

Perception of Gifted Students on Compulsory Subjects in Their Academic Performance a Case of Secondary Schools in Uasin Gishu County in Kenya

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Abstract

Academic performance is a function of many interrelated variables including inherent study efforts, modes of teaching, school environment and students ability. Many gifted students may face myriads of academic problems, which may however, be masked by their academic prowess, yet research into this realm is limited in Kenya. The objectives of the study were: To investigate the perception of gifted students on the effects of compulsory subjects on academic performance. To establish the perception of gifted students of teacher - centred teaching methods on academic performance. To examine the perception of the gifted students of the effects of mentorship and counselling services on academic performance. To establish the perception of teachers on gifted students identification criteria on academic performance. An exploratory survey design was used. The research population consisted of 100 heads of academic departments and 153 gifted students. The sample then was 30 teachers and 120 gifted students from the sampled schools in Uasin Gishu District. Two sets of structured questionnaires were used to collect data. The sample was selected using random sampling technique and purposive sampling technique. Descriptive statistics was used in data analysis that is of frequencies and percentages. The findings were presented using tables, pie charts and figures. From the findings it was established that the gifted students perceived that the compulsory subjects were highly influential in affecting academic performance. That most of these students 48 % (50) rated the teacher-centred teaching methods as poor and these teaching methods were found to affect the academic performances negatively. Absence of mentorship and guidance and counselling services affected a majority 55% (58) of the gifted students negatively academically. Identifying the gifted learners in secondary schools of Uasin Gishu was non standard. No intelligence tests were used to identify gifted learners instead evaluation test results was majorly used by 60% of the teachers to identify these learners. The study recommended that the MoE should make IQ tests available in schools. Teachers should be equipped with skills and knowledge of how to handle gifted learners in schools. Further studies should be carried out to establish how primary schools cater for this gifted learners

1.1 Background of the Study

Globally, education is fundamental in the development of human persons and has, therefore, been viewed principally in light of a fundamental human right (Kyalo, Osano, Maundu and Kipkemboi, 2006) and continues to play a significant role in imparting knowledge to many people, which portends a good future. Therefore, challenges facing learning among the students remain a major and a fundamental issue among policy makers. On attainment of political independence in 1963, the Government of Kenya (GK), households and the private sector collectively endeavoured to enhance the development of education in the country. The rapid development of education and training in Kenya was a result of the *Sessional Paper No. 10 of 1965 on African Socialism and its Application to Planning in Kenya*, which emphasized combating ignorance, disease and poverty. It was based on two long-standing concerns that: (1) every Kenyan child, irrespective of sex, religion and ethnicity, has the inalienable right to access basic welfare provision, including education; and (2) the GK had an obligation to provide opportunity to all citizens to fully participate in socio-economic and political development of the country and also to empower them to improve their welfare.

The education in Kenya is based on the model of performance based on evaluation of end of course examinations (Kamugisha, Tanui , Koros, Ondieki & Simiyu, 2005). The future progress of the students in academic echelons is, therefore, tied to the academic performance by the students. The issue behind this principle is that a student is academically able to go successfully through the examinations or they cannot manage them and thus will not progress beyond certain threshold education points. Furthermore, many potential employers prioritize formal education system as a way of employment in their firms.

Academic performance is a facet of many interrelated variables key among them is the inherent students' efforts, teachers' inputs, school environment and students attitudes. Many schools that are performing well in Kenya often attribute their "excellent students' performance" on students working hard and discipline in the school (Griffin, 2008). Successes for a number of the schools come through heavy investment in the learning materials such as books and laboratory facilities; employment of extra tuition to the students during holidays. Emphasizing the utilization of more time and resources to encourage improved academic performance looks farfetched in line with Boit (2001, p .15) assertion that "there exist a linkage between students' attitudes and

academic performance". Exploring the path of students attitudes in shaping their academic performance look a viable alternative in a country where schools lack essential resources and funds to keep an upward investment in improving students' performance.

In some schools, which perform well are those that are academically weak, here there are a number of students who are gifted learners who are bound to perform well regardless of the prevailing atmosphere. Van Tessel-Baska (2002) define gifted students as those who possess characteristics such as creativity, precocity, sensitivity, passion to master, matching to their own drummer and low tolerance for frustrations.

