Educating Learners Identified by Teachers as Gifted and Talented in Primary Schools in Wareng District, Uasin Gishu County, Kenya

Mary Cheptanui Sambu
Department of Educational Psychology
Moi University, Eldoret

Jillo Sharamo Kalla
Moi University, Eldoret
and

Sera Wanja Njue
Moi University, Eldoret

Abstract

Learners who are gifted and talented have extra ordinary abilities and interests that require a differentiated curriculum. Kenya's education system does not have a specialized curriculum in schools for them. The main purpose of the study was to establish which instructional strategies teachers use to educate learners who are gifted and talented in Primary schools in Wareng district, UasinGishu County, Kenya. Wareng district was purposively selected for the study because of its good performance in academics and sporting activities. The study adopted a mixed method approachand a descriptive survey research design.Ten schools werepurposively sampled using criteria of performance status. Ten headteachers were purposively picked and ninety nine teachers were selected using simple random sampling technique to get a sample size of one hundred respondents. Qualitative and quantitative data were collected using interview guides and questionnaires for headteachers and teachers respectively. Descriptive statistics using Statistical Package for Social Sciences (SPSS) programme were used to analyse quantitative data and presented in graphs, pie-charts, frequency tables and percentages while qualitative data were analysed according to the themes of the study. Both data were then triangulated to draw conclusions on the findings of the study. The study revealed that majority of teachers were conversant with various strategies of teaching the gifted and talented learners, however, they preferred using only one strategy that is, giving extra work, indicating a limitation on teacher's competence to meet the diverse needs of gifted and talented learners.

Keywords: Gifted and Talented, Curriculum, Differentiation, Education, Strategies, Kenya

1.0 Introduction

Gifted and talented learners are identified as those learners with outstanding ability and are capable of high performance. They require differentiated educational programs and services beyond those normally provided by the regular school programs (Heward, 2006).The study of giftedness has been marked by an evolution in definitions, programs and services, and professional interest (Friend, 2008).Societal interest in extraordinary ability has existed for centuries (Jolly, 2005). In the United States, it was the work of Lewis Terman and his colleagues over a period of approximately forty years (Terman & Oden, 1959) that laid the groundwork for practical efforts in schools to identify and nurture students who are gifted.In 1959, the Soviet Union successfully launched the space capsule Sputnik. The fact that the United Sates had not been first in achieving space flight was perceived by many Americans as an embarrassing educational failure (Friend, 2008), especially to those in the scientific, engineering, and mathematical fields. As a results, substantial research and development efforts were launched in the early 1960s to improve educational services for students who were gifted (Bish, 1961) in order to nurture their talents. A flurry of publications offered guidance to teachers on how to teach and counsel these students, but education for the gifted remained optional in public schools.In the 1990s, US federal support for gifted education emphasized serving educationally disadvantaged, (Castellano & Diaz, 2002) and US Department of Education established the National Research Center on the Gifted and Talented in 1990, allowing a consortium of universities to address research needs in this field (Swanson, 2002).

In order to meet the needs of students who are gifted and talented, several-research based practices are recommended (Van Tassel-Baska, 2003, 2004). These include curriculum compacting acceleration and enrichment and specific interventions to motivate learners from diverse groups. Some students who are gifted and talented often are already familiar with the concepts being taught in their classrooms, or they can master the concepts in a fraction of the time that it takes their classmates. If these students' needs are not addressed, they can become frustrated (Friend, 2008).

Currently, most Africans countries have not come up with any type of educational program for gifted and talented students (Wallace & Adams, 1993). Special Needs Education program in Kenya does not provide a specialized curriculum in schools for these learners who are gifted and talented as is the case in the developed countries (Republic ofKenya, 2003, 2009). However, the Kenya Government in particular and the public in general have clearly expressed concern to establish educational programs and other related services for the gifted and talented (Kamau, 2005).

1.1Educating Gifted and Talented Students

Students who are gifted and talented receive their education in a variety of settings. No data is available to indicate the amount of time they spend in a particular setting, and decisions about placement often depend on the breadth and level of a student's abilities as well as on the program options generally available based on local and state policies (Friend, 2008).

1.1.1 Differentiating Curriculum: Acceleration and Enrichment

Differentiation:Differentiation for students, who are gifted, as for all students, refers to an instructional approach that assumes that students need many different avenues to reach their learning potential (Tomlinson, 2001). It can address the content students are learning, the assessment tools through which learning is measured, the tasks students complete, and the instructional strategies employed (Tomlinson, Kaplan, Renzulli, Purcell, Leppien, & Burns, 2002).

Curriculum design is one major component of differentiation for students who are gifted (Maker &Schiever, 2005). Related to curriculum design is materials selection. In classrooms, serving these students, materials should go beyond a single textbook and also include advanced readings that present interesting and challenging ideas, treat knowledge as tentative and open ended, and provide a conceptual depth that allows students to make interdisciplinary connections (Friend, 2008).

Acceleration: Acceleration or advancing learners through levels of curriculum and programs according to individual achievement and performance, assumes that different students of the same age are at different levels of learning within and across learning areas (Colangelo & Assouline, 2004). Acceleration occurs in many ways. For some students, acceleration means allowing them to begin school before the age established through district/country policies. For other students, acceleration might mean moving through two grade levels in single year, skipping a grade level altogether, or entering high school or even college before the age typically permitted (Friend, 2008).

Another type of acceleration is content based. That is, some students may need to advance quickly in Mathematics or English but not in other subject areas. This practice, referred to as curriculum flexibility, makes learning options responsive to learners needs and contextual demands by offering content-based acceleration practices at all levels of schooling and in all subject areas. For learners who are gifted with precocious abilities in the verbal, scientific, and artistic areas, such flexibility is crucial (Friend, 2008; Heward, 2006; Tumbull, Turnbull, &Wehmeyer, 2007).

Another high school option is dual enrollment courses in which students take courses at local community colleges or universities or arrangements are made for those courses to be offered on the high school campus. Students earn college credit that then counts towards an undergraduate degree (Friend, 2008). One additional acceleration option found primarily in high school is the use of telecommunications. Advanced courses are made available through interactive video or similar mechanisms. Technology can offer options for independent study with University faculty and research project work conducted globally.

Enrichment: Another instructional approach to meeting the needs of students who are gifted and talented is enrichment, the extension of regular curriculum with different examples and associations that build complex ideas (Freeman, 2000).

Enrichment can encourage student creativity and the development of critical-thinking skills, and it can be an appropriate substitute for materials that is too basic for some students' skill levels. Of course, if enrichment is practiced only for students considered gifted and not as a part of class wide differentiation, it can lead to student isolation and feelings of being differentiated (Friend, 2008; Heward, 2006; Sharma, 2006).

