

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
INSTITUTE OF PSYCHOLOGY

LOCATION RELATED FACTORS THAT AFFECT
STUDENT ACADEMIC ACHIEVEMENT IN INNER
AND OUTER CITY SCHOOLS OF ADDIS ABABA

GENET ABIE



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A thesis submitted to the School of Graduate Studies of
Addis Ababa University, Institute of Psychology in partial
fulfillment of the requirements for the degree of Master of
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Abstract

The present study explores location related factors that contribute to student academic achievement. To do this, two sub cities that were assumed to be situated in inner and outer city were selected and 10 schools were purposively sampled from these sub cities. The data were collected through document review of 654 randomly selected samples. To support the document review, close ended questionnaire was administered to 279 randomly selected students. In addition, supportive evidences were also taken from 35 teachers and 10 principals through close ended questionnaire and interview guides, respectively. Analysis of the data collected was made using independent t-test. In addition, percentage was also used for the supportive data collected through questionnaire. The result of the analysis indicated that there is academic achievement difference between inner and outer city school students. In addition, outer government schools perform significantly better result. However, the trends of achievement between years, and outer and inner private schools have no significant difference. Moreover, from the evidences collected through questionnaire and interview, the researcher has identified out of school factors and in-school factors which have contribution to students' achievement difference between inner and outer city schools. Finally, working to minimize in school and out of school factors in inner city schools, strict control and counseling service, experience sharing, increasing teachers and stakeholders' effort and close communication with parents are forwarded as direction to improve student achievement.

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the Study

Education is the heart of human progress and making it to the highest quality is the foundation of all our existence. Quality education should be fully inclusive and accessible to all people on an equitable basis. The fundamental purpose of education is to empower people with knowledge, skills, values, and attitudes. This in turn helps to improve their quality of life, to enhance their productivity and their capacity to learn new skills and to enable them to participate more fully in the development process (Poulton, 2005).

The question of whether individual difference is due to heredity or environment has been a source of heated controversy. Some scholars contended that observed differences between human beings and groups were largely, if not wholly, on account of heredity. Others thought that differences are on account of differences in environment and nurture. Now it is generally recognized that the proper answer is hereditary in the environment (Anastasi, 1973). Consequently, we can understand that environment has its contribution to the academic intelligence of students

The Ethiopian Third National Learning Assessment (2008) emphasized that Education is universally acknowledged as an essential element in the process of national development. Learners, teachers, educators, leaders, and nations acknowledge that what is learned and how learning occurs are very important.

The National Learning Assessment was taken place for three times on the 4th and 8th grades. The main aim of the Ethiopian National Learning Assessment was to provide information on learning attainments by students and factors that determine those attainments in Ethiopian

primary education. Thus, attention is paid to the improvement of the system as a whole (Ethiopian Third National Learning Assessment, 2008). The result of the assessment revealed that there is academic achievement difference between urban and rural students. Therefore, location in terms of urban-rural context is one among the various factors for the difference in academic achievement in Ethiopia.

According to the Center for Technology in Education (CTE) in the USA (2008), characteristics of urban education reports on the condition of urban schools conducted over decades indicate that students and teachers in urban settings have greater challenges as compared to their suburban and rural counterparts. Independent of location, students in high poverty schools are less likely to feel safe in school, or spend much time on homework as those in better schools. Although there may not be a direct comparison, the greater challenge that is found in America might also found here in Ethiopia.

The Ethiopian national composite achievement results by location indicated that students in rural schools gained more than those in urban schools. Overall, those in urban schools scored in aggregate of 35.2% while students in rural schools had an average of 36.1%. The mean differences between urban and rural students except English were statistically in favor of students from rural schools (Ethiopian Third National Learning Assessment, 2008).

From the same source, urban students performed slightly well in English. A similar result was obtained in the recent National Learning Assessment. The mean composite score and the mean score on each subject when disaggregated across regions showed that there exist differences in academic achievement among regions.

It is also mentioned that the overall achievement of Tigray in the mean composite score (42.1%) was found to be significantly different from other regions, and from the national average as well. Students from Gambella region scored the least in academic achievement from other regions followed by Benishngul Gumuz and Dire dawa. The mean composite scores for Oromia (37.1%) and Amhara (36.9%) were found to be higher than the national average. All other regions had mean scores equal to or lower than the national average (Ethiopian Third National Learning Assessment 2008).

Generally, from sources like Ethiopian Third National Learning Assessment (2008) and CTE (2008), it is easy to understand that rural and sub-urban students perform better than their urban counterparts though the number of students enrolled in urban schools is much greater than the number of students in sub-urban and rural schools. This is because urban students and teachers face greater challenges to undertake as compared to sub-urban and rural schools. Some of the location related challenges that affect students' academic achievement could be school environment, home environment, sound interference, harassment, drug addiction and peer influence.

1.2 Statement of the Problem

School quality is usually described by the level of students' achievement. The degree of academic achievement of student in turn is determined by various internal and external school factors. Location of the school is one among the different variables that influence student achievement.

Scholars give various reasons for the academic achievement differences among students. One of the justifications that educationalists forward to the achievement difference between urban and rural types is that urban

schools are full of problems such as attention taking distracters of the area.

Even with in the inner city and outer city of Addis Ababa, there are differences in school settings. That is the inner city areas are full of distracters such as noise, pollutants, drugs, business, harassment etc. Students of inner city schools suffer from noise because of the high ways, business exchange near the schools of the area. In addition, there are also a lot of sewerage lines that flow near the sample schools of the area. Besides, gangsters are also come together near by schools. The students who join gangsters miss classes in the afternoon due to the bad behaviors they develop.

In the case of Addis Ababa, there are 10 sub cities. In these sub cities there are many schools of different grade levels. These schools are located near market areas, high ways, factories, government institutions, residential areas etc. In addition, there are different attention taking distracters near the schools that can impede the teaching learning processes such as high sound from market areas, high ways, etc. Though, there is no clear demarcation in selecting schools as inner and outer city areas, the researcher considered those sub cities such as Arada, Kirkos, Lideta and Addis Ketema as inner city because these sub cities have high business centers, more population and high ways etc and are not surrounded by rural districts. Sub cities like Gulele, Kolfie keranio, Yeka, Bole, Akaki Kality and Nifas silk Lafto were considered as outer cities because they are surrounded by residences and rural districts.

Since, the distance to any other area is measured from Arada sub city, Piazza area locally called 'Giorgis', the researcher took Arada sub city including Piazza area as inner city. Gulele sub city is occupied by

residences and is surrounded by rural kebeles or found at the periphery area of the city in the Northern and western direction and was considered as outer city.

From observation, chewing 'Chat' and taking drugs is a common phenomenon in the inner city of Addis Ababa. Students also practice such tricks not only at week ends but also during school days. Especially, government school students left their classes in the afternoon and went to the near by hidden houses and other near by areas where they can be put out of sight to chew 'Chat', because in most schools attendance is not usually taken in the afternoon. This problem might be one of the influencing factors for the decline in student academic achievement.

Children from poor family on the other hand have been attracted by the market of the area and need to enter to the market to make money and lead their life and support their family.

Consequently, students in the inner city might give more attention to such distracters more than their schooling while students in the outer city may give attention to their education. Such differences in the location of schools might create a difference in attention of students focus area. This difference in attention in turn could result in differences in their academic achievement. Therefore, the researcher was initiated to assess the academic achievement difference between inner and outer city school students, and to identify the location related factors that influence the academic achievement of students between inner and outer city schools of Addis Ababa.

1.3 Research Questions

Therefore, to come through such problems and to identify the location related factors, the researcher raised the following questions:-

1. Is there a difference in the academic achievement of inner and outer city school students of Addis Ababa city?
2. Is there a difference in the academic achievement of government and private school students of Addis Ababa city?
3. What location related factors influence the academic achievement of inner city and outer city students?
4. Is there any difference in students' behavior between inner and outer city schools Addis Ababa?

1.4 Objective of the study

The general objective of this study was to compare the academic achievement of students between inner city and outer city schools and to identify the possible location related reasons for their academic differences.

The specific objectives of the study were to:

- Assess the academic achievement difference between inner and outer city schools of Addis Ababa
- Identify location related factors that have influence on the students' academic achievement difference.
- Suggest the possible implications of the findings of the study to improve students' achievement

1.5 Definitions of Terms

Academic Achievement: refers to pupils' academic results in all the tests constructed by the National Organization for Examination (NOE) for grade ten and those constructed by the Regional Organization of Examination for grade Eight.

Inner city: refers to the city of Addis Ababa, located at the center of the city which is densely populated and is the business center of the city.

Outer city: refers to the part of the city which is located on the border (periphery) areas of Addis Ababa and are mostly residential localities.

1.6 Significance of the study

Education equips the child with the set of values and attitudes essential for the efficient performance in the later life of the individual. It also contributes to independent and critical learning so that all individuals regardless of sex and location can select and take advantage of the continuing education opportunity needed to make transitions from one stage of life to another. Quality of education and training is measured by the academic achievement of students.

This study was expected to assess the achievement difference between inner and outer city students. Moreover, it also provided necessary evidence regarding the location related factors that influence to students learning, there by enabling concerned individuals to be aware of the conditions and take the necessary measures to improve education of the youth.

Hence, this study is important to benefit the ten sample schools in that they can see where their performance is and easily identify the problems that the schools have in relation to their location. They can take the necessary measures to alleviate the problems. Based on the study, the sub cities can also see the Impacts of location in relation to the different distracters that are dominantly surrounding schools. Addis Ababa Education and Training Bureau also understand the degree of the influences that the distracters impose on the students' performance. This enables the Education Bureau to search valuable and possible solutions to the problems that decline students' achievement and take measures to improve students' academic achievement.

1.7 Delimitation Of the study

The research topic was too wide to cover all the schools in the inner and outer city of Addis Ababa. So, it is restricted to the assessment of academic achievement difference between students of some selected schools in Arada and Gulele sub cities of Addis Ababa. Besides, the two sub cities were considered as inner and outer city respectively to assess location related factors that contribute to students' academic achievement differences.

In addition, achievement test have not been prepared and used as instruments of data collection. Instead, the researcher has used grade 8 National examination results recorded by the sample schools for two consecutive years (2000 E.C and 2001 E.C) for the reason that the regional examination result is reliable than school based tests since the National examination is prepared and administered uniformly throughout.

The other delimitation was the number of schools. This study focused on the result of ten schools that are found in the inner and outer city.

In addition, students rosters for the years 2000 and 2001 E.C, questionnaire for grade eight students and teachers who teach grade eight students and interview guides were used as instruments of data collection.

In the data analysis, only the variables location and year were used. To analyze the data t-test and two ways ANOVA were used as a statistical instrument. In addition, percentage was also used.

1.8 Limitation of the Study

Though this study tried to see the contribution of location for students' academic achievement, different challenges were faced in finding sources and data collection. The first limitation was lack of sufficient related literature for the study topic. The second limitation was that some mission and private primary schools in inner city were not willing to give data and did not allow the researcher to administer questionnaire in the school.

1.9 Organization of the study

The study has six chapters. The first chapter deals with the introduction part. The second chapter overviewed related literature that has relationship with the title of the research. In the third chapter, the design and methodology of the study were dealt with. The forth chapter presents the analysis of the study, and the fifth chapter discusses the analysis of the study. The last chapter contains the summary, conclusion and recommendation part.

The next chapter deals with the review of literature about location related factors that contribute to the academic achievement difference between inner and outer city schools.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1 General overview of Quality Education

Education is an important means of economic, social and political development of a country. Schools are main institutions where the process of education is observed and the level of quality is actually measured (Erkiyhun Desta, 2007).

Addressing basic education for all is meaningful only if children could acquire useful behavior, skill and value. Recently the quality of education has been deteriorating from time to time. Owing to this, the quest for quality learning and better achievement has become the concern of every nation including Ethiopia. That is why education ministries have increasingly seeking evidences on how to improve the outcomes of this learning (MOE, 2005).

UNESCO, Henveld, Yalokwu cited in Fekede Tuli (2007) also discussed different factors that hinder the academic achievement of students. Some of the factors he mentioned are lack of proper physical infrastructure, teachers' absenteeism, poor school administration, dilapidated or half completed buildings, overcrowded classes, few or no learning materials, low quality of teachers, poverty, social influence, workload and inefficiency of teachers.

Quality education is measured by the academic achievement of students. Academic achievement of students is associated with different factors. Above all, it is the outcome of school quality. School quality is measured by students' level of performance. The increase in students' academic performance is the result of essential inputs available in the school, the teaching learning process, the conduciveness of home environment to study and the safety of school environment (Rudman and Featherstone, 1968).

Appreciating the attempt that was made to expand access and equity, educational quality of Ethiopia has still great challenge. To alleviate such problems systematically and gradually, the government has designed the education and training policy of 1994 (MOE, 2005).

A comparison between the findings of the Third and the previous two National Learning Assessments show a significant decline in the achievement scores. The mean composite score as well as the mean score of each subject in the Third National Learning Assessment was significantly lower than the Ethiopian baseline and Second National Learning Assessments (Ethiopian Third National Learning Assessment, 2008).

However, NOE (2004) indicated that students' attitude towards health, environmental protection, civics and ethics, cultural issues and education values is more or less the same.

The expected average achievement level By Education and Training Policy of Ethiopia is 50%. However, according to Ethiopian Third National Learning Assessment (2008), the achievement level of students as measured by the mean composite score of the five subjects (English, Mathematics, Biology, Chemistry, and Physics) was only 35.6%. Therefore, student academic achievement is still far below the average achievement level.

2.2 Academic achievement by location

The influences of heredity and environment on the development of an individual have been viewed differently by scholars. For the balance and harmonious development of an individual, balanced and harmonious

interactions between heredity and environment are essential. According to Chronbach cited in Mehrens and Lehmann(1974), heredity of an individual is not ones concern, instead working on the environment that covers all the surrounding factors have acted on the individual since she/he began life is decisive.

Rath, Dash.A and Dash.U (1979) have also indicated that environment is an instrument in advancing or hindering cognitive function which induce intellectual development of learners. Rudman and Featherstone (1968) also emphasized that both home and school environment are important factors either to impede or facilitate intellectual development of students.

Different sources use different ways of classification on the factors that are assumed to have important contribution to school participation and poor performance of students. According to Wondemench Asrat (2009), the contributing factors for student performance are categorized as in-school and out of school factors.

According to Rudman and Featherstone (1968), academic achievement of students is not the sole responsibility and effort of teachers. The task of teachers is limited to some aspects of students' development. In addition to teacher quality, there are different factors that contribute to student performance outside the classroom. Among these, better access to educational materials and other essential learning equipments which are complement to the teaching learning process in urban settings can be mentioned. Students of the environment that have access to materials are expected to have more advantage in academic achievement.

However, NOE (2004), CTE (2008) and the Ethiopian Third National Learning Assessment (2008) showed that the mean academic achievement differs significantly between rural and urban areas in favor

of the rural students, especially in mathematics result. In addition, Rudman and Featherstone (1968) also indicated the availability of large number of educational failures in large inner city schools than in almost any other school sites. The following could be the possible factors that contribute to such academic achievement difference between urban and rural students.

2.2.1 Out of school factors and academic achievement

Urban students are affected by school environment more than their rural counterparts because urban schools are open to elements such as high traffic and sound that distract student attention, pollutants that affect student and teacher health, unsafe areas where students are easily exposed to drug addiction. As a result, urban schools require great effort to enhance teaching-learning process (Rudman and Featherstone, 1968).