According to Watson and Ashton (1995), each person is unique, has unique gifts and problems, is subject to unique influence promoting certain aspects of learning and inhibiting others. Such characteristics are bound to make these students vulnerable to social and emotional problems and bring them into conflict with their environment, especially when schools are not conducive. Therefore, they become subjected to unique stressors and are vulnerable to difficulties with emotional, intellectual and social adjustment (Tuckman, 1998), which may result in risks of failure due to: untrained or under trained staff; inadequate educational opportunities and facilities; the myth that gifted learners have fewer problems than others and thus lack of extra attention from the teachers (Rockwell, 2010). Other factors which include ethnicity value on education, ethnic sub culture, social economic status, perception of the subject, parental education and occupation, parenting styles, social stratification and family size affects the overall performance of such individuals (Ngigi & Ndurumo, 2007).

Gifted and Talented Education (2006) stated that United States have schools tailored towards developing the student's talent. The White Paper (2005) set out Britain's ambition that every student- gifted and talented, struggling or average should have the right of personalized support to reach the limits of their capacity. Recognizing the unique needs of students with high potential in U.S.A, classes have been developed to help students develop their cognitive (thinking) such as logical reasoning, problem-solving critical thinking and creative thinking. Sampath, Roullet, Scott, and Miller (1999) noted that there are many facets of giftedness and no single child demonstrates all of them.

Based on statistics provided by Ndurumo (1993) which pegs the proportion of gifted learners at 3-5% of the students population in Kenya, it could be possible that in Kenya where the gross enrollment was 7 million in Primary school and 1.2 million in secondary schools by the year 2008. There are approximately 210,000 to 350,000 and 42,000 to 60,000 gifted learners in primary and secondary schools respectively in the year 2008. To maximize their potential, a well-designed system of education, which is adequate, is a necessary condition. This necessitates the need for quality not quantity education for the gifted and talented since the backbone of any development desired is a sound education systems. There is need for a conducive environment for the gifted and talented persons to think and reason. However, the Kenyan education system lacks such provisions for the academically talented hence their gifts may lie either unnoticed or under-utilized.

Ndurumo (1993) noted that the problem with giftedness in Kenya is that it has always been seen in a cultural, social, political and educational context. This is true of all the three areas of research study namely, highly gifted, quasi giftedness and pseudo giftedness. Therefore, a research work is important for identification, classification as well as intervention measures to be taken for successful performance of gifts and talents amongst Kenyan secondary schools learners. Also it is not clear as to whether these individuals are being identified in schools and being provided with appropriate curriculum and other academic opportunities that advance their academic giftedness.

According to Ngigi and Ndurumo (2007), constraints to academic performance of gifted students' are numerous and need to be investigated. There is a general consensus that there is need for intellectual ability; creative and productive thinking, and specific academic aptitude; through provision of differentiated curriculum, motivation and encouragement, and provision of adequate and ideal facilities as well as opportunities to advance the gifted students. Assessment and detection of the giftedness as well as the encouragement of performance by means of challenge and guidance is very necessary, research work is thus crucial in this area.

The academically talented students in Kenya are placed in the mainstream with the rest of the students, which makes it difficult to recognize their needs hence making it impossible for them to exercise their academic potential to the full. Bogonko (1992) stated that:

1.2 Statement of the Problem

The gifted students sometimes become under- achievers despite the fact that by nature they are highly inquisitive beings who normally should become "high achievers" as a result of their curiosity, experimentation, discoveries, assimilation, organization and use of information (Kalnes & John, 1991; Mowst, 2009). Underperformance of gifted students has been the subject of much inquiry and debate (Dowdall & Colangelo, 1982; Reis & McCoach, 2000, Whitmore, 2001; Whytte, 2010). Previous studies have established that giftedness learners are multi-dimensional, with high academic aptitude and intelligence being only one factor. Moon, Kelly and Felheusen (1997) findings on programming for the gifted and talented revealed that high prevalence of factors constraining academic performance for the gifted and talented significantly affecting the performance of such students and

ultimately the quality of education imparted to these students.

The research on the relationship between these factors and school programming for the gifted and talented students in Kenya is scanty (Koech Report, 1999). The body of literature on instruction and curriculum of gifted education in Kenya is limited and scarce (Ngigi & Ndurumo, 2007). Yet, it is the gifted and talented who are needed to steer Kenya compete in business, sports, science and technology. Therefore, there is a need for gifted learners need to be identified, educated and ultimately assume leadership roles. Unfortunately, existing programmes are inadequate and limited in form of quality teaching and consistent opportunities that enable the gifted and talented students to maximize their potential. Moreover, most of the existing literature is western based thus creating a necessity to bring out local based studies for local knowledge in Kenya.