1.1.2 Lesson Differentiation in the Regular Classroom

Curriculum Compacting: Some students who are gifted and talented often already are familiar with the concepts being taught in their classmates. If these students' needs are not addressed, they can become frustrated (Friend, 2008). A solution to this problem is curriculum compacting, in which the goals of an instructional unit are identified, student mastery of all or part of the goals is documented, and alternative instruction is provided as appropriate (Reis & Renzulli, 2004). Curriculum compacting involves compressing the instructional content and materials so that academically able students have more time to work on more challenging materials (Heward, 2006). Compacting often makes it possible for students to complete a single semester (Stamps, 2004). One study showed that when teachers compact the curriculum, gifted and talented students scored significantly higher on tests of mathematics and science concepts after the content was altered (Reis, 1995). For curriculum compacting to be effective, teachers must have a substantial understanding of the curricular content and not only condense the material but also modify its presentation, create more meaningful instruction, and evaluate that instruction for individual students (Heward, 2006).

Tiered lessons: A tiered lesson provides different extensions of the same basic lesson for groups of students of differing abilities (Heward, 2006). For example, after the whole class is exposed to a basic lesson on a poem, three groups of students might work on follow-up activities or assignments of basic, middle, and high difficulty.
Two other strategies that provide curriculum adaptations or augmentations involve the use of curriculum extension techniques and the application of cognitive taxonomies to the design of activity, lesson, and unit plans. Curriculum extension refers to efforts to expand the breadth of the coverage of a given topic. Students who are gifted and talented learn content quicker than the peers do; they do not need as much repetition, so their curriculum extension activities should not simply repeat the same task but should challenge them at a higher level (Tumbull et al., 2007).

Teachers can take their students to a higher level by using cognitive taxonomies. Taxonomy is an ordered list or classification of something. Cognitive taxonomies are ordered lists of cognitive skills or activities that can be used to differentiate expectations for students. The most familiar taxonomy is the one developed by Bloom and associates (1956). Bloom's taxonomy categorizes the cognitive skills that students use when achieving their learning goals. As a student ascends Bloom's taxonomy, he or she faces increasingly cognitive demands (Heward, 2006; Tumbull et al., 2007). Teachers can differentiate what they expect from students by designing lesson and activity objectives that range from less to more complex levels of interaction with materials. They also can extend the curriculum for gifted students by having their students engage in activities that move up the taxonomy, from applying information and knowledge to solve novel problems to synthesizing information to create new patterns or structures. These activities will teach students the skills they need to be more creative and to develop effective thinking skills (Tumbullet al., 2007).

1.1.3 Curriculum Differentiation outside the Classroom

Internships: For some students with outstanding talents, the activities that take place outside the classroom may be more important and rewarding than many of the activities within it. The teachers should always attempt to connect class work with human and physical resources available in the community (Heward, 2006). These activities include,
Internships and mentor programs. These opportunities allow students with exceptional talents to be exposed to one of the most powerful and proven educational strategies-modeling, practice, direct feedback and reinforcement of important behaviors-within a real-world setting. A good mentor provides students with exceptional talents opportunities to develop their conceptual and performance skills in a real-world setting (Heward, 2006).

Special Courses: According to Tumbull et al (2007) specialized courses and workshops may be offered in many communities, arts, and cultural venues, museums, and recreation centers. These courses which may or may not award high school or college continuing education credits, form a rich variety of opportunities for students to encounter mentors, new friends, and expansive concepts that may not be available in the confines of the school curriculum.

Junior Great Books: This is a highly structured educational program in which students read selections from a number of areas, including classics, philosophy, fiction, and poetry, and then discuss their meaning with teachers (Heward, 2006).

Summer Programs: Many summer programs are available to gifted and talented students that offer educational experiences as diverse as environmental studies. Summer programs are usually relatively brief but intense learning experiences that concentrate on specific areas of intellectual, artistic, or cultural affairs (Friend, 2008).

International Experiences: Numerous international programs offer academic credits for study at participating educational agencies around the world (Heward, 2006). They are excellent opportunities for students to develop global international skills with academically rigorous studies.

1.1.4 Instructional Models and Methods

The School Wide Enrichment Model: Renzulli and colleagues developed and implemented an enrichment model known as the school wide enrichment model (Renzulli & Reis, 2003). Its major goal is to promote challenging, high-end learning across a range of school types, levels, and demographic differences by creating services that can be integrated across the general education curriculum to assist all students, not just those who are gifted. This model considers schools as the places for talents development and provide opportunities which are challenging and enjoyable to the gifted. There are three types of enrichment approaches under the model (Heward, 2006; Sharma, 2006; Tumbull, et al., 2007). Type (1) enrichment exposes the students to a wide variety of topics, disciplines, occupations, hobbies, persons, places, and events that ordinarily would not be included in the general education curriculum. For example, Type (1) experiences may involve community speakers, demonstrations, performances, multimedia presentations, or other illustrative formats. Type (2) enrichment focuses on resources that promote creative thinking, problem solving, and critical-thinking skills. This kind of enrichment consists of how-to-learn skills, including written, oral, and visual communication skills. Other Type (2) skills are specific to a particular student's talents and interests. When a student becomes interested in pursuing a self-selected area of interest and commits the time necessary for this endeavour, Type (3) enrichment occurs. It consists of advanced-level studies with greater depth and complexity.

Maker's Active Problem Solver Model: (Maker, 2001; Maker & Nielson, 1996) proposes a process by which the key elements of content, process, products, and the environment of a child's learning situation can be modified.
Problem Based Learning Model: Problem-based learning (PBL) challenges students to "learn to learn" while working cooperatively in groups to seek solutions to real – world problems. The problems are used to engage students' curiosity and initiate learning of subject matter (Heward, 2006).The students explore the problem, gather research data about it, and design interventions to solve it. The instructional techniques needed by the teacher include high-level questioning skills, listening skills, conferencing skills, and tutoring in order to guide the process (Friend, 2008). PBL also incorporates flexible team grouping and whole-class discussion. Problem resolution usually involves student-initiated projects and presentations, guided by the teacher.

1.1.5 Ability Grouping

Ability and Performance Group: Strong research evidence supports effectiveness of ability grouping for gifted students in accelerated classes, enrichment programs, advanced placement programs and others (Heward,2006). Ability and performance grouping has been used extensively in programs for musically and artistically gifted students, and for athletically talented students with little argument. Grouping allows for more appropriate, rapid, and advanced instruction, which matches the rapidly developing skills and capabilities of gifted students (Friend, 2008).

XYZ Grouping or Tracking: XYZ grouping places students into different levels of curriculum requirements or offerings according to high, middle, and low ability based on test scores or other indicators or predictors of performance (Heward, 2006).

