**A STUDY REPORT**

**ON**

# FACTORS AFFECTING STUDENTS ACADEMIC ACHIEVEMENT IN SECONDARY SCHOOLS IN TANZANIA

**A TERMINAL REPORT OF SUA-NORAD FUNDED RESEARCH PROJECT**

**Submitted to**

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## EXECUTIVE SUMMARY

This study was conducted in the ten secondary schools in three regions namely Dar es Salaam, Morogoro and Tanga. Of the ten surveyed schools, five of them were in Dar Es Salaam region and these included Azania, Jangwani, Kinondoni Moslem, Shaaban Roberts and Jitegemee-JKT. Three secondary schools surveyed in Morogoro region included Kilakala, Morogoro and Lutheran Junior Seminary. The other two schools surveyed in Tanga region where Kifungilo and St. Mary's Mazinde Juu. Of the ten schools, five of them (Kinondoni Moslem, Lutheran Junior Seminary, Jitegemee-JKT, Morogoro secondary, Shaaban Robert) were co-education. Four of the surveyed schools (Kilakala, Kifungilo, Jangwani and St. Mary's Mazinde Juu) were girls only, while one (Azania) was boy's only secondary school. Based on school ownership, four schools were government owned and ran (Azania, Kilakala, Jangwani, Morogoro Secondary) while Kinondoni secondary school was owned and ran by the Moslem community in Dar es Salaam. Two schools (Kifungilo, St. Mary's Mazinde Juu) were owned and ran by Roman Catholic, and one (Lutheran Junior Seminary) were owned and run by CC of Tanzania. Jitegemee and Shaaban Robert secondary school were owned and ran by Jeshi la Kujenga Taifa-SUMA, and the Indian community of Dar es Salaam, respectively.

Based on the school type: Azania, Jangwani and Morogoro secondary schools had boarders and day going students, while Kilakala, Kifungilo, Lutheran Junior Seminary and St. Mary's Mazinde Juu were boarding schools. Day school in the survey included Kinondoni Moslem, Jitegemee-JKT and Shaaban Robert secondary schools. The study included respondents in the school with the most students (over 500), medium student (about 200) and the least (less than 100) students. Of the 630 interviewees, 217 (34.4%), 167 (26.6%), 91 (14.4%), 78 (12.4%), and 77 (12.2%) came from the government, religious-Christian, Jitegemee-SUMA-J.K.T, religious-Moslem, and individual secondary schools, respectively.

Of the ten surveyed secondary schools, eight of them having 554 (88%) respondents were located in urban areas. This bias was purposive because most of the secondary schools in the country are located in urban areas. Also, of the 630 surveyed students, 422 (67%) came from five schools in the city of Dar es Salaam because city has many schools in the country. Of the 630 respondents, 353 (56.0%) were girls and 273 (43.3%) males (Table 2). The average age of interviewees was 17.7 year old. Most of the surveyed students, 599 (95.1%) were sampled from Forms III and IV because these has stayed long enough in the schools and were hypothesized to have more knowledge about the phenomena being studied. Selection of schools was purposive and not all government schools were sampled for the study. Currently, about 90 per cent of all

students finish their ordinary and advanced secondary school education from the government schools. About half of the sampled students, 330 (52.4%) were in co-education, 164 (26.0%), and 136 (21.6%) were in girls and boys only secondary schools, respectively.

Most respondents, 568 (92%), 583 (94%), 576 (93%) agreed that biology, chemistry and physics laboratories were available in their schools. Over half of female and male interviewees, 411 409 (67%), (66%), 394 (65%), and 356 (63%) agreed that teachers used laboratories for practical sessions, classroom had enough chairs and desks, and teachers used teaching materials, respectively. Of the 630 interviewees, most, 528 (84%) agreed that they used only English during note taking in the classrooms. Respondents based on gender reported a similar observation: 306 (86%) and 222 (81%) female and male respondents respectively. Over half of the respondents, 415 (68%) and 380 (62%) agreed that they used English in answering and asking questions in the classrooms, respectively. Similarly, 385 (63%) of the interviewees agreed that they used both English and Kiswahili in group discussions. Of the 630 interviewees, 554 (89.1%), 448 (73.9%) agreed that their school had libraries and library attendants, respectively**.** Over half of the respondents, 384 (63%), 317 (51.8%), and 299 (50.2%) agreed that they borrowed books from their libraries, that their libraries had enough chairs and tables, their teachers asked students to go to the libraries and borrow books, respectively. Less than half of the respondents, 292 (47.9%), 282 (46.5%), 239 (40.7%) agreed that the school libraries had enough books, that libraries were within their vicinity, and that they frequently used the libraries. But, when students were asked to mention the clubs that they were involved in, only a few of them were able to name the specific clubs. Of the 630 respondents, 201 (31.9%) agreed that they were involved in the debate clubs in their schools.

Most interviewees in the ten schools, 530 (84.1%) agreed that English was only used during note taking in the classrooms. And over half of them, 431 (68,4%), 418 (66.3%), 387 (61.4%), and 383 (61.1%) agreed that they preferred teachers to use English when teaching, used English when answering questions, used both English and Kiswahili in group discussions, and used English when asking questions, respectively. Furthermore, most interviewees in the girls secondary schools, 193 (90%) agreed to using English during note-taking than boys 72 (84%), followed by co-education 265 (80%), although the difference was not significant. Over half of the interviewees, 431 (68%), 418 (66%), and 383 (60%), based on their school systems agreed that they like to use English, they used English in answering questions, and used English in asking questions, respectively. However, less than half of the respondents, 252 (40%) agreed that their teachers used English when teaching--this low response may be contributing to poor English among Tanzanian secondary school graduates.

Over half of the interviewees, 385 (61%) and 317 (50%) agreed that they borrowed books from their libraries and that schools classrooms had enough chairs and tables. However, of the 630 interviewees, less than half, 299 (48%), 292 (46%), and 284 (45%) reported that their teachers asked students to go to the libraries, that their libraries had enough books, and there was a nearby library, respectively. Further examination of these show that most respondents in the girls only schools, 154 (72%) followed by those in co-education, 199 (60%) borrowed books from the school libraries. However, few, 32 (37%) of the respondents in the boys only schools borrowed books from the school libraries. Over half of interviewees, 413 (66%), 411 (65%), and 395 (63%) agreed that their schools had enough chairs and desks, enough teachers, used laboratories for practical sessions, respectively. Summarily, data show that on average less than half 113 (42.2%) of the interviewees in the government-owned and ran schools agreed to most aspects pertaining to classroom-, teaching materials- and laboratories-related variables. This implied that most of the government-run secondary schools did not have an adequate supply of these items.

Of the 40 teachers, 25 (62.5%), 8 (20%), 6 (15%) and 1 (2.5%) were surveyed from the government, Christian, individual, and JKT secondary schools, respectively. Of the 25 teachers in the government secondary school, 15 (60%) had completed Form VI, which implied that they had no formal teaching skills. Most interviewees, 35 (87.5%) were trained teachers, and about half, 20 (50%) indicated that they had completed teacher training between 1986 and 1992. However, less than half, 18 (45%) had started teaching between 1986 and 1992, i.e. had an experience of between 13 and seven years of teaching. Also, the study shows that 9 (30%), 9 (22.5%), and 7 (17.5%) of the respondents taught biology and chemistry, English, mathematics and physics subjects, respectively. Of the 40 teachers, 27 (67.6%) of them agreed that they had not attended in-service courses and of these, the majority, 19 (76%) were from the government secondary schools. Similarly, 34 (85%), 28 (70%), 27 (67.5%) teachers sampled from the categories of school ownership type agreed that they had not attended refresher courses, seminars, and workshops, respectively.

Less than half, 18 (45%) of the respondents agreed that their class sizes were between 30 to 40 students. And, most teachers, 31 (77.5%) reported that teaching materials in their schools were enough. However, most teachers in the government secondary schools, 22 (88%), about half, 3 (50%) in the individual schools, and 2 (25%) in the Christian/religious schools reported that their schools had enough teaching materials. Secondary school teachers were asked to assess their English competence levels. Of the 40 teachers, 15 (37.5%), 9 (22.5%), and 1 (2.5%) agreed that their English competence levels were good, very good, and excellent, respectively. This data

implied that some secondary school teachers were not confident with their English competence, an aspect that may affect the performance of secondary school students. Less than half of the 40 teachers, 19 (47.5%) and 17 (42.5%) agreed that their schools had laboratories for physics, chemistry, biology and domestic science subjects, respectively. However, most teachers did not agree with the statement that their laboratories were well equipped as only six (15%) said so. Also, about half of the teachers, 21 (52.5%) agreed that there were librarians, but less than half, 19 (47.5%) disagreed that the school libraries had enough chairs and desks. Few interviewees, 13 (32.5%) agreed that they always used the library. This data implied that if teachers do not frequently use the library it could be difficult to advise students to do so--as only 18 (45%) assigned students to use the library. However, as school observations revealed this was due to the fact that most libraries in the schools had few books in terms of relevance, quality and quantity. For instance, few of the surveyed teachers, 7 (17.5%) agreed that libraries had enough book copies for the students. Of the 40 respondents, less than half 19 (47.5%) said that the school libraries had outdated books that needed updating. Few teachers agreed to be members to about six subject clubs in the schools. This small number of teacher involvement in school subject clubs manifests itself in the small numbers of students in the clubs as explained elsewhere. Consequently, this might have an effect on the performance of students in their respective subjects.

Of the surveyed seven school administrators, six indicated that they were trained teachers, and of all, three, two for each were trained at the University of Dar Es salaam, at Kleruu and Dar TTC, and abroad (USA, U.K.), respectively. Years in which they attended training were between 1969 to 1991. Four, two and one of the school administrators had Bachelor of Arts in Education, Bachelor of Science in Education, and a diploma in Education, respectively. The length of years worked in the schools varied. Three, two, one for each had worked for three, one, six and seven years, respectively. Of the seven respondents, three, one for each, agreed that the number one hindering factor was lack of teaching materials, textbooks, the double sessions, and interruption brought about by unplanned school closure before time, respectively. Two, one for each administrator mentioned that hindering factors included as lack of teaching materials, lack of study areas for students, lack of librarians, lack of emphasis of games and sports, respectively. Of the seven interviewees, two, and one for each agreed that the number one hindering factor was that teachers did not mark the students' home work in time, lack of effective teaching, and that teachers did not use teaching materials, and had heavy teaching loads, respectively. Of the six, four, one for each commented that the final examinations performance of their students were good, very good, and good if students were availed the facilities for practical. Also, seven

interviewees gave their comments on their students' English language competence, and two, one for each said that they were average, very good, not competent, lack practice out of the classrooms, respectively.

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**3.0 Title of Research Project:** Factors Affecting Student Academic Achievement in Secondary Schools in Tanzania.

**4.0 Field of Research:** Secondary School Education

**5.0 Research Objectives**

The long-term objective of this study is to improve students' mastery of academic skills and knowledge and their communicative competence in English. The aim of the study was to investigate factors that affected students' academic achievement, and specifically it was to determine:

5.1 The extent of use of code-switching and code-mixing in teaching.

5.2 Whether students' intellectual development suffers because of use of code-switching and code-mixing in teaching and discussions.

5.3 Means and ways of reinforcing acquisition and mastery of knowledge e.g. in specific subjects clubs/associations that complement classroom teaching.

5.4 The extent of exposure of students to laboratory practical skills.

5.5 The availability of teaching/learning materials.

5.6 The availability of textbooks and other reference materials in the libraries.

5.7 The existence and use of school library.

5.8 The academic levels of the teaching staff and their background training.

5.9 The extent and frequency of in-service training and refresher courses.

5.10 The source of funding of the selected schools.

**6.0 Research Duration**

This study was intended to be long-term longitudinal study in which same students in the same schools would be followed up to completion of their studies. To do this, an initial period of three years was requested to conduct the study, and a further extension of three years was anticipated to find out the progress, especially of non-use of code-switching/code-mixing in teaching. However, given the prevailing circumstances this was not possible and the study for only three years (1997-2000). The major cost of the project is transport to various schools, purchase of computer and software to handle the data and researcher per diem while in the field.

**7.0 How Much Has Been Done**

Data collection has been collected in all of the ten secondary schools (Jitegemee-J.K.T., Jangwani, Azania, Kinondoni moslem, Shaabani Robert, Kilakala, Morogoro Secondary, Morogoro Junior Seminary, Kifungilo, Mazinde Juu).

### *7.1 Background information and justification*

Tanzania's education tier is 7-4-2-3/4/5 system-i.e. Seven years of primary education, four of secondary education (O-level), two secondary (A-level) and three/four/five year of university education. The number of years for a specific degree programme at the University depends on the nature of the respective degree programme. Education is regarded as terminal at the end of each tier. The medium of instruction in primary school is Kiswahili while in secondary schools and universities is English language. There is, therefore a dramatic change in the medium of instruction from primary to post-primary education. However, student who make their way to secondary schools have had English as a subject in primary schools. (there is a very small number of primary school in the country whose medium of instruction is English. These schools normally serve children whose parents are foreigners but reside in Tanzania and also for a very limited number of local children-mainly of the bureaucrats and/or well-to-do families. The annual national budget set for education sector has continued to decrease year after year since 1980s.

### *7.2 The problem*

Although selection of students who make their way to tertiary education is stringent in terms of successful performance in "O" and "A" examinations, over the years, concern has been voiced by University lecturers at Sokoine University of Agriculture (SUA) and University of Dar es Salaam (UDSM) over the students' lack of mastery of skills and basic scientific knowledge and also poor proficient in English language (Mvungi, 1982; Roy-Campbell and Qorro, 1987, 1997). External examiners hold similar view to SUA as evidenced in their report after examining the student's written and oral script in different faculties. The reports indicate that student fail to communicate effectively in their written and spoken English and are generally weak in performing tasks that require mathematical/statistical skills. They also exhibit poor general scientific knowledge and skills. As a result of this observations it is extremely doubtful to believe that students benefit fully from tertiary education. In fact, every year over 20% of first year students are discontinued from studies at SUA, *inter alia*, on grounds of poor academic performance. On the side of learners themselves, language deficiency makes them frustrated because of their inability to make their needs known and their idea understood. Thus learner resort to code-switch or code-mix (also see Ndayipfukamiye, (1994) because they are unable to find the right vocabulary/phrase/sentences to express what they want to say in the language of instruction.

In order to acquire knowledge and skills in a given subject, students must think and **write in the language of instruction**. In secondary schools and tertiary education in Tanzania, it is

suspected that students tend to think in their mother tongue or Kiswahili- i.e their L1 but are required to perform academic tasks such as speaking or writing in English language i.e an L2-the medium of instruction. This phenomenon not only retards acquisition of the L2 but also acquisition and mastery of skills and knowledge in different subject taught in the classroom. Consequently, students who join tertiary education exhibit lack of basic skills in different subjects such as physical sciences, English language, mathematics and Statistics/Biometry1 Biostatistics. This tendency has led universities such as SUA to establish basic science Unit (now faculty of science-since July 1999) whose objective among others, is to offer remedial in this basic subjects. Similarly, at UDSM there is a Communication Skill Unit (CSU) whose sole task is to improve students' English language deficiencies and study skills. This is very expensive venture on the part of the University budget and burden to the government at large because skills and knowledge, which are supposed to be fully mastered at primary and secondary levels, are being offered at the University. This is also a burden on the side of learner because they are forced to take more subjects or stay longer at University as is the case in SUA whereby a good part of the first year of study is taken by this basic course. As a result most of the courses at SUA take up to four instead of three years.

As far as theories of second language (L2) learning and acquisition are concerned, learners can acquire knowledge and skills of a given subject better if they **listen, think, speak and write in the language of instruction**. If teachers teach in both L1 and L2 through code-switching/code-mixing because of linguistic constraints of either the learner or the teachers themselves, acquisition and mastery of the knowledge and skills in a given subject is inhibited (Cleghorn et al., 1989). Similarly, when student think and discuss in L1 and then switch to L2 when they speak or write, their output (in L2) is usually low. This result to poor performance in different academic tasks. Apart from the language factor, there are other factors that affect acquisition and mastery of skills and knowledge. Some of these factors include: First, ways and means of reinforcing learning through different task such as exercises, excursions, subject-specific clubs such as debating club and hobbies. Second, practical activities such as laboratory practical, or collecting specimen existing in nature. Third, the use of teaching/learning materials during teaching. Fourth, use of textbooks and other reference materials. Fifth, conducive learning environment. Sixth, the quality of teachers. Also source and level of funding can make a school well- or ill-equipped.

The first phase of this study, therefore, involved physical visits to all the selected schools to assess the above factors. While in the schools the researchers attended classes to observe how teaching was conducted. Particularly attention was paid to use of language of instruction. The

second phase of the study involved collecting data using a questionnaire to 630 randomly selected students in the ten surveyed secondary schools. The third phase was to gather information on results of National form six examination results from the National Examination Council of Tanzania in Dar es Salaam.

### *7.3 Previous work*

The Department of Foreign Languages and Linguistics at the University of Dar Es salaam conducted a survey of reading competence in English of secondary school students in Tanzania (Campbell and Qorro, 1987). Their aim was to determine the existing reading requirements in Tanzanian secondary schools for different subjects and the linguistics difficulty of the textbooks in use and identify factors which inhibit the necessary reading competence (Campbell and Qorro, 1987). Their study concludes that students in Tanzania are being barred from access to knowledge as a result of language barrier. They recommended the medium of instruction for secondary schools to be changed from English to Kiswahili (Roy-Campbell and Qorro, o*p. cit.* 93-94). Since the medium of instruction to secondary schools in Tanzania continue to be English as there is no clear language policy on this as of to date, universities will continue to receive students who have language deficiencies and poor knowledge and skills in their respective subjects. This study therefore intend to assess, among other factors, the extent of use of code-switching and code-mixing to overcome this language barrier by both secondary school teachers and students.

### *7.4 Definition of terms*

**Code-switching** is changing from one language to another in the source of speaking or writing when one is not able to find words to express what they want to say in the language of instruction.

**Code-mixing** is using phrases, sentences, words of two different languages interchangeably to express ideas one wants to say.

## Methodology

The study was conducted in ten secondary schools which were selected purposively from the following regions: Morogoro, Dar Es Salaam and Tanga (Lushoto district). This region has been chosen for ease of transport and also for some specific schools which have superior records i.e., Kifungilo and St. Mary's Mazinde Juu in Lushoto. The researcher spent five days in each school. The choice of schools was based on the following criteria:

1) Ownership of the school- whether government, private (if private whether Religious, groups, individual or group/association).

2) Whether unisex or coeducation.

3) Whether day school, boarding school or both boarding and day,

4) Whether urban/rural schools.

5) Subject biases e.g science, commerce, and domestic science.

Based on the above criteria, the following schools were earmarked for the study:

***In Morogoro***

Kilakala Secondary School (S.S.) - urban unisex (Girls (G) Boarding Govt. special school

Morogoro S.S. urban, coeducation, day, boarding, Govt.

Lutheran Junior seminary -urban, coed Boarding Religious (Lutheran)

***In Tanga*** (Lushoto District)

Kifungilo S.S. - rural unisex (G) Boarding Religious (RC)

St. Mary's Mazinde Juu S.S. - rural unisex (G) boarding Religious (RC)

These schools were selected because many parents all over the country struggle for very limited spaces for their children in these secondary schools.

***In Dar es Salaam***

Jangwani S.S. - urban unisex (G) boarding/Day Govt.d

Shaaban Robert S.S. – urban, coeducation, day, private

Kinondoni S.S. urban, coeducation, day, religious (Moslem)

Azania S.S. – urban, unisex (Boys (B),boarding/day, Govt.

Jitegemee S.S. – urban, coeducation, day, JKT- Mgulani.

***Research procedures and instruments***

Using a questionnaire, the researchers collected information from the randomly selected respondents (students, school administrators, teachers) in the ten secondary schools on:

a) Availability of laboratory and how well they are stocked;

b) Availability of apparatus and teaching/learning material and their quality;

c) Availability of textbooks and other reference material in the library and their qualities;

d) The use of library and its sustainability as a studying environment e.g. space, availability of chairs, study table, and books; and

e) Whether specific subject clubs/societies exist to reinforce classroom teaching/learning.