A previous study on the constraints to performance of gifted and talented students in Kenyan secondary schools has carried out in Nairobi (Ngigi, 2007). Though it is related to this study, generalization of the findings to the entire republic is difficult because purposive sampling was used rather than random sampling to sample the respondents to the study. To the researcher's knowledge no study has been conducted in Uasin Gishu District on the academic challenges of the gifted students despite the glaring facts that the district has gifted learners.

In line with the absence of well defined research on the gifted students in many schools of Kenya, that the study set to investigate the perception of gifted students of selected academic factors on academic performance in secondary schools, Uasin Gishu District of Kenya.

1.3 Purpose of the Study

The purpose of this study was to explore the perception of gifted students on compulsory subjects on their academic performance in secondary schools, Uasin Gishu County in Kenya.

1.3.1 Justification of the Study

Ndurumo (1993) states that identifying giftedness can be a difficult task, primarily because of the many forms that giftedness can take. In line with this notion, it has been difficult to identify gifted learners in many schools in Kenya generally and in Uasin Gishu District in particular. This study will attempt to shade light on the problem of identifying the gifted learners in secondary schools in Uasin Gishu district.

It is also crucial for administrators, teachers and others within the school environment dealing with gifted and talented students to know what to expect of them. Concerning classroom management, it is essential for teachers to be aware that gifted learners are always active participants, give independent input, get involved in discussion, and are not grade or examination conscious as their counterparts Shea and Baurer (2004). Furthermore, others are economically, culturally or socially disadvantaged and may not maximize their potential. Therefore, early identification, systematic assessment, parental involvement, mentoring, community involvement, and counselling is of great importance. However, this is only possible if factors challenging educational programming for gifted and talented among students in an existing education system are identified and documented.

1.4 Theoretical Framework

This study was based on Piaget's theory of cognitive development and Steinberg's Pentagonal implicit theory of giftedness. The tenets of these theories stress the curiosity, creativity and discovery that a student experiences at certain stages of development and the environmental conditions as well as characteristics necessary for one to be considered gifted of which the study is interested in. Piaget's (1964) theory of cognitive development, explains how children, adolescents and adults think. According to him there are four stages of cognitive development but this study is interested in the last stage namely, Formal operation stage, which is from 12 years of age onwards. It is the highest level of thinking thus of interest to this study because most of the students at this age bracket are at secondary school level.

These individuals are able to reason in a more abstract, idealistic and logical ways. They begin to think more as scientists, devising plans to solve problems and systematically testing solutions. This is only possible if a conducive environment is provided for successful transition from concrete operation to formal operational. The level and breadth at which the individual may reason depends on many factors, including the technological development of the location or country; infrastructure; exposure to other cultures through visits, television and magazine, and indeed the level of education (Ndurumo, 1993).

According to Santrock (2002) there are four main types of reasoning characteristics of formal operations. These are prepositional, proportional, hypothetical – deductive and combinational/reasoning. Basically two essential processes, assimilation and accommodation are used to incorporate new information into lasting mental structures.

The educational implication of the theory, which the study sought to incorporate is the view of the learner as someone who is not only an active discoverer, but an inventor and a problem solver. Piaget (1964) said that the goal of education was to mould people with ability to create, invent and discover than people who

constantly reflects ideas of others, this is what gifted learners are capable of. Based on this premise the study shall compare the reasoning of gifted learners and their peers (normal students) so as to identify them for placement.

Sternberg (1999) states that intelligence occur in three forms: analytical, creative and practical. Analytical intelligence involves the ability to analyze, judge, evaluate, compare and contrast. Creative intelligence consists of the ability to create, design, invent, originate, and imagine. Practical intelligence focuses on the ability to use, apply, implement, and put into practice.

Sternberg's Pentagonal Implicit Theory of Giftedness aims at capturing and synthesizing people's attention about what makes an individual gifted and talented. According to the theory an individual needs to meet the following five criteria to be considered gifted; the excellence criterion, rarity criterion; productivity criterion, demonstrability criterion and value criterion. These five criteria are important in both identification and effective programming for the gifted and talented.