Within Class Grouping: Within-class grouping is part of the concept of universal design for learning (UDL), and it can be effective at all levels of schooling and for students with many types of special needs. Students within the same heterogeneous class are grouped for instruction according to their achievement. The most common form of within-class grouping is regrouping by subject, students are generally grouped into three or more levels, and they study materials from different textbooks at different levels (Friend, 2008; Heward, 2006).

Another form of within-class grouping is cluster grouping, in which several talented students receive specialized instruction from a teacher who treats them as talented. Four to six talented students should make up a cluster. Cluster grouping can be used effectively at all grade levels and in all subject areas. It can be especially effective when there are not enough students to form an advanced placement section for a particular subject. Cluster grouping is also a welcome option in rural settings or wherever small numbers of gifted students make appropriate accommodations difficult (Heward, 2006).

Cross-Grade grouping: Cross grade grouping was first tried in the Joplin Plan in Missouri in the 1950's. In this model, students in the fourth, fifth, and sixth grades were broken into nine reading groups, ranging from the second-grade to ninth-grade levels. Students went to reading class at the same hour but to the level of instruction at which they were achieving (Heward, 2006). Other types of cross grade grouping are ability-grouped class assignment, ability grouping for selected subjects, non-graded plans, and special class. Cross-grade grouping is an effective means of delivering differentiated instruction, and achievement gains similar to those of within-grade grouping have been found (Lloyd, 1999). Still other types of grouping are peer tutoring dyads, cooperative grouping for like-ability students, and mixed-ability cooperative grouping (Rogers, 2002).

1.1.6 Specific Interventions for Diverse Populations

General interventions that have been documented as successful with learners identified as gifted and economically disadvantaged include early attention to needs, family involvement, use of effective instructional and leadership strategies in the school, experiential learning approaches, encouragement of self-expression, community involvement, counselling efforts, and building on strengths (Moore, Ford, & Milner, 2005).

1.2 Opinions of Teachers for Responsive Teaching

It is known, that learners who are talented and gifted perform at higher levels when they receive instruction that is responsive. Otherwise, when they are not understood for what they are, they become problematic to their parents, educators, and society as a whole (Kerr&Colangelo, 1988). Gay (2002, p. 106) defined culturally responsive teaching as:

> "Using the cultural; characteristics, experiences, and perspectives of ethnically diverse students, as conduits for teaching them more effectively. It is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more personally meaningful, have higher interest appeal, and are learned more easily and thoroughly."

Academically, students with gifts and talents have unusual cognitive and information processing abilities. They are usually early readers often ahead of their age-mates as reflected by their academic tasks. These learners are achievement-oriented and are easily bored if they are not given work that they consider challenging (Hallahan & Kauffman, 2003). Sometimes they daydream and exhibit high levels of energy that may get them in trouble (Roberts, 2003).

Teachers and service providers who lack a repertoire of practical ideas, strategies and techniques within a laden paradigm are inept in their interpretation, of the affective, social, emotional, psychological, and motivational needs of students with gifts and talents (Obiakor, 2007). In addition, they have inappropriate attitudes and instruct learners in ways that are incongruent with evidence based on effective teaching practices that optimize the ability of gifted students to develop their potential and achieve success.

According to Obiakor (2007) a number of factors can enhance giftedness. Those factors include recognizing indicators of giftedness and accomplishments of students from cultural perspectives, creating stimulating and nurturing learning environments; matching teaching – learning styles; involving students in class projects that have purpose, direction, meaning, and specific outcomes; using meaningful, challenging and conceptually rich embedded differentiated curricula. Also, a number of factors can inhibit giftedness. Among these factors are boredom; poor teaching, limited opportunities to learn, inappropriate curricula; family disorganization; abuse, neglect, and drugs; teachers' attitudes; and school climates (Daniels, 2001; 2003). Experimental deprivation during childhood, a lack of cognitive stimulation, limited language development, learning style differences and parent expectations, peer pressure, a lack of parental involvement, strained or difficult relationships with parents or guardians, cultural differences, racial biases, and lack of opportunities are also potential contributors to inhibition.

Successful teaching of students, including those gifted and talented, requires instruction by teachers who not only have a knowledge base of diverse cultures and his particularities of specific ethnic groups, but who also use culturally responsive pedagogy (Gay, 2002). Many scholars and educators agree that responsive teaching styles positively influence the way students learn. Successful teaching of learners with gifts and talents also requires the establishment of responsive environments. Ford and Trotman (2001) identified several characteristics of responsive classrooms. In their view, responsive classrooms have relevant pedagogy, equity pedagogy, a holistic teaching philosophy, a communal philosophy, a respect for students primary language, congruent instructional practices, sensitive assessment, student – family – teacher relationships, and teacher diversity. Thus, responsive teachers place students at the center of teaching and learning. They feel obligated and responsible for their students' cognitive, academic, and affective well – being – and they employ teaching methods tailored towards improving the intellectual, social, emotional, political, and cultural growth of their students (Ladson-Billings, 1995).

1.3 Educational Placement Alternatives

Several placement options exist in USA, that meet the needs of gifted and talented children. These include special schools, special classes, resource room, and homeschooling (Friend, 2008; Heward, 2006).

1.3.1 Special Schools

A few residential public high schools have been developed for students who are gifted (Coleman, 2005). Other specialized day schools, public and private, have emerged in response to the needs of these learners and the doctrine of parental choice. These schools, usually available only to the most highly gifted students, serve as immersion programs. They enable students to explore their areas of interest, develop their own skills, and accomplish their goals in a strongly supportive environment (Friend, 2008). In a special school gifted students receive differentiated instruction with a specially trained staff.

1.3.2 Special Classes

Gifted students are grouped together during most of the class time and are instructed by a specially trained staff.

1.3.3 Resource Room-Pull Out

Gifted students leave the classroom for a short period of time to receive instruction from a specially trained teacher.

1.3.4 Home Schooling

One additional emerging educational option for students who are gifted and talented is homeschooling. In Williamsburg, Virginia, more than one hundred families' home school their children identified as gifted. This option is one a parent may select when they have strong concerns the quality and availability of options in local schooling or when they have a child who is so gifted or talented that attention to that child's abilities makes traditional schooling impossible (Friend, 2008).

2.0 Study Methodology

The study was conducted in Wareng district in Uasin Gishu County of Kenya. This district is located in North-West part of Kenya, and is 981.9 Km^2 in size. The district performs well in academics and sporting activities at the primary school level. The study adopted a mixed method approach and a descriptive survey research design was used.Simple random sampling was used to determine the 90 teachers who participated in the study, while purposive sampling was used in the case of 10 head teachers getting a total of 100 respondents.