Using a questionnaire, school administrators and teachers provided information on:

a) The number of teaching staffs available for each of subject, their academic levels and background training in teaching; and

b) The frequency of in-service courses, workshops, seminars and fresher courses that teachers attended. Then, general observations were made of physical facilities such as library, availability of books, chairs, desks, chemicals, size of classrooms, furniture, equipment and environment of the schools. Permission was sought from the National Examination Council of Tanzania (NECTA) to access the "A" level examination results of the selected secondary schools.

***Data analysis***

Data on each questionnaire were inspected for their accuracy. The completed interview schedules were then summarized, coded and entered into a computer and analysed using the Statistical Package for Social Sciences computer programme. Descriptive statistics and cross-tabulations (percentages, means, chi-square, correlation) were done to find out the relationships between factors.

***Importance of the results***

The findings of this study will be used to improve teaching at all levels of the educational tier in Tanzania so as to enhance acquisition and mastery of scientific skills and knowledge in different subjects while simultaneously improving English communicative competence of the learners. The outcome of the study will specifically be very important and useful to the following:

a) Ministry of Education and Culture (MoEC) for policy matters on the use of different languages for teaching. The findings will also indicate to Ministry current state of schools in terms of how well these schools are equipped and their sustainability as centers of acquisition and mastery of skills and knowledge.

b) Institute of Curriculum Development, Dar Es Salaam.

c)Faculties of Education, Science and Arts, University of Dar Es Salaam who train teachers for Secondary School.

d) Teacher Training Collages in Tanzania.

e) Educationist, researchers, language teachers, policy makers and general public.

## 8.0 Main Results of the Research

### *8.1 Background Information*

This study was conducted in the ten secondary school in the three regions namely Dar es Salaam, Morogoro and Tanga. Of the ten surveyed schools, five of them were in Dar es Salaam region and these included Azania, Jangwani, Kinondoni Moslem, Shaaban Roberts and Jitegemee-JKT. Three secondary schools surveyed in Morogoro region included Kilakala, Morogoro and Lutheran Junior Seminary. The other two schools surveyed in Tanga region where Kifungilo and St. Mary's Mazinde Juu. Of the ten schools, five of them (Kinondoni Moslem, Lutheran Junior Seminary, Jitegemee-JKT, Morogoro secondary and Shaaban Robert) were co-education. Four of the surveyed schools (Kilakala, Kifungilo, Jangwani and St. Mary's Mazinde Juu) were girls only, while one (Azania) was boy's only secondary school. Based on school ownership, four schools were government owned and ran (Azania, Kilakala, Jangwani and Morogoro Secondary) while Kinondoni secondary school was owned and ran by the Moslem community in Dar es Salaam. Two schools (Kifungilo and St. Mary's Mazinde Juu) were owned and ran by Roman Catholic, and one (Lutheran Junior Seminary) were owned and run by CC of Tanzania. Jitegemee and Shaaban Robert secondary school were owned and run by Jeshi la Kujenga Taifa-SUMA, and the Indian community of Dar es Salaam respectively.

Based on the school type: Azania, Jangwani and Morogoro secondary schools had boarders and day going students, while Kilakala, Kifungilo, Lutheran Junior Seminary and St. Mary's Mazinde Juu were boarding schools. Day school in the survey included Kinondoni Moslem, Jitegemee-JKT and Shaaban Robert secondary schools. Table 1 shows that the study included respondents in the school with the most students (over 500), medium student (about 200) and the least (less than 100) students. Table 1 also gives an average number of students enrolled in the ten surveyed schools for the last five years.

Table 1. Surveyed school and students' average intake per year from 1995-1999

| School | Average No. of student | Year | | | | |
|---|---|---|---|---|---|---|
| Azania | 528 | | ‘96. | ‘97. | ‘98. | ‘99. |
| Jangwani | 305 | ‘95. | ‘96. | ‘97. | ‘98. | ‘99. |
| Jitegemee-JKT | 450 | | ‘96. | ‘97. | ‘98. | ‘99. |
| Kifungilo | 90 | | ‘96. | ‘97. | ‘98. | ‘99. |
| Kilakala | 84 | ‘95. | ‘96. | ‘97. | ‘98. | ‘99. |
| Kinondoni Moslem | 298 | ‘95. | ‘96. | ‘97. | ‘98. | ‘99. |
| Lutheran Junior seminary | 50 | | | ‘97. | ‘98. | ‘99. |
| Morogoro Secondary | 317 | | ‘96. | | ‘98. | ‘99. |
| Shaaban Robert | 171 | ‘95. | ‘96. | | ‘98. | ‘99. |
| St. Mary’s Mazinde | 40 | | ‘96. | ‘97. | ‘98. | ‘99. |

Source: National Examination Council of Tanzania, Dar es Salaam.

### *8.2 Characteristics of Schools and Respondents*

Of the ten surveyed secondary schools, eight of them having 554 (88%) respondents were located in urban areas. This bias was purposive because most of the secondary schools in the country are located in urban areas. Also, of the 630 surveyed students, 422 (67%) came from five schools in the city of Dar es Salaam because city has many schools in the country. Of the 630 respondents, 353 (56.0%) were girls and 273 (43.3%) males (Table 2). The average age of interviewees was 17.7 year old with a minimum 14 and maximum of 26 year old. Table 2 show that the standard deviation of the respondents’ age was 1.42 with variance of 2.0, standard error of 5.74 and a kurtosis of 2.82. Most of the surveyed students, 599 (95.1%) were sampled from Forms III and IV because these has stayed long enough in the schools and were hypothesized to have more knowledge about the phenomena being studied. Of the 630 interviewees, 217 (34.4%), 167 (26.6%), 91 (14.4%), 78 (12.4%), and 77 (12.2%) came from the government, religious-Christian, Jitegemee-SUMA-J.K.T, religious-Moslem, and individual secondary schools, respectively (Table 2). This data should not be taken to mean that government secondary schools contributed only 34 per cent of the students in the country. Selection of schools was purposive and not all government schools were sampled for the study. Currently, about 90 per cent of all students finish their ordinary and advanced secondary school education from the government schools. About half of the sampled students, 330 (52.4%) were in co-education, 164 (26.0%), and 136 (21.6%) were in girls and boys only secondary schools, respectively.

Table 2. Characteristics of surveyed schools and respondents (N = 630)

| | | | | | | |
|---|---|---|---|---|---|---|
| **Age** | minimum 14; | maximum 26; | mean 17.7; | std deviation 1.42; | | |
| | variance 2.0; | std error 5.74; | kurtosis 2.82 | | | |
| **Gender** | females 353 (56.0%); | males 273 (43.3%); | | missing 4 (0.6%) | | |

| **Surveyed school** | N | % | **district** | **region** | **Location** |
|---|---|---|---|---|---|
| Jitegemee J.K.T. | 91 | 14.4 | Temeke | Dar[1] | urban |
| Jangwani | 88 | 14.0 | Ilala | Dar | urban |
| Azania | 86 | 13.7 | Ilala | Dar | urban |
| Kinondoni Moslem | 78 | 12.4 | Kinondoni | Dar | urban |
| Shaabani Robert | 77 | 12.2 | Ilala | Dar | urban |
| Kilakala | 50 | 7.9 | Morogoro | Moro[2] | urban |
| Morogoro Secondary School | 43 | 6.8 | Morogoro | Moro | urban |
| Morogoro Junior Seminary | 41 | 6.5 | Morogoro | Moro | urban |
| Kifungilo | 40 | 6.3 | Lushoto | Tanga | rural |
| Mazinde Juu | 36 | 5.7 | Lushoto | Tanga | rural |
| **Respondents' Forms** | | | | | |
| Form I | 4 | 0.6 | | | |
| Form II | 1 | 0.2 | | | |
| Form III | 299 | 47.5 | | | |
| Form IV | 300 | 47.6 | | | |
| Form VI | 2 | 0.3 | | | |
| Missing | 24 | 3.8 | | | |
| **By school ownership** | | | | | |
| Government | 217 | 34.4 | | | |
| Religious -- Christian | 167 | 26.5 | | | |
| Jitegemee J.K.T. | 91 | 14.4 | | | |
| Religious -- Moslem | 78 | 12.4 | | | |
| Individuals | 77 | 12.2 | | | |
| **By school system** | | | | | |
| Co-education | 330 | 52.4 | | | |
| Girls only | 164 | 26.0 | | | |
| Boys only | 136 | 21.6 | | | |
| **By school type** | | | | | |
| Boarding/Day | 308 | 48.9 | | | |
| Day | 167 | 26.5 | | | |
| Boarding | 155 | 24.6 | | | |
| **By subject bias** | | | | | |
| Science | 420 | 66.7 | | | |
| Arts | 83 | 13.2 | | | |
| Commerce | 48 | 7.6 | | | |
| Science, domestic science | 41 | 6.5 | | | |
| Science, arts | 18 | 2.9 | | | |
| Arts, commerce | 7 | 1.1 | | | |
| Science, arts, domestic science | 4 | 0.6 | | | |
| Arts, domestic science | 3 | 0.5 | | | |
| Science, arts, commerce | 2 | 0.3 | | | |
| Science, French | 1 | 0.2 | | | |
| **By school bias** | | | | | |
| Science, domestic science | 332 | 52.7 | | | |
| Domestic science | 88 | 14.0 | | | |
| Science, French | 76 | 12.1 | | | |
| Science, arts, commerce | 50 | 7.9 | | | |
| Arts, commerce | 43 | 6.8 | | | |
| Science, arts | 41 | 6.5 | | | |

Source: Survey data of 1977-2000; [1]Short for the city of Dar es salaam; [2]Short for the town of Morogoro.

Also, 308 (49%) interviewees attended secondary schools that provided boarding facilities to some students and others attended schools but slept in their homes (boarding/day school). Few interviewees, 167 (26.5%) and 155 (24.6%) were boarders and others attended school during the day and slept in their homes (day students), respectively. For instance, secondary schools with

this latter system included Azania, Morogoro, Kinondoni Moslem, Jitegemme-J.K.T., and Jangwani. Table 2 also shows that most of the students, 620 (66.7%) took science subjects, and few, 83 (13.2%), 48 (7.6%), 41 (6.5%) took arts, commerce, a combination of science and domestic science subjects in the schools. Also, about half of the interviewees, 332 952.7%) indicated that their school biases were science and domestic science. Moreover, few, 88 (14.0%), 76 (12.1%), 50 (7.9%), 43 (6.8%), and 41 (6.5%) showed that their school biases were domestic science; science and French; science, arts and commerce; arts and commerce; science and arts, respectively (Table 2).

### *8.3 Respondents' Opinions on School Conditions*

#### *8.3.1 Respondents' opinions by gender*

Table 3 shows cross-tabulations between gender and classroom-, teaching materials- and laboratories-related variables. Most interviewees, 568 (92%), 583 (94%), 576 (93%) agreed that biology, chemistry and physics laboratories were available in their schools. However, the Pearson chi-square value for the three variables showed no statistical significance, and the Spearman correlation measure were negative implying that there was an inverse relationship between gender and the variables. For instance, theoretically increasing chemistry, biology or physics laboratories would cause a decrease in female or male students. Over half of female and male interviewees, 411 409 (67%), (66%), 394 (65%), and 356 (63%) agreed that teachers used laboratories for practical sessions, classroom had enough chairs and desks, and teachers used teaching materials, respectively (Table 3). Similarly, the Pearson chi-square showed no statistical differences between the means, and the Spearman correlation showed negative relationships between gender and the variables examined implying a similar case as that explained for laboratories.

Table 3. Cross-tabulations between gender and classroom-, teaching materials-, and laboratories-related variables who answered "Yes" (N = 630).

| Variable | M | F | Tot | % | $X^2$ | Sig. | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|
| If classroom chairs/desks were enough | 170 | 241 | 411 | 66 | 2.8 | .6 | -.7 | 622 | 8 |
| If laboratory chairs/desks were enough | 139 | 211 | 350 | 56 | 5.2 | .01 | -.9 | 622 | 8 |
| If teachers were enough | 168 | 226 | 394 | 65 | .6 | .25 | -.03 | 603 | 27 |
| If teaching materials were enough | 134 | 192 | 326 | 56 | 1.9 | .09 | -.6 | 578 | 52 |
| If teachers used teaching materials | 151 | 205 | 356 | 63 | 1.1 | .17 | -.04 | 567 | 63 |
| If physic laboratories were available | 242 | 334 | 576 | 93 | 4.3 | .03 | -.08 | 617 | 13 |
| If chemistry laboratory were available | 248 | 335 | 583 | 94 | 1.9 | .12 | -.06 | 618 | 12 |
| If biology laboratory were available | 241 | 327 | 568 | 92 | 2.9 | .55 | -.07 | 617 | 13 |
| If agriculture laboratory were available | 0 | 1 | 1 | .16 | .83 | .000 | -04 | 593 | 37 |
| If dom. Scie. labs. were available | 19 | 206 | 227 | 38 | 195 | .09 | -.6 | 600 | 30 |
| If computer laboratory were available | 42 | 30 | 72 | 14 | 2.1 | .000 | .06 | 524 | 6 |
| If labs. Were equipped with apparatus | 111 | 185 | 296 | 49 | 8.8 | .000 | -.3 | 599 | 31 |
| If labs. Were equipped with chemicals | 123 | 219 | 342 | 55 | 19 | .000 | -.2 | 618 | 12 |
| If teachers used labs. for practical | 150 | 259 | 409 | 67 | 24 | .000 | -.2 | 615 | 15 |
| Total | 1938 | 2971 | 4911 | 810 | 269 | | -4 | 839 | 327 |
| Average | 149 | 212 | 351 | 58 | 19 | | -.25 | 600 | 23 |

Key: M = Males; F = Females; Tot = total; % = per cent; $X^2$ = Pearson Chi-square value; Sig = Significance for 1-sided; Cor = Correlation value; N = the total sample size; Mi = Missing values, scie = science; labs = laboratories.

Table 4 shows the cross-tabulation results between gender and the language use-related variables. Of the 630 interviewees, most, 528 (84%) agreed that they used only English during note taking in the classrooms. Respondents based on gender reported a similar observation: 306 (86%) and 222 (81%) female and male respondents. Also, 431 (70%) of the interviewees agreed that they liked their teachers to use English during teaching, and based on gender differences, 269 (75.8%) females and 162 (58.9%) male respondents said so (Table 4). This implied that female secondary school students wanted their teachers to use English than male students.

Table 4. Cross-tabulations between gender and the use of languages related variables for the "Yes" responses (N = 630).

| Variable | M | F | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|
| Language used by teacher / teaching | | | | | | | | | |
| English only | 82 | 169 | 251 | 41 | | | | | |
| Kiswahili only | 2 | 0 | 2 | .3 | | | | | |
| English and Kiswahili | 183 | 179 | 362 | 58 | 22 | .000 | -.12 | 615 | 15 |
| Language used during notes taking | | | | | | | | | |
| English only | 222 | 306 | 528 | 84 | | | | | |
| Kiswahili only | 1 | - | 1 | .2 | | | | | |
| English and Kiswahili | 43 | 41 | 84 | 13 | 4 | .200 | -.07 | 613 | 17 |
| Language used in asking questions | | | | | | | | | |
| English only | 147 | 233 | 380 | 62 | | | | | |
| Kiswahili only | 8 | 3 | 11 | 2 | | | | | |
| English and Kiswahili | 109 | 110 | 219 | 36 | 11 | .004 | -.11 | 610 | 20 |
| Language used in answering questions | | | | | | | | | |
| English only | 153 | 262 | 415 | 68 | | | | | |
| Kiswahili only | 4 | 2 | 7 | 1 | | | | | |
| English and Kiswahili | 108 | 81 | 189 | 31 | 22 | .000 | -.19 | 611 | 19 |
| Language used in group discussions | | | | | | | | | |
| English only | 64 | 135 | 199 | 32 | | | | | |
| Kiswahili only | 15 | 12 | 27 | 4.4 | | | | | |
| English and Kiswahili | 186 | 199 | 385 | 63 | | | | | |
| Gujarati | - | 2 | 2 | .3 | | | | | |
| Gujarati, Kiswahili and English | 1 | - | 1 | .2 | 18 | .001 | -.15 | 614 | 16 |
| Language you like teacher to use | | | | | | | | | |
| English only | 162 | 269 | 431 | 70 | | | | | |
| Kiswahili only | 9 | 4 | 13 | 2 | | | | | |
| English and Kiswahili | 92 | 71 | 163 | 27 | | | | | |
| Gujarati | 1 | 1 | 2 | .3 | 21 | .000 | -.17 | 609 | 21 |
| Reasons for preferring English | | | | | | | | | |
| Understand subjects easily | 74 | 50 | 124 | 24 | | | | | |
| To improve written English | 37 | 64 | 101 | 19 | | | | | |
| To improve spoken English | 9 | 17 | 26 | 5 | | | | | |
| Is a language of instruction | 25 | 37 | 62 | 12 | | | | | |
| Has interest in the language | 33 | 27 | 60 | 11 | | | | | |
| Is useful in answering questions | 13 | 44 | 57 | 11 | | | | | |
| To improve in communication | 9 | 24 | 33 | 6 | | | | | |
| To know both Kiswahili and English | 4 | 9 | 13 | 2 | 54 | .000 | .14 | 523 | 107 |

Source: Survey data of 1997-2000.

Over half of the respondents, 415 (68%) and 380 (62%) agreed that they used English in answering and asking questions in the classrooms, respectively. Similarly, 385 (63%) of the interviewees agreed that they used both English and Kiswahili in group discussions. This fact is exemplified by responses on the language that students wanted their teachers to use, where about half of the interviewees, 362 (58%) agreed that their teachers should use both English and Kiswahili when teaching (Table 4). Clearly, this implied that half of the surveyed secondary students preferred their teachers to code-switch and code-mix during teaching. The statistical significance of the variables was small implying that there was a small relationship between gender and the language use-related variables. Furthermore, Table 4 shows the reasons that respondents gave for preferring English language. Unfortunately, few interviewees gave reasons

for preferring English such as to understand the subject (24%), to improve written English (19%), was a language of instruction (12%), and had interest in the language (11%). The small percentage testified to the fact that most surveyed students in the secondary schools had little interest in the English language, and that the high agreement for using the language might have been imposed by the school administration.

Table 5 discusses the cross-tabulations between gender and the availability and use of the school libraries. Of the 630 interviewees, 554 (89.1%), 448 (73.9%) agreed that their school had libraries and library attendants, respectively**.** A chi-square test of statistical significance can be used to determine the likelihood that the two variables are unrelated in the population. Clearly, the co-variation in Table 5 is unlikely to be observed in a population in which gender and the availability and use of the school library variables are unrelated. Therefore, the relationship of the two variables was statistically significant, that is, these two variables are probably related in the population of students. Other variables of similar aspect include those pertaining to borrowing books from the libraries, libraries being near to students' homes, and the frequency of using nearby libraries. If no relationship exists between two crossed variables, we say that they are statistically independent and as such do not influence student performance directly. The findings collaborate this thesis.

