in both examinable and non-examinable subjects is that, all subjects have placements, career opportunities and prospects. The aggregate scores provide a greater degree of curriculum alignment and synchronization. This has the implication that, more talents will be developed and so with human capital development. There is however the possibility of structural changes in terms of duration for the JHS and the SHS.



**Figure 4:** Mean of means scores for Achievement Test and Educational Opportunities

**Source:** Fieldwork, 2016

The pie-chart presentation (Figure 1) reveals that students have the ability to demonstrate their talents when given adequate opportunity to do so. Although, the non-examinable subjects rate higher, the level of content is not as adequate as the teaching subject. Practical activities far exceed the theoretical work to suggest such practical activities require adequate instructional periods on the time table. This is another policy issue within the instructional context. The realization is that, all teaching subjects are important. These ideally will create room for diversity and quality education for all. Data produced from the qualitative data provide the following.

In examining the similarities in views captured under research question two which accounts for; what are the educational implications of the junior high school curriculum design on policy, responses in general appear to produce universal facts, that nothing like adequate curriculum alignment is considered. For the teachers, "we know the core subjects which are examinable don't meet all the content knowledge at the SHS level and this foundation in relation to course content at a higher level might be a major problem. Hmm.....mmm mm, our worry is the non-examinable subjects too which is having adverse effect on our children when it comes to tapping of knowledge and talents from

music and dance, and physical education, and even foreign languages. Hmm..mmmm, some children will suffer in future.”

The universality in these responses describes the school curriculum as more traditional and deficient in certain teaching subjects at the JHS level. This subjectivity in universal fact though presents inadequate content knowledge and relevance when subject alignment is considered, it appears teacher competencies in certain subjects too may also be serious appendages on the school curriculum. The curriculum experts and circuit supervisors also admit the assertions. Re-positioning a curriculum design, from the universal category of responses, curriculum standards at the JHS levels, require structural changes and modern criteria for schools.

As to whether non-examinable subjects are not as important as the examinable, the 5 curriculum experts strongly disagree to that assertion. “We need potentials in the music and dance industry to demonstrate our cultural heritage, pool of knowledge which for sometimes now are gradually missing from schools which we think are big mistakes for not encouraging it as important and leading to poverty, unemployment and job security among our youth.” The responses rather require deepened social and cultural knowledge and identities in our schools.

The participants re-echoed, “Aha ....hmm..mm, take PE for instance in our schools is like extra-curriculum activity which has limited credit hours, a few teachers made to teach such subjects in some cases are not even trained and that is rather sad. Look....look... look at the previous Olympic games and consider how talents are utilized to create wealth, hmm...mm, that’s sad”. “We shall not hide our feelings because our African footballers are equally doing well at national and international contests, and today all these learning experiences in our schools seem to be relegated to the background, it is unfortunate.” The issues raised appear to be realizations that account for flaws in the curriculum implementation process where aims of education are to develop cognitive, affective and manipulative skills among students (MOE, 1961). It has the implications that, human capital development, prospects and opportunities for youth will be limited. Such will be a serious indictment on education implementation and public policy. The holistic way to meet appropriate curriculum needs and standards is the conceptualization of modern curriculum trends and integration of knowledge (Glathorn & Forshay, 1991). This idea indeed is to inform policy. However, the extent to which policy makers influence the school curriculum it self is a big question in this discourse.

All responses in the universal categories establish the fact that, language as important tool for communication should not be optional subject. “We don’t know why Ghanaian language can’t be considered as important, and why some foreign languages as well can’t be integrated in our schools to meet global standards.” Here, the emphasis is the significance of language use in schools and the potential benefits it may derive. The assertions have the implications for curriculum enrichment programme in language usage too which as well could draw international collaboration and global interest in terms of education, trade and commerce, science and technology.

Comparative analyses of the two paradigms of the study reveal the prima facie of the investigation as curriculum non-alignment between the “designers” and policy makers. This critical incident though is a debate generated; it is a big question for all stakeholders in education.

## 5. Conclusion

The study centrally discusses; challenges of curriculum design and its implications on policy. It raises pertinent issues which identify pattern of results in Junior High Schools in Ghana. The realization is that, there is significant difference between examinable and non-examinable subjects, suggesting that examinable subjects have competitive and comparative advantages for students in terms of placement, career opportunities and the job market. This critical incident is therefore a missing link in the education curriculum which has the recipe for academic barriers, career development and creation of human capital. The phenomenon is positively skewed towards the development of cognitive and affective domains more than the psychomotor skills which are essential goals of education.

As a misplacement in the education curriculum, the universality of responses also note that, students’ manipulative skills are placed at a disadvantaged end. This indeed interrogates the policy implementation process.

## 6. Recommendations

The study raises several factors captured under curriculum alignment, examinable and non-examinable subjects. The issues identified suggest the following.

1. Curriculum alignment must be a model for curriculum design, planning and curriculum implementation policy in Ghana. This should be part of quality assurance procedures to enhance quality education.

2. All teaching subjects must be given equal preference to help develop diverse talents and potentialities towards human capital development, placements and job opportunities.
3. Designing the curriculum involves experts. It is therefore suggested that, experts in diverse fields must be part of the development and the implementation process to curb the situation of placing some students at a disadvantaged end.
4. Key stakeholders must help in the implementation of the school curriculum and thus, objectivity should be required at all stages of the school curriculum. This will account for the devoid of both internal and external influences on education policy.
5. The structure and content of the JHS and the SHS must be evaluated and considerations for the durations must be part of the policy issues. Policy implementers may consider four years each for both JHS and SHS if subject alignment and harmonization of the school curriculum could be accounted for.

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