The main research instruments were questionnaires and interview schedules. The teachers filled in the questionnaire, while the headteachers were interviewed. Both the quantitative and qualitative data were analyzed. Statistical Package for Social Sciences (SPSS) was used to analyze quantitative data, while qualitative data were analyzed based on the study themes.

3.0 Data Analysis, Results and Discussion

3.1 Demographic Characteristics

A total of 93 out of 100 respondents participated in the study. Amongst the teachers, the return rate was 89.2% (90 had been sampled, and 83 completed the questionnaire).

In the case of head teachers, the return rate was 100%. Amongst the 83 teachers, 53% of these were female. However, there were disparities across teachers and head teachers as is evident in figure 3.1 below. While 55% of the teachers who participated in the study were female, only 30% of the head teachers were female, showing that gender balance appears to be lacking in schools' administration systems.

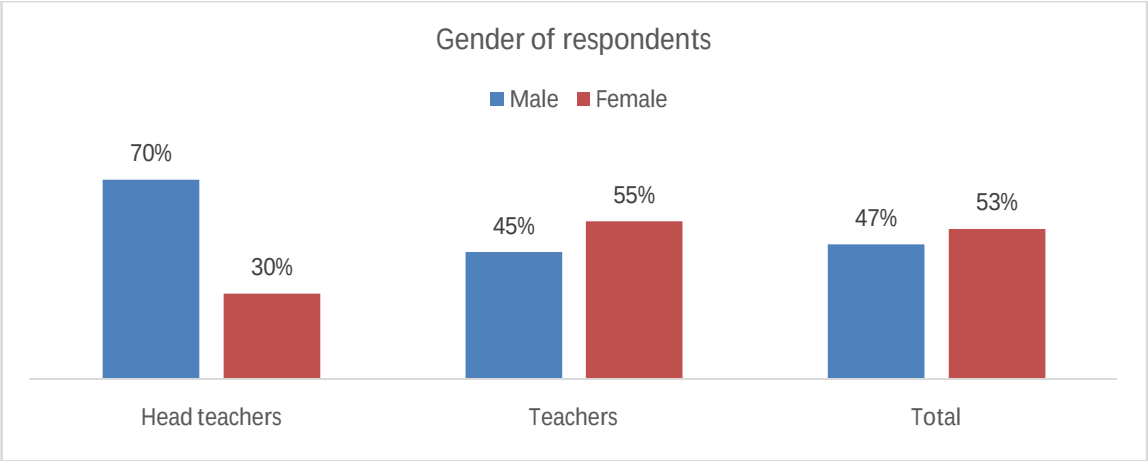

Figure 3: 1 Gender of Respondents

Fifty percent of the head teachers had a University degree, compared to only 23% of the teachers. Slightly over 40% of the teacher's highest education qualification was a certificate.

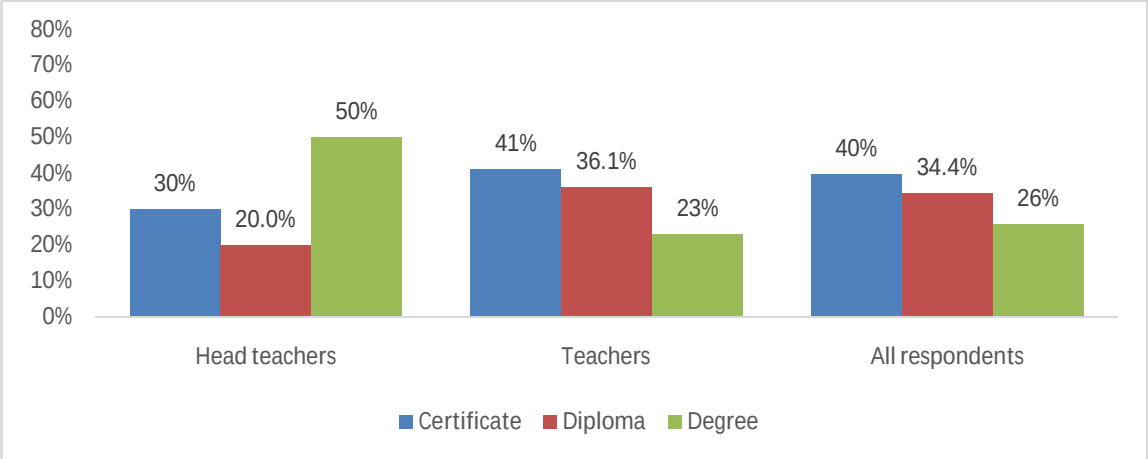

Figure 3.2: Education Level of Respondents

In terms of their teaching experience, 30% of the respondents had worked for a minimum of 16 years while 12% had had worked indicated that they had worked for 1-5 years. Six of the head teachers had worked for 16-20 years, while only 1 had worked for 1-5 years.

3.2 Instructional Strategies used by Teachers

The respondents mentioned various strategies that teachers employed to deal with gifted and talented children. Some of the main strategies that came up and shown in figure 3.3 belowincluded giving of extra work, giving challenging work, allowing the children to work ahead of the others, enriching the teaching content, ability grouping, and participation in co-curricular activities; and providing teaching/learning materials to occupy them. Some respondents named more than one strategy that they employed. Majority of the respondents 26(35%) believe that giving children extra work is one of the best strategies of dealing with them. 17(23%) of the respondents believed that ability grouping should be used to deal with the gifted and talented. Interview results also showed that giving extra work and challenging tasks were the major instructional strategies they employed to teach the gifted and talented learners. The extra work given was from other sources of books like supplementary books and story books. This was done to keep learners busy and be occupied.

In addition to co-curricular activities, schools also invited mentors and motivational speakers to coach them and who also acted as role models to gifted and talented.