Table 5. Cross-tabulation between gender and library-related issues for the "Yes" responses (N = 630).

| Variable | M | F | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|
| If have school library | 253 | 301 | 554 | 88.2 | 8.59 | .000 | 0.11 | 621 | 9 |
| If have library attendant | 213 | 235 | 448 | 71.1 | 8.46 | .000 | 0.11 | 606 | 24 |
| If have enough books | 120 | 172 | 292 | 46.3 | 2.27 | .14 | -0.06 | 610 | 20 |
| If have enough chairs/tables | 129 | 188 | 317 | 50.3 | 3.12 | .07 | -0.07 | 612 | 18 |
| Frequency of school library use | | | | | | | | | |
| Frequently | 97 | 142 | 239 | 37.9 | | | | | |
| Occasionally | 73 | 73 | 146 | 23,2 | | | | | |
| Rarely | 37 | 40 | 77 | 12.2 | | | | | |
| Not at all | 53 | 72 | 125 | 19.8 | 3.88 | .27 | -0.02 | 587 | 43 |
| If teachers ask to use library | 138 | 161 | 299 | 47.5 | 1.56 | .21 | 0.51 | 596 | 34 |
| If borrow books | 148 | 236 | 384 | 61.0 | 11.51 | .000 | -0.14 | 610 | 20 |
| Borrowing books frequency | | | | | | | | | |
| Frequently | 50 | 121 | 171 | 27.1 | | | | | |
| Occasionally | 79 | 99 | 178 | 28.3 | | | | | |
| Rarely | 28 | 34 | 62 | 9.8 | | | | | |
| Not at all | 23 | 29 | 52 | 8.3 | 10.61 | .01 | -0.13 | 463 | 167 |
| If any libraries nearby | 152 | 130 | 282 | 44.8 | 21.10 | .000 | 0.18 | 607 | 23 |
| Frequency of nearby library use | | | | | | | | | |
| Frequently | 48 | 28 | 76 | 12.0 | | | | | |
| Occasionally | 38 | 34 | 72 | 11.4 | | | | | |
| Rarely | 25 | 15 | 40 | 6.3 | | | | | |
| Not at all | 48 | 61 | 109 | 17.3 | 8.09 | .04 | 0.13 | 297 | 333 |

Over half of the respondents, 384 (63%), 317 (51.8%), and 299 (50.2%) agreed that they borrowed books from their libraries, that their libraries had enough chairs and tables, their teachers asked students to go to the libraries and borrow books, respectively (Table 5). Less than half of the respondents, 292 (47.9%), 282 (46.5%), 239 (40.7%) agreed that the school libraries had enough books, that libraries were within their vicinity, and that they frequently used the libraries (Table 5). Based on gender, less than half of female and male respondents, 239 (40.7%) agreed that they frequently used school libraries. However, the two crossed variables were statistically independent. Although more than half of the interviewees, 384 (62.9%) agreed to using school libraries, only 171 (36.9 %) of them agreed to frequently borrow books from the libraries, and the relationship of the two variables was statistically significant at p<. 0003 (Table 5). Few interviewees, 76 (25.6%) agreed to frequently using the nearby libraries, and relationship of the two variables was statistically significant at p< .04. The implication here was that students borrowed books from the libraries, but rarely from the nearby libraries. This perhaps points to the low propensity of our society to read books, which is manifested in the low level of writing in English among our secondary school pupils, college and university students.

Table 6 presents cross-tabulations between gender and respondents' involvement in various clubs in the schools. It is assumed that involvement of students in different clubs at school had an influence in their academic achievements. Students in the ten surveyed schools were asked to mention the subject clubs that they were members. Most, 474 (75.5%) interviewees agreed that they were involved in the subject clubs in their schools. But, when students were asked to mention the clubs that they were involved in, only a few of them were able to name the specific clubs.

Table 6. Cross-tabulation between gender and subject club-related issues for the "Yes" responses (N = 630).

| Variable | M | F | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|
| If have subject clubs | 218 | 256 | 474 | 75.7 | 3.88 | .56 | 0.08 | 601 | 29 |
| If debate club member | 103 | 98 | 201 | 31.9 | 5.12 | .05 | 0.15 | 206 | 424 |
| If math club member | 50 | 68 | 118 | 18.7 | 2,16 | .26 | 0.13 | 121 | 509 |
| If Science club member | 56 | 95 | 151 | 24.0 | 1,74 | .55 | 0.11 | 154 | 476 |
| If nature study club member | 12 | 11 | 23 | 3.7 | 3.75 | .11 | 0.37 | 27 | 603 |
| If Geography club member | 30 | 42 | 72 | 11.4 | 2.75 | .15 | 0.19 | 76 | 554 |
| Frequency of member meeting | | | | | | | | | |
| Once a week | 155 | 207 | 362 | 57.5 | | | | | |
| Once per two weeks | 5 | 9 | 14 | 2.2 | | | | | |
| Once per month | 23 | 18 | 41 | 6.5 | 3.03 | .22 | -0.05 | 417 | 213 |
| Activities when members meet | | | | | | | | | |
| Discuss any topic | 96 | 71 | 167 | 26.5 | | | | | |
| Discuss & solve study problem | 43 | 123 | 166 | 26.3 | | | | | |
| Discuss, excepts, exhibition, quizzes | 8 | 5 | 13 | 2.1 | 59.3 | .000 | 0.15 | 399 | 231 |
| Quizzes, math, games | 11 | 6 | 17 | 2.7 | 59.3 | .000 | 0.15 | 399 | 231 |

Of the 630 respondents, 201 (31.9%) agreed that they were involved in the debate clubs in their schools (Table 6). Other respondents showed that 151 (24%), 118 (18.7%), 72 (11.4%) were involved in the science, mathematics, and geography clubs, respectively. And for those with clubs, about half, 362 (57.5%) reported that they met once a week, and a few, 162 (26.5%) and 166 (26.3%) met to discuss topics related to the clubs' problems (e.g. solving problems) (Table 6). Of the six variables cross-tabulated with gender, only one, i.e., whether one was a club member was statistically significant at p>.05. However, observations showed that there was poor involvement of secondary school students in the school clubs. Firstly, perhaps lack of time for day school students, as 164 (26%) of the students were day scholars. Secondly, most subject club teachers may have had no time to oversee students' clubs as most taught "tuition" classes to supplement their income. Thirdly, may be lack of school administrators' enthusiasm to support and encourage subject clubs.

### *8.3.2 Respondents' opinions by the ten schools*

Table 7 presents cross-tabulations between the respondents' opinions for the ten surveyed schools about aspects pertaining to classrooms, laboratories, teachers, and teaching materials. Of the 630 respondents, 586 (93%), 579 (91.9%), and 571 (90.6%) agreed that their schools had chemistry, biology, and physics laboratories, respectively. The relationship of the two variables was statistically significant at p> .01 (Table 7). Over half of the 630 interviewees in all ten schools, 413 (65.5%), 411 65.2%), and 395 62.7%) agreed that their school classrooms had enough chairs and desks, used the available school laboratories for practical sessions, and schools had enough teachers, respectively. Observations showed that although some of the surveyed schools had laboratories, it was reported that they were infrequently used for practical sessions. Also, about half of the respondents, 356 (56.9%), 532 55.9%), 343 (54.4%) and 326 (51.7% agreed that teachers used the available teaching materials, laboratories had enough chairs and desks, laboratories were equipped with chemicals, and there were enough teaching materials, respectively.

Table 7 shows detailed analysis of data for interviewees' views in the ten secondary schools. Few respondents, an average of 3.3 (7.6%) at Morogoro secondary school agreed that their school had enough chairs and desks, teachers, teaching materials, teachers used the teaching materials, labs were well equipped with apparatus, and teachers used laboratories for practical sessions. Similarly, few interviewees, an average of 19 (22%) at Azania secondary school agreed that their school had enough chairs and desks, teachers, teaching materials, and teachers used the

teaching materials, laboratories were well equipped with apparatus, chemicals, and laboratories were used for practical sessions. Also, few interviewees, an average of 18 (36%) at Kilakala girls secondary school agreed that their school had enough teachers, teaching materials, teachers used teaching materials, laboratories were equipped with apparatus and chemicals (Table 7).

Table 7. Cross-tabulations between surveyed schools and classroom-, laboratories-, teachers-, teaching materials-related variables for the "Yes" responses (N = 630).

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If classroom chairs/desks enough | 35 | 77 | 43 | 41 | 5 | 36 | 40 | 35 | 82 | 19 | 413 | 66 | 282 | .00 | .04 | 625 | 5 |
| If laboratory chairs/desks enough | 29 | 76 | 42 | 41 | 3 | 36 | 40 | 28 | 41 | 16 | 352 | 56 | 260 | .00 | .18 | 625 | 5 |
| If teachers enough | 60 | 59 | 51 | 31 | 3 | 35 | 40 | 15 | 72 | 29 | 395 | 63 | 178 | .00 | .18 | 606 | 24 |
| If teaching materials enough | 14 | 75 | 29 | 32 | 3 | 36 | 40 | 20 | 62 | 15 | 326 | 58 | 259 | .00 | .01 | 579 | 51 |
| If teachers use teaching materials | 26 | 72 | 40 | 32 | 2 | 36 | 40 | 24 | 59 | 25 | 356 | 57 | 189 |  | .06 | 568 | 62 |
| If physics lab available | 87 | 77 | 78 | 41 | 42 | 36 | 40 | 49 | 49 | 80 | 579 | 92 | 226 | .00 | .28 | 620 | 10 |
| If chemical lab available | 87 | 77 | 78 | 40 | 42 | 36 | 40 | 50 | 55 | 81 | 586 | 93 | 186 | .00 | .25 | 621 | 9 |
| If biology lab available | 82 | 77 | 78 | 41 | 42 | 36 | 40 | 50 | 46 | 79 | 571 | 91 | 218 | .00 | .27 | 620 | 10 |
| If agriculture lab available |  |  |  |  |  |  |  | 1 |  |  | 1 | 0.02 | 11 | .28 | .25 | 596 | 34 |
| If domestic science lab available | 59 | - | - | - | 42 | 36 | 40 | 49 | 3 | - | 229 | 11 | 553 | .00 | .14 | 603 | 27 |
| If computer lab available | 69 |  |  |  |  |  | 3 |  |  |  | 72 |  | 503 | .00 | .57 | 527 | 103 |
| If Labs well equipped with apparatus | 24 | 76 | 37 | 28 | 2 | 36 | 40 | 12 | 28 | 14 | 297 | 47 | 259 | .00 | .22 | 602 | 28 |
| If Labs well equipped with chemicals | 50 | 75 | 51 | 29 | - | 35 | 40 | 18 | 29 | 16 | 343 | 54 | 246 | .00 | .34 | 261 | 9 |
| If use labs for practical session | 50 | 72 | 66 | 41 | 5 | 36 | 40 | 42 | 41 | 18 | 411 | 65 | 251 | .00 | .30 | 618 | 12 |

Source: Survey data of 1997-2000. Key: 1 = Jangwani; 2 = Shaaban Robert; 3 = Kinondoni; 4 = Junior seminary; 5 = Morogoro secondary; 6 = St. Mary's Mazinde Juu; 7 = Kifungilo; 8 = Kilakala; 9 = Jitegemee; 10 = Azania.

Similarly, Table 7 shows that Jangwani secondary school had some inadequacies. Few respondents at Jangwani agreed that their school had enough chairs and desks in the laboratories, teaching materials were enough, teachers used teaching materials, and that laboratories were equipped with apparatus an average of 23 (26.4%). The implication of this data was that all of the surveyed government secondary schools had insufficient teachers and most of the essential materials for enhancing learning. These inadequacies appeared to contribute towards the poor performance of school graduates from the government secondary schools as explained elsewhere. One observation pertaining to availability of chemicals and teaching materials was their obsoleteness. For instance, some of the chemicals displayed to researchers were over five years old and had expired. Also, in most classes one could see that the available teaching materials were infrequently used partly because of the teachers' speed to finish the curriculum and have time to do "tuition". Leaving schools to go and do tuition was serious in most urban schools as teachers moonlighted to subsidize their income. As Table 7 shows for each statement the relationship of the two variables was statistically significant at $p < .01$.

Table 8 further shows respondents' opinions within each school for the three mostly agreed statements (chemistry, physics, and biology). Data in Table 7 shows that all interviewees in the ten schools agreed that there were enough laboratories for the three subjects. However, data in Table 8 shows that about half (54.9%) of the 91 interviewees at Jitegemee JKT secondary school agreed to having enough laboratories for chemistry, physics and biology.

Table 8. Respondents' opinions of the three variables for the ten schools (N = 630).

| Subject | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Chemistry | 87 | 77 | 78 | 40 | 42 | 36 | 40 | 50 | 55 | 81 |
| Physics | 87 | 77 | 78 | 41 | 42 | 36 | 40 | 49 | 49 | 80 |
| Biology | 82 | 77 | 78 | 41 | 42 | 36 | 40 | 50 | 46 | 79 |
| Total | 256 | 231 | 234 | 122 | 126 | 108 | 120 | 149 | 150 | 240 |
| Average N | 85.3 | 77 | 78 | 40.7 | 42 | 36 | 40 | 49.7 | 50 | 80 |
| Av. % | 96.9 | 100 | 100 | 99.2 | 97.7 | 100 | 100 | 99.3 | 54.9 | 93.0 |

Source: Survey data 1977-2000.

Table 9 shows the cross-tabulations between the ten surveyed schools and the language related variable statements that respondents agreed. Most interviewees in the ten schools, 530 (84.1%) agreed that English was only used during note taking in the classrooms, and the relationship of the two variables was statistically significant at $p > .003$ (Table 9). Over half of the interviewees in the ten surveyed schools, 431 (68,4%), 418 (66.3%), 387 (61.4%), and 383 (61.1%) agreed that they preferred teachers to use English when teaching, used English when answering questions, used both English and Kiswahili in group discussions, and used English

when asking questions, respectively. All statements showed that the relationship of the variables was statistically significant at p> .001 (Table 9).

About half of the respondents, 47.4 (53.8%) at Jangwani secondary school also agreed that they wanted their teachers to use both English and Kiswahili during teaching, they used English and Kiswahili when asking and answering questions, in group discussions, and liked to use both languages. The trend was similar with other government-run and owned secondary schools implying that code-switching and -mixing was common among students in the government schools. However, code-switching and mixing was uncommon in the two Christian schools of Kifungilo and St. Mary's Mazinde Juu, and surprising common at Lutheran junior seminary school where an average of 20 (48.3%) of the interviewees agreed to use both English and Kiswahili (Table 9).

Table 9. Cross-tabulation of schools and language-related variables for the "Yes" responses (N = 630).

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Language used by teachers | | | | | | | | | | | | | | | | | |
| English only | 23 | 37 | 23 | 12 | 9 | 36 | 40 | 17 | 44 | 11 | 252 | 40 | | | | | |
| Kiswahili only | - | - | - | 1 | - | - | - | - | - | 1 | 2 | .3 | | | | | |
| English and Kiswahili | 63 | 38 | 55 | 26 | 30 | - | - | 33 | 46 | 73 | 364 | 58 | 170 | .000 | .002 | 618 | 12 |
| Language used during notes writing | | | | | | | | | | | | | | | | | |
| English only | 83 | 56 | 65 | 27 | 33 | 36 | 39 | 35 | 84 | 72 | 530 | 84 | | | | | |
| Kiswahili only | - | - | - | 1 | - | - | - | - | - | - | 1 | .2 | | | | | |
| English and Kiswahili | 4 | 16 | 13 | 11 | 7 | - | - | 15 | 6 | 13 | 85 | 14 | 60 | .000 | .000 | 616 | 14 |
| Language used in asking Questions | | | | | | | | | | | | | | | | | |
| English only | 45 | 42 | 50 | 16 | 22 | 36 | 40 | 28 | 69 | 35 | 383 | 61 | | | | | |
| Kiswahili only | - | - | 3 | 1 | 3 | - | - | 1 | - | 3 | 11 | 2 | | | | | |
| English and Kiswahili | 42 | 31 | 25 | 22 | 13 | - | - | 21 | 20 | 45 | 219 | 35 | 98 | .000 | .049 | 613 | 17 |
| Language used in answering Questions | | | | | | | | | | | | | | | | | |
| English | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| only | 59 | 49 | 47 | 18 | 31 | 36 | 40 | 30 | 72 | 36 | 418 | 66 | | | | | |
| Kiswahili only | - | - | 1 | 2 | 1 | - | - | 1 | - | 2 | 7 | 1 | | | | | |
| English and Kiswahili | 26 | 25 | 27 | 19 | 8 | - | - | 19 | 18 | 47 | 189 | 30 | 89 | .000 | .046 | 614 | 16 |
| Language used in group discussion | | | | | | | | | | | | | | | | | |
| English only | 5 | 20 | 16 | 6 | 13 | 35 | 40 | 8 | 41 | 16 | 200 | 32 | | | | | |
| Kiswahili only | 3 | - | 7 | 2 | 1 | - | - | 5 | 2 | 7 | 27 | 4 | | | | | |
| English and Kiswahili | 78 | 51 | 54 | 31 | 26 | 1 | - | 36 | 47 | 63 | 38 | 61 | | | | | |
| Gujarati | - | 1 | - | - | - | - | - | 1 | - | - | 7 | .3 | | | | | |
| English, Kiswahili & Gujarati | - | 1 | - | - | - | - | - | - | - | - | 1 | .2 | 241 | .000 | .180 | 617 | 13 |
| Language you like to use | | | | | | | | | | | | | | | | | |
| English only | 57 | 41 | 53 | 26 | 19 | 35 | 40 | 35 | 70 | 55 | 431 | 68 | | | | | |
| Kiswahili only | 2 | 1 | - | 1 | 2 | - | - | - | 2 | 5 | 13 | 2 | | | | | |
| English and Kiswahili | 28 | 35 | 24 | 10 | 15 | 1 | - | 13 | 17 | 23 | 166 | 26 | | | | | |
| Gujarati | - | - | 1 | - | - | - | - | - | - | 1 | 2 | .3 | 67 | .000 | .111 | 612 | 18 |
| Reasons for preferred language | | | | | | | | | | | | | | | | | |
| Understand easily | 21 | 22 | 16 | 8 | 8 | 1 | 1 | 9 | 19 | 19 | 124 | 20 | | | | | |
| Improve English | 24 | 9 | 14 | 12 | 1 | 5 | 3 | 6 | 9 | 18 | 101 | 16 | | | | | |
| Language for teaching | 9 | 1 | 8 | 2 | 4 | 2 | 9 | 6 | 13 | 8 | 62 | 10 | | | | | |
| English speaking improved | 5 | - | 3 | - | 2 | 2 | - | 6 | 3 | 5 | 26 | 4 | | | | | |
| Interesting language | 5 | 6 | 14 | 1 | 3 | 2 | 1 | 3 | 9 | 16 | 60 | 3 | | | | | |
| Useful in answering exams | 3 | 2 | 2 | 1 | - | 15 | 17 | 2 | 12 | 3 | 57 | 9 | | | | | |
| Communicate easily | 2 | 2 | - | - | 1 | 5 | 9 | 3 | 8 | 3 | 33 | 5 | 458 | .000 | .065 | 524 | 106 |

Source: Survey data of 1997-2000.

Furthermore, Table 10 shows the results of respondents who agreed to using English language. Of the 41 interviewees at Lutheran Junior Seminary, about half, 22 (an average of 53%), and 50 (an average of 58%) at Azania secondary schools agreed that they preferred to use English language, respectively. Also, they preferred their teachers to use English during teaching, they themselves used English when asking and answering questions (Table 10). Interviewees at Jangwani, Kilakala, and Shaabani Robert secondary schools (69 percent, 64 percent, and 61

percent respectively) agreed to the usage of English at school. Moreover, all respondents at St. Mary's Mazinde Juu and Kifungilo secondary schools confirmed all four variable statements pertaining to the usage of English in their schools (Table 10).

Table 10. Respondents' opinions of the three English usage variables for the ten schools (N = 630).

| | School | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Subject | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Used English during notes taking | 85 | 56 | 65 | 27 | 33 | 36 | 39 | 35 | 84 | 72 |
| Preferred teachers to use English | 57 | 41 | 53 | 26 | 19 | 35 | 40 | 35 | 70 | 55 |
| Used English in answering questions | 59 | 49 | 47 | 18 | 31 | 36 | 40 | 30 | 72 | 36 |
| Used English in asking questions | 45 | 42 | 50 | 16 | 22 | 36 | 40 | 28 | 69 | 35 |
| Total | 246 | 188 | 215 | 87 | 105 | 143 | 159 | 128 | 295 | 198 |
| Average N | 62 | 47 | 54 | 22 | 26 | 36 | 40 | 32 | 74 | 50 |
| Average % | 69 | 61 | 69 | 53 | 72 | 100 | 100 | 64 | 81 | 58 |

Further analysis of responses in Table 10 reveals three things: Firstly, that perhaps code-switching and code-mixing (use English and Kiswahili) during teaching in the surveyed schools was common with the exception of Kifungilo and St. Mary's Mazinde Juu. Secondly, it was, therefore, implied that code-switching and -mixing in teaching and group discussions impeded students' intellectual development. This point was exemplified by, among other things, high pass marks that most students from Kifungilo and St. Mary's Mazinde Juu attain. Thirdly, empirical evidence shows that students in the surveyed secondary schools appeared to like their teachers to use English during teaching. This, they reported improved their English. However, observations show that most secondary school students code-switched and -mixed when talking with friends and peers.

Table 11 presents interviewees' responses of the ten surveyed schools. Of the 630 respondents, 555 (88%) agreed that their schools had libraries, and 449 (71%) of them agreed that they had library attendants. Over half of the interviewees, 385 (61%) agreed that they borrowed books from the school libraries, while half of them, 317 (50%) agreed that they had enough chairs and desks in the classrooms and in the libraries. Also, as Table 12 shows, less than half of the respondents, 299 (48%), 292 (46%), 284 (45%) agreed that their teachers asked them to go the libraries, and that libraries had enough books, and were nearby, respectively.

