

**A COMPARATIVE STUDY OF THE ACADEMIC
ACHIEVEMENT OF REGULAR AND EXTENSION
STUDENTS OF THE
ADDIS ABABA COMMERCIAL COLLEGE**



**A Thesis
Presented to the
School of Graduate Studies
Addis Ababa University**



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for the Degree of Master of Arts
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**By
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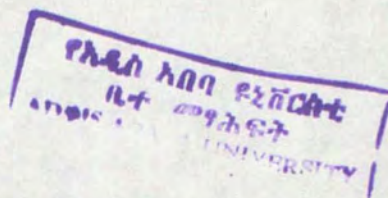
ABSTRACT

In this study, academic achievement was compared between regular and extension students. And also an attempt was made to assess the effect of certain factors (independent variables) namely years break in study, high school grades (ESLCE GPA), age on entry, sex and marital status upon the dependent variable (academic achievement). To serve this purpose 343 students (203 regular and 140 extension) who entered the Addis Ababa Commercial College (AACC) in 1990/91 and 1991/92 academic years were selected as a sample. Among the regular students 116 were males and 87 were females. Out of the extension entrants 63 were males and 77 were females. Cumulative Grade Point Average (CGPA) was used to compare the academic achievement status of regular and extension entrants. Student's personal files were consulted to obtain data pertaining to the independent variables considered in this study. In addition, structured interview was conducted with the instructors teaching both regular and extension classes, counselors and a co-ordinator of the continuing education program at the AACC. The interview was aimed at getting information about the position of regular and extension students with respect to their academic achievement, the academic problems of the two groups of students and the status of guidance and counseling. Data were analyzed using a t-test and analysis of variance. The results of these tests indicated that: 1) regular and extension students at the AACC differ significantly interms of their academic achievement; (2) years break in study, high school grades (ESLCE GPA), age on entry and marital status are significant as factors affecting academic achievement of students; (3) gender has no significant effect on academic achievement.

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CHAPTER ONE

INTRODUCTION

1.1 Education In Ethiopia: An Overview

Before the introduction of modern education, traditional church schools of the Ethiopian Orthodox Church and muslim run koranic centers have played important role in spreading traditional education.

In Ethiopia, modern secular type of education is a recent phenomenon. It's importance was recognized by Emperor Menelk II. He opened the first government school in 1908 in Addis Ababa. His death in 1913 has interrupted the development of modern education for a while. After the rise of Haile Selassie I to political power, modern education began to flourish. In 1922 he ordered the construction of Teferi Mekonnen School which was officially inaugurated in 1925. In 1931 the first public school for girls was established under the name of Empress Menen, who was the wife of Haile Selassie I. Other public schools continued to be established not only in Addis Ababa but also in other parts of the country such as Asaba

Tefferi (1931), Jimma (1932) Harar (1933), Gojam and Gonder (1934), Makale (1935) (Ababe Ghedai, 1977).

Before it was fully developed, modern education was destroyed during the fascist invasion and occupation of 1935-1941. However, after independence, Emperor Haile Selassie, expanded the educational system by increasing the number of schools at all levels in most parts of the country including the opening of higher education institutions.

In 1950, a decade after independence, the University College of Addis Ababa (UCAA) was established. It started with nine Canadian and European teachers and 25 male students (Balsivik, cited in Tesgaye Kassa, 1989). In 1954 UCAA was chartered as a degree granting institution and in the same year the first 13 students graduated.

During the period of 1954-1960 other separate colleges and post secondary institutions were established in Addis Ababa and other parts of the country. The College of Agriculture and Mechanical Arts (now, Alemaya University of Agriculture) began its instruction in 1953 in Jimma and in 1954 moved to its permanent campus in Alemaya, Harar. A College of Engineering and a College of Building Technology were started in 1954 in Addis Ababa. A Public Health College was also established in the same year at Gonder.

The then Haile Selassie I University which was later (in 1974) named Addis Ababa University was inaugurated in 1961. With this the various colleges were incorporated and brought under a single administration.