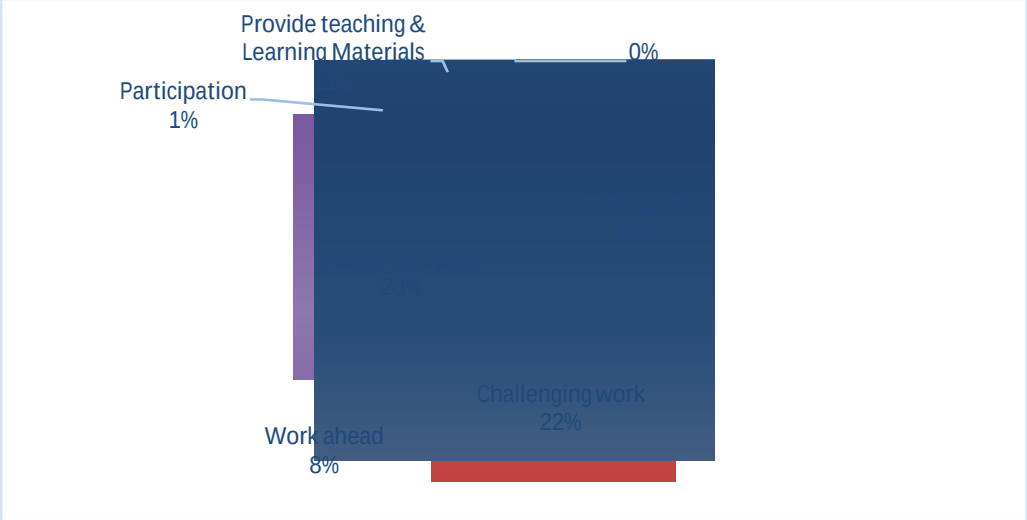

Figure 3.3: Instructional Strategies Used by Teachers

These results are supported by Van Tassel-Baska (2003, 2004) who also reveals that teachers use different instructional strategies to meet the diverse needs of gifted learners otherwise, they can become frustrated. For some students with outstanding talents, the things that take place outside the classroom may be more important and rewarding than many of the activities within it (Heward, 2006). Teachers should always attempt to connect class work with human and physical resources available in the community. This is because giftedness is not only one factor and therefore when teachers used only one strategy when teaching; they may have ignored other areas of giftedness leading to ineffective education of learners who are gifted and talented.

3.3 Teaching/ Learning Resources Available in Schools

The instructional strategies cited in above were also supplemented by teaching and learning resources available in the schools. Figure 3.4 below shows that out of 83 respondents who filled the questionnaires, 41 of them identified story books and supplementary books as the main resources available in their schools for gifted andtalented children. 27(34%) felt that there were no resources for gifted and talented children in their schools.

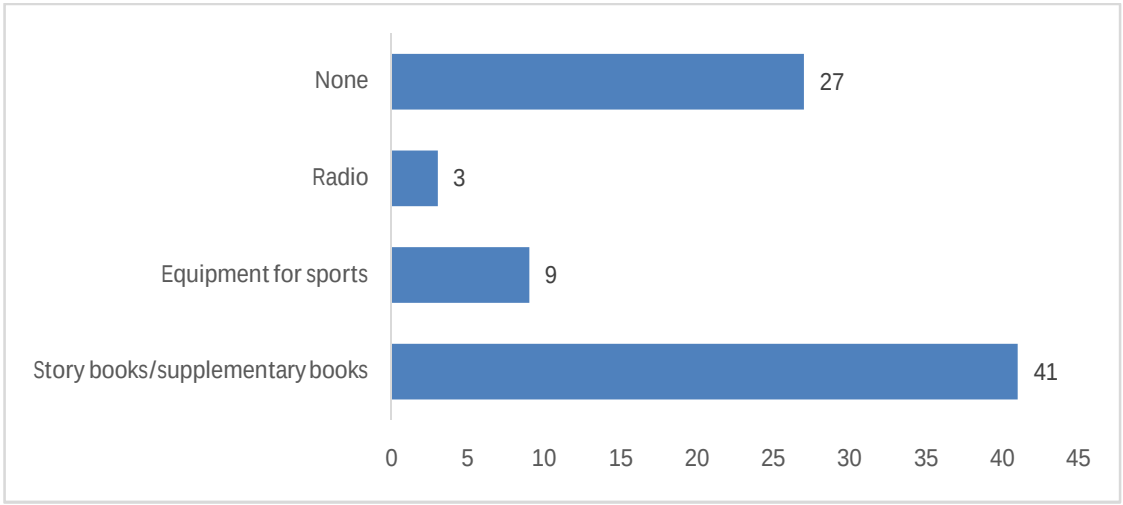

Figure 3.4: Teaching/Learning Resources Available in Schools

Some respondents named more than one resource as being available in their school. Gardner (1983) argues that instead of just presenting information in words through texts or lectures, teachers use physical and social experiences, music, and engagement with natural world. It is, therefore, important that schools provide a variety of teaching and learning resources and expose gifted learners to a wide variety of experiences in the class and even outside the school setting to maximize their potential to the full.

3.4 Programmes for the Gifted and Talented

The research also sought to establish if teachers believed whether programmes for the gifted and talented were actually in existence in their respective schools, to explore what those programmes were. Majority of the respondents (69%), said that their respective schools did not have any programmes for gifted and talented children. Twenty four respondents indicated that the schools they were teaching in had programmes that could meet the needs of the gifted and talented children. Out of this, 54(65.1%) of them indicated that the schools did not have any programmes for the gifted and talented children.

Figure 3.5 below shows that out of those respondents who said their respective school had programmes, 38% of them identified ability grouping as one of the programmes that were available for gifted and talented in their school. Other common programmes that were mentioned include co-curricular activities and clubs and societies.

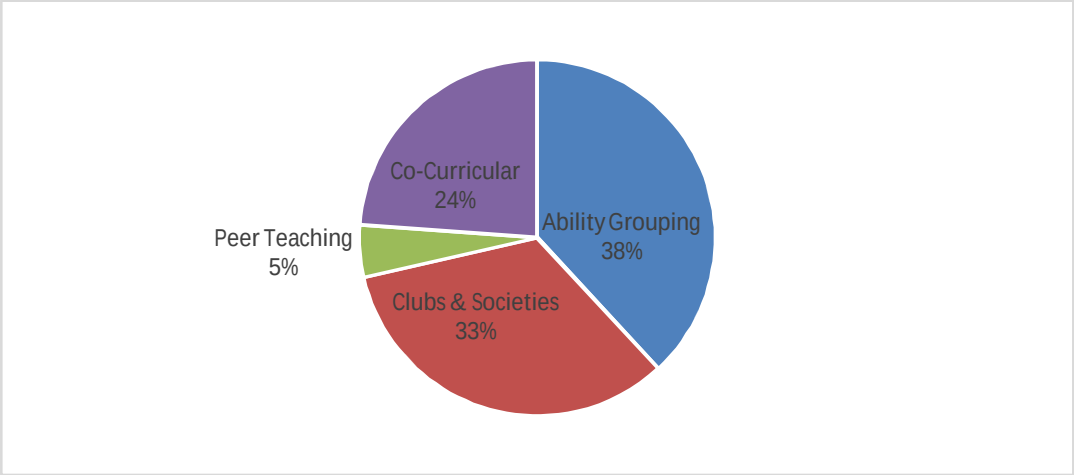

Figure 3.5: Programmes Available in Schools

Respondents felt that there was a need to introduce more programmes into the schools. Fifty seven percent of the respondents felt that there was a need for the establishment of a curriculum for gifted and talented children. Nineteen percent of them felt that it was important that library lessons and extra curriculum activities be introduced.