Table 11. Cross-tabulations between schools and library-related variables for the "Yes" responses (N = 630).

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If have school library | 63 | 77 | 78 | 40 | - | 36 | 40 | 47 | 90 | 84 | 555 | 88 | 398 | .000 | -.169 | 624 | 6 |
| If have library attendant | 36 | 76 | 62 | 32 | - | 34 | 40 | 30 | 76 | 63 | 449 | 71 | 206 | .000 | -.103 | 609 | 21 |
| If have enough books | 4 | 76 | 13 | 21 | - | 34 | 30 | 14 | 85 | 6 | 292 | 46 | 421 | .000 | -.071 | 613 | 17 |
| If have enough chairs/tables | 6 | 75 | 16 | 36 | - | 35 | 40 | 28 | 66 | 15 | 317 | 50 | 354 | .000 | -.069 | 615 | 15 |
| Frequency of school library use | | | | | | | | | | | | | | | | | |
| Frequently | 2 | 38 | 23 | 27 | - | 33 | 24 | 19 | 57 | 17 | 240 | 38 | | | | | |
| Occasionally | 16 | 32 | 23 | 8 | - | 3 | 9 | 15 | 19 | 21 | 146 | 23 | | | | | |
| Rarely | 19 | 5 | 5 | 2 | 3 | - | 7 | 10 | 3 | 26 | 77 | 12 | | | | | |
| Not at all | 44 | - | 17 | 3 | 9 | - | - | 1 | 4 | 19 | 127 | 20 | 394 | .000 | -.178 | 590 | 40 |
| If teachers ask to use library | 6 | 62 | 89 | 32 | - | 33 | 5 | 31 | 74 | 17 | 299 | 48 | 275 | .000 | -.046 | 599 | 31 |
| If borrow books | 45 | 76 | 50 | 38 | - | 34 | 36 | 39 | 35 | 32 | 385 | 61 | 210 | .000 | .218 | 613 | 17 |
| Borrowing books frequency | | | | | | | | | | | | | | | | | |
| Frequently | 11 | 33 | 19 | 14 | - | 34 | 25 | 15 | 16 | 5 | 172 | 27 | | | | | |
| Occasionally | 18 | 32 | 21 | 13 | - | 1 | 9 | 17 | 18 | 12 | 180 | 29 | | | | | |
| Rarely | 17 | 6 | 6 | 7 | 3 | 1 | 3 | 6 | 2 | 14 | 62 | 10 | | | | | |
| Not at all | 16 | - | 15 | 4 | 9 | - | - | 5 | 4 | 8 | 52 | 8 | 209 | .000 | -.073 | 466 | 164 |
| If any library nearby | 60 | 55 | 43 | 8 | 2 | 1 | - | 6 | 14 | 75 | 284 | 45 | 237 | .000 | .160 | 609 | 21 |
| Frequency of nearby library use | | | | | | | | | | | | | | | | | |
| Frequently | | | | | | | | | | | | | | | | | |
| Occasionally | 12 | 3 | 19 | 1 | 1 | - | - | 1 | 4 | 25 | 78 | 12 | | | | | |
| Rarely | 18 | 7 | 17 | 3 | 3 | - | - | 3 | 7 | 15 | 72 | 11 | | | | | |
| Not at all | 9 | 10 | 4 | - | 2 | - | - | - | 2 | 15 | 40 | 6 | | | | | |
| | 26 | 40 | 12 | 7 | 6 | - | - | 2 | 2 | 14 | 106 | 17 | 79 | .000 | -.251 | 299 | 331 |

Further analysis of data in Table 11 shows that few respondents at Jangwani, on an average of 5 (6%) agreed that their school had enough books, enough chairs in the library, and their teachers asked them to use the school library. Similarly, few interviewees at Kinondoni, 15 (18,6%) agreed that their school had enough books, chairs and desks. However, few respondents at Lutheran Junior Seminary, 8 (19.5%) agreed that they had a library near the school. All respondents at Morogoro secondary school reported that there was no library at school something that may be contributing to poor student achievement. Few interviewees at Azania secondary school, 13 (14.7%) agreed that their school had enough books, enough chairs and desks, and that their teachers asked them to go to the library. Also, few respondents at Jitegemee-JKT, 14 (15%) agreed that there were libraries in the nearby, and few respondents at Kilakala secondary, on an average of 10 (20%) agreed that they had enough books in the library and that there was a library nearby (Table 11).

Table 12 shows the interviewees' responses based on individual schools regarding subject club-related variables. Most interviewees, 474 (75%) agreed that they belonged to various subject

clubs in their schools, and 363 (58%) agreed that they met once per week. Of the three clubs that respondents belonged to, 202 (32%) were members of the debate clubs (Table 12). Few respondents, 152 (24%) and 119 (19%) belonged to science and mathematics clubs, respectively. Data presented in Table 12 shows that few interviewees were involved in any subject clubs.

Table 12. Cross-tabulations between schools and clubs-related variables for the "Yes" responses (N = 630).

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Tot | % | $X^2$ | Sig. | Cor. | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If have subject clubs | 35 | 76 | 58 | 37 | - | 36 | 40 | 34 | 91 | 67 | 474 | 75 | 264 | .000 | .18 | 603 | 27 |
| If debate club member | 20 | 3 | 41 | 30 | - | 6 | 4 | 20 | 30 | 48 | 202 | 32 | 24 | .002 | -.18 | 207 | 423 |
| If math club member | 10 | 17 | 18 | 1 | - | 22 | 5 | 5 | 24 | 17 | 119 | 19 | 13 | .017 | -.22 | 122 | 508 |
| If science club member | 8 | 19 | 11 | 1 | - | 10 | 27 | 15 | 43 | 18 | 152 | 24 | 21 | .008 | -.21 | 155 | 475 |
| If nature study club member | 5 | 1 | 5 | - | - | 1 | - | 2 | 3 | 6 | 23 | 4 | 8 | .225 | -.45 | 27 | 603 |
| Frequency of member Meeting | | | | | | | | | | | | | | | | | |
| Once a week | 23 | 66 | 40 | 32 | - | 36 | 40 | 14 | 83 | 29 | 363 | 58 | | | | | |
| Once per two weeks | 6 | - | 2 | 1 | - | - | - | 8 | - | 4 | 14 | 2 | | | | | |
| Once per month | 4 | - | 1 | 1 | - | - | - | 11 | 4 | 20 | 41 | 7 | 138 | .000 | .20 | 418 | 212 |
| Activities when Members meet | | | | | | | | | | | | | | | | | |
| Discuss any topic | 14 | 13 | 37 | 25 | - | - | 2 | 18 | 20 | 38 | 167 | 27 | | | | | |
| Discuss & solve Study problem | 10 | - | - | - | - | 35 | 38 | 7 | 67 | 9 | 166 | 26 | 526 | .000 | -.19 | 399 | 231 |

Source: Survey data of 1997-2000.

### *8.3.3 Respondents' opinions by school system*

Table 13 presents the distribution of respondents according to the school systems. Of the 630 interviewees, 330 (52%), 214 (34%), and 86 (13.6%) were in co-education, girls only, and boys only secondary schools.

Table 13. Distribution of schools according to the school systems (N =630).

| Co-education (COE) | | Girls only (G) | | Boys only (B) | | |
|---|---|---|---|---|---|---|
| Jitegemee JKT | 91 | Jangwani | 88 | Azania | 86 | |
| Kinondoni Moslem | 78 | Kifungilo | 40 | | | |
| Shaaban Robert | 77 | Kilakala | 50 | | | |
| Lutheran Junior seminary | 41 | Mazinde Juu | 36 | | | |
| Morogoro secondary school | 43 | | | | | |
| Total | 330 | | 214 | | 86 | 630 |
| Percent | 52.4 | | 34.0 | | 13.6 | 100 |

Source: Survey data of 1997-2000.

Furthermore, Table 14 presents cross-tabulations results between the school systems: co-education, boys only, and girls only and library related variables. Most respondents, 586 (93%), 579 (91.9%), and 571 (90.6%) in all school systems (in co-education, boys only, girls only)

school systems agreed that their schools had chemistry, physics, and biology laboratories, respectively. And the cross-tabulations for all variables were statistically significant at p> .001 with the exception of one, i.e. the availability of agricultural laboratories (Table 14). Although, most respondents agreed that their schools had science laboratories, data in Table 14 shows that about of the interviewees agreed that their school laboratories had apparatus and chemicals. This aspect had far reaching implications on the national economy, hence most students came out of the secondary schools "half baked". The reason explains the inability of most secondary school graduates to fail to carry out or undertake even simple science experiments. Table 14 further shows that only 72 (11.4%) of the interviewees agreed that their schools had computer laboratories, and this was for only two schools (Shaaban Robert, Kilakala).

Table 14. Cross-tabulations between the school systems and classrooms-, laboratories-, teachers-, and material-related variables for the "Yes" responses (N = 630).

| Variable | COE | B | G | Tot | % | $X^2$ | Sig | Cor. | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| If Classrooms chair/desk enough | 248 | 19 | 146 | 413 | 65.5 | 51.51 | .000 | .136 | 625 | 5 |
| If lab chairs/desks enough | 203 | 16 | 130 | 352 | 55.9 | 37.41 | .000 | .042 | 625 | 5 |
| If teachers enough | 216 | 29 | 150 | 395 | 62.7 | 91.17 | .000 | -.069 | 606 | 24 |
| If teaching materials enough | 201 | 15 | 110 | 326 | 51.7 | 19.36 | .000 | .148 | 579 | 51 |
| If teachers use teaching materials | 205 | 25 | 126 | 356 | 56.5 | 189.0 | .000 | .07 | 568 | 62 |
| If physics lab available | 287 | 80 | 185 | 579 | 91.9 | 29.14 | .000 | -.214 | 620 | 10 |
| If chemistry lab available | 292 | 81 | 213 | 586 | 93.0 | 26.47 | .000 | -.20 | 621 | 9 |
| If biology lab available | 284 | 79 | 208 | 571 | 90.6 | 21.18 | .000 | -.182 | 620 | 10 |
| If agricultural lab available | - | - | 1 | 1 | 0.2 | 3.45 | .178 | -.025 | 596 | 34 |
| If domestic science lab available | 45 | - | 184 | 229 | 36.3 | 270.6 | .000 | -.633 | 603 | 27 |
| If Computer lab available | 69 | - | 3 | 72 | 11.4 | 44.50 | .000 | .286 | 527 | 103 |
| If labs well equipped apparatus | 171 | 14 | 112 | 297 | 47.1 | 58.93 | .000 | .010 | 602 | 28 |
| If chemistry labs well-equipped | 184 | 16 | 143 | 343 | 54.4 | 82.23 | .000 | -.085 | 621 | 9 |
| If use labs for practical session | 225 | 18 | 168 | 411 | 65.2 | 41.07 | .000 | -.02 | 618 | 12 |
| Total | 263 | 39 | 187 | 490 | | | | | | |
| Average | 0 | 2 | 9 | 1 | | | | | | |
| Average % | 219 | 36 | 145 | 400 | | | | | | |
| | 66 | 41 | 67 | 58 | | | | | | |

Source: Survey data of 1997-2000.

Further analysis of the data in Table 14 shows that of the 77 and 50 respondents at Shaaban Robert and Kilakala, 69 (90%), and 3 (6%), agreed respectively hat their schools had computer laboratories. The implication from this data was that most of the surveyed schools had no computer laboratories, and hence their students did not get required knowledge and skills in this important area. Table 14 also shows that an average of 145 (67%) of the respondents in girls only secondary schools agreed to the classrooms-, laboratories-, teachers-, and material-related variables in their schools followed by those in co-education, 219 (66%), and those in boys only,

36 (41%) schools. This could be interpreted that girls were more satisfied with aspects related to the classrooms, laboratories, teachers, and materials in their schools than were boys, as less than half (41%) responded. Of the 630 interviewees, an average of 400 (58%) agreed to all classrooms-, laboratories-, teachers-, and material-related variables (Table 14).

Table 15 presents cross-tabulations results between the school systems and the two languages (English, Kiswahili) usage-related variables. Most respondents, 530 (84%), for all school systems agreed that they used English only during note-taking. And the cross-tabulations for all variables were statistically significant at p> .001, but the co-variation between school systems and languages use was negative, which theoretically implied that when school systems increased the use of one language decreased the use of the other languages (Table15). Furthermore, Table 15 shows that more interviewees in the girls secondary schools, 193 (90%) agreed to using English during note taking than boys 72 (84%), followed by co-education 265 (80%), although the difference was not significant. Over half of the interviewees, 431 (68%), 418 (66%), and 383 (60%), based on their school systems agreed that they like to use English, they used English in answering questions, and used English in asking questions, respectively. However, less than half of the respondents, 252 (40%) agreed that their teachers used English when teaching--this low response may be contributing to poor English among Tanzanian secondary school graduates.

Most respondents in boys only secondary schools, 73 (85%) agreed that their teachers should use both English and Kiswahili when teaching, while 195 (59%), and 96 (45%) of respondents in co-education, and girls only school reported a similar response (Table 15). About half of the interviewees in the boys only, 45 (52%) agreed to code-switching and code-mixing between English and Kiswahili when asking questions in the classroom, while few respondents in the co-education, 111 (34%), and girls only, 63 (29%) reported the same. Similarly, code-switching and code-mixing was common among boys as 47 (55%) of them said so, while only 97 (29%) and 47 (22%) interviewees in the co-education and girls only secondary schools also affirmed the statement. This implied that most boys preferred code-switching and code-mixing than did the girls an aspect that is exemplified in normal life, i.e. boys prefer code-switching than girls perhaps because the latter want to show off that they know the English language.

Table 15. Cross-tabulations between school system and language related variables who answered "Yes" (N = 630).

| Variable | COE | B | G | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| Language used by teachers | | | | | | | | | | |
| English only | 125 | 11 | 116 | 252 | 40.0 | | | | | |
| Kiswahili only | 1 | 1 | - | 2 | .3 | | | | | |
| English and Kiswahili | 195 | 73 | 96 | 364 | 57.8 | 51 | .000 | -.126 | 618 | 12 |
| Language used during notes | | | | | | | | | | |
| writing | 265 | 72 | 193 | 530 | 84.1 | | | | | |
| English only | 1 | - | - | 1 | .2 | | | | | |
| Kiswahili only | 53 | 13 | 19 | 85 | 13.5 | 26 | .000 | -.141 | 616 | 14 |
| English and Kiswahili | | | | | | | | | | |
| Language used in asking | | | | | | | | | | |
| Questions | 199 | 35 | 149 | 383 | 60.7 | | | | | |
| English only | 7 | 3 | 1 | 11 | 1.7 | | | | | |
| Kiswahili only | 111 | 45 | 63 | 219 | 34.8 | 25 | .000 | -.05 | 613 | 17 |
| English and Kiswahili | | | | | | | | | | |
| Language used in answering | | | | | | | | | | |
| Questions | 217 | 36 | 165 | 418 | 66.3 | | | | | |
| English only | 4 | 2 | 1 | 7 | 1.1 | | | | | |
| Kiswahili only | 97 | 47 | 45 | 189 | 30.0 | 42 | .000 | -.077 | 614 | 16 |
| English and Kiswahili | | | | | | | | | | |
| Language used in group | | | | | | | | | | |
| discussion | 96 | 16 | 88 | 200 | 31.7 | | | | | |
| English only | 12 | 7 | 8 | 27 | 4.3 | | | | | |
| Kiswahili only | 209 | 63 | 15 | 387 | 61.4 | | | | | |
| English and Kiswahili | 1 | - | 1 | 2 | .3 | | | | | |
| Gujarati | 1 | - | - | 1 | .2 | 43 | .000 | -.123 | 617 | 13 |
| English, Kiswahili & Gujarati | | | | | | | | | | |
| Language you like to use | | | | | | | | | | |
| English only | 209 | 55 | 167 | 431 | 68.4 | | | | | |
| Kiswahili only | 6 | 5 | 2 | 13 | 2.06 | | | | | |
| English and Kiswahili | 101 | 23 | 42 | 166 | 26.3 | | | | | |
| Gujarati | 1 | 1 | - | 2 | .3 | 15 | .019 | -.129 | 612 | 18 |
| Reasons for preferred language | | | | | | | | | | |
| Understand easily | 73 | 19 | 32 | 124 | 19.7 | | | | | |
| Improve English | 45 | 18 | 38 | 101 | 16.0 | | | | | |
| Language for teaching | 28 | 8 | 26 | 62 | 9.8 | | | | | |
| English speaking improved | 8 | 5 | 13 | 26 | 4.1 | | | | | |
| Interesting language | 33 | 16 | 11 | 60 | 9.5 | | | | | |
| Useful in answering exams | 17 | 3 | 37 | 57 | 9.0 | | | | | |
| Communicate easily | 11 | 3 | 19 | 33 | 5.2 | 117 | .000 | .065 | 524 | 106 |
| Total | 2126 | 580 | 1445 | 4152 | | | | | | |
| Average | 76 | 23 | 60 | 148 | | | | | | |
| Average % | 23 | 27 | 28 | 26 | | | | | | |

Source: Survey data of 1997-2000.

Table 15 further shows on average only 148 (26%) of the 630 interviewees agreed positively to the two languages usage-related variables. For instance, an average of 76 (23%), 60 (28%), and 23 (27%) of the respondents in co-education, girls only, and boys only secondary schools agreed to the two languages usage-related variables. The implication of this data is that within the three school systems, respondents were not satisfied with the usage of the two languages. Although, most respondents preferred English, the low responses they gave as reasons

for preferring it were discouraging. Of the 630 respondents, an average of as low as 66 (21%) gave various reasons to the seven variables for preferring English. Also, this is exemplified by the other statistics reported in Table 15. For instance, the high value of the chi-square show a dissatisfaction among the interviewees for the cross-tabulated variables. Observations in the higher institutions of learning and normal life show that most of the contemporary secondary school graduates have low mastery of the English language--both in written and oral communication.

Table 16 shows the cross-tabulations between the school system and the availability and use of the school library-related variables. Of the 630 interviewees, 555 (88%), 449 (71%) agreed that their school had libraries and library attendants. Further data shows that examining responses across the school systems one sees that most interviewees in the boys secondary schools, 84 (97%) agreed that their schools had libraries, 186 (87%) and 285 (86%) was for co-education and girls only, respectively. A similar trend appears for the statements pertaining to schools having library attendants. The relationship of the former variable (school library) with school system was statistically significant while the latter was not (Table 16). Other variables showing statistical significance included use of the school library, teachers asking students to use the library, borrowing books from the libraries, libraries being near to students' homes, and the frequency of using nearby libraries.

Table 16. Cross-tabulations between the school systems and library-related variables for the "Yes" responses (N = 630).

| Variable | COE | B | G | Tot | % | $X^2$ | Sig | Corv | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| If have school library | 285 | 84 | 186 | 555 | 88.00 | 11.98 | .002 | -.008 | 624 | 6 |
| If have library attendant | 246 | 63 | 140 | 449 | 71.26 | 2.523 | .283 | .062 | 609 | 21 |
| If have enough books | 195 | 6 | 91 | 292 | 46.34 | 78.82 | .000 | .140 | 613 | 17 |
| If have enough chairs/tables | 193 | 15 | 109 | 317 | 50.31 | 27.618 | .000 | .131 | 615 | 15 |
| Frequency of using school | | | | | | | | | | |
| library: | 145 | 17 | 78 | 240 | 38,09 | | | | | |
| Frequently | 82 | 21 | 43 | 146 | 23.17 | | | | | |
| Occasionally | 15 | 26 | 36 | 77 | 12.22 | | | | | |
| Rarely | 63 | 19 | 45 | 127 | 20.15 | | | | | |
| Not at all | | | | | | | | | | |
| If teachers ask to use library | 207 | 17 | 75 | 299 | 47.46 | 76.095 | .000 | .351 | 599 | |
| If borrow books | 199 | 32 | 154 | 385 | 61.11 | 13.448 | .001 | -.063 | 613 | 17 |
| Borrowing books frequency: | | | | | | | | | | |
| Frequently | 82 | 5 | 85 | 172 | 27.30 | | | | | |
| Occasionally | 123 | 12 | 45 | 180 | 28.57 | | | | | |
| Rarely | 21 | 14 | 27 | 62 | 9.84 | | | | | |
| Not at all | 23 | 8 | 21 | 52 | 8.25 | 46.631 | .000 | -.032 | 466 | 164 |
| If any library nearby | 142 | 75 | 67 | 284 | 45.07 | 14.597 | 0.001 | .021 | 609 | 21 |
| Frequency of using nearby | | | | | | | | | | |
| library: | 40 | 25 | 13 | 78 | 12.38 | | | | | |
| Frequently | 36 | 15 | 21 | 72 | 11.42 | | | | | |
| Occasionally | 16 | 15 | 9 | 40 | 6.34 | | | | | |
| Rarely | 67 | 14 | 28 | 109 | 17.30 | 14.219 | .027 | -.035 | 299 | 331 |
| Not at all | 2180 | 483 | 1273 | | | | | | | |
| Total | 136 | 25 | 67 | | | | | | | |
| Average | 41 | 29 | 31 | | | | | | | |
| %AV | | | | | | | | | | |

Source: Survey data of 1997-2000.