1.4(a) The Excellence Criterion

This states that the gifted individuals are extremely good in one or several areas. Some show a high ability in a particular area at a very young age, prior to or at the beginning of formal training (Howe, 2000). To be considered gifted, an individual has to be extremely good at something when compared to others of the same age.

1.4(b) The Rarity Criterion

According to Howe (2000) for individuals to be considered gifted and talented, they must exhibit a high level of a trait or attribute that is rare amongst their peers. The rarity and excellence criteria enable an individual to perform highly in a rare field or area.

1.10.3 The Productivity Criterion

States that area(s) which the individual is evaluated as superior must potentially lead to productivity (Sternberg, 1993) However, it is possible for an individual to be considered gifted without necessarily being productive. This is because learners are traditionally judged more on potential than on actual productivity. However, productivity is age- related, as people get older they tend to turn potentials into actual productivity.

1.4(c) The Demonstrability Criterion

It states that dimension(s) along which the individual is considered gifted or superior must be demonstrable through one or more tests that are valid assessments. This demonstration of possession of special abilities or performances, leads one to being judged as gifted and talented (Sternberg, 1993). Poor scores in all measures used in assessment, will not be evaluated as gifted. However, the instruments of assessment must be valid and reliable – must measure what is suppose to measure (Sternberg, 1993). This explains why traditional labeling of giftedness does not match modern measures of the same.

1.5(d) The Value Criterion

This states that for individuals to be labeled gifted, they must show superior performance in dimensions that are valued by their society. For instance an individual who is highly productive in a criminal manner is not considered gifted, because his area of productivity is not valued by the society. Therefore, the labeling of giftedness varies from culture depending on what they value most.

According to this study, implication of the theory to educational practice is that for the learners to be identified as gifted and talented, they must meet the criteria above with availability of necessary resources and special services provided to them. They must excel in the specific domain or domains. The theory also presupposes that the school values fast learning, hence acceleration educational program will make sense. This theory was used in the identification criteria of the academically gifted and talented students. It also gives a highlight of the meaning of giftedness in addition to how other psychologists have defined them.

2.0 DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

2.1 Perception of the Gifted Learners of the compulsory subjects on Academic Performance

The objective of this study was to investigate the perception of gifted students on the effects of compulsory subjects on academic performance. The research was: Do gifted students perceive the compulsory subjects as a booster of a hindrance to academic performance? The study sought from the students their perception on whether or not compulsory subjects influenced their academic performance. The questionnaire (see Appendix iii, part ii) was used to gauge the gifted student's perception of the compulsory subjects on their academic performance.

This data has been presented in Table 4.1 From the findings it was evident that 37%(39) of the respondents did not perceive that the contents of these subjects to be relevant. While 34% perceived that the syllabus was adequately covered. A greater majority 42% did not perceive assessment methods as being adequate compared to 9% who were of the perception that these subjects were interesting and relevant to them. These results indicate that most of the gifted learners did not perceive the compulsory subjects as being helpful

to them in as far as boosting of their academic performance was concerned. 39% perceived the target grades set for the subjects as being a hindrance to the hard work. These implies that they were not exercising their potentials to the maximum. The results indicate that the necessary learning materials were not available to the students. These include teaching resources where 37% of the students pointed their in availability.

Further findings indicate that 32% of the respondents perceived that the subjects were easy to understand. This implied that the contents of the subjects were not challenging enough for their level of intelligence hence finding them boring. As indicated in figure 1.1

In addition from the findings it was evident that 41% (43) of the respondents which is a greater majority perceived that the compulsory subjects were not favourable for their level of intelligence. Most likely they were too simple for their level of intelligence thus impacting negatively on their performance.

3.0 Discussions, Conclusions and Recommendations

3.1 Perception of Gifted Students of the effects of Compulsory subjects on academic performance.

The first objective of the study was to investigate the perception of gifted students of the effects of compulsory subjects on academic performance. The research question was: Do gifted students perceive compulsory subjects as a booster or a hindrance to academic performance? The findings of the research indicate that the content of compulsory subjects are theoretical rather than practical. A majority of students 37% (39) respondent on (see Appendix III) the item concerning the nature of the content of the subject as being theoretical rather than practical. This form of the content makes the learning process boring for this group of students because they seem to enjoy dealing with things practically rather than being passive in the learning process. The study further established that a majority 41% (43) of these students were not for the compulsory subjects. These would perhaps be linked with the fact that they found the contents boring rather than interesting since they were theoretical and shallow rather than extensive and deep in contents these findings concur with Reis (1993) assertion that theoretical content makes gifted students handicapped because they naturally enjoy extensive and practical subjects. They derive a lot of pleasure in working with their hands as well as reading extensively. However, (Simonton, 1997) argued that the gifted learners are categorised into two groups. The first group are practical oriented and the second group are theoretical oriented. This second group exhibit extraordinary ability in writing and related areas. They enjoy participation in essay writing, drama and poetry recitation. This therefore, is contrary to the research findings.