According to Sewnet Mamo (1995), urban students are lower than the rural areas in academic achievement. This is due to the various attention taking distracters in urban areas that affect students to take less attention as compared to their rural counterparts.

2.2.1.1 Home environment

Learners' residential area has either negative or positive contribution to students' performance depending on their home environment. The place where students do their school activity like homework, assignment, etc has contribution on their academic performance. According to Douglas (1968), although there are exceptional students who work hard with little encouragement at home, most children tend to work when their parents give attention to their school progress, but they fail to work when their parents are not concerned.

In the same source, the middle class children are less influenced by their

parents' attitude and tend to work hard even when their parents lack interest than children of economically low status family. According to Taylor and Bosall (1994), In addition to the support of parents, home environment is advised to be away from places that have undesirable influences on youth. This enables students to develop good study skills that contribute to their academic success.

According to Fuller cited in the Ethiopian Third National Learning Assessment (2008), factors out of school program such as home assignment and labor demand influence children final academic achievement. In many of the developing countries, the demands for labor earnings in rural and urban poor families affect school attendance and learning achievement significantly. For instance, in Egypt rural primary school students perform one grade level below the mean performance of urban schools; in Kenya it is one third below the mean performance of urban schools.

The same source also witnessed that a nation's wealth is related to student average achievement levels in at least two ways. First, infants and young children in wealthy countries experience a higher material quality of life. Second, the demand for the child's labor is lower in industrial nations. In contrast, children in developing countries are required to work in agriculture or take up urban jobs like petty trading for a considerable part of each day that affects their academic achievement.

Though recently have encouraging atmosphere and supportive policy environment for the cases in Ethiopia, still there are different factors for the poor academic achievement of students which include poverty, low quality and relevance of education and limited income generation opportunity (World Bank in Wondemenh Asrat, 2009).

Students in rural area participate in schools with their additional burden like house work, cooking, taking care of their younger brothers and sisters, and supporting their overburdened mothers and training for their future role as housewives and mothers. These leave female students to have little time for their study (Wondemench Asrat, 2009).

Children from poor family in urban area are also deserved to generate money so that he/she can feed him/herself and used as a source of income to the family. In this context therefore, the business opportunity in the inner city may attract children than their schooling. This in turn, could have contribution to low academic achievement of such students.

2.2.1.2 Drug addiction

According to Asfaw Debella, Dawit Abebe and Almaz Abebe (2005), people begin to use addictive substances quite early in life. Chewing 'Chat' is a common sight among children living and working in the streets of Addis Ababa. In the same proceeding, among the 1800 respondents, 44.9% started the habit forming substance under the age of 15 and 34.6% at the age between 15-19. The prevalence of 'Chat' is so high that it is considered as a sign of modernity.

However, addiction is the first enemy to the society and the economy of the country. For many people it seems a minor problem, yet it has a devastating effect to the economy of the country for the reason that it affects the productive citizens including school age students. Recently, chewing 'Chat' is becoming a common phenomenon even in the street corners and work places of Addis Ababa (Asfaw Debella, Dawit Abebe and Almaz Abebe 2005).

According to USAID cited in Asfaw Debella, Dawit Abebe and Almaz

Abebe (2005), when people take drugs, they usually unable to make correct decisions and fail to abstinence, faithfulness, rape, and become impair to make judgment.

According to Stein (1999), schools will not be safe unless abuse and violence are addressed; though schools are places for behavioral change of students, chewing 'Chat' and taking other drugs are being accustomed near schools, and people consider taking 'Chat' as common as eating food. Therefore, parents, school administrators and students could openly discuss about the problems and its solution.

From observation, chewing 'Chat' and taking drugs is common phenomenon in the inner city of Addis Ababa. Students also practice such tricks not only at week ends but also during school days. Especially, government school students left their class in the afternoon and went to the near by hidden houses and other near by areas where they can be put out of sight to chew 'Chat', because in most schools attendance is not usually taken in the afternoon. This problem may be one of the contributing factors for the decline in student academic achievement.

Despite the fact that some of the risk areas are not common in our country, school site should consider the proximity to airports, presence of toxic and hazardous substances, hazardous air emission, and proximity to railroads, high pressure natural gas lines, high pressure sewerage lines, major road ways, bad smell, etc (Wolfe, 2009).

In our context, distracters like sound, traffic congestion, sanitary problems, and exchange of goods are commonly observed around schools which are found near 'Atikilt-Tera' and 'Eribekentu'. In addition, residuals of fruit in Atikilt-Tera, rivers that carry waste disposal in

'Eribekentu' area release bad smell to the surrounding environment. In addition to high distracting effect, the bad smell emitted from such areas highly affects students' health and expose them to common cold. As a result, students could not be regular school attendants. This frequent absence from class may result in low academic achievement.

2.2.1.3 Sound distracters

According to School Noise Control Design (2004), noise is unwanted or is harmful. The loudness of the sound is measured in decibels. The normal range of conversation is between 34 to 66 decibels. If the range goes beyond 70 decibels, it can affect the teaching learning process. In the same source, too loud sound is distracting or injuring. Hence, if schools are located in areas where loud noise is found, the teaching-learning process is directly or indirectly hindered.

Excessive noise causes irritation and emotional strain on school community. Therefore, giving attention to noise situation is important when school sites are selected. That is either locating away from noise or using noise reducing materials for construction is important. According to Terry and Sterling in Melaku Dires (1995), external source of noise outside the school premise can be reduced by choosing a site which is away from truck routes, railroads, trolley lines, airports, factories and other sources of sound.

From the same source, schools should also be away from amusement areas like theater, movies, and other installations, because these may attract the attention of students, and adversely affect them.

Students benefit from classrooms with low sound distracters. If the classroom is acoustically poor, and the student can not hear what is being said, it can have the same end result as if students have hearing

impairment, because much of what goes on in the classroom may be missed due to the site of the school or acoustic design of the classroom (School Noise Control Design, 2004).

Although schools have qualified teachers, up-to-date materials and access to the latest technology, noise makes learning difficult for students in understanding what the teacher and other students say. In addition, students can not properly manage their materials, time and the situation unless they develop interest on their study. To develop such habit, students need quiet and safe area. One of the preferable areas for student academic success is library. Parallel to the necessary materials available, schools have to provide encouragement and safe environment to students so that they can stay in school (Kifle G/kirstos, 2004).

2.2.2 In-school factors and academic achievement

Schools are established to produce individuals who can solve the practical problems of the society. If it is hoped to create such individuals in schools, quality education could be provided for citizens. To do so, properly designed and constructed building is essential (Tamirat Bekele, 1999).

From the preconditions necessary to undertake educational activities, the existence of well designed and appropriately sited school building is important. The site selection for a school physical plant is the primary component to create conducive environment for the teaching-learning process. It determines the school environment to be either substandard or better-quality. Therefore, selecting the most appropriate site for school is an important consideration for a school community (Melaku Dires, 1995).

However, in inner city schools of Addis Ababa the setting does not allow

to establish such appropriate and sufficient school compound. As a result, it becomes common to observe large number of students confined in small compound.

It is a common assumption that children get their behaviors from their family and their friends. What many parents do not realize is that, from the minute of birth, all children have a natural attraction to their parents. When the children grow up, often parents are busy to pay attention to their children. As a result, children share their peers' behavior. Peer pressure in school may have influence on student achievement (Associated content home society, 2006).

Survey conducted on the victimization and perpetration of harassment and bullying to overall school safety on grade 9 and 11 in south western Ontario, 4% of males in grade 11 admitted trying to force some one to have sex with them, while 10% of males and 27% of females admitted being pressured into doing sex that they did not want (Wolfe, 2009).

The same source also reported that 29% of grade 9 girls and 33% grade nine boys feel unsafe in school. They marked that going to high school is like running to hell. In addition, 16% of girls and 32% of boys are being physically harmed. 10% of girls and 25% of boys admit that they are perpetrators of such violence.

In South Africa, many of the schools become violent and unsafe environment due to bullying, drug abuse, sexual abuse, verbal abuse, racism, gangsters, gun and weapons and other antisocial behavior. Such students narrowed their dreams and start to lead a battle for survival rather than striving for better academic achievement (Wolfe, 2009).

Finn and Fraley cited in Takele G/kidan (1990) also explained that

variation in academic achievement from school to school is caused by variation in school facilities, curriculum and staff. Students learn more if their school sets high standards, maintain discipline, demands regular attendance, assigns home works, is staffed by dedicated teachers etc.

One can not also deny that academic achievement of students is strongly associated with the characteristics of the learning environment. Since all school environments are not the same, there could be difference in academic achievement. If certain school students perform better than others, there must be something that makes students to work hard to achieve better than others in school.

To summarize, the researcher has tried to cite some literature review that directly or indirectly related to the influence of location related factors that could contribute to the academic achievement of students. Of these, out of school factors like family involvement in supporting and encouraging children, family economic status, home location, attention taking distracters around school compound as well as in-school factors such as size of the compound, peer pressure etc are assumed to have contribution to the academic achievement difference among students. Moreover, drug addiction may also contribute to student academic achievement difference between inner and outer city schools.

The next chapter presented the design and methodology of the research. In the design and methodology, the procedure, participants, sampling technique, tools of data collection and the statistical tools for analysis are presented.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Design of the study

This research has tried to analyze the academic achievement difference between some selected inner and outer city primary school students of Addis Ababa. The yearly variation in academic achievement between students has been also assessed. To meet the purpose, the researcher selected two sub cities as inner (Arada) and outer city (Gulele) of Addis Ababa.

To select the two sub cities for the study, purposive sampling technique was used. Though, there is no clear demarcation in selecting schools as inner and outer city areas from the ten sub cities of Addis Ababa, the researcher considered the sub cities such as Arada, Kirkos, Lideta and Addis Ketema as inner city because these sub cities have high business centers, more population and high ways etc and are not surrounded by residences and rural districts. Sub cities like Gulele, Kolfie keranio, Yeka, Bole, Akaki Kality and Nifas silk Lafto were considered as outer cities because they are surrounded by residences and rural districts.

Representative sample of 10 schools (four government, two Public, two private and two mission schools were also selected through purposive sampling technique. The schools selected are located either near market areas, high ways, factories or near government institutions, residential areas etc. The sub cities which are found near different attention taking distracters that impede the teaching learning processes such as high sound from market areas, high ways, etc were considered as inner city schools. In contrast, schools which are found at the periphery and surrounded by residences were considered as outer city schools.

The study conducted on grade 8 students of the selected schools equally at each sub city with 3195 students was drawn for 2000 and 2001 E.C. The sample students were selected to represent the target population using systematic random sampling technique depending on the list of students on the roster. The researcher took 20% of the students result in the two years. To take the students score from the roster, the researcher selected the initial number from the list of one to five using lottery method, and then add the constant from the first number to get the next.

3.2 Participants of the study

The selected schools in inner city were Yekatit 66 primary and secondary school, Key kokeb primary school, Africa Andinet 'Kutir'1 primary and secondary school, Super-Holy savior primary school, and Lutheran primary school. In the outer city, Medahnealem primary school, Belay Zeleke 'Kutir' 2 primary school, Birhan Hilina primary school, Elbethel primary and secondary school, and Lazarist primary and secondary school were selected. These sample schools were selected because the schools have different settings and are found in two different settings of the city (inner and outer city). The study participants were students, teachers, and school principals. 654 students roster were analyzed, 279 students filled questionnaire, the questionnaire were also administered for 35 teachers. In addition to students and teachers, ten school principals have also participated in the interview to give basic information about their respective schools and legitimate evidences for the research. The detail description of the participants was shown in the table below

Table 1. Sample of schools used in the study

No	Sampled schools	Total students			Number selected		
		M	F	T	M	F	T
1	Medahnealem primary school	255	332	587	48	70	118
2	Belay Zeleke primary school	435	265	700	43	78	121
3	Birhan Hilina primary school	68	89	157	12	19	31
4	Lazarist primary and secondary school	96	65	161	23	17	40
5	Elbethel primary and secondary school	31	35	66	7	7	14
6	Yekatit 66 Primary and secondary school	84	131	215	15	29	44
7	Keykokeb primary school	159	197	356	39	49	88
8	Africa Andinet K.1 primary and secondary school	350	330	680	70	66	136
9	Super Holy Savior primary school	73	84	157	15	18	33
10	Lutheran Primary school	76	40	116	19	10	29
Total		1627	1568	3195	291	363	654

Table 2. Sample of grade eight students

	Name of selected schools	Male	Female	Total
1	Medahnealem primary school	9	21	30
2	Belay Zeleke primary school	20	27	47
3	Birhan Hilina primary school	10	11	21
4	Lazarist primary and secondary school	14	8	22
5	Elbethel primary and secondary school	7	12	19
6	Yekatit 66 Primary and secondary school	17	18	35
7	Keykokeb primary school	6	23	29
8	Africa Andinet K.1 primary and secondary school	22	20	42
9	Super Holy Savior primary school	6	14	20
10	Lutheran Primary school	6	7	13
Total		118	161	279

Table 3. Sample of teachers

No	Name of selected schools	Sampled teachers		
		M	F	T
1	Medahnealem primary school	1	1	2
2	Belay Zeleke primary school	3	1	4
3	Birhan Hilina primary school	2	2	4
4	Lazarist primary and secondary school	3	1	4
5	Elbethel primary and secondary school	4	-	4
6	Yekatit 66 Primary and secondary school	3	1	4
7	Keykokeb primary school	2	1	3
8	Africa Andinet K.1 primary and secondary school	3	1	4
9	Super Holy Savior primary school	3	1	4
10	Lutheran Primary school	1	1	2
Total		25	10	35

3.3 Sampling Technique

From 3195 grade 8 target population of the above schools in the 2000 and 2001 Ethiopian academic years, only 20% was included for the document analysis. The participants were selected through systematic random sampling technique from 2000 E.C and 2001 E.C National exam roster.

For the questionnaire, 20% of the students who attend in the same schools for the year 2002 were included to get supportive evidence to location related factors that contribute to student performance. This percentage was selected because it was believed by the researcher to adequately represent the population. These samples of students were selected through systematic random sampling technique from students' attendance sheets.

Participant teachers were also selected through simple random sampling technique among those who were assigned to teach grade eight students in 2002 E.C. In addition, all the head teachers in the sample schools were interviewed to make the evidence more reliable and to counter check teachers and students responses.

3.4 Tools of data collection

The researcher gathered the data using analysis of students result from their rosters, questionnaire and interview. The participant students and teachers of these sample schools filled the questionnaire prepared by the researcher. After the administering the questionnaire, interview was held with the principals of the schools.

3.4.1 Document Analysis

The researcher has tried to see the academic achievement difference between students in different school locations. Therefore, to see this difference, the 2000 and 2001 academic year National examination results of the sample students were taken from each school through analysis of their rosters. During sample taking in the students' rosters, the researcher took the rosters from the school documentation room and copied the document. Two documents (2000 and 2001 E.C) at each school were selected and from each document the researcher took 20%, which was one fifth of the total. Hence, using lottery method, the researcher identified the initial number from one to five. After selecting the initial number, the researcher added five from the number to get the next.

3.4.2 Questionnaire

The researcher prepared a written list of close ended questionnaire for students and teachers who teach grade 8 students in the sample schools. The questionnaire was prepared to assess the contribution of

location related factors to student academic achievement and to investigate the possible distracting factors that contribute to the difference in student academic achievement.