Over half of the interviewees, 385 (61%) and 317 (50%) agreed that they borrowed books from their libraries and that schools classrooms had enough chairs and tables. However, of the 630 interviewees, less than half, 299 (48%), 292 (46%), and 284 (45%) reported that their teachers asked students to go to the libraries, that their libraries had enough books, and there was a nearby library, respectively. Further examination of data in Table 16 shows that most respondents in the girls only schools, 154 (72%) followed by those in co-education, 199 (60%) borrowed books from the school libraries. However, few, 32 (37%) of the respondents in the boys only schools borrowed books from the school libraries. Although over half of the interviewees, 207 (63%) in the co-education schools agreed that their teachers asked them to used the libraries, few, 75 (35%) and 17 (20%) of the respondents in the girls and boys only schools were in agreement with this statement (Table 16). The implication of this data is that perhaps teachers in the schools do not often encourage students to borrow books--an aspect that may be affecting students learning and later their performance.

Less than half of the respondents, 292 (47.9%), 282 (46.5%), 239 (40.7%) agreed that the school libraries had enough books, that libraries were in their vicinity, and that they frequently

used libraries (Table 16). Table 16 further shows that an average of 136 (41%) of the respondents in the co-education secondary schools agreed to the library-related variables in their schools, while only 67 (31%) the girls only schools and 25 (29%) in boys only did not. This could be interpreted that on the average most students in our secondary schools irrespective of the school system were not satisfied with the library-related variables, and that there is a need to improve the library component in the school system.

### *8.3.4 Respondents' opinions by school ownership*

Table 17 shows the school owners and number of respondents in the ten surveyed schools. Of the 630 interviewees, 267 (42.4%) respondents were in schools that were by the government owned secondary schools.

Table 17. Respondents' school ownership (N = 630).

| School | Owner | N |
|---|---|---|
| Azania | Government (GT) | 86 |
| Jangwani | " | 88 |
| Kilakala | " | 50 |
| Morogoro sec. School | " | 43 |
| Kinondoni | Moslem (MS) | 78 |
| Kifungilo | Christian (CHR) | 40 |
| Mazinde Juu | " | 36 |
| Moro Junior Seminary | " | 41 |
| Jitegemee | JKT (JKT) | 91 |
| Shaaban Robert | Individual (IN) | 77 |
| Total | | 630 |

Key: N totals are: GT = 267; MS = 78; CHR = 117; JKT = 91; IN = 77.

Table 18 shows cross-tabulations between school owners and classroom-, teaching materials- and laboratories-related variables. Most interviewees, 579 (92%), 586 (92%), 571 (91%) agreed that their schools had physics, chemistry and biology laboratories, respectively. With the exception of one cross-tabulation (presence of agriculture laboratory) the Pearson chi-square for all variables showed statistical significance. And the Spearman correlation values for most variables were negative implying that there was an inverse relationship between school ownership and the variables. For instance, theoretically increasing chemistry, biology or physics laboratories would cause a decrease in ownership of the school--something that is not practical. A close scrutiny of the data in Table 18 shows that although most (over 95%) of the interviewees in the four school systems (GT, MS, CHR, IN) agreed that their schools had physics, chemistry and biology laboratories. But only an average of 49 (54%) respondents at Jitegemee-JKT secondary

school said so. A similar case is also true for variables pertaining to using laboratories for practical sessions 41 (45%) and laboratories having enough chairs 41 (45%).

Table 18 also shows that less than half of the interviewees, 37 (47%) at Kinondoni Moslem secondary school agreed that the school laboratory was well equipped with chemicals. With the exception of four variables, about less than half of the interviewees, 94 (35%) in the four-government run-secondary schools agreed that: their classrooms had enough chairs and desks. Others, 107 (40%), 76 (29%), and 52 (20%) reported having enough teachers, enough chairs and desks in the laboratories, and adequate teaching materials, respectively. Still others, 115 (43%), 84 (32%), 77 (29%), 52 (29%), and 3 (1%) agreed that teachers used laboratories for practical sessions, laboratories had chemicals, teachers used the teaching materials, that teaching materials were adequate, and that computer laboratories were available, respectively (Table 18). This observation is the opposite of that seen for the Shabaan Robert secondary school--an individually owned school. This implied that most of the government secondary school faired badly in providing classroom-, teaching materials- and laboratories-related items which appear to manifest or result into poor performance of secondary school graduates. Critically, this was exemplified in the higher learning institutions such as Sokoine University of Agriculture and the University of Dar Es Salaam by the unusual high rates of the discontinued (disco) students who were mostly selected from government secondary schools.

Table 18. Cross-tabulation between school owners and classroom-, labs-, teachers-, materials-related variables for the "Yes" responses (N = 630).

| Variable | GT | MS | CHR | IN | JKT | Tot | % | $X^2$ | Sig. | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If classroom chairs and desks enough | 94 | 43 | 117 | 77 | 82 | 413 | 66 | 259 | .000 | -.595 | 625 | 5 |
| If laboratory chairs and desks enough | 76 | 42 | 117 | 76 | 41 | 352 | 59 | 228 | .000 | -.397 | 625 | 5 |
| If teachers are enough | 107 | 51 | 106 | 59 | 72 | 395 | 63 | 54 | .000 | -.26 | 606 | 24 |
| If teaching materials are enough | 52 | 29 | 108 | 75 | 62 | 326 | 52 | 229 | .000 | -.549 | 576 | 54 |
| If teachers use teaching materials | 77 | 40 | 117 | 72 | 59 | 356 | 57 | | | | | |
| If physics laboratory available | 258 | 78 | 116 | 77 | 49 | 579 | 92 | 225 | .000 | -.360 | 620 | 10 |
| If chemistry laboratory available | 260 | 78 | 166 | 77 | 55 | 586 | 92 | 185 | .000 | .330 | 621 | 9 |
| If biology laboratory available | 253 | 78 | 117 | 77 | 46 | 571 | 91 | 216 | .000 | .321 | 620 | 10 |
| If agriculture laboratory available | 1 | - | - | - | - | 1 | .2 | 3 | .632 | -.013 | 596 | 34 |
| If domestic science laboratory available | 150 | - | 76 | - | 3 | 229 | 36 | 252 | .000 | 0.266 | 603 | 27 |
| If computer laboratory available | 3 | - | - | 69 | - | 72 | 11 | 502 | .000 | -.369 | 527 | 103 |
| If laboratory well equipped with apparatus | 52 | 37 | 104 | 76 | 28 | 297 | 47 | 186 | .000 | -.348 | 602 | 28 |
| If laboratory well equipped with chemicals | 84 | 51 | 104 | 75 | 29 | 343 | 54 | 150 | .000 | -.244 | 621 | 9 |
| If use laboratory for practical session | 115 | 66 | 117 | 72 | 41 | 411 | 65 | 206 | .000 | -.297 | 618 | 12 |
| If have w/shop for technical subject | - | - | - | - | - | - | | | | | 626 | 4 |
| Total | 1582 | 583 | 1307 | 882 | 567 | 5144 | 827.2 | | | | | |
| Average | 113 | 54 | 109 | 74 | 47 | 367 | 59 | | | | | |
| % average | 42.2 | 69.2 | 93.2 | 96 | 52 | 70.5 | | | | | | |

N.B. The average per cent (%) is only calculated from the row data than from the column totals as the individual total numbers comprise of the missing data.

Of the 630 respondents, over half of them, 413 (66%), 411 (65%), and 395 (63%) agreed that their schools had enough chairs and desks, enough teachers, used laboratories for practical sessions, respectively (Table 18). Similarly, the Pearson chi-square showed statistical significance between the means, and the Spearman correlation value showed negative relationships between the variables implying a similar trend as observed for laboratories. About half of the respondents, 352 (59%), 356 (57%), 343 (54%), 326 and (52%) agreed that there were enough chairs and desks in the laboratories, teachers used the teaching materials, laboratories were equipped with chemicals, and teaching materials in their schools respectively (Table 18). Summarily, Table 18 shows on average less than half 113 (42.2%) of the interviewees in the government-owned and ran schools agreed to most aspects pertaining to classroom-, teaching materials- and laboratories-related variables. This implied that most of the government-run secondary schools did not have an adequate supply of the items in listed Table 19. This might have an affect on students' learning and hence lowering their performance in the final examinations. On average, 74 (96%) interviewees in the individual-managed school of Shaaban Robert, and an average of 109 (93.2%) in the Christian secondary schools, were satisfied with classroom-, teacher-, teaching materials- and laboratories-related issues in their schools (Table 19). The presence of these things appeared to enhance performance of learning in these schools.

Table 19 shows cross-tabulation results between the school owners: government (GT), Moslem (MS), Christians (CHR), individual (IN), JKT and the two languages (English, Kiswahili) usage-related variables. Most interviewees, 530 (84%), for all school owners agreed that they used English only during notes taking. With the exception of using English and Kiswahili during notes taking, the cross-tabulations for all variables were statistically significant at $p > .01$. But, the co-variation between school systems and languages use was negative, which theoretically implied that when school systems increased the use of one language, the use of the other also decreased. Furthermore, Table 19 shows that more interviewees at Jitegemee-JKT secondary school, 84 (92%) agreed to using English during note-taking than those in the Christians, 102 (87%), government 223 (83%), Kinondoni Moslem (65 (83%), and individual secondary school of Shaaban Robert (56 (76%). In these cases, the difference was not significant. Over half of the interviewees, 431 (68%), 418 (66%) based on the school ownership agreed that they liked to use English, and used English in answering questions, respectively. Yet, 387 (61%) and 364 (58%) of the interviewees agreed to use English and Kiswahili in group discussions, and wanted their teachers to use both English and Kiswahili during teaching, respectively. However, less than half of the respondents, 252 (40%) agreed that their teachers used English when teaching.

Table 19. Cross-tabulation between school ownership and languages related variables for the "Yes" responses (N = 630).

| Variable | GT | MS | CHR | IN | JKT | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Language used by teachers | | | | | | | | | | | | |
| English only | 60 | 23 | 88 | 37 | 44 | 252 | 40 | | | | | |
| Kiswahili only | 1 | - | 1 | - | - | 2 | .3 | | | | | |
| English and Kiswahili | 199 | 55 | 26 | 38 | 46 | 364 | 58 | 82 | .00 | -.28 | 618 | 12 |
| Language used during notes writing | 223 | 65 | 102 | 56 | 84 | 530 | 84 | | | | | |
| English only | - | - | 1 | - | - | 1 | .2 | | | | | |
| Kiswahili only | 43 | 13 | 7 | 16 | 6 | 85 | 13 | 13 | .106 | .01 | 616 | 14 |
| English and Kiswahili | | | | | | | | | | | | |
| Language used in asking Questions | 130 | 50 | 92 | 42 | 69 | 383 | 61 | | | | | |
| English only | 7 | 3 | 1 | - | - | 11 | 2 | | | | | |
| Kiswahili only | 121 | 25 | 22 | 31 | 20 | 219 | 35 | 38 | .000 | -.18 | 613 | 17 |
| English and Kiswahili | | | | | | | | | | | | |
| Language used in answering Questions | 156 | 47 | 94 | 49 | 72 | 418 | 66 | | | | | |
| English only | 4 | 1 | 2 | - | - | 7 | 1 | | | | | |
| Kiswahili only | 100 | 27 | 19 | 25 | 18 | 189 | 30 | 20 | .011 | -0.1 | 614 | 16 |
| English and Kiswahili | | | | | | | | | | | | |
| Language used in group discussion | | | | | | | | | | | | |
| English only | 42 | 16 | 81 | 20 | 41 | 200 | 32 | | | | | |
| Kiswahili only | 6 | 7 | 2 | - | 2 | 27 | 4 | | | | | |
| English and Kiswahili | 204 | 54 | 32 | 51 | 47 | 387 | 61 | | | | | |
| Gujarati | 1 | - | - | 1 | - | 2 | .3 | | | | | |
| English, Kiswahili & Gujarati | - | - | - | 1 | - | 1 | .2 | 93 | .00 | -5.5 | 617 | 13 |
| Language you like to use | | | | | | | | | | | | |
| English only | 1669 | 53 | 101 | 41 | 70 | 431 | 68 | | | | | |
| Kiswahili only | 79 | - | 1 | 1 | 2 | 13 | 2 | | | | | |
| English and Kiswahili | 1 | 24 | 11 | 35 | 17 | 166 | 26 | | | | | |
| Gujarati | | 1 | - | - | - | 2 | .3 | 45 | .00 | -.08 | 612 | 18 |
| Reasons for preferred language | 57 | 16 | 10 | 22 | 19 | 124 | 20 | | | | | |
| Understand easily | 49 | 14 | 20 | 9 | 9 | 101 | 16 | | | | | |
| Improve English | 27 | 8 | 13 | 1 | 13 | 62 | 9.8 | | | | | |
| Language for teaching | 18 | 3 | 2 | - | 3 | 26 | 4 | | | | | |
| English speaking improved | 27 | 14 | 4 | 6 | 9 | 60 | 9.5 | | | | | |
| Interesting language | 8 | 2 | 33 | 2 | 12 | 57 | 9 | | | | | |
| Useful in answering exams | 9 | - | 14 | 2 | 8 | 33 | 5.2 | 24 | .000 | .093 | 524 | 106 |
| Communicate easily | 1747 | 521 | 779 | 486 | 611 | | | | | | | |
| Total | 67.2 | 23.6 | 31.2 | 23.1 | 29 | | | | | | | |
| Average | 25.2 | 30.4 | 26.6 | 30 | 32 | | | | | | | |
| % average | | | | | | | | | | | | |

Furthermore, Table 19 shows that most interviewees in the GT secondary schools, 199 (74%) were of the opinion that their teachers should use both English and Kiswahili when teaching. While 55 (71%), 46 (51%), 38 (49%), and 26 (22%) of the respondents at MS., JKT, IN., and CHR. secondary schools said so. This meant that most students in GT. secondary schools preferred their teachers to code-switch and code-mix during teaching than those at JKT, IN and Christian schools. A similar trend was observed when asking questions in the classroom. Interviewees in the GT secondary schools preferred to code-switch and code-mix in asking questions in the classrooms and answering questions than in other schools. This implied that most students in GT secondary schools preferred the code-switching and code-mixing than did other

students in non-government-run schools--an aspect that was exemplified in normal life and in the higher learning institutions.

Table 20 discusses the cross-tabulations between school ownership and the availability and use of the school library. Of the 630 respondents, most, 555 (88.1%), 449 (71%) agreed that their school had libraries and library attendants. However, less than half of the interviewees, 110 (41%) in the GT schools agreed that there were library attendants. The relationship of all variables was statistically significant, but there was a negative co-variation value implying that school ownership and the availability and use of the school library variables were unrelated. Over half of the interviewees, 385 (61%) agreed that they borrowed books from their libraries. Further analysis of borrowing books revealed that most interviewees in the individual school of Shaaban Robert, 76 (99%) and the Christian schools, 108 (92%) borrowed books from their libraries, and over half at Kinondoni, 50 (64%). Less than half of the respondents in the GT schools, 116 (43%), and at JKT, 35 (39%) borrowed books (Table 20). It was clear from this data that few students in the government- and JKT-owned and ran schools borrowed books from their libraries, which may have contributed to their poor learning and performance in their final examinations. The frequency of borrowing and use of the school libraries received very low consent implying that most secondary school students did not effectively use the libraries. Table 20 shows that although few, 240 (38%) of all interviewees agreed to frequent use school libraries, fewer, 146 (23%), 127 (20%) and 77 (12%) agreed that they occasionally, rarely and not at all respectively used libraries. Again, this implied that the use of libraries among secondary school students was minimal, much so in government-run secondary schools. This reason, among others, could explain the propensity of parents to send their children to neighbouring countries and abroad because the frequency of borrowing and use of the school libraries received very low consent implying that most secondary school students did not effectively use the libraries. Table 20 shows that although few, 240 (38%) of all interviewees agreed to frequent use school libraries, fewer, 78 (12%) agreed that they frequently used them. Again, this implied that the use of libraries among secondary school students was minimal, much so in government-run secondary schools. This reason, among others, could explain the propensity of parents to send their children to neighbouring countries and abroad because parents hypothetically think that their kids will get better education. parents hypothetically think that their kids will get better education.

Table 20. Cross-tabulation between school ownership and library-related variables for the "Yes" responses (N = 630).

| Variable | GT | MS | CHR | IN | JKT | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If have school library | 194 | 78 | 116 | 77 | 90 | 555 | 88.09 | 130.71 | .000 | -.387 | 624 | 6 |
| If have library attendant | 110 | 62 | 106 | 76 | 76 | 449 | 71.26 | 111.67 | .000 | -.390 | 609 | 21 |
| If have enough books | 24 | 13 | 94 | 76 | 85 | 292 | 46.34 | 362.68 | .000 | -.746 | 613 | 17 |
| If have enough chairs/tables | 49 | 16 | 111 | 75 | 66 | 317 | 50.31 | 331.33 | .000 | -.640 | 615 | 15 |
| Frequency of school library use | | | | | | | | | | | | |
| Frequently | 39 | 23 | 84 | 38 | 57 | 240 | 38.09 | | | | | |
| Occasionally | 52 | 23 | 20 | 32 | 19 | 146 | 23.17 | | | | | |
| Rarely | 55 | 5 | 9 | 5 | 3 | 77 | 12.22 | | | | | |
| Not at all | 102 | 17 | 4 | - | 4 | 127 | 20.15 | 260.25 | .000 | -.578 | 590 | 40 |
| If teachers ask to use library | 54 | 39 | 70 | 62 | 74 | 299 | 47.46 | 207.63 | .000 | -.570 | 599 | 31 |
| If borrow books | 116 | 50 | 108 | 76 | 35 | 385 | 61.11 | 172.41 | .000 | -.225 | 613 | 17 |
| Borrowing books frequency | | | | | | | | | | | | |
| Frequently | 31 | 19 | 73 | 33 | 16 | 172 | 27.30 | | | | | |
| Occasionally | 89 | 21 | 23 | 32 | 18 | 180 | 28.57 | | | | | |
| Rarely | 37 | 6 | 11 | 6 | 2 | 62 | 9.84 | | | | | |
| Not at all | 29 | 15 | 4 | - | 4 | 52 | 8.25 | 95.004 | .000 | -.337 | 466 | 164 |
| If any library nearby | 163 | 43 | 9 | 55 | 14 | 284 | 45.07 | 225.42 | .000 | .387 | 609 | 21 |
| Frequency of nearby library use | | | | | | | | | | | | |
| Frequently | 51 | 19 | 1 | 3 | 4 | 78 | 12.38 | | | | | |
| Occasionally | 38 | 17 | 3 | 7 | 7 | 72 | 11.42 | | | | | |
| Rarely | 24 | 4 | - | 10 | 2 | 40 | 6.34 | | | | | |
| Not at all | 48 | 12 | 97 | 40 | 2 | 109 | 17.30 | 53.18 | .000 | .209 | 299 | 331 |
| Total | 130 4 | 482 | 849 | 703 | 578 | 3936 | | | | | | |
| Average | 68.6 | 25.4 | 44.7 | 41.4 | 30.4 | 207 | | | | | | |
| % average | | | | | | | | | | | | |

Source: Survey data of 1997-2000.