The study further established that 34% (36) which is a majority of gifted students indicated that there was inadequacy of learning resources and facilities hence impacting negatively on their performance. The research established that most schools lacked the necessary learning resources and facilities. These findings agree with assertion by Wadsworth (1978), who noted that for effective implementation of the compulsory curriculum (Subjects), availability of materials and other resources are necessary; these resources include physical facilities found in schools such as enough and spacious classrooms, laboratories and libraries as well as teaching and learning materials such as references and class text books, computers among others, which contributes to the process of implementation of the various programmes. Thus for the gifted learners to maximise their potential and perform well academically the need to provide such materials and facilities is with no doubt a necessity.

For effective learning to be ascertained in any learning institution, the availability of these resources and facilities is very vital. When asked whether they perceived the compulsory subjects as being interesting or not, the study established that a majority of these students 40% (42) did not like these subjects. They complained that the content was too shallow, simple and easy to understand hence making them boring. This implies that these students would have been more at home if the subjects were vast and complex in content. The reason for this is that these students demonstrate a precocious ability to think abstractly, have an extreme need for constant stimulation, ability to learn and process complex information very rapidly; and need to explore subjects in depths (Davidson, 2003). This observation concurs with the present research findings that gifted learners enjoy subjects with deep and complex contents so as to maximise their advanced intellectual ability.

The provision would have been met if the education sector in Kenya would have adapted acceleration approach. This is where the gifted learner would have been exposed to more advanced content at more advanced level through skipping of classes and for entrance into these classes one requires outstanding academic performance in specific subject matters. (Sandler, 2006). In this approach, the teacher monitor students' progress, play tutorial roles, provide feedback and reward learners as they move through the curriculum at their own pace (Kerry, 2006)

The study findings indicated that academic clubs were rare in most secondary schools. The study established indicated that only a very small percentage yet important group of gifted students 17% (17) admitted to the presence of these clubs. Academic clubs encourages or enhances learning process and application of practical skills. The absence of these important clubs derailed learning. This findings concur the assertion that creative individuals have ideational fluency, which is the ability to produce many ideas or alternatives.

Originality, which is the ability to arrive at a new and unique thing (Esyenk, 1995). These unique talents and skills could only be exploited and put into constructive use if only such academic clubs were present in schools. However the study observed that most schools had them in writing but they were missing in action. They were only made active during the contests and thereafter became inactive until the next season for such competitions. Esyenk (1995)

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Table 4.1. Perception of the gifted students of the effects of compulsory subjects on Academic Performance

Statement	SD [1]	D [2]	U [3]	A [4]	SA [5]	Totals
The content of the subjects are practical not theoretical thus boosting performance.	37%	30%	15%	12%	6%	100%
The syllabus was adequately taught hence boosting performance	34%	22%	18%	17%	9%	100%
The subjects contents were easy to understand hence enhancing my performance.	9%	12%	18%	29%	32%	100%
Teaching resources were adequate hence boosting my performance.	34%	20%	18%	15%	13%	100%
The subjects were problem solving oriented that is applicable to life situations.	37%	29%	21%	9%	4%	100%
The subjects were interesting/motivating hence boosting my performance.	40%	32%	10%	13%	9%	100%
CATs and exams are adequate hence boosting my performance.	42%	27%	15%	12%	4%	100%
I prefer the methods of assessment in form of practical	44%	22%	10%	18%	6%	100%
I like all the subjects taught thus performing well in them.	41%	25%	12%	10%	12%	100%
Academic clubs are present and active thus boosting m performance.	24%	25%	12%	22%	17%	100%
Academic trips are frequent in the school thus boosting my performance	38%	25%	9%	23%	5%	100%
In most subjects, students are encouraged to gather more information on their own	36%	32%	14%	10%	8%	100%
The targets set for each compulsory subject makes me work hard to attain them.	39%	34%	20%	7%	0%	100%
Subjects focuses on substantive content to ensure relevance to everyone	37%	30%	14%	10%	9%	100%