The questionnaires were given to the advisor for comment after typing. By incorporating the comments given by the advisor, the researcher conducted pilot study. Based on the responses from the pilot study, final refinement was made on the questionnaires and distributed to the participants of the study in person. From the comments given, unclear directions were refined. In addition, from the response of the piloted students and teachers three questions were included and items were arranged in order of their sequence to assess location related factors

3.4.3 Interview

Interview was held to the school principals of each sample schools on the location related factors that contribute to the difference in academic achievement between inner and outer city students. The purpose of the interview was to get reliable evidence on location related factors. In addition, it was also used to get back ground information about the school environment and administration system.

3.5 Procedures of data collection

At school level, the researcher made self introduction, the objective of the study to the head teachers and also explained what is expected of the schools. Then the required data sources were sampled according to the sample selection criteria. Then the questionnaire was made available for the sample students and teachers at each school. After the administration of the questionnaire to students and teachers, interview was also held to the principals of the sample schools in order to reduce the biasness of the responses given by the students and teachers.

3.6 Method of Data Analysis

The study Variables were:-

1. Independent Variables:

- Location (inner city and outer city)
- Year (2000, 2001 E.C)
- School type (government and private)

2. Dependent Variable

- Academic Achievement (Amharic, English, Mathematics, Biology, Physics, Chemistry, Social study, Civics and Ethical education and Average score)

The data gathered from students' rosters, the questionnaire administered to students and teachers, the interviews of head teachers were analyzed through quantitative and qualitative methods. The quantitative method was used to analyze students national examination result for two years from the school roster. In addition, the data gathered through close ended questionnaire administered to the sample students and teachers was also analyzed as supportive evidence through quantitative and qualitative method. Moreover, the data gathered from the head teachers was analyzed through qualitative technique.

Finally, independent t-test was used to treat one independent variable with two categories like achievement difference between inner and outer city school students, government and private schools, 2000 and 2001 academic years, inner and outer government schools, inner and outer private schools as well. Alpha value 0.05 was used for all significance tests carried out in the study. The raw score collected was analyzed using SPSS. In addition, questionnaire administered for students and teachers was also analyzed and discussed using percentage.

SPSS. In addition, questionnaire administered for students and teachers was also analyzed and discussed using percentage.

3.7 Result of Pilot study

The pilot study was conducted to see the validity and reliability of the questionnaire presented to the sample students and teachers to support the students academic achievement analyzed. Thirty questions were conducted to forty three students in Arbegnoch primary school, which was out of the sample schools. Through the comments given by the students in the pilot study, unclear directions were revised and items were also arranged in order of their sequence to measure the location related factors. Three additional questions were also added to make the questionnaire full.

In addition, the questionnaire had no write or wrong answers. Instead it was to indicate respondents stand on the continuum between agreement and disagreement. So Chronbach alpha was used to measure the reliability. Finally, the responses of the piloted students were properly coded and inserted in the SPSS program.

Table 4. Reliability statistics of the pilot study

Cases	N	%	Chronbach Alpha	Chronbach Alpha based on standardized items	No of items
Valid	43	100	.726	.717	30
Excluded	0	0			
total	43	100			

From Table 4 above, the reliability of the pilot study was 0.726. Since alpha value indicated good reliability, the internal consistency of the questionnaire was considered good and administered in the sample schools.

CHAPTER FOUR

4. RESULTS OF THE STUDY

This part analyzes the result of grade eight students National Examination in 2000 E.C and 2001 E.C. The subjects considered were Amharic, English, Mathematics, Biology, Physics, Chemistry, Social study and Civics and Ethical education. In addition, the difference in the average subjects was also analyzed in the analysis part.

The independent variable was location. In relation to location, the trend of student achievement per year and the performance difference between schools were also considered. The common statistical procedures followed were independent t-test and two way analysis of variance. Moreover, summary descriptive statistics like mean, standard deviation and percentage were also used.

4.1 Academic achievement by location

Table 5. Achievement difference between inner and outer city students using t-test

Subject	Location	N	Mean	Std. Deviation	Std. Error Mean	t value
Amharic	Inner city	317	33.31	7.73	.43	-.407
	Outer city	337	33.55	7.15	.39	
English	Inner city	317	24.74	9.75	.55	-1.202
	Outer city	337	25.64	9.46	.52	
Mathematics	Inner city	317	20.47	7.54	.42	-2.835***
	Outer city	337	22.25	8.45	.46	
Biology	Inner city	317	25.01	8.44	.47	-3.149***
	Outer city	337	27.30	10.06	.55	
Physics	Inner city	317	27.86	8.33	.47	-1.451
	Outer city	337	28.86	9.17	.50	
Chemistry	Inner city	317	25.66	8.23	.46	.060
	Outer city	337	25.62	9.56	.52	
Social study	Inner city	317	24.42	7.02	.39	-3.008***
	Outer city	337	26.27	8.58	.47	
Civics	Inner city	317	45.35	6.98	.39	-1.510
	Outer city	337	46.21	7.51	.41	
Average	Inner city	317	47.31	9.16	.51	-2.109*
	Outer city	337	48.98	10.94	.60	

* $p < 0.05$

*** $p < 0.001$

In the Table 5 above, there is statistically significant difference in achievement between inner and outer city school students in favor of outer city in Mathematics, Biology and Social study. The t-test result for these subjects show $t = -2.835$, $t = -3.149$, and $t = -3.008$; ($p < 0.001$) respectively. In the same table, the average result is also statistically

different between inner and outer city students at $t = -2.109$, and 0.05 level of significance. Students in outer city with mean value of 48.98 were better than their inner city fellows with mean value of 47.31.

However, as it is observed in the Table 5 above, there was no significant achievement difference between inner and outer city school students' in the other subjects (Amharic, English, Chemistry, Physics and Civics and Ethical education). The table value of t (1.960) is greater than the calculated value of t for the subjects, Amharic (-.407), English (-1.202), Chemistry (-1.451), Physics (.060), and Civics and Ethical education (-1.510) at 0.05 level of significance.

4.2 Trends of student academic achievement

The following table compares students' academic performance difference between 2000 and 2001 E.C.

Table 6. Students' achievement difference between 2000 and 2001 using t-test.

Subject	Year	N	Mean	Std. Deviation	Std. Error Mean	t value
Amharic	2000	324	34.14	7.34	.41	2.412*
	2001	330	32.74	7.46	.41	
English	2000	324	23.52	8.44	.47	-4.529***
	2001	330	26.87	10.37	.57	
Mathematics	2000	324	19.56	7.20	.40	-5.870***
	2001	330	23.18	8.47	.47	
Biology	2000	324	25.78	9.53	.53	-1.101
	2001	330	26.59	9.21	.51	
Physics	2000	324	30.84	9.16	.51	7.381***
	2001	330	25.96	7.68	.42	
Chemistry	2000	324	26.69	9.57	.53	2.989***
	2001	330	24.61	8.14	.45	
Social study	2000	324	24.42	8.19	.46	-3.094***
	2001	330	26.32	7.52	.41	
Civics	2000	324	46.44	7.37	.41	2.282*
	2001	330	45.15	7.12	.39	
Average	2000	324	48.18	10.12	.56	.008
	2001	330	48.17	10.18	.56	

*p<0.05

**p<0.001

As it is indicated in Table 6, there is significant difference in student achievement between 2000 and 2001 E.C in all subjects except Biology. Yet, the students results in the subjects like Amharic, Physics, Chemistry and Civics and Ethical Education declined from 2000 to 2001 E.C, where as students showed improvement in English, Mathematics and Social study.

As a result, there was no statistically significant average achievement difference between students who took the National Examination in 2000 and 2001 E.C ($t = .008$, $p < 0.05$).

4.3 Academic achievement difference between Schools

The sample included government, public, private and mission schools in both inner and outer city. However, in this section the sample schools are dichotomized in to two groups as government (government and public) and private (private and mission) to analyze the academic achievement difference between schools.

Table 7. t-test result on achievement difference between inner and outer city government schools

Subject	School type	N	Mean	Std. Deviation	Std. Error Mean	T value
Amharic	Inner city	268	31.89	7.08	.43	-1.005
	Outer city	270	32.51	7.13	.43	
English	Inner city	268	22.35	7.07	.43	-.536
	Outer city	270	22.69	7.25	.44	
Mathematics	Inner city	268	19.34	6.83	.42	-2.851*
	Outer city	270	21.14	7.80	.47	
Biology	Inner city	268	23.56	7.74	.47	-2.178*
	Outer city	270	25.16	9.22	.56	
Physics	Inner city	268	26.24	7.27	.44	-1.957*
	Outer city	270	27.60	8.70	.53	
Chemistry	Inner city	268	23.92	6.99	.43	.522*
	Outer city	270	23.57	8.38	.51	
Social study	Inner city	268	23.44	6.30	.38	-.618
	Outer city	270	23.80	7.04	.43	
Civics	Inner city	268	45.25	7.10	.43	.342
	Outer city	270	45.04	7.60	.46	
Average	Inner city	268	44.99	6.87	.42	-1.460****
	Outer city	270	46.01	9.25	.56	

* $P < 0.05$

**** $p < 0.000$

As it was seen in Table 7 above, in government schools, there was statistically significant average achievement difference between inner and outer city schools at $t = -1.460$ and 0.000 alpha level. At 0.05 level of significance, Mathematics ($t = -2.851$), Biology ($t = -2.178$), Physics ($t = -1.957$) and Chemistry ($t = .522$) showed statistically significant difference between inner and outer city government schools.

The results in Table 7 above indicated that the mean values of Mathematics, Biology, Physics and Chemistry in inner city government schools were 19.34, 23.56, 26.24 and 23.92 respectively. On the other hand, the mean values of outer city schools were 21.14, 25.16, 27.60, and 23.57 respectively.

Table 8. Achievement difference between Inner and outer city private schools using t-test

Subject	School type	N	Mean	Std. Deviation	Std. Error Mean	t value
Amharic	Inner city	49	41.06	6.42	.92	2.981
	Outer city	67	37.73	5.57	.68	
English	Inner city	49	37.80	11.90	1.70	.125****
	Outer city	67	37.57	7.83	.96	
Mathematics	Inner city	49	26.65	8.30	1.19	-.037
	Outer city	67	26.72	9.53	1.16	
Biology	Inner city	49	32.94	7.71	1.10	-1.941
	Outer city	67	35.94	8.59	1.05	
Physics	Inner city	49	36.73	8.20	1.17	1.668
	Outer city	67	33.96	9.32	1.14	
Chemistry	Inner city	49	35.16	8.05	1.15	.776
	Outer city	67	33.85	9.62	1.18	
Social study	Inner city	49	29.80	8.30	1.19	-4.592
	Outer city	67	36.25	6.83	.83	
Civics	Inner city	49	45.88	6.34	.91	-4.848
	Outer city	67	50.93	4.87	.60	
Average	Inner city	49	60.02	9.74	1.39	-.527
	Outer city	67	60.94	8.95	1.09	

****P<0.000

The t-test result in Table 8 above showed that there was no statistically significant average achievement difference between inner and outer city students of private (private and mission) schools ($t = -.527$; $p < 0.05$). Significant achievement difference between inner and outer city private schools was observed only in English ($t = .125$; $p < 0.000$). The mean value of English in inner city private schools was 37.80 while it was 37.57 for outer city.

Table 9. Achievement comparison between government and private schools using t-test

	School type	N	Mean	Std. Deviation	Std. Error Mean	t value
Amharic	Government	538	32.20	7.11	.31	-9.756****
	Private	116	39.14	6.14	.57	
English	Government	538	22.52	7.154	.31	-19.294****
	Private	116	37.66	9.71	.90	
Mathematics	Government	538	20.24	7.37	.32	-8.195****
	Private	116	26.69	8.99	.83	
Biology	Government	538	24.36	8.55	.37	-11.836****
	Private	116	34.67	8.33	.77	
Physics	Government	538	26.92	8.04	.35	-9.769****
	Private	116	35.13	8.93	.83	
Chemistry	Government	538	23.75	7.72	.33	-13.085****
	Private	116	34.41	8.98	.83	
Social study	Government	538	23.62	6.68	.29	-13.925****
	Private	116	33.53	8.11	.75	
Civics	Government	538	45.15	7.35	.32	-4.993****
	Private	116	48.79	6.06	.56	
Average	Government	538	45.50	8.16	.35	-17.579****
	Private	116	60.55	9.26	.86	

****p<0.000

As it can be observed from Table 9, there is statistically significant achievement difference between government and private schools in favor of privates. In addition, all the subjects show statistically significant achievement difference between government and private schools ($p<0.001$).

Yet, there is high range between the mean values of government and private schools at each subject. For example, at $t = -17.579$; $p<0.000$, the

mean value of government and private school students is 45.5 and 60.55 respectively, and the mean difference has a range of 15.05. From the mean values of each subject, the highest and the lowest range is observed in English (15.14) and Civics and Ethical education (3.64) respectively.

4.4 Location related factors that influence academic achievement difference between students

The following table was the summary of students response on the questionnaire administered. It was used as supportive evidence about the location related factors that affect students' achievement.

Table 10. Summary of Student responses on location related factors

Location related variables	No of questions	Inner city				Outer city				Percentage (%)					
		1	2	3	T	1	2	3	T	Inner city			Outer city		
										1	2	3	1	2	3
HE	10	109	357	505	971	93	357	531	981	11.23	36.77	52.01	9.48	36.39	54.13
SD	2	45	105	126	276	54	164	81	299	16.3	38.04	45.65	18.06	54.85	27.09
SE	3	76	394	281	751	108	496	221	825	10.12	52.46	37.42	13.09	60.12	26.79
MRP	5	193	345	138	676	153	486	55	694	28.55	51.04	20.41	22.05	70.03	7.93
DA	8	288	450	343	1081	259	635	228	1122	26.64	41.63	31.73	23.08	56.6	20.32

Note. 1 is for Undecided

2 is for disagree

3 is for agree

T is for Total

HE = Home Environment

SD = Sound Distracters

SE = School Environment

MPR = Market Related Problems

DA = Drug Abuse

From table 10 above, 52.01% of the respondents in the inner city and 54.13 % from the outer area showed that home environment including families' interest towards their children's schooling was good. The

percentage showed that in both areas students received nearly equal support from their families. Since the facilitation or impediment of the intellectual development of children depends on the conduciveness of the home environment, students who get better support could have better academic achievement. However, from the same table above, 36.77 % of the respondents in the inner city and 36.39% of the students in the outer city schools responded that home environment was not better to study and play. They also agreed that they were interested to stay in school than going home as soon as the class ended.

In table 10 above, 52.46% of the respondents in the inner city schools agreed that school environment has sufficient and safe compound to stay and study there. They also preferred to study in the school after class than their home. In the same area 37.42% of the respondents expressed their feeling on their respective school environment that the school has no enough space and was not safe to extend the time of their stay in schools after class.

On the other hand, 60.12% of the respondents in the outer city schools responded that their respective school environments were safe and conducive to stay there, study and has also contribution on their academic achievement. 26.79% of the respondents in the same area disagreed that the schools were not safe and conducive enough to stay and study there.

From the respondents of the inner city schools, 38.04% responded that they disagreed on the noise around their respective schools. Their response showed that there was no disturbance during learning in the class and study in the school compound including library. However, 45.65% of the respondents in the same location believed on the availability of noise and other distracters around their respective school

which disturbed them in school attendance their class, study in the library and stay safely. However, the large percentage of the respondents believed that the school environment did not allow them to study because of the distracting effects available in the surrounding environment.

On the other hand, 54.85% of the outer city school students responded that they disagree on noise distracters during their class and library usage. In the other way, they responded that no distracting noise was available surrounding their respective schools. Only 27.09% of the respondents from the outer city believed that there was noise around their schools. The percentage difference between the respondents of the two areas might show that there was more degree of noise distracters in the inner city schools than the outer city.