The country's need for more trained manpower demanded the expansion of higher education. In response to this the Commission For Higher Education (CHE) (now, the Higher Education Main Department of the Ministry of Education) was founded in 1977. The CHE established new junior colleges. And some existing institutions were transferred to the CHE and organized as junior colleges offering two to three years diploma programs in the fields of agriculture, technology, teacher education and commerce. Including the Addis Ababa Commercial College (AACC) there are ten institutions of higher education under the supervision of the Higher Education Main Department of the Ministry of Education.

In Ethiopia college level continuing education was first organized during 1952-53 academic year at the University College of Addis Ababa (UCAA). The first program was law course and was offered as an evening program for practitioners and other persons who wished to learn the foundation of Law (Trudea, cited in Abebe Ghedai, 1977). In 1954 an Extension Department was formally initiated as part of the faculty of Arts. In 1957 the College of Engineering started to offer

series of continuing education programs. After the formal inauguration of the Haile Selassie I University in 1961, a centrally administered Division of General Studies which was subsequently named Extension Division was instituted (Abebe Ghedai, 1977). Both diploma and degree level programs are offered by and through Extension Division of the University.

Furthermore, including the Addis Ababa Commercial College (AACC) all higher institutions supervised under the Higher Education Main Department offer continuing adult education programs.

The Addis Ababa Commercial College (AACC) (formerly known as Commercial School of Addis Ababa and Junior College of Commerce) was founded in 1943 as a one year program. The school began its function in Menelik II school compound with 30 students and two full-time and two part-time teachers. The educational standard of the school went through many changes until 1980, when a two year intensive program was introduced for candidates who had completed secondary education. The institution has emerged as a full-fledged college in 1990.

The AACC offers diploma level regular programs during day-time for full-time students and extension courses for part-time entrants who spent day time in other pursuits. In both programs identical credit courses are offered. Teaching

methods, examinations and evaluation procedures are also similar. The Higher Education Main Department of the Ministry of Education determines the admission of regular students into the college. The admission is normally based on Ethiopian School Leaving Certificate Examination (ESLCE). Admission into the evening or continuing program is determined by the Admission and Placement Committee of the college. The criteria for admission in the extension division is decided by the academic commission of the college every year as per the policy of the Higher Education Main Department of the Ministry of Education.

Ethiopian students enrolled in the regular program of the college pay only graduation fee. They are provided a monthly stipend of Birr 60 but no food and boarding facilities. However, extension students pay required tuition fees as listed below:

Application for admission fees	Birr 5
Registration fees per semester	Birr 5
Tuition fee (for Ethiopian)	Birr 16 per credit/contact hour per semester.

Diploma programs for regular division are two years/four semesters) long and diploma studies through evening programs are generally three years(eight semesters) long. The minimum

credit load per semester for a regular student is 15 and the maximum is 19. Extension students must take 9-12 credit hours per semester. In order to graduate both regular and extension students must have at least a Cumulative Grade Point Average (CGPA) of 2:00 and 2:00 in major areas of study. He or she must also complete the required credit hours (with no "F" grade(s)). The major areas of specialization are Secretarial Studies, Accounting, Banking and Finance, Purchasing and Supply Management, Personnel Management, and Marketing Management.

The number of part-time evening students enrolling in the AACC and other post secondary institutions in Ethiopia are increasing. Given that part-time students are in college now and coming in a great number, it is important that policy makers and administrators at the institution of higher education have a clear understanding of who part-time college attenders are, how they differ from full-time students and what effect these differences have on their performance. This study mainly concentrates on these issues.

1.2 The Problem and Its Background

Previous study findings concerned with the academic achievement of young regular and adult extension college students are contradictory.

Some studies show that the marks of adult part-time students on course examinations are as high and often higher than young regular students (example, Sorenson (cited in McMahon, 1960); Dyer, 1956; Kidd, 1973).