Key: Strongly Disagree D = Disagree U = Not sure A = Agree SA = Strongly Agree

Figure 1.1 Subject content was easy to understand

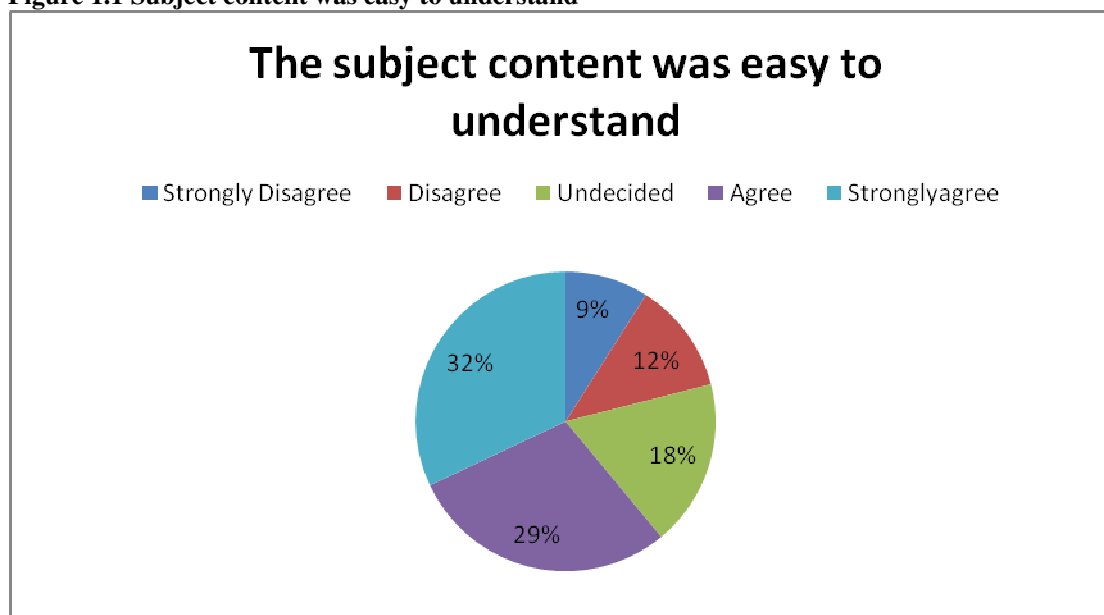
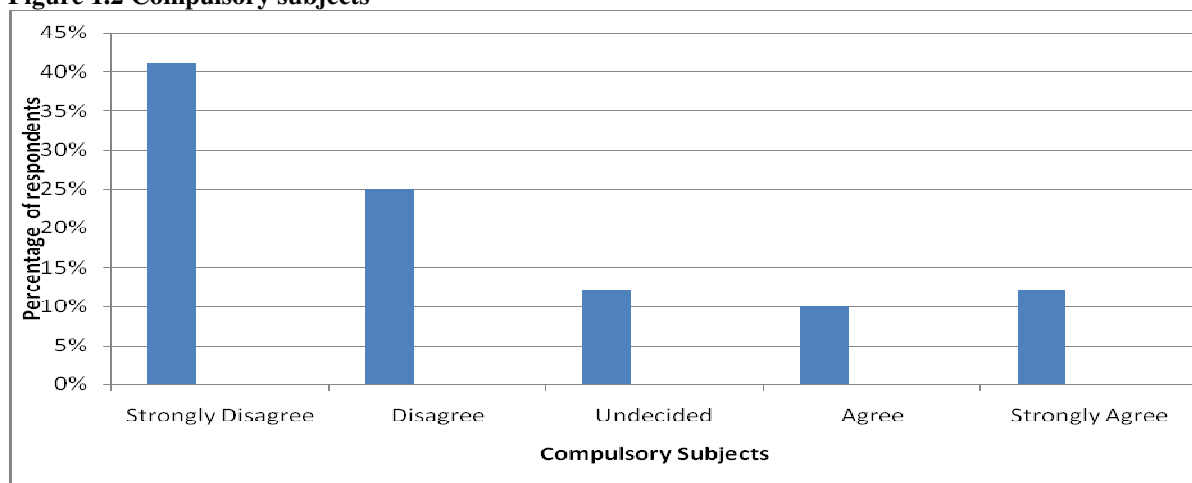


Figure 1.2 Compulsory subjects



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