From the participants of inner city schools, 41.6% responded that the area was full of chat, hashish, alcohol and other interferences that distract their schooling. They also agreed that in the afternoon many of their classmates did not attend class especially, government schools, since class attendance was taken once a day and no other mechanism to control. Those absentees might either go to use chat and drug and enjoy with their peers out of the site of their parents and teachers or make their own business through petty trading, like 'Kollo', chewing gum, biscuit, etc. 37.73% of the respondent also agreed that they were in fear of the gangsters the around their school was not safe.

This idea is consistent with other literatures. According to Asfaw Debella, Dawit Abebe and Almaz Abebe (2005), addictive substances are practiced in quite early years of life to about less than 15 years. They also added that chewing chat is common phenomena on the streets of Addis Ababa. Though chat and other drugs have devastating effect on the economically

active people including school students, it became a sign of modernity and our people becomes drug dependent considering it as one of the basic needs.

On the other hand, 56.6% of the respondents in the outer city schools responded their disagreement on the availability of chat, drug and alcohol houses in the area. They also agreed that their respective school environment was free of such problems and schools were safe to stay more time in school and to study. Even such chat and drug user gangsters were not available and were free to go to their home with out any fear of them. However, 20.3% of the respondents agreed on the availability of such problems in the area.

Some students stay with their peers in the afternoon and tend to develop bad behaviour through peer pressure. From the response of the questionnaire, there were few students who become pregnant and dropout of school due to such cases. Gangsters regularly wait for girls and deceived them to leave the school compound with out the knowledge of parents and teachers.

Innocently, girls were involved and share gangsters' bad experiences. This was reflected in the questionnaire. Moreover, some school age children and youth in the area engage in petty trading. They join this activity leaving their afternoon class. Students especially, in government schools were from family with low economic background. These students were attending class in half shift and on the other shift; they made business through petty trading.

Moreover, on their respective school environments students gave their own response on petty trading. About 20.41% of students from inner city schools and 7.93% of the outer city students agreed that students were

making business in the afternoon shift leaving their class. On the other hand, 51.04% of inner city respondents and 70.03% of outer city students disagreed on the attractiveness of market centers.

From the above percentage we can judge that 20.41 % of the students in inner city is more likely to miss classes where as it is only 7.93% for outer city fellows. In addition, this nearly one-fourth of students may have less probability to get daily rations unless they work. The frequent missing of class together with lack of sufficient food in turn affects their academic achievement.

Table 11. Summary of teacher responses on location related factors

Location related variables	No of questions	Inner city				Outer city				Percentage (%)					
		1	2	3	T	1	2	3	T	inner city			Outer city		
										1	2	3	1	2	3
School environment	5	5	21	29	55	5	33	40	78	9.09	38.18	52.73	6.41	42.31	51.28
Sound distracter	3	6	14	13	33	2	23	21	46	18.18	42.42	39.39	4.35	50.00	45.65
Drug usage	8	13	47	26	86	23	76	30	129	15.12	54.65	30.23	17.83	58.91	23.26
Sanitation and safety	5	3	24	18	45	1	57	18	76	6.67	53.33	40.00	1.32	75.00	23.68
Student behavior	3	3	18	12	33	3	31	11	45	9.09	54.55	36.36	6.67	68.89	24.44

Note. 1 is for Undecided

2 is for disagree

3 is for agree

T is for Total

Teachers' responses

Nearly equal percentage of teacher respondents (52.73% from inner and 51.28% from outer city) agreed on the sufficiency, conduciveness and safeness of their respective school environment. Similarly, 39.39% of the inner city school teachers responded that they agree on the noise that distracts their class and library usage where as 45.65% of the outer city school teachers agreed on the availability of sound distracters.

Moreover, 30.23% Of teachers in the inner city and 23.26% of the outer city teachers responded the availability of drug usage by students and gangsters of the surrounding area. This includes the availability of drug houses, chat, alcohol and places that can hide students. In addition, students also mentioned that the sanitary problems were more in inner city than outer city schools. 40% of teacher respondents in inner city schools and 23.68% of the outer city teachers believed on the availability of sanitary problems near the school compound. Concerning their students' behavior, 36.36% of inner city school teachers and 24.44% of outer city teachers responded that there were misbehaving students in the compound. Due to such students, others' behavior also changed from time to time. This in turn have direct influence on the academic achievement.

Head Teachers' Response

According to the school directors' response, from the ten sample schools, nine have more than ten years since their establishment and only one has between five to ten years of age. The smallest size of the school compound was 1575 square meter, where as the largest has 23,368 square meter. The smallest school compound was found in the inner city while the largest school compound was found in the outer city. From the two areas, government schools have largest school compounds.

From the sampled schools six accommodate grades one to eight, three schools accommodate grades one to ten and one school accommodates Kindergarten to grade ten. Surprisingly this school was found in inner city where the biggest eat fruit market is available. In addition it has not more than 3500 square meter and during the data collection the number of students was 2,332, which was huge number as compared to other schools.

From the response of the head teachers, there were also visible differences between inner and outer city schools. That is except one school, all the sampled inner city schools were surrounded by commercial institutions, sewerage lines and high ways, where as outer city schools were all located in residential areas. Due to high traffic congestion and commercial institutions in Inner city schools, there was noise which can distract students' attention to their schooling. On the other hand, only one school director in the outer city schools explained the availability of distracter because of the common animal market near the area locally called 'Shegole'.

In addition, seven principals (4 from inner and 3 from outer city) indicated the availability of disciplinary problems among students in their respective schools. The possible reasons suggested by principals for such misbehaving were mixing of primary and secondary schools together, the in availability of fence, high market and drug vendors in the area.

The suggestions of the head teachers to minimize students' behavioral problems through arranging guidance and counseling services, daily communication with family and finally disciplinary measure if a student does not improve they suggest. In addition, separating grades 1 -4 from 5-10 are suggested by two of the principals for the behavioral and achievement improvement of students.

CHAPTER FIVE

5. DISCUSSION

5.1 Academic achievement difference by location

In the fourth chapter, the collected data from student rosters, questionnaire and interview were analyzed. In this section the analyzed data is interpreted and discussed based on the research questions. The first research question that was expected to be answered was the assessment of academic achievement difference between inner and outer city school students. As it can be observed from Table 4 and Table 8, the finding of the study revealed that there is statistically significant academic achievement difference between inner and outer city in favor of the outer city schools ($t = -2.109$; $p < 0.05$). The mean values of inner and outer city students are 47.31 and 48.98, respectively.

There was no previous research finding that assessed academic achievement difference between inner and outer city schools. However, the findings of Fuller cited in Ethiopian Third National Learning Assessment (2008) indicated the inequalities urban-rural in students' academic achievement in favor of urban students in Egypt and Kenya. The reason for the imbalance between the urban – rural schools achievement in favor of the urban was the over work load in rural students. On the other hand, Ethiopian rural students performed better than urban due to more urban challenges and attention taking distracters.

Similarly, the explanation for this finding probably lies on the different challenges such as unsafe area of school and home environment, drug, attention taking distracters, high traffic, and pollutants, teachers' and students health. This seems also consistent with the findings of Rudman and Featherstone (1968), Douglas (1968) that revealed the availability of large number of educational failures in large inner city students than rural fellows. Students' response from questionnaire showed 52.46% of the respondents in the inner city and 60.12% in the outer city schools indicated that their

respective school environments have sufficient and safe compound to stay and study there. From this percentage, larger number of students in the outer city feels safe as compared to the inner city students.

5.2 Academic achievement difference between schools

As it was indicated in the methodology part, the samples were taken from government, public, private and mission schools that were found in inner and outer city. For simplicity, government and public schools were considered as government (538 students) where as private and mission schools were considered as private (116 students).

The average academic achievements between inner and outer city government schools have significant difference. In addition, students of inner and outer government schools showed significant difference in achievement of specific subjects like Mathematics, Biology, Physics and Chemistry, respectively. From observation, the society thought that better quality of education is given by private schools as compared to government schools. Consequently, families who can pay school fee send their children in private schools with few exceptional students in government schools. Most government school students are those who can not cover the school fee requested by the owners.

Hence, it is possible to say that government school students of both inner and outer city have similar family back ground and economic status. In addition, equally qualified teachers, text books and study time are similar in the schools since the schools are under the umbrella of Addis Ababa Education bureau. However, the possible reasons for the less academic achievement of inner city schools may lie on the difference in school environments, and the influence of out of school environments like business of the area, sound distracters, high traffic and less follow up of the family.

In contrast, the average academic achievement between inner and outer city private schools has no significant difference. Students of inner and outer city private schools showed significant difference only in English. Like government schools of both inner and outer city, private school students might have similar family back ground and economic status, equally qualified teachers, text books and study time. Therefore, the reasons for the less academic achievement of inner city government schools have no influence in private schools.

This might be because of the better school environment, strong controlling mechanism, and better family economic status. This is supported by the response from the private school directors. Since it is a way of image building to attract more students, school owners created better school environment. In addition, the responses of four principals of private schools showed that all have close contact with students' families. Moreover, most of the students in private schools pay school fee. This might be an indication of the income difference between families of private and government school students. As a result, students of private school do not miss classes to make business since they have better family status.

On the other hand, the average academic achievement between private and government schools have significant difference. Moreover, students of private and government schools showed significant difference in achievement of all subjects. Therefore, the possible reasons for the less academic achievement of government schools may lie on the unsafe school environments and out of school environments like business of the area, sound distracters, high traffic and less follow up. In addition, the education and economic background of the family, the qualification of teachers and the availability of reference books of private schools might be better than government schools.

The findings of the research is consistent with others findings such as Takele G/Kidan (1990). One can not deny that academic achievement of students is strongly agreed with the characteristics of the learning environment. In the same source, apart from other factors, schools that set high standards, maintains discipline, demands regular attendance, assigns homework and is staffed with dedicated teachers result in better academic achievement. Hence, as a result of the improvement of the learning environment, private schools performance became better than government schools.

5.3 Trends of students academic achievement

In Table 5, although all subjects except Biology have shown significant difference between 2000 and 2001 E.C, there is no significant achievement difference on the average result of students between 2000 E.C and 2001 E.C. This was because the trend of students' performance in the subjects like Amharic, Physics, Chemistry and Civics and ethical education were declined. In contrast, the trend of other subjects except Biology showed improvement. This finding seems inconsistent with the Ethiopian Third National Learning Assessment (2008). In the National Learning Assessment, the trend of students' academic achievement has been declining consecutively. However, in this study, there was no decrement in average achievement from 2000 to 2001 E.C. Moreover, the result in English, Mathematics, Biology and Social study showed an improvement from 2000 to 2001 E.C. However, the reason for the decline in the achievement trend of some of the subjects, the improvement in others, and the stagnancy of Biology was not assessed.

5.4 Location related factors that contribute to achievement difference

The second research question was related with location related factors that have contribution to the difference in student achievement. The study tried to treat the contribution of location related factors like home environment, school environment, noise, drug usage and commercial activities and other

distracters. Rudman and Featherstone (1968), Douglas (1968) justified that urban students are open to elements such as high traffic, sound distraction, pollutants, unsafe area where students easily exposed to drug.

From the questionnaire, there was no big gap between the percentage of inner and outer city students' response. This indicated that in both areas students receive nearly equal support from their families. Since the facilitation or impediment of the intellectual development of children depends on the conduciveness of the home environment, students who get better support could have better academic achievement. The findings of Rudman and Featherstone (1968) may support this response in that home environment is important in providing base for the intellectual development of children.

Douglas (1968) also indicated that the attitude of children to their work is deeply affected by the degree of encouragement their parents give them and by their own level of emotional stability. However, nearly equal number of respondents in the inner city and students in the outer city schools responded that home environment was not better to study and play. They also agreed that they were interested to stay in school than going to home as soon as the class ended. Students in both areas may be attracted by other factors that decline their achievement (see Table 11).

Almost half of the respondents in the inner city schools agreed that school environment has sufficient and safe compound to stay and study there. They also preferred studying in the school after class to their home. In the same area the respondents expressed their feeling on their respective school environment that the school has no enough space and is not safe to extend the time of their stay in schools after class.

On the other hand, over half of the respondents in the outer city schools responded that their respective school environments are safe and conducive to stay there, study and has also contribution on their academic achievement. One third of the respondents in the same area disagreed that the schools are not safe and conducive enough to stay and study there. From the percentage, high number of students in the outer city area believed on the conduciveness of their respective schools than their inner counterparts.

This result is supported by other literatures. For instance, the finding from Rath, Dash and Dash (1979) have indicated that environment is an instrument in advancing or retarding cognitive function which induces intellectual development in learners. Hough cited in Sewnet Mamo (1995) also indicated that the cognitive stages of individual people and the influence of the entire school environment may have profound influence on academic achievement. The outer city schools have better school environment than the inner ones. Therefore, the better academic achievement of outer city schools is the result of the better school environment. However, it does not mean that school environment was the sole factor that determines students result though it has significant contribution to students' achievement difference.

Nearly one third of the inner city schools respondents disagreed on the noise around their respective schools that disturb them to learn and study. However, nearly half of the respondents in the same location believed on the availability of noise and other distracters around their respective school which disturb them to attend their class, study in the library and stay safe. According to Taylor and Bonsall, (1994), library provides a study atmosphere. Moreover, there is space and silence to study and many people find it helpful for their concentration. The researchers also advised students to go and work in the library than to go home. However, the large percentage of the respondents

believed that the school environment did not allow them to study because of the distracters available in the surrounding environment.

The percentage difference between the respondents of the two areas might show that there was more degree of distractive noise in the inner city schools than the outer city. In Table 4, the academic result showed that there was average academic achievement difference between inner and outer city school students, in favor of the outer city schools. The students responded through the questionnaire also support the availability of high distractive noise and high traffic problem in the inner city schools than the outer. Therefore Noise distracter might also be one of the influential factors for the academic achievement difference among students of different school location.

Recently, the discussion on unnecessary noises has been on Ethiopian Television Tea and Coffee Program for weeks on Sunday morning. On the discussion, schools and other institutions which need special silence were focusing areas. The participants of the discussion agreed on the availability of sound distracting effects in schools and other institutions, especially schools near the main road are highly susceptible to such sound. Finally, the participants agreed on the importance of removing such unnecessary and distractive noises. Louder sound heard by vehicles, advertisements and announcements with high speakers were mentioned as the pioneer distracters in schools and other institutions. Finally, organizations like the Ethiopian National Lottery, took their own share to at least minimize the sound disturbance that is disseminated to schools and other institutions (Tea and Coffee Program, 2010).

The purposively sampled schools in inner city were commonly found in 'Atikilt-Tera', and 'Eribekentu' (local names in piazza area). Distracters like high sound, high traffic congestion, sanitary problems and high exchange of goods

characterizes the area. Residuals of fruit in 'Atikilt-Tera', rivers that carry waste disposal in 'Eribekentu' released bad smell to the surrounding environment. Students of such environment were highly exposed to such bad smell and common cold. As a result, students could not be regular school attendants. In addition, high traffic congestion as well as loud noise from National Lottery, people's exchange of goods etc also affected the teaching learning process. Moreover, the biggest eat fruit market, petty trading, alcohol houses, chat vendors, hidden drug houses and commercial sex workers surround the inner city schools which have power to attract school attendants.