Less than half of the interviewees, 299 (47.5%) and 292 (46.3%) agreed that the school libraries had enough books and their teachers asked them to use the school libraries (Table 20). Again, most respondents at Shaaban Robert, and in the Christians, and JKT secondary schools, 76 (99%), 94 (80%), and 93% agreed that their schools had enough books, respectively. While those in the GT, 24 (9%), and for MS, 13 (17%) had similar responses. This implied that most of the government and the Kinondoni secondary schools did not have enough books--an aspect that perhaps affected the performance of graduates from these schools. Similarly, the frequency of borrowing books from the library was high among interviewees in the Christians schools, 73 (62%) than in others, i.e., IN 33 (42%), MS 19 (12%), JKT 16 (18%), and GT, 31 (12%) (Table 20). Furthermore, data shows low levels of borrowing books from the library among students in the government-owned and ran secondary schools.

To conclude, Table 20 shows on average of less than half, 207 (32.8%) of the interviewees in all five systems of school ownership agreed to each aspect pertaining to library-related variables. This implied that most of the government-owned and ran secondary schools did not have adequate supply of the items listed in Table 20. Interviewees in the individual-owned and ran school of Shaaban Robert, an average of 41 (54%) agreed to the individual library-related issue in their school. Others with similar responses were Christian schools, 45 (38%), Ms 25

(33%), JKT 30 (33%), and GT 69 (26%) (Table 20). The presence of libraries appeared to enhance learning among students hence improving students' performance in their examinations.

Table 21 shows the cross-tabulations between school ownership and subject club-related variables. Of the 630 interviewees, 474 (75%) agreed that they had clubs in their schools. Examination based on school ownership showed that respondents at JKT 91 (100%), IN 76 (99%), CHR 113 (97%), MS 58 (74%), and GT (51%) agreed to having subject clubs in their schools--and only half of them in the government schools said so. About half of the interviewees, 363 (58%), agreed that they met once in a week in their subject clubs. And the responses for different school ownership were CHR 108 (92%), JKT 83 (91%), IN 66 (86), MS 40 (51%), and GT 66 (25%). A few respondents in the GT, 202 (32%), 167 (27%), 166 (26%), and 152 (24%) agreed that they were club members, discussed some topics during the meetings, discussed subject topics and solved problems, were science club members, respectively (Table 21).

Table 21. Cross-tabulation between school owners and subject club-related variables for the "Yes" responses (N = 630).

| Variable | GT | MS | CHR | IN | JKT | Tot | % | $X^2$ | Sig. | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| If have subject clubs | 136 | 58 | 113 | 76 | 91 | 474 | 75 | 149.7 | .000 | -.474 | 603 | 27 |
| If debate club member | 88 | 41 | 40 | 3 | 30 | 202 | 32 | 11.56 | .021 | -.051 | 207 | 423 |
| If math club member | 32 | 18 | 28 | 17 | 24 | 119 | 19 | 4.991 | .288 | -.100 | 122 | 508 |
| If Science club member | 41 | 11 | 38 | 19 | 43 | 152 | 24 | 7.102 | .131 | -.111 | 155 | 475 |
| If nature study club member | 13 | 5 | 1 | 1 | 3 | 23 | 4 | 4.360 | .359 | -.145 | 27 | 603 |
| If Geography club member | 33 | 12 | 6 | 2 | 20 | 73 | 12 | 10.16 | .038 | -.170 | 77 | 553 |
| Frequency of member meeting | | | | | | | | | | | | |
| Once a week | 66 | 40 | 108 | 66 | 83 | 363 | 58 | | | | | |
| Once per two weeks | 11 | 2 | 1 | - | - | 14 | 2 | | | | | |
| Once per month | 35 | 1 | 1 | - | 4 | 41 | 7 | 73.82 | .000 | -.325 | 418 | 212 |
| Activities when members meet | | | | | | | | | | | | |
| Discuss any topic | 70 | 37 | 27 | 13 | 20 | 167 | 27 | | | | | |
| Discuss & solve study problem | 26 | - | 73 | - | 67 | 166 | 26 | | | | | |
| Discuss, excepts, exhibition, quizzes | - | - | 1 | 12 | - | 13 | 2 | | | | | |
| Quizzes, math, games | - | 3 | - | 14 | - | 17 | 3 | 388.6 | .000 | .420 | 399 | 231 |
| Total | 551 | 228 | 437 | 223 | 385 | 1824 | | | | | | |
| Average | 50.1 | 20.7 | 36.4 | 22.3 | 38.5 | 140.3 | | | | | | |
| Average % | 18.7 | 26.5 | 31.1 | 28.9 | 42.3 | 29.5 | | | | | | |

Of the five types of school ownership, an average of 39 (42%), 36 (31%), 22 (29%) 21 (27%), and 50 (19%) respondents at JKT, CHR, IN, MS, and GT agreed with the club subject-related variables (Table 21). The low per cent imply that most students in the surveyed secondary schools were not involved in the subject clubs in their schools. Also, this data may be an indication that perhaps subject clubs were not functional in the surveyed schools.

### *8.3.5 Respondents' opinions by school types*

Table 22 shows that interviewees were distributed in three types of schools: day scholars were 246 (39.1%), in boarding and day schools 217(34.4%), and boarding schools 167 (26.5%). The

selection of schools based on the type was purposive to get a representation of views from the respondents.

Table 22. Respondents' three school types (boarding, day, boarding and day) and their numbers (N = 630).

| Day | | Boarding | | Boarding and day | | Total N & % |
|---|---|---|---|---|---|---|
| School | N | School | N | School | N | |
| Kinondoni- Moslem | 78 | Luth. Junior seminary | 41 | Azania | 86 | |
| Jitegemee - JKT | 91 | Kilakala | 50 | Jangwani | 88 | |
| Shaaban Robert | 77 | Kifungilo | 40 | Morogoro sec. | 43 | |
| | | Mazinde Juu | 36 | | | |
| Total | 246 | | 167 | | 217 | 630 |
| % | 39.1 | | 26.5 | | 34.4 | 100 |

Source: Survey data of 1997-2000.

Table 23 reveals that the cross-tabulations between the school types and classroom-, teachers-, laboratories-, and teaching materials-related variables that respondents answered "Yes". Based on the school types (day, boarding, boarding and day) most interviewees, 586 (93%), 579 (92%), and 571 (91%) agreed that their schools had chemistry, physics, and biology laboratories, respectively. Although, most respondents agreed to the three statements, some variations are worth noting. On an average of 166 (99.6%) and 207 (95.5%) of the interviewees in boarding and day schools agreed that their schools had the three named laboratories, respectively. An average of 205 (83%) interviewees in the day schools said so. With the exception of the availability of the agriculture laboratories in the schools, all cross-tabulations were statistically significant at p.> .0003, which indicated a small relationship. Over half of the respondents in all three school types, 413 (65.4%), 411 (65%), agreed that their school classrooms had enough chairs and desks, and school laboratories were used for practical sessions, respectively (Table 23). Others, 352 (55.9%), 343 (54.4%), and 326 (51.7%) said that school laboratories had enough chairs and desks, laboratories were equipped with chemicals, and schools had enough teaching materials, respectively (Table 23).

Table 23 further shows that less than half of the respondents, 297 (47%), 229 (36%), and 395 (27%) agreed that their school laboratories were equipped with chemicals, had domestic science laboratories, and that there were enough teachers, respectively. A close examination of this data revealed that on average, 120 (72%), 109 (44%), and 78 (35%) of the interviewees in the boarding, day, and boarding and day schools, respectively agreed to the three variables (equipped with chemicals, domestic science labs, enough teachers). This implied that respondents in the boarding and day schools followed by those in the day schools were less satisfied with the three variables.

Table 23. Cross-tabulations between school type and classroom-, teachers-, laboratories-, and teaching materials related variables for the "Yes" responses (N = 630).

| Variable | B | D | BD | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| If classroom chairs/desks enough | 120 | 152 | 141 | 413 | 65 | 112 | .000 | .35 | 625 | 5 |
| If laboratory chairs/desks enough | 118 | 145 | 89 | 352 | 56 | 183 | .000 | .47 | 625 | 5 |
| If teachers enough | 110 | 121 | 164 | 395 | 27 | 19 | .000 | .17 | 606 | 24 |
| If teaching materials enough | 104 | 128 | 94 | 326 | 52 | 114 | .000 | .39 | 579 | 51 |
| If teacher use teaching material | 132 | 171 | 53 | 356 | 57 | | | | | |
| If physics lab available | 155 | 166 | 258 | 579 | 92 | 43 | .000 | .25 | 620 | 10 |
| If chemical lab available | 155 | 166 | 265 | 586 | 93 | 36 | .000 | .23 | 621 | 9 |
| If biology lab available | 155 | 167 | 249 | 571 | 91 | 57 | .000 | .29 | 620 | 10 |
| If agriculture lab available | - | 1 | - | 1 | 0.2 | 3 | .276 | .02 | 596 | 34 |
| If Domestic lab available | - | 125 | 104 | 229 | 36 | 191 | .000 | -.19 | 603 | 27 |
| If Computer lab available | 69 | 3 | - | 72 | 11 | 192 | .000 | .51 | 521 | 103 |
| If Labs well equipped-apparatus | 113 | 116 | 68 | 297 | 47 | 149 | .000 | .48 | 602 | 28 |
| If Labs well equipped–chemicals | 126 | 122 | 95 | 343 | 54 | 134 | .000 | .451 | 621 | 9 |
| If use labs for practical sessions | 138 | 159 | 114 | 411 | 65 | 201 | .000 | .516 | 618 | 12 |

Source: Survey data of 1997-2000.

Based on individual school type, data shows that an average of 141 (84.6%), 172 (70%), and 56 (25.5%) of the respondents in the boarding, day, and boarding and days schools agreed to the adequacy of classroom, teachers, laboratories-related issues in their schools. The implication of this data was that most interviewees in the boarding and day schools were less satisfied with the adequacy of the desks and chairs in the school classrooms and laboratories. Others things were the inadequacy of the teaching materials, laboratory chemicals, and the use of laboratories for practical sessions.

Table 24 presents the cross-tabulations between the school types and language use-related variables that respondents answered "Yes". Based on the school types (day, boarding, boarding and day) most respondents, 530 (84%) agreed that they used only English in during note-taking. Examining the responses within the school types showed that 188 (86.6%), 205 (83%), and 137 (82%) in the boarding and day, day, and boarding schools agreed to using only English during note-taking, respectively. However, the differences within the school were not significant. With the exception of language used in answering questions, all cross-tabulations were statistically significant at p.> .0003 (showing a small relationship). Over half of the interviewees based on their school types, 431 (68.4%), 383 (60.8%), 387 (61.4%) 383 (60.8%), agreed that they liked English, used only English in asking questions, used English and Kiswahili in group discussions, and in answering questions, respectively.

Table 24. Cross-tabulation between school type and language-related variables for the "Yes" responses (N = 630).

| Variable | B | D | BD | Tot | % | $X^2v$ | Sig | Cor. | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| Language used by teachers | | | | | | | | | | |
| English only | 105 | 104 | 43 | 252 | 40 | | | | | |
| Kiswahili only | 1 | - | 1 | 2 | .31 | | | | | |
| English and Kiswahili | 59 | 139 | 166 | 364 | 58 | 54 | .000 | -0.117 | 618 | 12 |
| Language used during notes writing | | | | | | | | | | |
| English only | 137 | 205 | 188 | 530 | 84 | | | | | |
| Kiswahili only | 1 | - | - | 1 | .15 | | | | | |
| English and Kiswahili | 26 | 35 | 24 | 85 | 14 | 11 | .026 | -0.117 | 616 | 14 |
| Language used in asking Questions | | | | | | | | | | |
| English only | 120 | 161 | 102 | 383 | 61 | | | | | |
| Kiswahili only | 2 | 3 | 6 | 11 | 2 | | | | | |
| English and Kiswahili | 43 | 76 | 100 | 219 | 35 | 11 | .031 | 0.062 | 613 | 17 |
| Language used in answering Questions | | | | | | | | | | |
| English only | 124 | 70 | 126 | 383 | 61 | | | | | |
| Kiswahili only | 3 | 1 | 3 | 7 | 1 | | | | | |
| English and Kiswahili | 38 | 70 | 81 | 189 | 30 | 7 | .125 | 0.013 | 614 | 16 |
| Language used in group discussion | | | | | | | | | | |
| English only | 89 | 77 | 34 | 200 | 32 | | | | | |
| Kiswahili only | 7 | 9 | 11 | 27 | 4 | | | | | |
| English and Kiswahili | 68 | 152 | 167 | 387 | 61 | | | | | |
| Gujarati | 1 | 1 | - | 2 | .31 | | | | | |
| English, Kiswahili & Gujarati | - | 1 | - | 1 | .15 | 54 | .000 | 0.065 | 617 | 18 |
| Language you like to use | | | | | | | | | | |
| English only | 136 | 164 | 131 | 431 | 68 | | | | | |
| Kiswahili only | 1 | 3 | 9 | 13 | 2 | | | | | |
| English and Kiswahili | 24 | 76 | 66 | 166 | 26 | | | | | |
| Gujarati | - | 1 | 1 | 2 | .31 | 31 | .000 | -0.025 | 612 | 18 |
| Reasons for preferred language | | | | | | | | | | |
| Understand easily | 19 | 57 | 48 | 124 | 20 | | | | | |
| Improve English | 26 | 32 | 43 | 101 | 16 | | | | | |
| Language for teaching | 19 | 22 | 21 | 62 | 10 | | | | | |
| English speaking improved | 8 | 6 | 12 | 26 | 4 | | | | | |
| Interesting language | 7 | 29 | 36 | 60 | 9.5 | | | | | |
| Useful in answering exams | 35 | 16 | 6 | 57 | 8 | | | | | |
| Communicate easily | 17 | 10 | 6 | 33 | 5 | 139 | .000 | -0.039 | 524 | 106 |
| Total | 1116 | 1520 | 1431 | | | | | | | |
| Average | 43 | 58.5 | 57.2 | | | | | | | |
| %AV | 25.7 | 23.8 | 26.4 | | | | | | | |

A close analysis of data in Table 24 for English use related variables shows that on average, 112 (67.1%), 137 (55.7%) of the interviewees in the boarding, day, and boarding and day schools, respectively agreed that they liked to use only English in asking and answering questions. Others, an average of 175 (60.6%) agreed to use both English and Kiswahili in group discussions. The implication of these data was that students in boarding schools preferred using English than their counterparts in day, boarding and day schools. And, that over half of the interviewees based on the school types code-switched in boarding secondary schools and mixed. We can, therefore, say perhaps the use of English among students in boarding secondary schools does has a positive effect on their final performance in the national examinations that we often see. However, few respondents agreed to the seven reasons for preferring English language. For instance, an average of only 66 (10.4%) of the interviewees agreed to prefer using English language (Table 24). Also, data shows that of the 630 interviewees, 345 (57.6%) and 234 (37.3%) agreed that they preferred English and Kiswahili, respectively. Based on school type, data shows

that an average of 58.5 (23.8%), 57.2 (26.4%), and 43 (25.7%) of the respondents in the boarding, day, and boarding and days schools agreed to variables related to English language use.

Table 25 discusses the cross-tabulations between school types and the availability and use of the school library. Of the 630 respondents, 555 (88.1%), and 449 (71%) agreed that their schools had libraries and library attendants, respectively. Over half of the interviewees, 385 (61.1%) agreed that they borrowed books from the school libraries, and about half of them, 317 (50.3%) agreed that their schools had enough chairs and desks in their libraries. However, less than half of the respondents, 299 (47.5%), 292 (46.4%), and 284 (45.1%) agreed that their teachers asked them to go to libraries and read books, they had enough books in their libraries, and that there were libraries nearby, respectively. Further analysis shows that few respondents in the boarding and day schools, 10 (4.6%) agreed that their schools had enough books, while those in the day schools stood at 174 (70%), and 108 (64.7%) for boarding schools (Table 25). This implied that day and boarding schools had more books than others. Also, few interviewees in the boarding and day schools, 23 (10.5%) agreed that their teachers asked them to go to libraries and read books, while 225 (91%) and 101 (60.5%) respondents said so for only day, and boarding schools, respectively (Table 25). The relationship of all these variables was statistically significant at $p>.0003$ (a small relationship), but there was a negative co-variation value for libraries being in the vicinity and the frequency of using the nearby library, implying that school types and these two variables were unrelated.

Over half of the interviewees, 385 (61%) agreed that they borrowed books from their libraries. Further analysis of borrowing books revealed that most interviewees in the boarding schools, 147 (88%), day 161 (65.4%), and few, 77 (35.5%) in the boarding and day schools agreed to borrow books from their libraries. These data implied that students who attended boarding and day schools borrowed few books from their libraries, which may have affected their performance. The frequency of borrowing books from the school libraries was agreed by few respondents, an average of 63 (10%), and 109 (17.3%) agreed that they never borrowed books from the libraries (Table 25). These data point to the low motivation among most secondary school students to borrow books and read them at home even in homes where light was available. Observations show that reading a novel is not something that the contemporary secondary school students looks forward, but watching TV, listening to rap music, and dancing are pre-occupations of most students. Summarily, Table 25 shows that on average, 63 (38%), 95 (38.8%), and 54 (25%) of the respondents agreed to each variable related to the library use in their schools.

Table 25. Cross-tabulation between school type and library-related variables for the "Yes" responses (N = 630).

| Variable | B | D | BD | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| If have school library | 163 | 245 | 147 | 555 | 88.09 | 73 | .000 | .33 | 624 | 6 |
| If have library attendant | 136 | 214 | 99 | 449 | 71.26 | 56 | .000 | .29 | 609 | 21 |
| If have enough books | 108 | 174 | 10 | 292 | 46.43 | 61 | .000 | .27 | 613 | 17 |
| If have enough chairs/tables | 139 | 157 | 21 | 317 | 50.31 | 140 | .000 | .34 | 615 | 15 |
| Frequency of school library use | 103 | 118 | 19 | 240 | 38.09 | | | | | |
| Frequently | 35 | 74 | 37 | 146 | 23.17 | | | | | |
| Occasionally | 19 | 13 | 45 | 77 | 12.22 | | | | | |
| Rarely | 4 | 21 | 102 | 127 | 20.15 | 123 | .000 | .320 | 590 | 40 |
| Not at all | | | | | | | | | | |
| If teachers ask to use library | 101 | 225 | 23 | 299 | 47.46 | 65 | .000 | .32 | 599 | 31 |
| If borrow books | 147 | 161 | 77 | 385 | 61.11 | 155 | .000 | 0.49 | 613 | 17 |
| Borrowing books frequency | 88 | 68 | 16 | 172 | 27.30 | | | | | |
| Frequently | 40 | 71 | 69 | 180 | 28.57 | | | | | |
| Occasionally | 17 | 14 | 31 | 62 | 9.84 | | | | | |
| Rarely | 9 | 19 | 24 | 52 | 8.25 | 59 | .000 | .21 | 466 | 164 |
| Not at all | | | | | | | | | | |
| If any library nearby | 15 | 112 | 157 | 284 | 45.07 | 131 | .000 | -.07 | 609 | 21 |
| Frequency of nearby library use | | | | | | | | | | |
| Frequently | 2 | 26 | 50 | 78 | 12.38 | | | | | |
| Occasionally | 6 | 31 | 35 | 72 | 11.42 | | | | | |
| Rarely | - | 16 | 24 | 40 | 6.34 | 17 | .010 | -.19 | 299 | 331 |
| Not at all | 9 | 54 | 46 | 109 | 17.30 | | | | | |
| Total | 1141 | 1813 | 1032 | | | | | | | |
| Average | 63.4 | 95.4 | 54.3 | | | | | | | |
| %AV | 38.0 | 38.8 | 25.0 | | | | | | | |

Table 26 shows the cross-tabulations between school types and subject club-related variables. Of the 630 interviewees in all school types, 474 (75%) agreed that there schools had subject clubs. About half of the respondents, 363 (58%), agreed that they met once in a week in their subject clubs. And the responses for the different school types were for day 189 (76.8%), boarding 122 (73%), and boarding and day 52 (24%), implying that few students in the latter schools met once a week.