Research by Van Tassel-Baska (2003, 2004) also shows that in order to meet the needs of students who are gifted and talented several research-based methods such as curriculum compacting, instructional models, ability grouping and specific interventions are recommended. Therefore, a differentiated curriculum needs to be established to cater for the diverse needs and interests of gifted students.

3.5 Effects of the Instructional Strategies

The researchers wanted to establish the effects of the instructional strategies that the teachers employed to accommodate the gifted and talented children. The respondents were asked to note the effects of the strategies. The researchers then classified the effects into three broad categories; improving talents and unleashing their potential, enhancing academic excellence, and reducing boredom. Respondents interviewed revealed that instructional strategies kept gifted learners busy and not bored, idle, noisy and disruptive. They also enhanced their academic excellence thus motivating them to meet their needs and interests however not to their full potentials.

Figure 3.7 below shows the effects that respondents mentioned. Majority of them (34) affirmed that the instructional strategies improved the talents of the gifted and talented children while 24 of them felt that excellence of academic performance was enhanced as a result of the strategies that the teachers employed. Only 13 of them mentioned reduction in boredom.

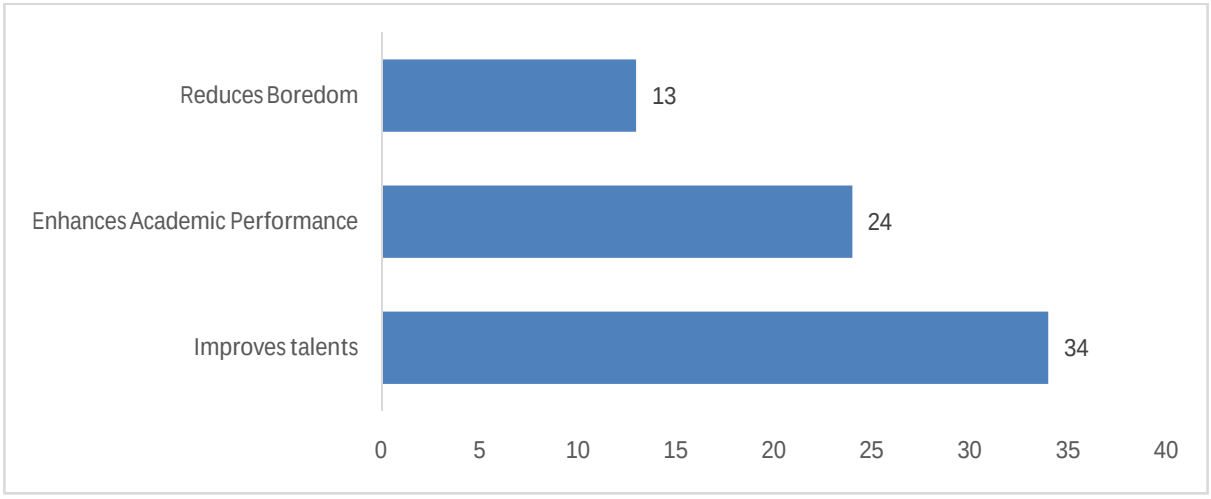

Figure 3.7: Effects of Strategies Teachers Applied

The results are supported by Friend (2008), who also notes that instructional strategies enable learners to explore their areas of interests, develop their own skills and accomplish their goals. Gay (2002) additionally mentions that learners who are talented and gifted perform at higher levels when they receive instruction that is responsive. Many scholars and educators such as Heward (2006) and Obiakor (2007) agree that responsive teaching styles positively influence the way students learn. Therefore, teachers need to employ instructional strategies which match these learners' diverse needs and abilities instead of using only one strategy which may not be effective for all gifted learners.

3.6 Challenges Teachers Encounter in Teaching Gifted and Talented Learners

The respondents quoted many challenges that they encounter and these included lack of adequate learning resources, indiscipline cases, teachers being incompetent, low teacher-learner ratio, and learner's inquisitiveness. Expectedly, teachers face more than one challenge when dealing with gifted and talented children. Figure 3.8 below shows that (48%) of the respondents indicated that gifted and talented children were not disciplined, often making noise and disrupting their fellow classmates. Ten percent of them felt that the number of the children was many and that the number of the teachers was too small to handle the learners.

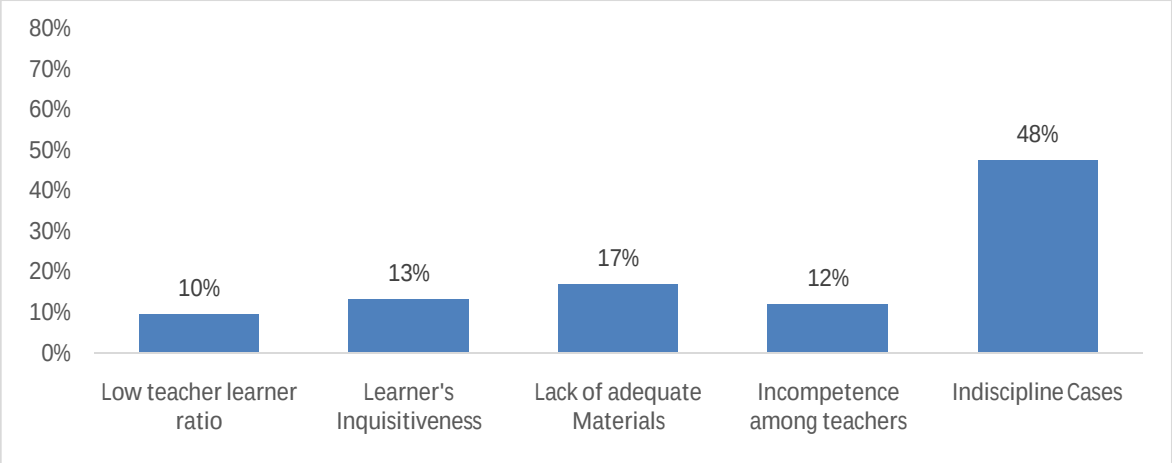

Figure 3.8: Proportion (%) of Challenges Affirmed by Respondents

Respondents gave their views on what could be done to alleviate the challenges that they faced when dealing with the gifted and talented. The researchers classified their answers into 7 broad categories which included creating a curriculum, early identification, availing of learning resources, attending to the learners according to their needs, giving them extra and challenging work and government subsidies being used to lower the cost of learning. Some respondents gave more than one solution as shown in Figure 3.9 below.

Sixteen (20%) of them felt that the creation of a curriculum for the gifted and talented children was essential and very important. 18(23%) of them suggested giving the children extra and challenging work while 10(13%) of the respondents felt that teachers needed to be trained so as to be able to handle the gifted and talented sufficiently.