From the participants of inner city schools, the area was full of Chat, Hashish, Alcohol and other attention taking interferences that created great challenges on their schooling. They also agreed that in the afternoon many of their classmates did not attend class especially in government schools, since class attendance was taken once a day and no other mechanism to control. Those absentees might either go to use chat and drug and enjoy with their peers out of the site of their parents and teachers or make their own business through petty trading, like 'Kollo', chewing gum, biscuit, etc. Some of the respondents also agreed that they were in fear of the gangsters around their school. Hence, students in the area did not feel safe when they enter and exit at their respective schools.

According to Asfaw Debella, Dawit Abebe and Almaz Abebe (2005), addictive substances are practiced in quite early years of life to about less than 15 years. They also added that chewing chat is common phenomena on the streets of Addis Ababa. Though chat and other drugs have devastating effect on the economically active people including school students, it became a sign of modernity and our people becomes drug dependent considering it as one of the basic needs. Therefore, the response of the students in this study seems consistent with the above researchers.

On the other hand, over half of the respondents in the outer city schools responded their disagreement on the availability of chat, drug and alcohol houses in the area. They also agreed that their respective school environment was free of such problems and schools were safe to stay more time in school and to study. Even chat and drug user gangsters were not available and students were free to go to their home with out any fear of them. However, one fifth of the respondents agreed on the availability of such problems in the outer area.

Some students left their schools and went to entertain with their peers in the afternoon and tend to develop bad behaviour through peer pressure. From the response of the questionnaire, there were few students who became pregnant and dropout of school due to such cases. Gangsters regularly waited for girls and deceived them to leave the school compound with out the knowledge of parents and teachers.

Innocently, girls were involved and shared gangsters' bad experiences. This was also supported by the evidence from Asfaw Debella, Dawit Abebe and Almaz Abebe (2005) that when people take drugs they usually are unable to make correct decisions and fail to abstinence, be faithful, use of condoms and rape.

Some school children and youth in the area engaged in petty trading. They joined this activity leaving their afternoon class. Students especially, in government schools were from family with low economic background. These students have attended classes in half shift and on the other shift they made business through petty trading.

Moreover, on their respective school environments students gave their own response on petty trading. About one-fifth of students from inner city schools and one-twelfth of the outer city students agreed that students are making business in the afternoon shift leaving their class. On the other hand, over half of inner city respondents and two-third of outer city students disagreed on the attractiveness of market centers.

From the above percentage we can judge that students in inner city were more likely to miss classes where as it was less in outer city fellows. In addition, this nearly one-fourth of students might have less probability to get daily rations unless they work. The frequent missing of class together with lack of sufficient food in turn affects their academic achievement.

Nearly equal percentage of teacher respondents agreed on the sufficiency, conduciveness and safeness of their respective school environment. Similarly, nearly equal number of the inner city and outer city school teachers responded that they agreed on the noise that distracted their class and library usage where as. However, all the outer city head teachers witnessed the minimal number of noise distracters where as four of the inner city believed on the availability of such sound distracters.

On the other hand, nearly one-third of teachers in the inner city and one-fourth of the outer city teachers responded the availability of drug usage by students and gangsters of the surrounding area. This included the availability of drug houses, chat, alcohol and places that can hide students. In addition, sanitary problems were more common in inner than outer city. 40% of the respondents in inner city schools believed on the availability of sanitary problems near the school compound. However, nearly one fourth of the outer city school teachers also supported the availability of sewerage problems near their compound.

5.5 School Location and student behavior

According to the principals' response, from the ten sample primary schools, 9 have more than 10 years since their establishment and only one has below 10 years of age. The smallest school compound was found in the inner city while the largest school compound was found in the outer city. From the two areas, government schools have largest school compounds. However, the lowest academic result was achieved from government schools. This possibly indicated that the size of school environment has low contribution to the academic achievement of students. In addition, concerning their students' behavior, inner city and outer city teachers responded that there were misbehaving students in the compound. Due to such students others' behavior also changed from time to time.

The achievement of students in schools including other government schools is significantly less than the result of outer city government schools. Besides the low achievement of students in inner city government schools, children of lower grade also learnt bad behaviors from upper grade students. In the long run, this behavioral change might contribute for the decline in the academic achievement of the students.

From the interview, the response of principals also showed that there was also visible difference between inner and outer city schools. Except one school, all the sampled inner city schools were surrounded by commercial institutions, sewerage lines and high ways, where as outer city schools were all located in residential areas. Due to high traffic congestion and commercial institutions in inner city schools, there was louder sound which could distract students' attention to their schooling. On the other hand, only one school principal in inner city explained the availability of distracters because the availability of the common animal market near the area locally called 'Shegole' area.

In addition, Head teachers indicated the availability of disciplinary problems among students in their respective schools. Some of the possible reasons suggested by principals for the increase in such misbehaving were mixing of primary and secondary schools together, the in availability of fence in two of the schools, high market and drug vendors in the area and cinema houses.

The principals sought solutions to minimize behavioral problems of students through arranging guidance and counseling service, close school family communication and follow up. Disciplinary measures could be suggested as the last option if a student does not improve his/her behavior through guidance and counseling. In addition, separating grades KG, 1 -4 from 5-10 are suggested by two of the principals as a solution for the behavioral and achievement improvement of students.

dependent variable. Finally, independent t-test and percentage were used as statistical methods for data analysis. The independent t-test were analyzed using SPSS.

6.2 Conclusion

Based on the result obtained from students' roster, supportive questionnaire and interview, analysis was made by relating to the available review of the literatures. Based on the analysis, the researcher reached at the following conclusions.

- The over all academic achievement of outer city school students was better than the achievement of inner city ones. In addition, there was significant difference in student achievement between inner and outer city government schools.
- Student academic achievement did not show significant difference between 2000 to 2001 E. C.
- Students who attend private schools performed better as compared to government schools in both inner and outer city localities.
- There is no significant difference in student achievement between inner and outer city private schools.
- Different location related factors such as sound distracters, drug usage, petty trading, peer pressure, business of the area influenced the students' performance.
- There were misbehaving students in the inner city schools than the outer city counterparts.

6.3 Recommendation

1. The reasons for the less achievement of inner city school students as compared to outer city schools is the exposure of inner city schools to noise, business and other distracters. Therefore, schools are advised to work in collaboration with the local government and family at least to minimize the distracters and to create conducive and safe school environment.
2. Students' academic achievement declines significantly between 2000 and 2001 E.C in Amharic, Physics, Chemistry and Civics and Ethical education. Therefore, teachers and principals are advised to work for the improvement of the low student academic performance taking each subject in to consideration.
3. Private schools have relatively better experience in handling students through close communication with family. Therefore, Government schools are advised to embark experience sharing with private schools in student handling.
4. School principals and teachers have to follow up their students and give continuous awareness on the disadvantage of drug usage and encourage them for better achievement. In addition, parents have to be informed immediately when their children start to miss classes so that they can shape and manage their children.
5. Though the degree varies, students of both inner city and outer city government schools show misbehaving behavior. This could be the result of peer pressure and lack of strict control. Therefore, continuous follow up and counseling service for students are advised to practice in these schools.
6. Student academic achievement seems sluggish from year to year. Therefore, further research has to be conducted on the factors that have influence on the trend of student achievement.

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Appendices

Appendix I
ADDIS ABABA UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
GRADUATE STUDIES PROGRAMME

This Questionnaire is prepared for teachers who teach grade eight students in the selected sample schools. The aim of this questionnaire is to get necessary empirical evidence regarding the research topic Location related factors that affect pupils' academic achievement, there by enabling concerned individuals to be aware of the conditions and take necessary steps to improve the academic achievement of students.

Please indicate your belief and observation regarding the questions under consideration. Your genuine responses will be highly appreciated. Please answer all the questions honestly and frankly.

1. Sex Male Female
2. In which sub city do you live? _____
3. Please write the name of the school you are teaching _____
4. How many years did you teach in the school? A. Under two years B. 2-5 years
C. 5-10 years D. Above 10 years
5. What additional responsibility do you have in the school? A. Unit leader
B. Department head C. Homeroom teacher D. Vice principal E If other mention

The Responses from # 6-33 are categorized in the following five items, please mark '✓' for the answer you believed so.

Answers	Representation	value
Agree	A	3
Disagree	DA	2
Undecided	UD	1

No	List of questions	Response items		
		1	2	3
I	School environment related questions			
6	The site of the school is conducive to the teaching-learning process			
7	I am very much interested to stay more time in the school even when I have no classes			
8	I stay in the school for class only			
9	I use the school library frequently			
10	The school compound is too small to play and stay there			
11	The school compound is not adequate enough to accommodate the school community			
12	The site of the school has a negative effect on the students' academic achievement			

No	List of questions	Response items		
		1	2	3
II	School Noise related questions			
13	The school is found in a noisy area			
14	I do not use the school library because of the noise			
III	Drug Addiction			
15	There are a lot of commercial activities / Chat, Mariwana, Hashish, Alcohol etc/ around the school that attract the attention of the students of our school			
16	There are male students in the school who use the drugs mentioned in number 14			
17	There are female students in the school who use the drugs mentioned in number 14			
18	Male students use the drugs more frequently than female students			
19	Female students use the drugs more frequently than male students			
20	The roads to the school are not safe for students to come to school because of gangsters			
21	There are students in the school who are harassed by gangsters around the school compound			
22	Female students are more exposed to gangsters than male counterparts			
V	School safety			
23	The roads to the school are not safe for the students to come to and go from school because of the high traffic accident			
24	There are students who moved to other schools due to noise, drug, harassment and other school location related problems			
25	The roads to the school are not safe for the students to come to and go from school because of the sanitary problem around the school			
26	Most of the students suffer from common cold because of the sanitary problem around the school			
27	There are students who dropout of school due to noise, drug, harassment, pollution and other school location related problems			
VI	Solutions suggested			
28	The behaviour of students worsen from time to time due to the location of the area			
29	As a teacher I repeatedly counselled students who are suspected to develop bad behaviour			
30	As a teacher I reported such drug related problems that I observe around the school			
31	If the play ground of the school compound is improved, students drug addiction will decrease			
32	Students are out of the control of teachers and school principal because of the location of the school			
33	Our school's location is not the major problem for students academic problem			

Thank you in advance/

Appendix II
ADDIS ABABA UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
GRADUATE STUDIES PROGRAMME

This Questionnaire is prepared for grade eight students in the selected sample schools. The aim of this questionnaire is to get necessary empirical evidence regarding the research topic, Location related factors that affect pupils' academic achievement, there by enabling concerned individuals to be aware of the conditions and take necessary steps to improve the academic achievement of students.

Please indicate your belief and observation regarding the questions under consideration. Your genuine responses will be highly appreciated. Please answer all the questions honestly and frankly.

1. Sex A. Male B. Female
2. In which sub city do you live? _____
3. Please write the name of the school you are attending _____
4. What was the previous primary school that you attended? _____
5. How did you choose this school from previous school? _____

The Responses from # 6-31 are categorized in the following five items, please mark each with '✓' for the answer you believed so.

<u>Answers</u>	<u>Representation</u>	<u>value</u>
Agree	A	3
Disagree	DA	2
Undecided	UD	1

No	List of questions	Response items		
		1	2	3
I	Home environment			
6	The school is far from my residence			
7	My families are very much interested in my school attendance			
8	My families motivate me to be successful in my education			
9	My families are interested if I drop out of school and create my own business			
10	I prefer to create my own business than continuing my education			
11	My great interest is to be successful through my education			
12	I prefer to study at my home rather than at school			
II	School environment			
13	I am very much interested to stay longer than usual in the school			
14	I stay in the school for class attendance only			

No	List of questions	Response items		
		1	2	3
15	I prefer to study in the school better than my home			
16	The school compound is not adequate enough to accommodate the school community			
17	The school compound is not safe for students because it is full of pollutants, abuse and addicted gangsters			
18	Sexual abuses frequently occur in the school compound			
19	The site of the school has a negative influence on the students' academic achievement			
III	Sound distraction			
20	The school is found in a noisy locality			
21	I do not use the school library because of the noise			
IV	Drug			
22	There are a lot of commercial activities / Chat, Mariwana, Hashish, Alcohol etc/ around the school that attract the attention of the students in our school			
23	There are male students in the school who use the drugs mentioned in number 15			
24	There are female students in the school who use the drugs mentioned in number 15			
25	Male students use drugs more frequently than female students			
26	Female students use drugs more frequently than male students			
27	There are students in the school who are harassed by gangsters around the school			
28	The roads to the school are not safe for students because of the gangsters			
29	Female students are more susceptible to such gangsters than male students			
30	I know a boy or girl who was considered as juvenile delinquent from the school community because of drug addiction			
31	There are students who moved to other schools due to drug related problems			
32	There are students who dropout of school due to drug related problems			
33	The behaviour of students change from time to time due to peer pressure and drug abuse			
V	Solutions sought			
34	The teachers and principal of the school knew the problems in the school environment and took measures in collaboration with the local government			
35	If drug sellers are removed from the area student behaviour will improved			
36	If the play ground of the school compound is improved students drug addiction will decrease			

Thank you in advance/

Appendix III
ADDIS ABABA UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
GRADUATE STUDIES PROGRAMME

This interview guide is prepared for principals of the sample schools selected. The aim of this interview guide is to get necessary data of the school. The research topic is **Location related factors that affect student academic achievement**. So I kindly request you to give the genuine responses that directly or indirectly affect students academic achievement with regard to the location of the school.

1. The name of the school _____
2. The Number of students in the school. Male ____ Female ____ Total ____
3. How many years since you are assigned in the school? A. Under two years
B. 2-5 years C. 5-10 years D. Above 10 years
4. How old is the age of the school? A. Under two years B. 2-5 years
C. 5-10 years D. Above 10 years
5. Number of teachers in the school. Male ____ Female ____ Total ____
6. Number of administrative staff. Male ____ Female ____ Total ____
7. The total area of the school compound in sq. meters _____
8. The grade range that the school accommodates is from ____ to ____
9. The school compound is more dominantly surrounded by A. Residence B.
Shops C. Government & other institutions D. If another please
mention _____
10. How is the general behavior of students in this school?

11. Which type of problem did you observe frequently in the school compound?
A. harassment /abuse B. Juvenile delinquency C. Drug addiction D.
mention if any other violence _____
12. Is there any visible noise or other distracter that affect learning or study?
A. Yes B. No
13. Do you think that the behavioral problems of the school community are
related to the location of the school? A. Yes B. No
14. Did you get a student who misbehaved? A. Yes B. No
If so how you settled the problem?