Other studies come up with different and opposing results. According to those results adult part-time students were found to be inferior in academic achievement than their day time counterparts (example, Anikeef, 1954).

Those who classify adult part-time extension students as superior achievers argue that adult part-time students are strongly motivated and more matured. It is also argued that the negative factors that place adult evening entrant on a disadvantage, such as lack of enough time for study or fatigue after work are compensated by his motivation, maturity, and experience.

Reasons commonly forwarded for adult part-time student's low academic performance included such statements as that because most of adult evening students enter or reenter to college after a gap of many years they lack basic academic skills, underestimate their ability to learn, that because of domestic and occupational responsibilities adult part-time entrants do not have enough time for study and library work, that most of the students have worked all day and are tired,



and that because priority assigned to learning is not as high as other things adults might wish to do.

Though the findings of the two groups of researchers are contradictory, they indicate the existence of discrepancy in achievement between young full-time and adult part-time extension students. Is the achievement of adult evening students higher than those of young full-time enrollees or is it lower? The answer, ofcourse, is that in comparing the academic achievement of regular and extension students one must consider certain factors that differentiate the learning gain of the two groups of students.

Thus, it seems reasonable to examine whether academic achievement of regular and extension students is influenced by differences in number of years elapsed between high school graduation and entrance into college, high school grades(ESLCE GPA), age on entry, sex, and marital status. This study focuses on these issues with particular reference to regular and extension students of the Addis Ababa Commercial College.

1.3 Statement of the Problem

This study attempts to answer the following questions:

1. Is there a significant difference between regular and extension students with respect to their academic achievement?
2. Does difference in the number of years break in study cause difference in academic achievement?
3. Does difference in high school grades(ESLCE GPA) cause difference in academic achievement of students at college level?
4. Is there a significant difference in academic achievement between different age groups?
5. Is there a significant differeneec in academic achievement between different sex groups?
6. Is there a significant difference in academic achievement between single and married students?

1.4 Objectives of the Study

The objectives of this study are:

1. To examine whether or not there is a difference between regular and extension students intermes of their academic achievement.
2. To see if academic achievement of students is affected by difference in amount of years elapsed between high school graduation and entrance into college and high school grades(ESLCE GPA).
3. To determine if there is a significant difference in academic achievement between different age groups.
4. To see if there is a significant difference in academic achievement between different sex groups.
5. To examine if there is a significant difference in academic achievement between single and married students.

1.5 Justification and Significance

The effectiveness and often the survival of educational program depends on a thorough understanding of the needs, problems, attitudes, and achievement of its clientele (Darkenwald and Merriam, 1982). Thus, comparison of educational attainment is important not only to clearly understand the

performance level of day and evening entrants but also determine the relative effectiveness of regular and extension programs for achieving similar objectives.

In Ethiopia extension academic program operate within the resident college frame of reference. Its course content, teaching methods, examinations and evaluation procedures are identical with the day program which is originally divided for young full-time students. If both adult part-time and young full-time students are to be adequately served, institutions of higher education must understand learning related differences between the two groups of students and make appropriate adjustment in program development. This research provides information on what differentiates the learning gain of young full-time entrants from that of adult evening attenders which is vital for program planners and organizers.

Furthermore, many college instructors need adequate knowledge and information about the conditions and circumstances that affect the academic progress of their students in both regular and extension classes. The outcome of this study may help instructors understand factors that influence the academic performance of their students and adjust their teaching methods and learning materials in response to this.

This study also provides valuable information for counselors. Because the knowledge of learning related differences between student clienteles is very important for effective counseling. Finally this research may serve as a basis for further study in this area.

1.6 Limitation and Delimitation of the Study

This study is limited to comparing the academic achievement of regular and extension students of the AACC.

The study considers only the AACC among other colleges in Ethiopia because most of the regular and extension students of the college have completed their secondary education in Addis Ababa region. This will enable the researcher to include in the study subjects from the same environment.

Moreover, in this study possible answers and recommendations will be offered concerning only those questions raised previously.