Table 26. Cross-tabulation between school type and subject club-related variables for the "Yes" responses (N = 630).

| Variable | B | D | BD | Tot | % | $X^2$ | Sig | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| If have subject clubs | 147 | 225 | 102 | 474 | 75.23 | 53.03 | .000 | .285 | 603 | 27 |
| If debate club member | 60 | 74 | 68 | 202 | 32.06 | 0.295 | .863 | .029 | 207 | 423 |
| If math club member | 33 | 59 | 27 | 119 | 18.88 | 1.229 | .541 | .042 | 122 | 508 |
| If Science club member | 53 | 73 | 26 | 152 | 24.12 | 1.609 | .447 | .025 | 155 | 475 |
| If nature study club member | 3 | 9 | 11 | 23 | 3.65 | 0.631 | .729 | .078 | 27 | 603 |
| If Geography club member | 18 | 34 | 21 | 73 | 11.58 | 1.288 | .525 | .055 | 77 | 553 |
| Frequency of member meeting | | | | | | | | | | |
| Once a week | 122 | 189 | 52 | 363 | 57.61 | | | | | |
| Once per two weeks | 2 | 2 | 10 | 14 | 2.22 | | | | | |
| Once per month | 12 | 5 | 24 | 41 | 6.50 | 24.4 | .000 | .235 | 418 | 212 |
| Activities when members meet | | | | | | | | | | |
| Discuss any topic | 45 | 70 | 52 | 167 | 26.50 | | | | | |
| Discuss & solve study problem | 80 | 67 | 19 | 166 | 26.34 | | | | | |
| Discuss, exits, exhibition, | 1 | 12 | - | 13 | 2.06 | | | | | |
| quizzes | - | - | - | 17 | 2.69 | 212.3 | .000 | -.19 | 399 | 231 |
| Quizzes, math & games | | | | | | | | | | |
| Total | 576 | 807 | 412 | 1824 | | | | | | |
| Average | 48 | 73.4 | 37.4 | 52.9 | | | | | | |
| % average | 28.7 | 29.8 | 517 | 425 | | | | | | |

Few, 202 (32%) and 152 (24%) interviewees agreed that they were members in the debate and science clubs, respectively. And, 167 (26.5%) and 166 (26.3%) agreed that they discussed any topic and solved problems during their club meetings, respectively (Table 26). Based on the school types, each variable was agreed on, as an average of 73 (29.8%) for day, 48 (28.7%) for boarding, and 38 (17.3%) for boarding and day schools, respectively. The implication of these data was that few students in the secondary schools joined subject clubs even when the clubs may have been there. Perhaps there were no incentives for both teachers and students and the former to encourage students and the latter to join subject clubs partly because they may have lacked time to coordinate and supervise clubs.

### *8.4 Teachers' Responses Affecting Pupils' Performance*

The second part of this research involved seeking views of teachers in the ten surveyed secondary schools about factors that affected the performance of secondary school students. Forty teachers were sampled and of these 24 (60%) were males and 16 (40%) females, and 28 (70%) of them indicated that they were between the ages of 30 to 41 years old (Table 27). This implied that most teachers in the surveyed secondary schools were of young ages. Less than half, 18 (45%) of them had completed Form VI, while 8 (20%) and 5 (12.5%) had attained Bachelor of Arts and Master of Science degrees, respectively (Table 27). The study results indicated that of the 25 teachers in

the government secondary school, 15 (60%) had completed Form VI, which implied that they had no formal teaching skills. Most interviewees, 35 (87.5%) were trained teachers, and about half, 20 (50%) indicated that they had completed teacher training between 1986 and 1992. However, less than half, 18 (45%) had started teaching between 1986 and 1992, i.e. had an experience of between 13 and seven years of teaching. Table 28 also shows that 9 (30%), 9 (22.5%), and 7 (17.5%) of the respondents taught biology and chemistry, English, mathematics and physics subjects, respectively.

Of the 40 teachers, 25 (62.5%), 8 (20%), 6 (15%) and 1 (2.5%) were surveyed from the government, Christian, individual, and JKT secondary schools, respectively (Table 27). The study results show hours that teachers taught per week in the schools, and 22 (56.4%) interviewees showed that they taught between 12 to 20 hours per week and few, 7 (17.9%) said that they taught between three and eleven hours per week. Further analysis of data in Table 28 shows that of all teachers, seven (17.9%) of them in the government schools taught between three to 11 hours per week compared to other schools. This implied that teachers in the government schools had less workload compared to other teachers in the surveyed schools. And, 27 (67.5%) of the teachers agreed that the hours they taught per week were a normal workload. However, 7 (29%) and 4 (50%) of the teachers in the government and Christian/Religious secondary schools complained that the hours they taught per week were too many (Table 30). Of the 40 teachers, 29 (72.5%) reported that they had taught one to three schools since they started working.

Table 27. Respondents' gender, age, level of education, year completed TTC and started teaching (N = 40).

| Variable | GT | CHR | IN | JKT | Tot | % | $X^2$ | Cor | N | Mis |
|---|---|---|---|---|---|---|---|---|---|---|
| Gender of teachers | | | | | | | | | | |
| Female | 11 | 3 | 1 | 1 | 16 | 40.0 | | | | |
| Male | 14 | 4 | 5 | - | 24 | 60.0 | 3.2 | -.12 | 40 | 0 |
| Age of teachers | | | | | | | | | | |
| 30 - 35 years old | 9 | 3 | 3 | 1 | 16 | 40 | | | | |
| 36 - 41 " | 8 | 3 | 1 | - | 12 | 30 | | | | |
| 42 - 46 " | 4 | 1 | 2 | - | 7 | 17.5 | | | | |
| 47 - 52 " | 2 | 1 | - | - | 3 | 7.5 | 71 | -.8 | 38 | 2 |
| Highest level of education | | | | | | | | | | |
| M.A. | 2 | 1 | 1 | - | 5 | 12.5 | | | | |
| B.A. | 2 | 4 | 2 | - | 8 | 20.0 | | | | |
| B.Sc. | 4 | 1 | 2 | - | 5 | 12.5 | | | | |
| B.Com. | 2 | - | - | - | 2 | 5.0 | | | | |
| Form VI | 15 | 2 | - | 1 | 18 | 45.0 | | | | |
| Advanced diploma | 1 | - | - | - | 1 | 2.5 | | | | |
| Ordinary diploma | 1 | - | - | - | 1 | 2.5 | 26 | -.56 | 40 | 0 |
| Trained teacher | | | | | | | | | | |
| Yes | 24 | 6 | 4 | 1 | 35 | 87.5 | | | | |
| No | - | 2 | 2 | - | 4 | 10 | 8.2 | .42 | 39 | 1 |
| Year completed TTC | | | | | | | | | | |
| 1972 - 1978 | 3 | 1 | - | - | 4 | 10 | | | | |
| 1979 - 1985 | 4 | - | 1 | - | 5 | 12.5 | | | | |
| 1986 - 1992 | 16 | 3 | 1 | - | 20 | 50 | | | | |
| 1993 - 1999 | 2 | 2 | 2 | - | 6 | 15 | 46 | -.65 | 36 | 4 |
| Year started teaching | | | | | | | | | | |
| 1972 - 1978 | 3 | 2 | 1 | - | 5 | 12.5 | | | | |
| 1979 - 1985 | 8 | - | 2 | - | 10 | 25 | | | | |
| 1986 - 1992 | 12 | 3 | 2 | 1 | 18 | 45 | | | | |
| 1993 - 1999 | 1 | 3 | 1 | - | 5 | 12.5 | 45 | -.55 | 39 | 1 |
| Subjects normally taught | | | | | | | | | | |
| Biology, chemistry | 8 | 2 | 1 | 1 | 12 | 30.0 | | | | |
| English | 7 | 2 | - | - | 9 | 22.5 | | | | |
| Mathematics, physics | 4 | 1 | 2 | - | 7 | 17.5 | | | | |
| English, geography, history | 1 | 2 | 1 | - | 4 | 10 | | | | |
| Civics, Kiswahili, history | 3 | - | 1 | - | 4 | 10 | | | | |
| Physical education | - | - | 1 | - | 1 | 2.5 | | | | |
| Religion | - | 1 | - | - | 1 | 2.5 | | | | |
| Arts | 1 | - | - | - | 1 | 2.5 | | | | |
| Accountancy, economics | 1 | - | - | - | 1 | 2.5 | 79 | -.8 | 40 | 0 |

Source: Survey data 1997-2000.

Table 28 shows that of the 40 teachers, 27 (67.6%) of them agreed that they had not attended in-service courses and of these, the majority, 19 (76%) were from the government secondary schools. Similarly, 34 (85%), 28 (70%), 27 (67.5%) teachers sampled from the categories of school ownership type agreed that they had not attended refresher courses, seminars, and workshops, respectively. Few, 5 (12.5%) had attended refresher courses, seminars, and

workshops, which were between 1994 and 1998. Four (10%) teachers had attended refresher courses such as ELSP, teaching methods, and fine art. Nine (22.5%) teachers had attended workshops that covered topics such as new technology in science (2), ELSP (2), female students' sensitization (2), why students hate science subjects (1), training of trainer's (1), and writing books (1). This data implied that there were few courses, seminars, and workshops offered to secondary school teachers for helping them to improve their teaching performance.

Table 28 shows that less than half of the teachers, 18 (45%) agreed that the themes of the in-service courses, seminars, workshops they attended were not relevant to the subjects they taught in the schools. This implied that there was no need assessment to ascertain the kind of courses, seminars, and workshops that would increase their teaching effectiveness. Of the 14 teachers who agreed to have attended in-service courses, 10 (25%) and 4 (10%) agreed that sponsorship was by donor agencies and their employees. Also, 12 teachers who had attended the workshops, 8 (20%), 3 (7.5%) and 1 (2.5%) agreed that sponsorship was by the donor agencies, employers, and self, respectively. This implied that donor agencies sponsored most teachers for in-service courses, workshops, and seminars.

Teachers in the surveyed schools were asked to mention the common class sizes. Table 28 also shows that less than half, 18 (45%) of the respondents agreed that their class sizes were between 30 to 40 students. And, most teachers, 31 (77.5%) reported that teaching materials in their schools were enough. Most teachers in the government secondary schools, 22 (88%), about half, 3 (50%) in the individual schools, and 2 (25%) in the Christian/religious schools reported that their schools had enough teaching materials. This implied that most of the government secondary schools do not have enough teaching materials, which may be affecting the academic performance of the students. Of all interviewees, 20 (50%) agreed to using teaching materials in their classrooms, with 4 (50%), 14 (35%), 1 (16.7%), and 1 (100%) teachers in the religious/Christian, government, and individual, and JKT reported similar responses (Table 28).
Of the 40 teachers, 16 (40%) agreed that the teaching materials that they used in the classrooms were specially made, while 10 (25%) respondents for each variable agreed that they designed teaching materials themselves, and others said that they both made and used the specially made materials. Less than half of the respondents, 17 (42.5%) agreed that schools bought the teaching materials they used in the classrooms. However, 10 (25%), and 4 (10%) agreed that the government (in the government secondary schools) bought the materials, while non-government owned and ran schools bought materials from their own resources (Table 28).

Table 28. Several teachers' variables that affected their teaching in secondary schools (N = 40).

| Variable | GT | CHR | IN | JKT | Total |
|---|---|---|---|---|---|
| No. of hrs/week | | | | | |
| 3 – 11 | 7 | - | - | - | 7 |
| 12 – 20 | 14 | 5 | 2 | 1 | 22 |
| 21 – 29 | - | 2 | 3 | - | 5 |
| 30 – 38 | 2 | 1 | - | - | 3 |
| 39 – 46 | 1 | - | 1 | - | 2 |
| These hrs. were: | | | | | |
| Too many | 7 | 4 | - | - | 11 |
| Normal | 16 | 4 | 6 | 1 | 27 |
| Too few | 2 | - | - | - | 2 |
| No. of sch. Taught | | | | | |
| 1 – 3 | 18 | 6 | 4 | 1 | 29 |
| 4 – 6 | 6 | 2 | 1 | - | 9 |
| 6 – 9 | - | 1 | - | - | 1 |
| No. of ins. Attend. | | | | | |
| None | 19 | 5 | 3 | - | 27 |
| 1 – 2 | 5 | 1 | 1 | 1 | 8 |
| 3 – 4 | 1 | - | 1 | - | 2 |
| Was theme of w/s/c relevant? | | | | | |
| Yes | 9 | 4 | 4 | 1 | 18 |
| Class size | | | | | |
| 30 – 40 | 11 | 2 | 5 | - | 18 |
| 41 – 50 | 8 | 3 | 1 | 1 | 13 |
| Over 51 | 6 | 3 | - | - | 9 |
| Teach. Materials enough? | | | | | |
| Yes | 3 | 2 | 3 | 1 | 9 |
| No | 22 | 6 | 3 | - | 31 |
| Used teach. Materials | | | | | |
| Yes | 14 | 4 | 1 | 1 | 20 |
| No | 5 | 4 | 5 | - | 14 |
| Who made teach. Materials | | | | | |
| Specially made | 9 | 6 | 1 | - | 16 |
| Self | 10 | - | - | - | 10 |
| Both | 3 | 2 | 4 | 1 | 10 |
| Who bought them | | | | | |
| Self | 4 | - | - | - | 4 |
| School | 4 | 6 | 6 | 1 | 17 |
| Government | 10 | - | - | - | 10 |
| How often used teach. Materials | | | | | |
| Always | 7 | 1 | 1 | 1 | 10 |
| Not always | 8 | 3 | - | - | 11 |

Source of data: Survey of 1997-2000; ins. attends. = in-service course attended

Table 29 shows the languages that teachers used during teaching and the status of laboratories in their schools. Of the 40 teachers, 31 (77.5%) agreed that they only used English during teaching students in the classrooms. However, few, 4 (10%) of the surveyed teachers

agreed to use both English and Kiswahili during teaching. These were the few who reported the truth whereas those who reported using English only gave information that contradicted students' responses discussed earlier. The implication of this data was that code-mixing and code-switching was somewhat common in the secondary schools, which is also verified by students' responses. For instance, when teachers were asked whether they mixed English and Kiswahili during teaching, 12 (30%) of them agreed to code-mix and code-switch. Similarly, 15 (37.5%) of the surveyed teachers gave the reason for using both English and Kiswahili during teaching was to help students better understanding what was taught. Secondary school teachers were asked to assess their English competence levels. Of the 40 teachers, 15 (37.5%), 9 (22.5%), and 1 (2.5%) agreed that their English competence levels were good, very good, and excellent, respectively. This data implied that some secondary school teachers were not confident with their English competence, an aspect that may affect the performance of secondary school students. Field observations appear to support this aspect as most teachers in the secondary schools could somehow speak and write good English--something that was seen in the students they taught. For instance, in our meetings with some of the teachers, we observed that a number of them were hesitant to participate in discussions with us in English. If they agreed, then the discussions were quite often one sided with the interviewer doing most of the talking while teachers produced short answers even in cases where the question required detailed explanations. This notion was supported also by the survey results of the students that are reported elsewhere.

Table 29. Several teachers' variables that affected their teaching in secondary schools (N = 40).

| Variable | GT | CHR | IN | JKT | Total | % | $X^2$ | Cor | N | Mis |
|---|---|---|---|---|---|---|---|---|---|---|
| Language used: | | | | | | | | | | |
| English only | 17 | 8 | 5 | 1 | 31 | 77.5 | | | | |
| Kiswahili only | 1 | - | - | - | 1 | 2.5 | | | | |
| Eng. & Kiswahili | 3 | - | 1 | - | 4 | 10 | | | | |
| Eng. & Vernacular | 1 | - | - | - | 1 | 2.5 | 3.1 | -.18 | 37 | 3 |
| | | | | | | | | | | |
| Do you mix Eng. & Kiswahili | | | | | | | | | | |
| Yes | 9 | 3 | - | - | 12 | 30 | | | | |
| No | 15 | 5 | 6 | 1 | 27 | 67.5 | 3.8 | .24 | 39 | 1 |
| | | | | | | | | | | |
| Language mixing is better for understanding | | | | | | | | | | |
| Yes | 11 | 3 | 1 | - | 15 | 37.5 | | | | |
| No | 9 | 2 | 2 | 1 | 14 | 35.0 | 1.7 | .14 | 29 | 11 |
| | | | | | | | | | | |
| Reason if mix languages | | | | | | | | | | |
| Easy to understand | 7 | 3 | 1 | - | 11 | 27.5 | - | - | 11 | 29 |
| | | | | | | | | | | |
| English competence level | | | | | | | | | | |
| Excellent | 1 | - | - | - | 1 | 2.5 | | | | |
| Very good | 2 | 3 | 4 | - | 9 | 22.5 | | | | |
| Good | 10 | 3 | 1 | 1 | 15 | 37.5 | 12 | -.36 | 29 | 11 |
| Laboratories available | | | | | | | | | | |
| Physics, chem, biology | | | | | | | | | | |
| Computer | 8 | 7 | 3 | 1 | 19 | 47.5 | | | | |
| Geography | - | - | 3 | - | 3 | 7.5 | | | | |
| | - | 1 | - | - | 1 | 2.5 | 44 | -.65 | 40 | 0 |
| Domestic science | | | | | | | | | | |
| Laboratory status | 17 | - | - | - | 17 | 42.5 | | | | |
| Well equipped | 2 | 1 | | | | | | | | |
| Poorly equipped | 21 | 7 | 2 | 1 | 6 | 15.0 | | | | |
| Fairly equipped | 1 | - | 3 | - | 31 | 7.5 | | | | |
| Do you conduct lab. practicals | | | - | - | 1 | 2.5 | 9.0 | -.35 | 38 | 2 |
| Yes | | | | | | | | | | |
| No | 15 | 4 | 2 | 1 | 22 | 55.0 | | | | |
| | 7 | 4 | 3 | - | 14 | 35.0 | 2.5 | .17 | 36 | 4 |
| Lab. technician available | | | | | | | | | | |
| Yes | 12 | 2 | 5 | 1 | 20 | 50.0 | | | | |
| No | 11 | 5 | - | - | 16 | 40.0 | 6.9 | -.18 | 36 | 4 |
| | | | | | | | | | | |
| Workshops available | | | | | | | | | | |
| Yes | - | 1 | - | - | 1 | 2.5 | | | | |
| No | 21 | 7 | 5 | 1 | 34 | 85.0 | 3.8 | -.15 | 35 | 5 |
| | | | | | | | | | | |
| Workshops well equipped | | | | | | | | | | |
| Yes | | | | | | | | | | |
| No | - | 1 | - | 1 | 2 | 5.0 | | | | |
| | 8 | 4 | 2 | 1 | 15 | 37.5 | 2.4 | -.15 | 16 | 24 |

* No statistics are computed because reasons if mix languages is a constant.

Table 29 also reports on teachers' opinions about the status of secondary school laboratories. Less than half of the 40 teachers, 19 (47.5%) and 17 (42.5%) agreed that their schools had laboratories for physics, chemistry, biology and domestic science subjects, respectively. However, most teachers did not agree with the statement that their laboratories were well equipped as only six (15%) said so. In respect to use of laboratories in the schools, over half of the teachers, 22 (55%) agreed that they conducted practical sessions in the laboratories. Also, 20 (50%) teachers agreed that the school laboratories had technicians who helped them with practical sessions (Table 29). Most teachers, 34 (85%) disagreed that their schools had workshops

for technical oriented subjects, and 15 (37.5%) disagreed that even if laboratories were available they were poorly equipped.

Furthermore, Table 30 shows teachers' opinions regarding the presence of school libraries and the status, sources, and the availability of books. Many teachers, 31 (77.5%) agreed that their schools had libraries, most, 29 (72.5%) disagreed that their libraries had enough book copies. Researchers verified this aspect during school observations. Also, about half of the teachers, 21 (52.5%) agreed that there were librarians, but less than half, 19 (47.5%) disagreed that the school libraries had enough chairs and desks. Few interviewees, 13 (32.5%) agreed that they always used the library. This data implied that if teachers do not frequently use the library it could be difficult to advise students to do so--as only 18 (45%) assigned students to use the library (Table 30). However, as school observations revealed this was due to the fact that most libraries in the schools had few books in terms of relevance, quality and quantity. For instance, few of the surveyed teachers, 7 (17.5%) agreed that libraries had enough book copies for the students. Of the 40 respondents, less than half 19 (47.5%) said that the school libraries had outdated books that needed updating. Few teachers agreed to be members to about six subject clubs in the schools (Table 30). This small number of teacher involvement in school subject clubs manifests itself in the small numbers of students in the clubs as explained elsewhere. Consequently, this might have an effect on the performance of students in their respective subjects.