15. What do you suggest to make the school environment safe and conducive to students?

16. Please add additional comments if you have any and suggestions that have value to the research

Thank you in advance/

Appendix IV

በአዲስ አበባ ዩኒቨርሲቲ ሳይኮሎጂ ትምህርት ክፍል ለድህረ-ምረቃ ጥናት የተዘጋጀ የጽሁፍ መጠይቅ

የጥናቱ ርዕስ "ከትምህርት ቤት የቦታ አቀማመጥ ጋር ተያይዞ በተማሪዎች ውጤት ላይ ተጽዕኖ የሚያመጡ ምክንያቶች" የሚል ሲሆን ዓላማውም ከትምህርት ቤቱ የቦታ አቀማመጥ ጋር ተያይዞ በተማሪዎች ውጤት ላይ ተጽዕኖ የሚያመጡ ምክንያቶች ምን ምን እንደሆኑ ከተማሪዎች መረጃ ለመሰብሰብ እና ከመረጃውም በመነሳት ምን ያህል ተጽዕኖ እንደሚያመጣ እና ይህንም ችግር በመጻፍ የሚመለከተው ሁሉ ችግሮችን ለመቅረፍ የበኩሉን አስተዋጽኦ እንዲያደርግ የመፍትሄ አቅጣጫ ለማስቀመጥ ነው፡፡ ስለዚህ የእናንተ መልስ ለጥናቱ ትክክለኛነት ከፍተኛ አስተዋጽኦ ስላለው በቀናነት ትክክለኛውን መልስ እንድታስቀምጡልኝ እጠይቃለሁ፡፡

1. ጾታ ሀ. ወንድ ለ. ሴት
2. የምትኖረበት(ርበት) ክፍለ ከተማ የት ነው?-----
3. አሁን የምትማረበት(ርበት) ትምህርት ቤት ስም ማን ይባላል?-----
4. ከአሁን በፊት የተማርሽበት(ህበት) ትምህርት ቤት ካለ ቢጠቀስ -----
5. አሁን የምትማረበትን(ርበትን) ትምህርት ቤት ከበፊቱ ለምን መረጥሽው(ከው)? -----

ከተራቁጥር 6-36 ለቀረቡት ጥያቄዎች ለእያንዳንዳቸው 5 አማራጮች የተሰጡ ሲሆን ከአማራጮች ውስጥ ለጥያቄው በቂ መልስ ሊሆን ይችላል ብለሽ(ህ) ካመንሽበት(ህበት) መልስ ላይ ብቻ X በማለት ግለጪ(ጽ)

መልስ	የተሰጠው ዋጋ
እስማማለሁ	3
አልስማማም	2
መወሰን እችላለሁ	1

ተ. ቁ	ዝርዝር ጥያቄዎች	አማራጭ መልሶች		
		1	2	3
	የቤት ሁኔታን የሚመለከቱ ጥያቄዎች			
6	የምማርበት ትምህርት ቤት ከቤቴ የራቀ ነው			
7	ወላጆቼ በእኔ ትምህርት መማር ደስተኞች ናቸው			
8	ወላጆቼ ወደፊት ትምህርቴን በሚገባ ተምራ ውጤታማ ሁኔ ማየት ይፈልጋሉ			
9	ወላጆቼ ከትምህርት ይልቅ የራሴን የገቢ ማስገኛ ስራ ብሰራ ይመርጣሉ			
10	ፍላጎቴ ከትምህርት ይልቅ በንግዱ ዓለም መሰማራት ነው			
11	በትምህርቴ ወጤታማ ከመሆን የበለጠ የሚያስደስተኝ ነገር የለም			
12	ከትምህርት ሰዓት ውጪ ለማጥናትና ለመጫወት ከትምህርት ቤቴ ይልቅ መኖሪያ ቤቴን እመርጣለሁ			
	ትምህርት ቤትን የሚመለከት ጥያቄ			
13	ከትምህርት ሰዓት ውጪም እንኳ ትምህርት ቤቴ ግቢ መቆየት ደስ ይለኛል			
14	የት/ቤቴ ግቢ ስለማይመቸኝ ትምህርት ቤት የምመጣው ክፍል ውስጥ የሚሰጠውን ትምህርት ለመማር ስል ብቻ ነው			
15	የትምህርት ቤቴ ቅጥር ግቢ ለመጫወትም ሆነ ለመማር በቂ የሆነ ቦታ የለውም			
16	የትምህርት ቤቴ አካባቢ ካለበት የጽዳት ችግር፣ በህጻናት ላይ ከሚደርሰው ትንኮሳና ጥቃት እንዲሁም በሱስ የተያዙ ተማሪዎች ስላሉ ነጻነት አይሰማኝም			

ተ. ቁ	ዝርዝር ጥያቄዎች	አማራጭ መልሶች		
		1	2	3
17	የዚህ ት/ቤት አቀማመጥ በተማሪዎች ውጤት ላይ ከፍተኛ የሆነ ተፅዕኖ አለው ድምፅን የሚመለከት ጥያቄ			
18	ትምህርት ቤቱ አካባቢ ለመማርም ሆነ ለማጥናት የሚያስቸግር ድምጽ አለ በምስማው ድምጽ ምክንያት ላይበራሪ ገብቼ ማንበብ አይመቻኝም			
19	አደንዛዢ እጽ የሚመለከት ጥያቄ			
21	በትምህርት ቤቱ ግቢ ዙሪያ እንደ ጫት፣ ሀሽሽ፣ መጠጥ መሳሰሉትን የሚሸጡ በርካታ ነጋዴዎች አሉ			
22	በተ.ቁ 19 ላይ የተጠቀሱትን አደንዛዢ ነገሮች የሚጠቀሙ ሴት ተማሪዎች አሉ			
23	በተ.ቁ 19ላይ የተጠቀሱትን አደንዛዢ ነገሮች የሚጠቀሙ ወንድ ተማሪዎች አሉ			
24	በተ.ቁ 19 ላይ የተጠቀሱትን አደንዛዢ ነገሮች ከሴት ተማሪዎች ይልቅ ወንዶች በስፋት ይጠቀማሉ			
25	በተ.ቁ 19 ላይ የተጠቀሱትን አደንዛዢ ነገሮች ከወንድ ተማሪዎች ይልቅ ሴቶች በስፋት ይጠቀማሉ			
26	ት/ቤቱ መንገድ ላይ የሚቀመጡ ጎረምቶች ስለሚበዙ ትምህርት ቤት ለመምጣትም ሆነ ከትምህርት ቤት ወደ ቤት ለመመለስ እቸገራለሁ			
27	ሴት ተማሪዎች ከወንዶች ይልቅ በጎረምቶች ምክንያት ለአደጋ የተጋለጡ ናቸው			
28	ከአሁን በፊት በጎረምቶች ጥቃት የደርስባቸው የትምህርት ቤቱ ተማሪዎች አሉ			
29	ከትምህርት ቤቱ ተማሪዎች ውስጥ በአደንዛዢ እጽ ምክንያት ጥፋት የለራ ተማሪ እንዳለ አውቃለሁ			
30	በትምህርት ቤቱ ቅጥር ግቢ ውስጥ የወሲብ ጥቃት በተደጋጋሚ ይሰማል			
31	በትምህርት ቤቱ ቅጥር ግቢም ሆነ አካባቢ ባለው በጎረምቶች መገደድ እና አደንዛዢ እጾች መበራከት ምክንያት ት/ቤቱን የለቀቁ ተማሪዎች አሉ			
32	በትምህርት ቤቱ ቅጥር ግቢም ሆነ አካባቢ ባለው በጎረምቶች መገደድ እና አደንዛዢ እጾች መበራከት ምክንያት ከትምህርት ገበታቸው ያቋረጡ ተማሪዎችን አውቃለሁ			
	ከጓደኛ ግፊትና አደንዛዢ እጽ የተነሳ የተማሪዎች ባህሪ ከጊዜ ወደ ጊዜ እየተበላሸ ሄዷል			
33	መፍትሄ ይሆናሉ የሚባሉ ጥያቄዎች			
34	በትምህርት ቤቱ ውስጥ ያሉትን የተማሪዎች የባህሪ ለውጦች እና ጥቃቶች ር/መምህሩና መምህራን ስለሚያውቁ ከአካባቢው የመንግስት አካላት ጋር በመሆን የወሰዱት እርምጃ አለ			
35	በት/ቤቱ ቅጥር ግቢ አካባቢ ያሉ አደንዛዢ እጽና መጠጥ ነጋዴዎች ከአካባቢው ቢለቁ የተማሪዎች ባህሪ ሊስተካከል ይችላል			
36	በት/ቤቱ ቅጥር ግቢ ያለው የተማሪዎች መጫወቻ ቦታ ምቹ ቢሆን ተማሪዎች ከሱስ ነጻ ይሆናሉ			

ስለትብብራችሁ አመሰግናለሁ//

Appendix V
Africa Andinet Kutir 1

2001 E.C													
S/No	Sex	Subjects									Average	Percentile	
		Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum			
1		36	27	18	31	16	12	17	37	189	39	42.4	
2		31	15	41	33	25	19	17	48	229	48	73.6	
3		32	32	38	44	21	14	13	37	231	48	73.6	
4		38	33	41	47	20	18	17	43	227	47	71.1	
5		36	26	17	31	25	25	26	51	235	49	75.7	
6		36	35	27	29	27	18	13	40	225	47	71.1	
7		41	42	51	50	39	35	33	54	345	72	97.4	
8		37	32	47	45	29	26	22	42	280	58	88.6	
9		34	33	20	40	20	31	28	49	255	53	82.5	
10		34	24	23	40	27	21	16	46	231	48	73.6	
11		28	26	21	31	23	16	19	30	197	41	51.6	
12		36	20	24	28	23	19	18	52	220	46	68.9	
13		26	18	20	24	15	18	14	41	172	36	28.6	
14		27	21	18	25	16	19	18	33	177	37	32.5	
15		33	18	23	29	23	20	14	31	191	40	47.0	
16		20	14	18	22	19	28	14	39	174	36	28.6	
17		29	29	23	17	16	30	26	49	219	46	68.9	
18		30	18	24	24	23	32	23	50	224	47	71.1	
19		25	17	21	26	21	31	30	44	215	45	65.9	
20		20	13	21	23	21	32	18	49	197	41	57.6	
21		28	29	18	18	20	29	18	46	206	43	58.8	
22		21	22	23	23	19	31	37	44	210	44	62.5	
23		34	25	21	26	17	28	14	40	205	43	58.8	
24		33	20	35	34	23	26	20	47	238	50	77.8	
25		37	30	33	39	41	32	21	47	280	58	88.6	
26		34	21	23	25	20	20	27	43	213	44	62.5	
27		38	28	17	20	19	18	27	47	214	45	65.9	
28		26	22	32	25	27	26	26	47	254	53	82.5	
29		21	30	24	14	20	18	27	45	199	41	51.6	
30		31	25	32	40	23	24	28	49	252	53	82.5	
31		31	21	30	28	24	21	20	40	226	47	71.1	
32		46	24	32	27	29	15	30	53	256	53	82.5	
33		34	27	26	23	21	35	31	51	248	52	80.0	
34		25	30	39	34	32	35	35	42	272	57	87.4	
35		22	38	33	34	32	23	32	44	258	54	83.9	
36		34	17	15	17	25	16	30	47	201	42	54.9	
37		19	16	26	17	31	33	33	52	227	47	51.1	
38		22	30	15	26	25	35	30	40	223	46	68.9	
39		32	24	18	25	24	27	30	53	233	49	75.9	
40		37	35	30	29	27	26	30	55	269	56	86.5	
41		32	18	26	29	27	24	30	55	241	50	77.8	
42		36	18	23	15	21	19	17	47	196	41	51.6	
43		23	21	23	16	21	23	17	44	188	39	42.4	
44		24	20	5	30	25	28	27	54	213	44	62.5	
45		28	21	20	27	23	26	21	42	208	43	58.8	
46		29	13	29	21	21	26	21	51	211	44	62.5	
47		37	28	20	16	17	24	12	49	203	42	54.9	
48		21	24	11	15	25	21	21	39	177	37	32.5	
49		21	13	20	16	24	22	21	44	181	38	37.5	
50		20	17	18	20	20	17	20	43	175	36	28.6	
51		25	12	14	16	24	22	25	43	181	38	37.5	
52		21	6	8	14	9	20	15	31	124	26	0.9	

53		20	14	18	17	20	20	30	50	189	39	42.4
54		29	19	27	26	28	26	26	43	224	47	71.1
55		25	22	26	26	16	24	38	45	222	46	68.9
56		32	29	23	37	24	28	28	55	256	53	82.5
57		32	15	23	23	24	27	28	45	217	45	65.9
58		35	23	18	25	24	29	24	48	226	47	71.1
59		20	10	24	18	19	11	22	29	153	32	11.1
60		27	21	14	18	20	20	18	40	178	37	32.5
61		34	32	20	26	25	31	27	52	249	52	81.0
62		34	16	23	35	19	22	27	47	213	44	62.5
63		33	36	24	22	23	26	26	53	243	51	79.6
64		29	29	21	33	27	22	28	38	227	47	71.1
65		41	40	21	32	27	31	28	46	266	55	85.2
66		28	29	17	21	23	25	32	46	221	46	68.9
67		42	41	23	33	28	30	27	50	274	57	87.4
68		35	39	21	33	23	23	27	46	247	51	79.6
69		40	33	21	31	24	30	18	20	217	45	65.9

2000 E.C

S/No	Sex	Subjects									Average	Percentile
		Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1		31	19	17	26	36	17	16	48	210	44	48.5
2		31	17	18	11	21	13	14	22	147	31	4.5
3		25	14	15	16	23	13	18	40	166	35	13.9
4		26	18	15	19	20	14	18	50	180	38	24.4
5		44	22	15	27	27	21	16	49	221	46	56.4
6		21	14	21	16	28	9	16	46	171	36	17.2
7		39	23	14	17	28	15	15	48	199	41	36.8
8		46	19	18	20	31	23	17	46	220	46	56.4
9		22	15	14	18	23	25	15	18	150	31	4.5
10		29	17	18	16	16	15	14	38	163	34	10.8
11		35	24	21	16	35	28	24	53	236	49	65.6
12		35	20	17	18	25	26	27	52	220	46	56.4
13		34	14	14	18	17	18	19	39	173	36	17.2
14		20	11	18	27	29	26	25	43	199	41	36.8
15		29	15	17	20	25	18	22	43	189	39	28.5
16		40	20	14	18	21	17	30	56	216	45	52.6
17		31	15	11	31	33	27	26	52	226	47	59.2
18		34	23	21	22	29	27	18	38	212	44	48.5
19		36	20	23	21	32	24	22	48	226	47	59.2
20		26	23	17	16	20	20	15	45	182	38	24.4
21		27	14	20	19	29	18	18	48	193	40	32.6
22		23	25	18	20	25	23	12	41	187	38	24.4
23		38	22	21	27	32	24	28	52	244	51	71.3
24		43	16	20	16	31	21	13	50	210	44	48.5
25		17	20	23	19	28	28	17	44	196	41	36.8
26		33	22	24	20	28	27	16	37	207	43	44.4
27		38	26	17	35	28	27	26	51	248	52	73.3
28		30	27	23	32	21	16	16	51	216	45	52.6
29		32	21	18	24	16	25	13	46	195	41	36.8
30		15	21	24	18	20	19	24	35	176	37	20.4
31		24	20	21	22	28	24	17	45	201	42	40.2
32		22	20	20	15	29	24	17	40	187	39	28.5
33		24	13	24	17	31	24	33	43	209	44	48.5
34		36	28	21	32	21	17	17	47	219	46	56.4
35		32	20	29	30	35	34	23	41	244	51	71.3
36		28	24	12	15	25	21	22	48	195	41	36.8
37		32	18	12	13	21	23	17	49	185	39	28.5
38		36	20	17	19	27	22	19	47	207	43	44.4