Furthermore, this study will be confined to subjects who have joined the AACC in 1990/91 and 1991/92 academic years both in regular and extension programs.

1.7 Operational Definition

The technical terms used in the text of this paper are used as defined below:

- Academic Achievement:- It refers to four semesters Cumulative Grade Point Average (CGPA) of regular student and eight semesters CGPA of extension entrant.
- An Adult:- A person who enrolled in evening extension college programs.
- A Youth:- A person who enrolled in college on a regular and full-time basis.
- High School Grades:- Grade point obtained by admitted student by sitting for the ESLCE.

1.8 Organization of the Study

This introductory chapter included an overview of the development of education in Ethiopia together with the statement of the problem, the purpose, significance, delimitation and limitation of the study and operational definition of terms.

Chapter II deals with the review of related literature.

Chapter III is devoted to the methodology of the study. In this chapter the procedure of selecting subjects, explanation of the instrument used, methods of data collection and analysis are presented.

Chapter IV is devoted to the presentation and analysis of the results of the study.

Chapter V deals with the discussion of the findings.

Chapter VI contains the summary, conclusions and recommendations of the study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Can Adults Learn As Well As Young Students

Many researchers argue that adults can learn as well as young students. For example, Cross, (1988) has looked at physical changes that accompany aging particularly reaction time, vision and hearing. And she concludes that while there is clear evidence of gradual deterioration in all the three categories, this need not affect learning till the age of 75 and not necessarily even then. Similarly, as reported by Kidd, (1973) adults can and do learn well through out life. Furthermore, Knox, (1989) states that when they can control the pace most adults in their 40's and 50's have about the same ability to learn as they had in their 20's and 30's.

The view that adults can learn as well as young students is supported by empirical evidences. For example, Sorenson (cited in Kidd, 1973) made a thorough study of adult ability and summarized his findings in the following statements:

The evidence indicate that the measured ability of extension and non-extension students are essentially equal. In some universities the extension students are slightly superior, but the differences are not very large at any university. They do indicate, however, that any

existing superiority is found in the adult group(p.33),

Similarly, McGrath and Forman(cited in McMahon,1960) compared the aptitude of evening students at the University of Buffalo with those of resident freshmen. They concluded that there is no great difference in college aptitude between the day and evening students tested. They found the adult students of the evening division slightly superior to the day students. The maintenance of learning ability during much of adulthood is also substantiated by anecdotal experiences of adults of all ages. The Open University for example, has had some students in their eighties who have successfully completed a degree course (Sylvia et.al,1987).

These findings mentioned above show that adult extension students are capable of performing academic work of quality. According to these studies adult extension students poor classroom achievement-if it exists-is not a result of decline in some capacity but because of other factors, factors that can be controlled.

Despite research findings many people assume that adults find it difficult to learn and succeed. They say "you cannot teach an old dog new tricks." This view is also prevalent among adult learners. As reported by several studies too many adults accept the notion that adulthood is a time of steadily decreasing ability to learn (example,Kidd,1973; Brookfield, 1979; Lowe,1975). Adults

acceptance of the stereotype that adults steadily lose their ability to learn and the resulting high anxiety, low academic self confidence and negative attitude to learning are among the main factors that influence adults learning achievement (Knowles, 1980; Lowe, 1975; Apps, 1982).

2.2 Is the Academic Achievement of Adult Extension Students Higher than Those of Young Full-time Students, or is it Lower?

There is a continuous argument concerning the academic achievement of young regular and adult extension college students.

The first group claims about the superior achievement of extension students (example Dyer, 1956; Kidd, 1973; Knox, 1989). The second group believes that in comparison with young full-time students, adult part-time entrants obtain low marks when tested on the same examination (example, Anikeef, 1954).