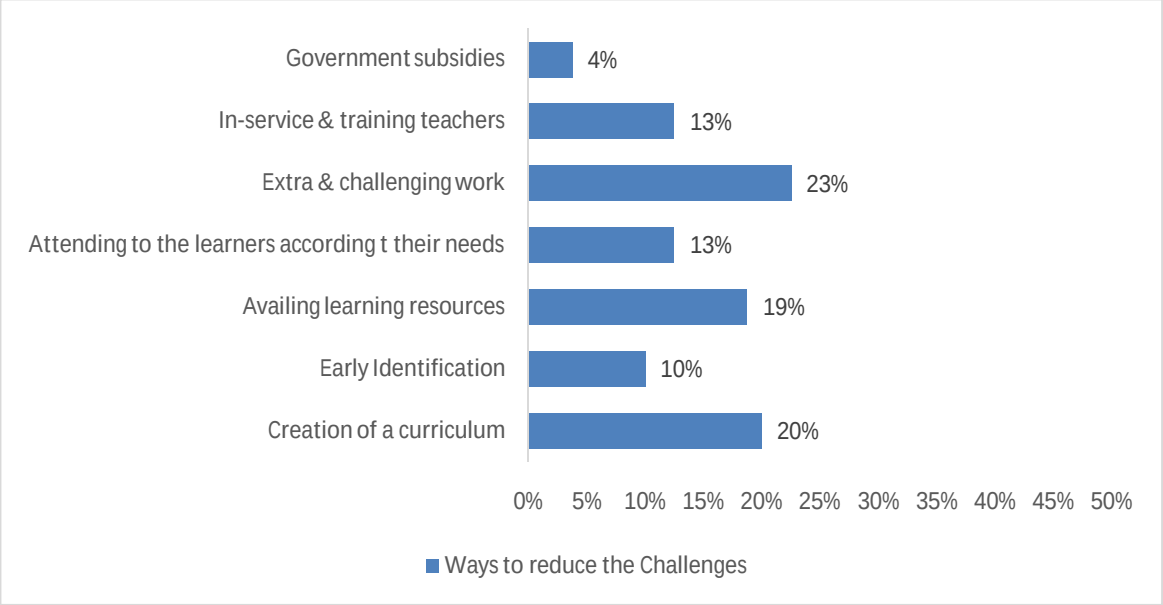

Figure 3.9: Ways to Alleviate the Challenges faced by the Respondent (N=83)

Tomlinson et al (2002) supports these findings and notes that differentiation for students who are gifted refers to an instructional approach that assumes that these students need many different avenues to reach their learning potential. It can address the content students are learning, the assessment tools through which learning is measured, the tasks students complete, and the instructional strategies employed. However, Sessional Paper No.1 of 2005notes that Kenya's national education system has been characterized by lack of systems and facilities that respond to the challenges faced by learners with special needs and disabilities. All teachers, therefore, need to be trained in special needs education to acquire knowledge and skills on how to support gifted and talented learners in their classes fully.

3.7 Opinions of Teachers on Learners who are Gifted and Talent

Respondents also gave various opinions about the attributes of the gifted and talented learners in relation to the curriculum in place.

Table 3.1 below shows that out of 83 respondents 59(71.1%) agreed that gifted children were disrespectful and disruptive with 16(19.2%) disagreeing and 7(8.4%) were neutral on this. Majority of the respondents 80(96.3%) agreed that work that was too easy frustrated gifted children while 1(1.2%) disagreed. On the curriculum, 35(42.2%) of the respondents felt that the curriculum in place was suitable for all learners including those gifted and talented while 37(44.6%) felt it was unsuitable and 11(13.3%) were neutral. Majority of the respondents 66(79.5 %) were of the opinion that a differentiated curriculum be established for gifted and talented learners and 10(12.0%) did not feel that it was necessary to have such a curriculum.

Table 3.1: Teachers` Opinions on Gifted and Talented Learners

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Teachers often see gifted children as disrespectful and disruptive	37%	34%	8%	10%	10%
Work that is too easy frustrates gifted children	60%	36%	1%	1%	0%
If not challenged, gifted children can waste their ability	37%	46%	8%	4%	1%
Not all gifted children show creativity, leadership, or physical expertise	17%	55%	13%	11%	1%
The regular curriculum currently in use is suitable for all learners including those gifted and talented	18%	24%	13%	33%	12%
Currently, no programs are in place for the gifted and talented	33%	31%	17%	11%	7%
Gifted and talented require a differentiated curriculum	21%	43%	10%	15%	10%
There is need to come up with a differentiated curriculum	54%	25%	6%	7%	5%

Similar opinions were given by headteachers 10(100%) interviewed who claimed that the curriculum in place was academic and exam oriented and therefore ignores other areas of giftedness and talentedness. Respondents further complained that there was no specialization in the Primary school curriculum to provide and meet the diverse needs of learners who are gifted and talented. The curriculum treated all learners the same irrespective of their exceptional abilities.

Kerr and Colangelo (1988) argue that learners who are gifted and talented become problematic to their parents, educators and society as a whole when they are not understood for what they are. On the other end Ladson-Billings (1995) claims responsive teachers place learners at the centre of teaching and learning. They feel obligated and responsible for the student's cognitive,academic, and effective well-being and they employ teaching methods tailored towards improving the intellectual, social, emotional, political, and cultural growth on their students. This means teachers need to be competent enough to come up with strategies of handling gifted and talented learners otherwise, they may be seen to be problematic hence their talents may be underdeveloped and underutilized.

Conclusion

The study found that teachersused instructional strategies such as giving learners extra work, giving them challenging tasks, allowing them to work ahead, ability grouping and also participation in co-curricular activities to educate gifted and talented learners. The most common strategy was giving of extra work. The study found that teachers felt that these strategies improved learners' talents unleashed their potential, enhanced academic excellence and reduced boredom. However, teachers experienced various challenges such as lack of adequate learning resources, indiscipline cases and low teacher-learner ratio among others. The respondents gave their view on what could be done to alleviate these challenges. These included creating a differentiated curriculum, early identification of gifted and talented learners and attending to those learners according to their needs. The Kenyan government should therefore develop a curriculum that can be used to teach gifted and talented children, and one which will also be more practical-oriented curriculum. Teachers should also be trained in order for them to have the knowledge and skills to adequately cater for gifted and talented children. Facilities in schools should also be improved and instructional materials and resources developed for the gifted and talented. This should be done by Ministry of Education in collaboration with parents, curriculum developers, stakeholders, professionals and policy makers.

References

Bish, C.E. (1961). The academically talented.*National Education Association Journal, 30*(2),33-37

Bloom, B.S. (1956).*Taxonomy of Educational Objectives: The Classification of Educational Goals*. Handbook 1.Cognitive Domain. New York: Longman's Green.

Castellano, J.A.,& Diaz, E. (Eds). (2002). *Reading new horizons: Gifted and talented education for .culturally and linguistically diverse students.* Boston: Allyn& Bacon.