39		35	21	17	12	21	16	15	47	184	38	24.4
40		13	18	11	24	28	24	14	23	155	32	5.9
41		41	25	12	36	35	39	24	44	256	53	75.5
42		31	10	21	17	29	27	14	48	197	41	36.8
43		41	23	35	37	28	21	22	53	260	54	77.6
44		40	31	14	34	43	47	36	49	294	61	88.0
45		41	34	24	43	43	44	44	55	328	68	94.1
46		32	25	23	30	20	25	29	43	227	47	59.2
47		32	23	17	36	24	34	26	40	232	48	62.5
48		38	22	21	36	37	40	27	41	262	55	79.4
49		36	12	9	22	19	16	27	53	194	40	32.6
50		32	17	15	32	21	36	30	32	215	45	52.6
51		38	24	17	10	33	43	24	35	224	47	59.2
52		41	33	26	33	37	38	32	56	296	62	89.0
53		21	19	20	27	21	17	20	26	171	36	17.2
54		36	21	12	25	37	37	39	51	258	54	77.6
55		34	20	15	15	36	26	19	37	202	42	40.2
56		31	31	21	32	32	19	21	39	226	47	59.2
57		43	21	24	35	39	36	32	53	283	59	85.5
58		37	25	20	34	36	36	24	53	265	55	79.4
59		39	20	15	16	41	32	25	54	242	50	68.5
60		34	15	17	19	33	27	18	45	208	43	44.4
61		39	29	14	24	28	33	29	48	244	51	71.3
62		30	24	14	26	33	34	36	36	233	49	65.6
63		31	21	9	11	32	26	16	40	186	39	28.5
64		33	19	12	19	25	24	21	49	202	42	40.2
65		38	26	14	33	35	36	34	51	267	56	81.2
66		33	18	17	19	20	18	19	46	190	40	32.6
67		34	21	14	10	37	41	27	46	230	48	62.5

Appendix VI
Yekatit 66 primary and secondary school

2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	39	23	11	15	24	19	20	40	191	40	32.6
2	35	21	14	24	27	23	8	53	205	43	44.4
3	40	20	18	12	16	18	14	30	168	35	13.9
4	32	22	18	24	23	13	13	48	193	40	32.6
5	30	16	11	18	17	12	16	44	164	34	10.8
6	26	13	15	23	20	10	17	37	161	34	10.8
7	35	24	14	13	20	21	17	50	194	40	32.6
8	34	24	12	30	15	22	19	50	206	43	44.4
9	32	18	17	13	28	14	26	49	197	41	36.8
10	23	15	18	17	24	21	15	42	175	36	17.2
11	28	25	15	18	15	16	18	44	179	37	20.4
12	32	16	15	11	27	24	22	36	183	38	24.4
13	37	30	20	20	20	29	26	52	234	49	65.6
14	33	23	17	18	17	14	18	49	189	39	28.5
15	28	28	12	27	32	25	19	45	216	45	52.6
16	35	26	12	15	32	20	20	51	211	44	48.5
17	33	25	39	40	40	34	24	44	279	58	84.0
18	25	22	26	33	27	28	35	53	249	52	73.3
19	30	23	24	34	37	16	33	52	249	52	73.3
20	27	14	20	36	43	37	30	35	242	50	68.5
21	35	14	20	15	48	46	35	41	254	53	75.5
22	31	19	27	15	23	26	24	47	212	44	48.5

2000 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	51	29	21	20	28	25	30	47	251	52	72.2
2	47	35	12	24	21	24	28	48	239	50	67.6
3	40	19	12	23	31	27	24	31	207	43	45.0
4	37	27	21	28	35	29	28	38	243	51	70.3
5	49	32	30	44	35	32	31	44	297	62	88.4
6	48	34	15	25	13	17	23	46	221	46	55.9
7	40	34	18	28	27	28	20	34	229	48	61.9
8	35	25	21	15	31	35	29	45	236	49	64.8
9	31	23	30	26	25	31	25	42	233	49	64.8
10	34	39	24	20	25	31	26	43	242	50	67.6
11	41	39	18	32	37	31	30	31	259	54	76.6
12	43	39	24	24	28	30	30	46	264	55	78.6
13	43	40	14	32	37	33	25	42	266	55	78.6
14	47	44	29	37	35	34	27	46	299	62	88.4
15	36	38	14	22	24	29	26	20	209	44	48.8
16	36	29	18	29	17	20	35	50	234	49	64.8
17	38	34	26	24	29	29	28	41	249	52	72.2
18	41	37	18	37	29	19	37	53	271	56	80.5
19	46	31	23	24	36	23	31	51	265	55	78.6
20	31	23	21	19	23	13	24	42	196	41	38.0
21	51	36	30	38	36	28	32	51	302	63	89.5
22	34	14	18	26	32	28	29	47	228	48	61.9

Appendix VII
Elbethel primary and secondary school
2001 E.C

	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	49	39	23	35	39	33	33	46	297	62	88.4
2	50	55	29	50	49	39	38	49	359	75	97.5
3	53	57	30	46	45	46	45	53	375	78	98.5
4	50	50	23	34	35	36	37	48	313	65	91.6
5	48	57	26	39	40	37	35	42	324	68	93.8
6	40	50	23	34	36	35	28	32	278	58	83.4
2000 E.C											
	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	43	41	20	32	35	37	28	55	291	61	88.0
2	38	37	24	53	36	47	44	55	334	70	95.4
3	31	18	17	43	41	46	39	53	288	60	86.8
4	46	54	23	42	40	40	37	56	338	70	95.4
5	45	41	33	42	41	44	47	53	346	72	96.5
6	40	20	15	27	23	17	20	49	211	44	48.5
7	35	30	18	41	36	36	35	57	288	60	86.8
8	42	41	30	36	43	40	38	53	323	67	93.4

Appendix VIII
Berhan hilina primary school
2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	37	32	26	48	19	16	29	53	260	54	83.9
2	29	24	27	44	20	29	27	45	245	50	77.9
3	26	30	30	34	20	19	15	45	219	46	68.9
4	32	17	29	41	13	12	28	50	222	46	68.9
5	33	16	27	36	27	21	18	36	214	45	65.9
6	35	41	29	41	23	31	17	50	267	56	86.5
7	37	28	26	45	23	23	19	42	243	51	79.6
8	36	33	29	40	20	15	26	52	251	53	82.5
9	36	14	27	40	15	17	23	41	213	44	62.5
10	31	22	26	38	24	23	23	45	232	48	73.6
11	37	27	24	39	20	15	22	47	231	48	73.6
12	32	35	18	34	35	10	18	45	227	47	71.1
13	37	22	21	33	27	20	26	43	229	48	73.6
14	42	31	17	30	32	33	35	51	271	56	86.5
15	27	14	14	26	32	26	17	43	199	14	51.6
16	27	21	24	21	31	26	26	47	223	46	68.9
17	28	20	38	29	31	35	17	27	225	47	71.1
18	31	23	38	33	32	30	36	50	273	57	87.4
19	43	30	30	24	27	29	26	46	255	53	82.5
20	41	32	39	31	27	22	29	49	270	56	86.5
21	33	26	14	20	31	25	23	45	217	45	65.9
2000 E.C											
S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	40	35	30	34	32	26	21	45	263	55	79.4
2	28	23	17	16	32	26	19	54	215	45	52.6
3	37	17	23	26	51	23	25	55	257	54	77.6
4	44	33	39	42	49	43	31	55	336	70	95.4
5	48	36	35	44	55	39	32	58	347	72	96.5
6	41	36	21	36	33	25	25	50	267	56	81.2
7	37	21	26	29	39	40	22	55	269	56	81.2
8	35	24	32	34	49	32	23	55	284	59	86.5
9	37	27	32	37	44	43	21	54	295	61	88.0
10	36	38	18	35	44	35	29	45	280	58	84.0

Appendix IX
Lazarist primary and secondary school

2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	33	28	12	24	20	22	32	52	223	46	68.9
2	36	44	29	25	21	24	29	45	253	53	82.5
3	42	47	36	44	39	35	40	56	339	71	97.1
4	34	40	23	24	24	24	34	52	255	53	82.5
5	33	33	20	27	24	22	37	49	245	51	79.6
6	37	48	30	25	28	29	34	49	280	58	88.6
7	41	46	33	44	36	40	45	51	336	70	96.7
8	30	42	24	41	32	28	38	53	288	60	90.4
9	36	36	26	24	31	24	40	47	264	55	85.2
10	34	34	18	24	28	27	36	46	247	51	79.6
11	39	45	47	48	44	44	40	51	358	75	98.5
12	38	42	44	46	47	40	34	43	334	70	96.7
13	37	42	47	48	31	37	44	53	339	71	97.1
14	30	25	44	34	27	39	24	49	272	57	87.4
15	30	31	21	44	45	37	31	47	286	60	90.4
16	37	43	32	39	25	18	30	51	275	57	87.4
17	41	47	32	37	31	33	43	52	316	66	94.7
18	39	42	26	34	28	25	35	52	281	59	89.5
19	33	32	30	41	28	34	33	52	283	59	89.5
20	33	39	36	30	32	29	28	48	275	57	87.4

2000 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	40	23	18	39	45	40	45	49	299	62	89.0
2	45	35	21	42	41	45	43	54	326	68	94.1
3	39	35	30	39	41	35	33	51	303	63	90.0
4	41	34	29	40	49	41	46	49	329	69	94.7
5	50	35	30	44	41	44	45	56	345	72	96.5
6	39	21	24	48	39	19	40	53	283	59	85.5
7	39	39	33	47	43	49	44	47	341	71	96.1
8	44	41	36	46	47	38	51	57	360	75	97.8
9	30	40	18	38	29	39	41	38	273	57	82.5
10	38	36	17	26	32	25	32	49	255	53	75.5
11	43	40	20	33	49	43	34	48	310	65	91.9
12	50	42	41	44	41	43	40	59	360	75	97.8
13	41	38	35	48	45	42	40	54	343	71	96.1
14	43	27	20	35	39	40	38	52	294	61	88.0
15	42	36	24	37	36	37	39	51	302	63	90.0
16	42	26	20	20	48	41	24	49	270	56	81.2
17	44	35	33	40	39	39	29	53	312	65	91.9
18	36	39	38	44	48	51	40	52	348	73	96.9
19	38	30	24	43	43	50	41	51	320	67	93.4
20	51	44	26	51	48	51	42	58	371	77	98.5

Appendix X

Lutheran primary school

2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	40	22	23	34	32	40	29	51	271	56	81.2
2	34	26	18	31	32	35	19	46	241	50	68.5
3	36	21	14	21	17	30	23	50	212	44	48.5
4	27	13	15	31	25	25	15	41	192	40	32.5
5	41	27	18	22	33	34	20	52	247	51	71.3
6	38	24	20	17	35	32	11	57	234	49	65.6
7	39	41	32	34	32	36	23	50	287	60	86.8
8	33	23	21	32	33	31	17	43	233	49	65.5
9	46	42	18	31	32	35	26	58	288	60	86.8
10	41	25	26	26	25	27	34	54	258	54	77.6
11	26	19	14	37	29	23	17	46	211	43	44.4
12	36	24	17	29	24	28	26	55	239	50	68.5
13	39	21	21	21	23	25	26	49	225	47	59.2
14	42	22	14	27	25	26	20	46	222	46	56.4
15	37	33	17	33	29	21	26	49	245	51	71.3
16	39	25	20	32	25	37	24	51	253	53	75.5
17	33	43	15	32	24	29	22	49	247	51	71.3

2000 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	43	32	26	25	44	47	34	48	299	82	88.4
2	42	50	41	35	36	48	42	47	341	71	95.7
3	44	50	39	36	41	50	39	52	351	73	96.7
4	38	41	26	20	45	24	30	41	266	55	78.6
5	34	38	18	21	36	43	24	39	253	53	74.5
6	48	49	26	34	44	35	39	46	321	67	93.1
7	43	29	24	31	47	49	38	40	301	63	89.5
8	42	43	24	24	43	35	25	42	278	58	83.4
9	47	50	32	42	48	47	33	44	343	71	95.7
10	42	47	39	41	48	52	35	51	355	74	97.1
11	45	47	26	25	47	48	46	45	329	69	94.5
12	36	28	32	30	39	37	44	50	296	62	88.4

Appendix XI
Super holysavior primary school
2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	39	43	30	35	37	36	40	54	314	65	94.1
2	31	30	20	21	16	23	44	50	235	49	75.7
3	31	41	26	34	39	33	34	56	294	61	91.2
4	30	36	11	22	20	21	42	49	231	48	73.6
5	32	33	18	28	25	36	35	53	256	53	82.5
6	38	37	15	28	31	25	28	56	258	54	83.9
7	46	44	32	30	28	31	34	57	296	62	91.9
8	29	30	9	24	20	19	30	33	174	36	28.6
9	33	27	21	22	20	16	33	55	227	47	71.1
10	31	42	20	29	13	22	26	45	228	48	73.6
11	38	48	23	30	39	39	29	47	293	61	91.2
12	46	50	48	43	29	32	43	58	349	73	97.8
13	35	47	15	29	28	26	43	53	276	58	88.6
14	35	44	32	35	27	22	30	49	274	57	87.6
15	31	30	42	41	21	40	16	44	258	54	83.9
16	30	42	14	32	36	38	29	38	259	54	83.9
17	39	47	14	40	32	30	37	56	295	61	91.2
18	28	31	29	24	16	10	36	46	220	46	68.9
19	38	51	44	38	39	39	38	54	341	71	97.1

2000 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	46	44	26	40	41	39	39	46	321	67	93.1
2	45	45	39	40	41	37	27	49	323	67	93.1
3	48	41	33	38	39	38	35	40	312	65	91.6
4	42	44	33	34	36	34	33	36	292	61	87.5
5	32	31	32	31	41	32	34	45	278	58	83.4
6	31	52	41	33	40	38	27	39	301	63	89.5
7	31	31	35	45	37	30	19	24	252	53	74.5
8	50	53	30	43	48	33	36	49	342	71	95.7
9	38	29	45	51	48	42	41	36	330	69	94.5
10	47	46	38	29	49	37	29	45	320	67	93.1
11	44	51	35	43	41	21	31	43	309	64	90.6
12	39	44	32	32	32	22	24	39	264	55	78.6
13	50	48	36	27	41	26	33	46	307	64	90.6
14	48	30	21	36	29	39	29	49	281	59	84.9

Appendix XII
Key kokeb primary school
2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	27	17	9	22	35	26	12	42	190	40	47.0
2	39	34	18	30	25	21	29	54	250	52	81.0
3	29	21	15	18	23	25	20	45	196	41	51.6
4	23	14	11	18	27	20	24	50	187	39	42.4
5	27	15	12	14	21	21	27	36	173	36	28.6
6	27	31	9	18	23	21	22	53	204	43	58.8
7	27	24	15	21	32	25	29	51	224	47	71.1
8	24	31	26	25	32	24	19	32	213	44	62.5
9	20	19	12	18	24	25	25	48	191	40	47.0
10	21	21	21	14	24	15	17	49	182	38	37.5
11	32	18	21	12	20	12	14	53	182	38	37.5
12	25	19	20	14	13	16	21	45	173	36	28.6
13	39	20	21	16	16	16	15	40	183	38	37.5
14	26	16	29	23	19	17	15	35	180	38	37.5
15	23	20	32	30	17	20	26	39	207	43	58.8
16	31	11	24	14	16	15	29	50	190	40	47.0
17	30	7	23	25	11	23	23	42	184	38	37.5
18	18	12	15	14	20	20	16	36	151	32	11.1
19	22	19	12	21	25	16	20	43	178	37	32.5
20	30	19	17	21	19	25	22	47	200	42	54.9
21	35	16	18	24	15	15	18	47	188	39	42.4
22	38	17	21	19	25	18	21	47	206	43	58.8
23	32	23	18	21	28	18	15	45	200	42	54.9
24	32	31	33	29	29	19	17	48	238	50	77.8
25	29	27	17	24	20	21	24	46	208	43	58.8
26	22	32	15	31	29	20	23	49	221	46	68.9
27	43	31	17	31	35	22	26	55	260	54	83.9
28	21	25	24	21	23	22	31	48	215	45	65.9
29	31	21	20	23	28	16	26	50	215	45	65.9
30	22	15	17	18	15	22	12	29	150	31	8.5
31	27	25	20	23	27	18	28	40	208	43	58.8
32	27	19	8	29	21	15	22	51	192	40	47.0
33	18	19	11	15	20	16	27	47	173	36	28.6
34	31	17	11	26	27	18	19	51	200	42	54.9
35	21	17	9	16	13	15	22	44	157	33	14.7
36	38	26	18	25	12	23	25	50	217	45	65.9
37	38	17	17	14	21	20	18	50	195	41	51.6
38	15	19	14	26	20	20	28	45	187	39	42.4
39	25	24	17	21	15	18	26	42	188	39	42.4
40	30	19	9	19	19	15	24	44	179	37	32.5
41	26	19	15	17	29	31	29	42	208	43	58.8
42	25	21	11	15	15	24	26	42	179	37	32.5