There are studies which substantiate the believes of the former group. The first such study was made by Sorenson (cited in McMahon, 1960). Sorenson appraised classroom achievement by studying fifty pairs of comparable day and evening classes in which the instructor, subject matter, and examination were the same in each pair. On the basis of such a sample, the investigator found that the extension

classes had a slight advantage. Moreover, the research made at Roosevelt University by Staff of the Center for the Study of Liberal Education For Adults(cited in Dyer,1956)came up with the same results. In this study twenty four pairs of day and evening students were selected from the registration records of the college. The students were matched on the basis of sex, equivalent credit hours completed (sixty hours), and ACE psychological Test total scores.

In this study academic ability as measured by the ACE examination was held constant. Academic achievement was measured by the Educational Service Sophomore Comprehensive General Cultural Test. This examination tests knowledge and understanding in several academic areas. The results of this portion of the study indicate that extension students are capable of performing well on achievement tests.

The above study was also extended to classrooms. In this situation instructor's records in four courses were made available. In each case, objective-type examination were given to both day and evening students completing the courses. The results of this study indicate no significant difference in achievement between day and evening students. According to this study findings evening students seem to have done a little better than day students.

Furthermore, the study findings summarized by Kidd, (1973)are in line with the aforementioned study results.

After summarizing study results regarding academic achievement of regular and extension students he concluded that in almost every single example where comparative results have been obtained, the extension students have obtained equal or better results than young regular enrollees. Furthermore, as reported by Kidd, (1973) academic achievement of men and women extension students is comparable.

2.2.1. Reasons Forwarded for Adult Extension Students Superior Performance.

Many explanations have been advanced for adult extension students superior performance. One such explanation is related to maturity and experience. As reported by Dyer, (1956) and Smith (cited in Brookfield, 1986) one of the characteristics of adult part-time learners is that they are more mature persons who have a rich and varied background experience than young students. Adults use their experience as a resource in learning (Bhola, 1988). To those researchers most of part-time learners are adults. Problem solving, perceptual, memorized and skill learning are distinctly in favour of the mature person, because a richer apperceptive background of experience is brought to bear on the learning (Kundu, 1986).

On the other hand voluntary nature of adult learning is regarded as a contributing factor for adult extension

student's superior performance. Adult learning is necessarily a voluntary activity, the basic driving force is therefore, the individual motivation of the adult Deyer, (1956); McMahon, (1960); Kidd, (1973); Knowles, (1980); Brookfield, (1986); Knox, (1989). This voluntary learning is most effective (Cross, 1988).

The other explanation has to do with interest. Interest, attention and motivation are more likely to be present at middle age where there is a will to learn (Kundu, 1986). Similarly, as reported by Darkenwaled and Merriam, (1982) adults are not only volunteers in the learning process, but the subjects or skills they learn are by and large voluntarily chosen. This voluntary nature of learning and freedom of choice are characteristics of adult learning that set it apart from the schooling of children and young people. According to Lowe, (1975) adults select not only their own areas of educational interest but also the institution through which they will study. As reported by Cross, (1988) and Anderson and Darkenwaled, (1979) many adults pursued job related subjects and more likely to be supported by their employers. The pursuit of part-time education for employment reasons is positively related to successful completion (Anderson and Darkenwaled, 1979). Similarly according to Miles (cited in Kidd, 1973) adults continue to learn and perform better, because they concentrate their learning in the area of experience in which their interest also lies. Thus, their motivation is

substantial and wanting to learn is the greatest aid to learning.

Furthermore, as reported by Dyer, (1956) and McMahon, (1960) the maturity, experience and motivation of adult students are not only compensatory factors to offset the fatigue after work and lack of time for study but also give him an advantage over his younger and less experienced day time student.

Despite such study findings mentioned above many researchers continue to think of adult extension students as incapable of performing well. For example, Anikeef, (1954) has compared the academic achievement of extension and regular students and found significant difference in achievement between the two groups of students. In this study 39 male students were selected from evening classes composed of entirely a World War II veterans and similar number of regularly enrolled students were drawn from day time classes consisting of relatively small number of students who were veterans of World War II. And identical personnel management examinations were administered to those selected students before and after exposure to course subject matter.