Table 30. Several teachers' variables that affected their teaching in secondary schools (N = 40).

| Variable | GT | CHR | IN | JKT | Total | % | $X^2$ | Cor | N | Mi |
|---|---|---|---|---|---|---|---|---|---|---|
| School library available | | | | | | | | | | |
| Yes | 16 | 8 | 6 | 1 | 31 | 77.5 | | | | |
| No | 8 | - | - | - | 8 | 20.0 | 6.3 | -.39 | 39 | 1 |
| School librarian available | | | | | | | | | | |
| Yes | 8 | 7 | 5 | 1 | 21 | 52.5 | | | | |
| No | 6 | 1 | - | - | 7 | 17.5 | 5.0 | -.42 | 28 | 12 |
| Enough copies in the library | | | | | | | | | | |
| Yes | - | 1 | 5 | 1 | 7 | 17.5 | | | | |
| No | 18 | 7 | - | - | 25 | 62.5 | 26.9 | -.77 | 32 | 8 |
| Library use | | | | | | | | | | |
| Always | 3 | 5 | 4 | 1 | 13 | 32.5 | | | | |
| Rarely | 9 | 2 | 2 | - | 13 | 32.5 | | | | |
| Not at all | 6 | 1 | - | - | 7 | 15.2 | 15 | -.59 | 33 | 7 |
| Enough chairs and desks | | | | | | | | | | |
| Yes | 2 | 4 | 5 | 1 | 12 | 30 | | | | |
| No | 15 | 3 | 1 | - | 19 | 47.5 | 13 | -.64 | 31 | 9 |
| Enough book copies | | | | | | | | | | |
| Yes | - | - | 2 | 1 | 3 | 7.5 | | | | |
| No | 17 | 8 | 4 | - | 29 | 72.5 | 16 | -.50 | 32 | 8 |
| Who provide books | | | | | | | | | | |
| Government | 11 | - | - | - | 11 | 27.5 | | | | |
| Donors | 4 | 6 | 1 | - | 11 | 27.5 | | | | |
| School itself | - | 2 | 4 | 1 | 7 | 17.5 | 234 | .41 | 29 | 11 |
| Assign students to use library | | | | | | | | | | |
| Yes | 7 | 6 | 4 | 1 | 18 | 45 | | | | |
| No | 11 | 2 | 2 | - | 15 | 37.5 | 4 | -.33 | 33 | 7 |
| Comments on school library | | | | | | | | | | |
| No comments | 3 | - | 1 | - | 4 | 10 | | | | |
| Up to date books | 8 | 6 | 4 | 1 | 19 | 47.5 | | | | |
| Poorly equipped | 4 | - | - | - | 4 | 10 | | | | |
| Provide chairs and desks | 3 | 1 | - | - | 4 | 10 | 62 | -.26 | 31 | 9 |
| Subject club membership | | | | | | | | | | |
| No clubs | 9 | 1 | - | - | 10 | 25 | | | | |
| In a debate club | 5 | - | - | - | 5 | 12.5 | | | | |
| In a math club | 1 | 1 | - | - | 2 | 5 | | | | |
| In a science club | 5 | 1 | 1 | - | 7 | 17.5 | | | | |
| In a nature club | - | 1 | - | - | 1 | 2.5 | | | | |
| In a geography club | - | 1 | - | - | 1 | 2.5 | | | | |
| In a commerce club | 2 | - | - | - | 2 | 5 | | | | |
| In other clubs | 5 | 2 | 2 | 1 | 10 | 25 | 93 | .52 | 38 | 2 |

### *8.5 School Administrators' Responses Affecting Pupils' Performance*

The study surveyed seven school administrators in the government and Christian secondary schools. The analysis was limited to frequencies because of the few numbers of respondents. Of the seven, five and two were from the government and religious Christian run and owned secondary schools. Of these, one was a male and six female administrators. Of the seven school administrators, five, and each one of which were headmistresses, academic master and second masters, respectively. Four, two and one of the school administrators had Bachelor of Arts in Education, Bachelor of Science in Education, and a diploma in Education, respectively. The length of years worked in the schools varied. Three, two, one for each had worked for three, one, six and seven years, respectively. Of the seven school administrators, six indicated that they were trained teachers, and of all, three, two for each were trained at the University of Dar Es salaam, at Kleruu and Dar TTC, and abroad (USA, U.K.), respectively. Years in which they attended training were between 1969 to 1991.

Of the seven interviewed administrators, five agreed that their schools had enough teachers, and all indicated that they recruited teachers from two sources: the University of Dar Es salaam and the Teachers' Training Colleges. One administrator said solving the problem of insufficient teachers they employed part-time teachers, overloaded or overworked the available teachers, and combined streams for one teacher, respectively. Five school administrators agreed that their schools had enough classroom furniture, but only three, two, and one had similar responses for the school laboratories, library, and dinning halls.

The study also asked school administrators about school-related aspects that they perceived as hindering the learning process and the performance of the students in the schools. Of the seven respondents, three, one for each, agreed that the number one hindering factor was lack of teaching materials, textbooks, the double sessions, and interruption brought about by unplanned school closure before time, respectively. Two, one for each administrators mentioned that hindering factors included as lack of teaching materials, lack of study areas for students, lack of librarians, lack of emphasis of games and sports, respectively. Only three and one administrator respondents mentioned lack of teaching materials and lack of teachers as the number three hindering problems, respectively.

Furthermore, administrators were asked about the teacher-related aspects that they perceived as hindering the learning process and performance of the students. Of the seven interviewees, two, and one for each agreed that the number one hindering factor was that teachers did not mark the students' home work in time, lack of effective teaching, and that teachers did not

use teaching materials, and had heavy teaching loads, respectively. Similarly, two and one for each of the respondents mentioned that teachers missed classes, lack of teaching materials, and lack of practical skills as the number two hindering factor. Only two administrators mentioned lack of morale among teachers as the number three factors affecting the performance of teachers. School administrators were also asked to comment on their students' performance in the national examinations for the past four years. Of the six, four, one for each commented that the examinations performance were good, very good, and good if students were availed the facilities for practical. The seven interviewees gave their comments on their students' English language competence, and two, one for each said that they were average, very good, not competent, lack practice out of the classrooms, respectively. These school administrators' comments further attested to the poor English usage among secondary school students as explicated in this study, a point shared by most teachers though subjectively.

## *8.6 Conclusion and Recommendations*

### *8.6.1 Conclusion*

This study was conducted in the ten secondary school in the three regions namely Dar es Salaam, Morogoro and Tanga. Of the ten surveyed schools, five of them were in Dar Es Salaam region and these included Azania, Jangwani, Kinondoni Moslem, Shaaban Roberts and Jitegemee-JKT. Three secondary schools surveyed in Morogoro region included Kilakala, Morogoro and Lutheran Junior Seminary. The other two schools surveyed in Tanga region where Kifungilo and St. Mary's Mazinde Juu. Of the ten schools, five of them (Kinondoni Moslem, Lutheran Junior Seminary, Jitegemee-JKT, Morogoro secondary and Shaaban Robert) were co-education. Four of the surveyed schools (Kilakala, Kifungilo, Jangwani and St. Mary's Mazinde Juu) were girls only, while one (Azania) was boy's only secondary school. Based on school ownership, four schools were government owned and ran (Azania, Kilakala, Jangwani and Morogoro Secondary) while Kinondoni secondary school was owned and ran by the Moslem community in Dar es Salaam. Two schools (Kifungilo and St. Mary's Mazinde Juu) were owned and ran by Roman Catholic, and one (Lutheran Junior Seminary) were owned and run by CC of Tanzania. Jitegemee and Shaaban Robert secondary school were owned and run by Jeshi la Kujenga Taifa-SUMA, and the Indian community of Dar es Salaam respectively.

Based on the school type: Azania, Jangwani and Morogoro secondary schools had boarders and day going students, while Kilakala, Kifungilo, Lutheran Junior Seminary and St. Mary's Mazinde Juu were boarding schools. Day school in the survey included Kinondoni

Moslem, Jitegemee-JKT and Shaaban Robert secondary schools. The study included respondents in the school with the most students (over 500), medium student (about 200) and the least (less than 100) students. Of the 630 interviewees, 217 (34.4%), 167 (26.6%), 91 (14.4%), 78 (12.4%), and 77 (12.2%) came from the government, religious-Christian, Jitegemee-SUMA-J.K.T, religious-Moslem, and individual secondary schools, respectively.

Of the ten surveyed secondary schools, eight of them having 554 (88%) respondents were located in urban areas. This bias was purposive because most of the secondary schools in the country are located in urban areas. Also, of the 630 surveyed students, 422 (67%) came from five schools in the city of Dar es Salaam because city has many schools in the country. Of the 630 respondents, 353 (56.0%) were girls and 273 (43.3%) males. The average age of interviewees was 17.7 year old. Most of the surveyed students, 599 (95.1%) were sampled from Forms III and IV because these has stayed long enough in the schools and were hypothesized to have more knowledge about the phenomena being studied. Selection of schools was purposive and not all government schools were sampled for the study. Currently, about 90 per cent of all students finish their ordinary and advanced secondary school education from the government schools. About half of the sampled students, 330 (52.4%) were in co-education, 164 (26.0%), and 136 (21.6%) were in girls and boys only secondary schools, respectively.

Most respondents, 568 (92%), 583 (94%), 576 (93%) agreed that biology, chemistry and physics laboratories were available in their schools. Over half of female and male interviewees, 411 409 (67%), (66%), 394 (65%), and 356 (63%) agreed that teachers used laboratories for practical sessions, classroom had enough chairs and desks, and teachers used teaching materials, respectively. Of the 630 interviewees, most, 528 (84%) agreed that they used only English during note taking in the classrooms. Respondents based on gender reported a similar observation: 306 (86%) and 222 (81%) female and male respondents respectively. Also, 431 (70%) of the interviewees agreed that they liked their teachers to use English during teaching. This implied that female secondary school students wanted their teachers to use English than male students. Over half of the respondents, 415 (68%) and 380 (62%) agreed that they used English in answering and asking questions in the classrooms, respectively. Similarly, 385 (63%) of the interviewees agreed that they used both English and Kiswahili in group discussions. Unfortunately, few respondents gave reasons for preferring English such as to understand the subject (24%), to improve written English (19%), English was a language of instruction (12%), and had interest in the language (11%). The small percentage could be generalized to mean that most students in the secondary schools have little interest in the English language. Given this scenario, it is valid to accept Roy-Campell and Qorro (1987) who confirmed that English was no

longer a viable medium of instruction at secondary school level. But, this change could also pose some problems as "only about 10% of the Tanzanian population speak Kiswahili as their mother-tongue. For the vast majority of Tanzanians, Kiswahili is a second language" (Rubagumya, 1999: 127). Furthermore, Khamisi (1991) found that another problem in primary schools was the unsystematic teaching of Kiswahili syntactic patterns compared to subjects such as Mathematics, Geography and History.

Of the 630 interviewees, 554 (89.1%), 448 (73.9%) agreed that their school had libraries and library attendants, respectively**.** Over half of the respondents, 384 (63%), 317 (51.8%), and 299 (50.2%) agreed that they borrowed books from their libraries, that their libraries had enough chairs and tables, their teachers asked students to go to the libraries and borrow books, respectively. Less than half of the respondents, 292 (47.9%), 282 (46.5%), 239 (40.7%) agreed that the school libraries had enough books, that libraries were within their vicinity, and that they frequently used the libraries. But, when students were asked to mention the clubs that they were involved in, only a few of them were able to name the specific clubs. Of the 630 respondents, 201 (31.9%) agreed that they were involved in the debate clubs in their schools.

Most interviewees in the ten schools, 530 (84.1%) agreed that English was only used during note taking in the classrooms. And over half of them, 431 (68,4%), 418 (66.3%), 387 (61.4%), and 383 (61.1%) agreed that they preferred teachers to use English when teaching, used English when answering questions, used both English and Kiswahili in group discussions, and used English when asking questions, respectively. Furthermore, most interviewees in the girls secondary schools, 193 (90%) agreed to using English during note-taking than boys 72 (84%), followed by co-education 265 (80%), although the difference was not significant. Over half of the interviewees, 431 (68%), 418 (66%), and 383 (60%), based on their school systems agreed that they like to use English, they used English in answering questions, and used English in asking questions, respectively. However, less than half of the respondents, 252 (40%) agreed that their teachers used English when teaching--this low response may be contributing to poor English among Tanzanian secondary school graduates. Similarly, 385 (63%) of the interviewees agreed that they used both English and Kiswahili in group discussions. This fact is exemplified by responses on the language that students wanted their teachers to use, where about half of the interviewees, 362 (58%) agreed that their teachers should use both English and Kiswahili when teaching. Clearly, this implied that half of the surveyed secondary students preferred their teachers to code-switch and code-mix during teaching. For instance, Alderson and Ladbury (1990) found that most teachers' English in Tanzanian secondary schools was weak, they largely read aloud from the prepared notes, and pupils were reluctant to respond and only did so

inadequately, in monosyllables, and showed little evidence of having understood the teacher. However, as Rubagumya (1999) notes that teachers, students, parents as well as policy makers display resistance to replace English with Kiswahili in the secondary schools. Qorro (1997) observes that applied to Tanzania situation, teaching English effectively as a subject and teaching other subjects through the medium of Kiswahili would facilitate better understanding and learning of the English language. Further, this study points out that secondary school students in Tanzania have problems in all three interrelated aspects of the second language (L2) acquisition: "representation, acquisition, and processing" (Jiang, 2000: 47).

Over half of the interviewees, 385 (61%) and 317 (50%) agreed that they borrowed books from their libraries and that schools classrooms had enough chairs and tables. However, of the 630 interviewees, less than half, 299 (48%), 292 (46%), and 284 (45%) reported that their teachers asked students to go to the libraries, that their libraries had enough books, and there was a nearby library, respectively. Further examination of these show that most respondents in the girls only schools, 154 (72%) followed by those in co-education, 199 (60%) borrowed books from the school libraries. However, few, 32 (37%) of the respondents in the boys only schools borrowed books from the school libraries. The study points to the low propensity of our society to read books, which is manifested in the low level of writing skills among our secondary school pupils, college, and university students. Over half of interviewees, 413 (66%), 411 (65%), and 395 (63%) agreed that their schools had enough chairs and desks, enough teachers, used laboratories for practical sessions, respectively. Summarily, data show that on average less than half 113 (42.2%) of the interviewees in the government-owned and ran schools agreed to most aspects pertaining to classroom-, teaching materials- and laboratories-related variables. This implied that most of the government-run secondary schools did not have an adequate supply of these items.

Of the 40 teachers, 25 (62.5%), 8 (20%), 6 (15%) and 1 (2.5%) were surveyed from the government, Christian, individual, and JKT secondary schools, respectively. Of the 25 teachers in the government secondary school, 15 (60%) had completed Form VI, which implied that they had no formal teaching skills. Most interviewees, 35 (87.5%) were trained teachers, and about half, 20 (50%) indicated that they had completed teacher training between 1986 and 1992. However, less than half, 18 (45%) had started teaching between 1986 and 1992, i.e. had an experience of between 13 and seven years of teaching. Also, the study shows that 9 (30%), 9 (22.5%), and 7 (17.5%) of the respondents taught biology and chemistry, English, mathematics and physics subjects, respectively. Of the 40 teachers, 27 (67.6%) of them agreed that they had not attended in-service courses and of these, the majority, 19 (76%) were from the government secondary

schools. Similarly, 34 (85%), 28 (70%), 27 (67.5%) teachers sampled from the categories of school ownership type agreed that they had not attended refresher courses, seminars, and workshops, respectively.

Less than half, 18 (45%) of the respondents agreed that their class sizes were between 30 to 40 students. And, most teachers, 31 (77.5%) reported that teaching materials in their schools were enough. However, most teachers in the government secondary schools, 22 (88%), about half, 3 (50%) in the individual schools, and 2 (25%) in the Christian/religious schools reported that their schools had enough teaching materials. Secondary school teachers were asked to assess their English competence levels. Of the 40 teachers, 15 (37.5%), 9 (22.5%), and 1 (2.5%) agreed that their English competence levels were good, very good, and excellent, respectively. This data implied that some secondary school teachers were not confident with their English competence, an aspect that may affect the performance of secondary school students. Less than half of the 40 teachers, 19 (47.5%) and 17 (42.5%) agreed that their schools had laboratories for physics, chemistry, biology and domestic science subjects, respectively. However, most teachers did not agree with the statement that their laboratories were well equipped as only six (15%) said so. Also, about half of the teachers, 21 (52.5%) agreed that there were librarians, but less than half, 19 (47.5%) disagreed that the school libraries had enough chairs and desks. Few interviewees, 13 (32.5%) agreed that they always used the library. This data implied that if teachers do not frequently use the library it could be difficult to advise students to do so--as only 18 (45%) assigned students to use the library. However, as school observations revealed this was due to the fact that most libraries in the schools had few books in terms of relevance, quality and quantity. For instance, few of the surveyed teachers, 7 (17.5%) agreed that libraries had enough book copies for the students. Of the 40 respondents, less than half 19 (47.5%) said that the school libraries had outdated books that needed updating. Few teachers agreed to be members to about six subject clubs in the schools. This small number of teacher involvement in school subject clubs manifests itself in the small numbers of students in the clubs as explained elsewhere. Consequently, this might have an effect on the performance of students in their respective subjects.

Of the surveyed seven school administrators, six indicated that they were trained teachers, and of all, three, two for each were trained at the University of Dar Es salaam, at Kleruu and Dar TTC, and abroad (USA, U.K.), respectively. Years in which they attended training were between 1969 to 1991. Four, two and one of the school administrators had Bachelor of Arts in Education, Bachelor of Science in Education, and a diploma in Education, respectively. The length of years worked in the schools varied. Three, two, one for each had worked for three, one, six and seven

years, respectively. Of the seven respondents, three, one for each, agreed that the number one hindering factor was lack of teaching materials, textbooks, the double sessions, and interruption brought about by unplanned school closure before time, respectively. Two, one for each administrator mentioned that hindering factors included as lack of teaching materials, lack of study areas for students, lack of librarians, lack of emphasis of games and sports, respectively. Of the seven interviewees, two, and one for each agreed that the number one hindering factor was that teachers did not mark the students' home work in time, lack of effective teaching, and that teachers did not use teaching materials, and had heavy teaching loads, respectively. Of the six, four, one for each commented that the final examinations performance of their students were good, very good, and good if students were availed the facilities for practical. Also, seven interviewees gave their comments on their students' English language competence, and two, one for each said that they were average, very good, not competent, lack practice out of the classrooms, respectively. Similarly, two and one for each of the respondents mentioned that teachers missed classes, lack of teaching materials, and lack of practical skills as the number two hindering factor. However, only two administrators mentioned lack of morale among teachers as the number three factors affecting the performance of teachers.

### *8.6.2 Recommendations*

This has been an extensive study that looked at ten schools in selected regions in the country, and some of the recommendations made could not be generalized to other schools. However, the belief is that most of the secondary schools in Tanzania could use the study results to improve their endeavours in teaching and promoting students' learning and knowledge acquisition.

1. One roles of education in our society is to prepare young people for their future role in society, which is over 90% Kiswahili-speaking (Qorro, 1997), then it is logic that policy makers change from using English to Kiswahili in the secondary schools. This inevitably could reduce the high failing rates and discontinuation from studies of undergraduate students often seen at Sokoine University of Agriculture and University of Dar es Salaam. This could, therefore, reduce the endemic malpractice of code-switching and code-mixing commonly seen among secondary school pupils and teachers.
2. Although, most students mentioned that they had laboratories in their schools, there was a need, especially, the government owned and ran secondary schools to ensure that they have up to date chemicals and apparatus.

3. School administrators, especially in the government secondary schools should ensure that their schools have enough desks and chairs both in the classrooms and libraries. These items should frequently checked for damage and whenever possible replaced.
4. Similarly, most schools have buildings for the school libraries, but most of them have irrelevant and sometimes obsolete books. There is a need, especially, in the government secondary schools to have enough copies of relevant books in the libraries. The government should ensure that annual budgets for each school to buy books for the libraries are implemented. Qualified librarians should be employed for the school library. School administrators and teachers should point out to pupils the importance of frequently using the library.
5. School administrators should see that teachers of the respective subjects start clubs so as to attract pupils to join them.
6. School administrators, especially in the government schools should ensure that teaching materials are available in their schools, and should whenever possible encourage teachers to make them using local and available materials.
7. School owners and school administrators should see that their teachers attended refresher courses, seminars, and workshops at least once per year for them to learn the modern methods of teaching, and also to have for exchanging ideas about teaching with other teachers.

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