Colangelo, N., &Assouline, S.G. (2004). A nation deceived: How schools hold back America's brightest students. Ames: University of Iowa. Retrieved July 6, 2006, from www.nationsdeceived.org.

Coleman, M. R. (2005). Academic strategies that work for gifted students with learning disabilities. *Teaching Exceptional Children, 38,* 28-32.

Daniels, V.I. (2001).Responding to the learning needs of multicultural learners with gifts and talents.In C.A. Utley & F.E Obiakor (Eds.), *Special education, multicultural education, and school learners with mild disabilities*. (pp.140-154). Springfield, IL: Charles C. Thomas.

Daniels, V.I. (2003).Students with Gifts and Talents. In F.E. Obiakor, C.A. Utley, & A. F.; Rotatori (Eds.), *Effective Education for Learners with Exceptionalities: Advances in Special Education* (pp. 325–348). Oxford, England: Elsever Science/JAL Press.

Ford, D. Y., &Trotman, M.F. (2001). Teachers of gifted students: ***Suggested Multicultural characteristics*** *and competences*.*Roeper Review, 23*, 235-239.

Freeman, J. (2000). Teaching for talent: Lessons from the research. In C.M.F. van Lieshout& P.G. Heymans (Eds.).*Developing talent across the life* span (PP. 231-248). Philadelphia: Psychology Press.

Friend, M. (2008).*Special Education: Contemporary Perspectives for School Professionals* (2nd ed.). USA; Pearson Education Inc.

Gardner, H. (1983). *Frames of Mind: Theory of Multiple Intelligence*. New York: Basic Books Inc.

Gay, G. (2002). Preparing for Culturally responsive teaching.*Journal of Teacher Education, 53,* 106-116.

Hallahan, D.P., & Kauffman, J.M. (2003).*Exceptional Learners: Introduction to Special Education* (9thed.). Boston: Allyn& Bacon.

Heward, W.L.(2006). *Exceptional Children: An Introduction to Special Education* (8thed.). New Jersey: Merill Prentice Hall.

Jolly, J. L. (2005). Foundations of the field of gifted education.*Gifted Child Today, 28*(2), 14-18,65.

Kamau , R.W. (2005). *A study of measures used in the identification of Gifted and Talented children in Three Districts of Kenya.*(Unpublished doctoral dissertation).Kenyatta University, Nairobi.

Kerr, B. A., &Colangelo, N. (1988).The College Plans of Academically Talented Students. *Journal of Counselling and Development, 67,* 42-49.

Ladson-Billings, G. (1995). Toward a Theory of Culturally Relevant Pedagogy.*American Educational Research Journal, 32,* 465-491.

Lloyd, L. (1999). Multi-age classes and high ability students.*Review of Educational Research, 69* (2), 187-212.

Maker, C.J., & Nielson, A.B. (1996).*Curriculum development and teaching strategies for gifted learners* (2nded.) Austin: TX: PRO-ED.

Maker, C.J. (2001). DISCOVER: Assessing and developing problem solving.*Gifted Education International, 15*, 232-251.

Maker, C.J., &Schiever, S.W. (2005).*Teaching model in education of the gifted* (3rded.). Austin, TX: Pro- Ed.

Moore, J.L., Ford, D.Y.,& Milner, H.R. (2005). Underachievement among gifted students of colour: Implications for educators. *Theory into Practice, 44,* 167-177.

Obiakor, F.E. (2007). *Multicultural Special Education.Culturally Responsive Teaching*.New Jersey 07458, Pearson Prentice Hall.

Reis, S. (1995). What gifted education can offer:the reform movement.Talent development. In J.L Genshaft M. Bireley, C.L. Hollinger (eds.), *Serving gifted and talented students.A resource for school personnel* (pp. 371-387). Austin, TX: PRO-ED.

Reis, S.M., &Renzulli, J.S. (2004).*Curriculum compacting: A systematic procedure for modifying the curriculum for above average ability students*. Storrs, C.T: National Research Centre on the Gifted and Talented. Retrieved on April 1, 2004, from *www.sp.ucom.edu/~nrcgt/sem/semart08.html.*

Renzulli, J.S., & Reis, S.M. (2003). The school wide enrichment model: Developing creative and productive giftedness. In N. Colangelo, & G.A. Davis (Eds.), *Handbook of gifted education* (3rd ed.), pp. 184-203). Boston :Allyn& Bacon.

Republic ofKenya (2003).*National Action Plan on Education for All 2003-2015*.Ministry of Education, Science and Technology.

Republic of Kenya (2005).*Sessional Paper No. 1 of 2005 on aPolicy Framework for Education, Training and Research*.Ministry of Education, Science and Technology.Nairobi: Government Printers.

Republic of Kenya (2009).*The National Special Needs Education Policy Framework*.Ministry of Education, Nairobi: Government Printers.

Roberts, J.L. (2003). Persons who are gifted and talented. In R.M. Gargiulo (Ed.), *Special education in contemporary society: An introduction to exceptionality* (pp. 315-361). Belmont, CA: Woodsworth/Thomson Learning.

Rogers, K. (2002). *Re-forming gifted education.* Scottsdale, AZ: Great Potential.

Sharma, S. (2006).*Education of the Gifted.* New Delhi:Shipra Publications.

Stamps, L.S. (2004).State policies regarding gifted education.*Gifted Child Today, 26* (3), 16-21.

Swanson, M. (2002).National survey the state governance of K-12 gifted and talented education: Summary report. Retrieved on Februrary 27, 2004, from www.edrs.com/members/sp.cfm? AN=ED471886.

Terman, L.M., & Oden, M. (1959).*The gifted group at Mid-life.*Stanford University Press.

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and curriculum Development.

Tomlinson, C.A., Kaplan, S.N.,Renzulli, J.S., Purcell, J.,Leppien, J.,& Burns, D. (2002).*The parallel curriculum: A design to develop high potential and challenge high- ability learners.* Thousand Oaks, CA: Corwin.

Turnbull, A., Turnbull, R., &Wehmeyer, L. M. (2007).*Exceptional Lives: Special Education in Today's Schools* (8th ed.). New Jersey: Merill/Prentice Hall.

Van Tassel-Baska, J. (2003).*Curriculum planning and instructional design for gifted learners.* Denver, CO: Love.

Van Tassel-Baska, J.(2004).Effective curriculum and instructional models for talented students. In J. Van Tassel-Baska(Ed.), *Curriculum for gifted and talented students* (pp.1-12). Thousands Oaks, CA: Corwin.

Wallace, B., & Adams, H. (1993).*World perspective on the Gifted Disadvantaged.* Bicester, UK: AB Academic publishers.