In this study both extension and regularly enrolled students obtained higher scores after studying than they did before studying. However, on each of the administered

examination the regularly enrolled students achieved higher scores than extension students both before studying and after studying. According to the results of this study extension students were found to be inferior in academic achievement than their day time counterparts. Thus, the investigator questions whether granting credit for work completed in extension courses, given the low academic performance of part-time students. Similarly studies by Astin,(1977) and checkering,(1974)(cited in Cross,1988) showed that part-time enrollement tends to result in a lower quality of learning. According to these researchers full-time students gain more from their college experience than part-time attenders.

2.2.2. Reasons for Adult Extension Students Low Academic Performance

A) Emotional Barriers

Many studies relate adult extension students' low academic achievement to emotional barriers rather than to intellectual deficiencies (example, Sylvia et.al.,1987; Cross,1988; Knowels,1980).

In educational settings any learner brings to the learning transaction such feelings as self-esteem,fear, anxiety and so on. These feelings and emotions are as

important as intellectual ability in influencing learning outcomes(Sylvia et.al,1987; Kidd,1973; Brookfield,1979; Cross,1988; Knowles,1980; Mekonen,1987).

Several studies have shown that adult learners underestimate their ability to learn or perform well in educative activities. For example,Brookfield,(1979)after analyzing the difficulties most frequently encountered and expressed by adult part-time learners engaged in formal learning concluded the following:

A concern for self-esteem is likely to be evident amongst students of any age who find themselves in unfamiliar settings, but adults are liable to a particularly low self-evaluation when they compare their abilities to those of adolescents (p.91).

Similarly according to a study results summarized by kidd,(1973)older professors made twice as many remarks belittling themselves when taking an "intelligence" test as did a group of younger professors. Furthermore, in survey study conducted by Nisbet and Welsh,(1972)a significant number of adult college students were found to have doubt about their ability to pass examinations.

According to many investigators adult learners enter into the learning situation carrying one load or stigma from which the young students are free. Adult learners accept the prevailing view that adulthood is a time of steadily

decreasing ability to learn(Brookfield,1979;Sylvia et.al,1987; Apps,1982). Adult learners low academic self confidence is a result of their acceptance of the notion that all adults are not efficient learners. Because too many adult learners accept the stereotype of loss they are likely to have negative attitude to learning, feel high anxiety and lack self-confidence in their ability to learn and succeed (Apps,1982; Brookfield,1979). This feeling of being too old to learn and the resulting anxiety and low academic self confidence contribute a lot for adults' lack of academic success. The reason for adults poor classroom achievement is not that adults cannot learn but that many adults internalize a view of adult hood and adult potential which suggests that they are incapable of performing well since "old dogs cannot learn new tricks" (Lowe,1975; Jense and Glenn,1970; Brookfieled,1979; Sylvia et.al,1987; Knowles,1980; Knox,1989). This feeling of being tooold to learn increases steadily with age until it becomes a common barrier to learning(Cross,1988). Many writers have pointed out the specific effects of these feelings mentioned above on adults learning activity. For example, as reported by Kuhlen(cited in Jensen and Glenn,1970) adults with low self-confidence fail to participate in education,dropout, resist examinations, refuse to take part in discussion and become dogmatic. Similarly, according to Nelson Jones(cited in Sylvia et.al,1987)lack of sense of competence may inhibit learners from realizing actual competence,whether in examination,reading,note taking, use of study time,

creativity, critical thinking etc. Furthermore, as reported by Brookfield, (1979) and Knox, (1989) high anxiety and low academic self-confidence made adult learners perform below their capacity. Conversely, many researchers indicate that adult learning is enhanced when these feelings of threat are removed, when positive attitudes are developed to education, and when the adult attains a sense of self-confidence (Sylvia et al, 1987; Knox, 1989; Brookfield, 1986; Cross, 1988; Jackson and Strantner, 1964).