2000 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	31	20	23	24	25	26	27	55	231	48	62.5
2	37	23	21	24	20	16	28	53	222	46	54.4
3	26	23	20	27	28	30	28	47	229	48	62.5
4	37	11	9	16	20	18	27	57	195	41	36.8
5	27	14	14	24	13	14	27	46	179	37	20.4
6	41	22	12	18	28	20	16	56	213	44	48.5
7	30	20	17	24	21	14	25	47	198	41	36.8
8	29	12	24	15	19	17	27	44	187	39	28.5
9	35	20	24	20	25	14	10	51	199	41	36.8
10	36	26	17	18	33	30	20	54	234	49	65.6
11	33	23	9	19	37	32	21	41	215	45	52.6
12	29	20	18	24	35	31	22	29	208	43	44.4
13	42	25	15	21	36	35	21	49	244	51	71.3
14	34	23	11	24	31	33	25	36	217	45	52.6
15	33	30	24	31	32	27	24	38	239	50	68.5
16	26	20	14	18	23	26	15	38	180	38	24.4
17	40	20	17	14	31	29	23	52	226	47	59.2
18	34	26	17	16	29	34	23	40	219	46	56.4
19	26	25	27	21	36	31	33	46	245	51	71.3
20	25	15	17	13	19	17	22	44	172	36	17.2
21	42	26	17	21	24	23	26	55	234	49	65.6
22	33	20	17	12	31	18	27	46	204	43	44.4
23	42	19	15	21	20	14	16	51	198	41	36.8
24	37	10	18	25	23	10	24	53	200	42	40.2
25	41	16	17	23	24	14	18	40	193	40	32.6
26	41	18	11	21	41	27	23	53	235	49	65.6
27	34	22	15	21	32	34	28	49	235	49	65.6
28	23	14	24	28	41	28	26	52	236	49	65.6
29	33	13	17	29	24	29	20	50	215	45	52.6
30	38	29	18	26	43	27	30	54	265	55	79.4
31	29	11	23	18	41	26	30	48	226	47	59.2
32	27	25	15	29	40	22	34	50	242	50	68.5
33	37	20	14	39	41	26	33	55	265	55	79.4
34	26	18	20	31	40	30	23	47	235	49	65.6
35	31	16	18	33	39	25	30	54	246	51	71.3
36	30	18	17	20	40	26	31	46	228	48	62.5
37	25	12	9	16	29	23	27	53	194	40	32.6
38	31	18	5	14	35	24	31	50	208	43	44.4
39	36	28	9	16	32	26	24	52	223	46	56.4
40	32	26	27	19	33	27	25	52	241	50	68.5
41	24	15	14	23	33	24	30	52	215	45	52.6
42	38	11	14	11	29	26	29	52	210	44	48.5
43	38	24	14	18	27	26	21	45	213	43	44.4
44	37	18	18	19	33	24	26	35	210	44	48.5
45	43	20	11	19	33	19	20	54	219	46	56.4
46	28	22	21	21	31	22	25	51	221	46	56.4

Appendix XIII
Medahnealem primary school
2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	30	13	15	20	20	13	27	48	186	39	42.4
2	43	27	24	25	21	27	28	57	252	53	82.5
3	27	12	18	28	19	16	12	44	176	37	32.5
4	30	24	21	28	17	20	23	48	211	44	62.5
5	21	18	21	18	21	18	22	19	158	33	14.7
6	28	26	17	17	23	10	20	46	187	39	42.4
7	20	11	27	12	15	11	17	35	148	31	8.5
8	27	26	17	18	19	18	26	43	194	40	47.0
9	48	41	8	33	27	24	23	42	246	51	79.6
10	45	47	38	48	41	48	40	57	364	76	98.6
11	38	28	15	21	23	19	29	50	223	46	68.9
12	41	23	18	24	36	20	24	43	229	48	73.6
13	46	45	45	55	45	49	47	56	388	81	99.5
14	36	12	20	20	19	24	22	48	201	42	54.9
15	25	21	15	16	19	15	26	30	167	35	23.7
16	32	22	15	23	17	19	24	50	202	42	54.9
17	35	16	20	14	25	22	24	46	202	42	54.9
18	22	16	18	12	23	16	21	37	165	34	19.0
19	26	23	15	18	16	13	20	43	174	36	28.6
20	26	12	11	22	19	18	20	49	177	37	32.5
21	31	23	14	23	23	16	30	48	208	43	58.8
22	46	23	27	21	35	25	30	51	258	54	83.9
23	34	21	27	29	20	26	24	45	226	47	71.1
24	36	23	12	22	15	22	25	55	210	44	62.5
25	32	24	15	20	16	16	27	47	197	41	51.6
26	33	16	29	26	20	28	25	41	218	45	65.9
27	23	18	12	16	17	21	30	49	186	39	42.4
28	45	42	42	45	35	39	40	52	340	71	97.1
29	33	23	18	23	25	23	28	50	223	46	68.9
30	24	36	14	10	33	26	32	53	228	48	73.6
31	33	35	23	25	24	15	32	48	235	49	75.7
32	28	16	20	23	24	18	31	39	199	41	51.6
33	37	12	20	24	25	17	29	54	218	45	65.9
34	47	51	24	46	31	41	48	56	344	72	97.4
35	14	16	17	11	28	20	24	34	164	34	19.0
36	31	32	33	47	25	20	38	47	273	57	87.4
37	50	37	21	33	27	22	32	54	276	58	88.6
38	38	26	14	13	27	25	31	52	226	47	71.1
39	34	19	11	13	25	23	25	45	195	41	51.6
40	42	27	17	28	29	25	31	56	255	53	82.5
41	24	20	30	24	24	26	29	36	213	44	62.5
42	28	29	26	33	23	33	26	34	232	48	73.6
43	40	24	27	22	31	22	27	48	241	50	77.8
44	34	17	26	18	28	20	22	29	194	40	47.0
45	37	21	20	22	23	16	28	54	221	46	68.9
46	39	20	30	25	33	26	26	47	246	51	79.6
47	33	14	32	39	27	32	37	44	258	54	83.9
48	31	18	29	22	29	21	27	45	222	46	68.9
49	29	13	29	25	27	10	24	44	201	42	54.9
50	31	18	23	17	16	24	21	50	200	42	54.9
51	36	22	12	19	21	29	14	36	189	39	42.4
52	36	22	27	31	27	30	21	44	238	50	77.8
53	33	24	30	30	24	28	32	40	241	50	77.8
54	33	38	33	38	39	37	37	57	312	65	94.1
55	47	24	27	29	33	28	35	56	279	58	88.6
56	28	20	21	24	28	18	35	43	217	45	65.9
57	31	15	14	12	21	19	28	47	187	39	42.4
58	37	13	17	11	26	17	20	51	192	40	47.0

2000 E.C

S/No	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	23	19	17	20	51	41	18	28	217	45	52.6
2	41	27	30	40	47	51	39	44	319	66	92.8
3	19	25	18	22	21	24	18	52	199	41	36.8
4	30	17	11	19	20	19	14	37	167	35	13.9
5	35	21	18	19	20	20	22	50	205	43	44.4
6	23	19	21	11	21	16	13	34	158	33	8.1
7	30	13	17	16	24	17	14	46	177	37	20.4
8	28	25	17	18	24	17	18	47	194	40	32.6
9	24	12	11	17	12	15	14	39	144	30	3.0
10	42	27	17	31	43	31	29	50	270	56	81.2
11	20	19	12	17	28	29	24	55	204	43	44.4
12	19	15	18	32	23	32	19	27	185	39	28.5
13	47	45	14	37	47	37	38	53	318	66	92.8
14	29	11	18	16	47	13	39	43	216	45	52.6
15	38	21	20	19	24	21	11	49	203	42	40.2
16	38	21	20	19	24	21	11	49	203	42	40.2
17	28	21	17	13	32	20	34	47	212	44	48.5
18	33	19	20	20	28	32	22	41	215	45	52.6
19	44	33	21	32	32	30	28	59	279	58	84.0
20	38	20	11	34	44	21	36	49	253	53	75.5
21	28	21	20	36	33	31	21	38	228	48	62.5
22	42	35	18	35	40	39	37	55	301	63	90.00
23	25	22	21	20	33	22	27	37	207	42	40.2
24	39	23	20	29	32	31	35	49	258	54	77.6
25	33	25	11	29	16	23	23	52	212	44	48.5
26	28	16	14	16	15	17	22	45	173	36	28.6
27	38	22	14	24	17	20	16	46	197	41	36.8
28	28	22	20	28	39	34	32	47	250	52	73.3
29	25	24	18	19	36	28	30	26	206	43	44.4
30	42	33	23	44	48	37	33	57	317	66	92.8
31	34	23	11	33	23	25	26	53	228	48	62.5
32	47	30	20	39	36	32	29	57	290	60	86.8
33	45	27	21	37	43	41	30	52	296	62	89.0
34	37	30	18	30	15	26	24	49	229	48	62.5
35	41	27	20	32	25	26	20	31	222	46	56.4
36	45	23	24	34	36	32	9	44	247	51	71.3
37	26	16	15	22	35	22	13	45	194	40	32.6
38	43	26	20	18	20	19	22	48	216	45	52.6
39	29	15	18	28	20	14	24	43	191	40	32.6
40	36	19	20	19	20	21	20	47	202	42	40.7
41	26	16	18	29	15	16	20	57	197	41	36.8
42	39	24	11	25	32	14	16	55	216	45	52.6
43	29	27	20	27	37	32	31	43	246	51	71.3
44	42	25	14	22	27	19	18	49	216	45	52.6
45	25	16	18	13	43	14	17	42	188	39	28.5
46	33	18	24	9	24	16	25	55	204	43	44.4
47	37	18	6	25	31	34	32	50	233	49	65.6
48	34	20	18	20	27	16	24	50	209	44	48.5
49	33	13	12	16	35	29	27	55	220	46	56.4
50	31	18	11	20	29	18	31	50	208	43	44.4
51	34	15	9	13	32	12	22	45	182	38	24.4
52	42	18	20	28	27	26	18	55	234	49	65.6
53	30	16	18	21	23	23	16	47	194	40	32.6
54	39	23	23	33	32	37	37	51	275	57	82.5
55	29	19	14	18	31	25	25	40	201	42	40.2
56	36	13	21	19	28	10	18	47	192	40	32.6
57	37	27	20	11	24	18	17	41	195	41	36.8
58	29	42	27	32	31	16	16	47	240	50	68.5
59	38	31	20	39	48	40	17	42	275	57	82.5
60	33	35	15	14	31	15	21	54	218	45	52.6

Appendix XIV
Belay Zeleke kutir 2 primary school

2001 E.C

S/No	Subjects									Average	Percentile
	Amh	Eng	Maths	Bio	Phy	Chem	S/study	Civics	Sum		
1	30	24	14	13	20	20	24	44	189	39	42.4
2	22	20	17	22	27	24	28	32	192	44	62.5
3	30	22	23	21	21	21	21	47	206	43	58.8
4	18	15	18	14	27	29	17	34	172	36	28.6
5	37	22	15	19	21	26	27	52	219	46	68.9
6	29	18	18	21	25	16	20	45	192	40	47.0
7	21	16	20	16	19	24	28	30	174	36	28.6
8	22	25	14	10	13	19	15	43	161	34	19.0
9	28	13	18	18	28	18	29	50	202	42	54.9
10	24	16	24	20	21	19	16	45	185	39	42.4
11	28	23	17	24	25	20	17	46	200	42	54.9
12	30	16	18	15	28	20	14	42	183	38	37.5
13	31	31	39	24	25	33	24	45	252	53	82.5
14	32	25	11	20	21	22	22	45	198	41	51.6
15	31	34	14	24	29	15	19	51	217	45	65.9
16	23	22	17	8	19	15	21	37	162	34	19.0
17	24	22	36	28	28	22	25	44	234	49	75.5
18	29	30	32	26	28	24	20	43	232	48	73.6
19	30	31	24	22	27	16	22	44	216	45	65.9
20	28	28	21	23	19	17	23	43	202	42	54.9
21	33	34	27	22	33	32	22	41	244	51	79.6
22	27	21	9	23	28	25	24	43	200	42	54.9
23	30	17	23	22	28	26	28	37	211	44	62.5
24	31	33	45	18	28	28	29	41	253	51	79.6
25	31	14	33	21	20	14	19	44	196	41	51.6
26	26	21	32	32	28	26	33	38	236	49	75.6
27	36	23	33	46	37	28	21	43	267	56	86.5
28	38	33	30	43	39	34	32	50	299	62	91.9
29	26	18	14	18	19	17	11	41	164	34	19.0
30	25	20	29	23	24	20	20	40	201	42	54.9
31	39	32	30	38	37	34	32	48	290	60	90.4
32	36	28	30	32	25	16	22	46	235	49	75.7
33	39	26	29	31	39	33	33	55	285	59	89.5
34	29	23	32	36	35	32	23	49	259	54	83.9
35	41	26	29	28	19	17	25	46	231	48	73.6
36	38	41	29	35	35	34	39	53	304	63	92.7
37	31	25	21	29	24	19	32	43	224	47	71.1
38	36	19	15	26	23	19	33	46	217	45	65.9
39	35	28	35	37	25	28	19	43	250	52	81.0
40	32	21	17	33	28	23	24	38	216	45	65.9
41	24	18	32	16	20	16	33	47	206	43	58.8
42	33	27	42	40	21	15	16	41	235	49	75.7
43	32	22	20	15	20	22	24	41	196	41	51.6
44	17	15	18	23	23	17	18	49	180	38	37.5
45	28	12	29	17	12	14	11	35	158	33	14.7
46	38	28	20	34	33	25	24	41	243	51	79.6
47	30	12	18	15	17	14	20	10	136	28	2.4
48	25	22	18	13	28	19	20	45	190	40	47.0
49	35	13	24	16	19	25	12	35	179	37	32.5
50	25	23	23	29	15	12	22	27	176	37	32.5
51	25	22	18	15	35	27	28	40	210	44	62.5
52	36	23	20	22	15	14	22	37	189	39	42.2
53	33	23	32	24	27	26	21	54	240	50	77.8
54	24	23	12	20	23	14	28	40	184	38	37.5
55	36	22	15	21	23	18	15	48	198	41	51.6
56	30	17	14	14	25	17	16	22	155	32	11.1
57	31	20	27	29	25	21	21	38	212	44	62.5
58	33	23	26	19	25	19	19	49	213	44	62.5
59	28	15	26	21	27	19	20	45	201	42	54.9
60	37	32	29	25	27	23	30	51	254	53	82.5
61	25	19	21	12	25	24	24	36	186	39	42.4