B) Years Elapsed Between High School Graduation and Entrance into College

Adult extension students' low academic performance was attributed to the number of years spent away from education. According to several investigators adults enter or reenter to formal education after a gap of some years (example, Knox, 1989; Knowles, 1990; Cross, 1988; Steltenpohe and Shipton 1986). As reported by Nisbet and Welsh (1972) adult college student is one who had a break of two years or more between leaving high school and entry to college. Because adults have been out of high school for years they are likely to be much "rustier" in basic subjects than young regular students who come to college immediately following high school graduation (Steltenpohe and Shipton, 1986; Apps, 1982).

Furthermore, adults' absence from formal education for years is likely to result in lack of basic tools of

learning. According to many studies adults lately returned to education lack efficient reading and study habits and skills. For example, in a study conducted by Steltenpohe and Shipton, (1986) a substantial percentage of adult students who have been enrolled to college after a lengthy interruption rate themselves low on the following academic skills: critical reading, selection of research topics, organization of data, use of the library, and analytical ability. Similarly, as indicated by Sylvia et.al, (1987) adults returning to formal education after a gap of some years, reported significant uncertainty and insecurity about their feelings of learning competence, ability to write essay, take notes, participate in a tutorial, read economically and a range of related study problems. These academic skill problems made adults slow and inefficient learners (Else, 1982; Brookfield, 1979; Sylvia et.al, 1987; Apps, 1982). Adults' lack of basic academic skills also results in dropout. Based on a follow up inquiry of a sample of adult college dropouts, Steltenpohe and Shipton, (1986) concluded that personal reasons relating to work and family life or health did account for approximately half of the withdrawal. The other half however, were due to poor academic skills not recognized or admitted by student themselves.

Moreover, according to several researchers adults absence from formal education for years results in low academic self confidence, high anxiety and a feeling of

inadequacy (example, Apps, 1982; Knowles, 1990; Sylvia et.al 1987; Cross, 1988; Knox,1982; Steltenpohe and Shipton,1986).

In this regard Knowles(1990)wrote:

Adults who have been away from academia for some time frequently experience high anxiety on re-entery...they wonder whether they can learn as well as or as fast as the younger students,they fear that they might fail or get lower grades (p.121).

These feelings of threat act as a major barrier to adults academic success. According to Axford, (1980) the psychological factors of "being out of school"; "rusty at learning", "away from the books too long" all contribute to adult learners lack of success.

Conversely, some investigators found the recency of participation in formal education to be correlated with more effective learning. Recent participation in educational activity results in increased knowledge and content competence, such participation also results in increased competence in the process of learning(Knox,1989)enhances self-esteem, creates positive attitude toward education and leads to increased expectation of success (Cross,1988).

C) High School Grades

As reported by many researchers adult learners obtain lower marks both in high school and college. For example, Holmstrom(cited in Cross,1988)compared the characteristics

of these 20 years of age and older with the characteristics of 16 to 19 years old freshmen. And she concluded that the older students were more likely to made lower high school grades and except in community college, made lower college grades in their major fields. Similarly according to Solomon Gordon and Ochsner(cited in Cross,1988)adult college entrants made lower high school grades and were less likely to pursue college preparatory program in high school than their younger colleagues.

According to some writers lower grades in the past are among the obstacles to adults academic achievement. For example, in view of Knox,(1989)if the early school experience of adults is characterized by low achievement and feelings of failure, the likely results are reduced accumulated knowledge, learning skills,persistence in school, self-confidence as learners and participation and interest in education. Similarly, as reported by(Cross,1988;and Wlodkowski,1991) adults with poor educational backgrounds frequently lack interest in learning or confidence in their ability to learn. This lack of self confidence as indicated earlier interfere with adults learning achievement.

D) Expectation

According to some investigators many adults enter into the learning situation intending to solve immediate problems

and overcome some sense of inadequacy. For example, as reported by Steltenpohe and Shipton, (1986) adults enroll or reenter in college to correct a felt deficiency or inadequacy. Upon entry to college adults focus with intensity on the final outcome of education (the degree or diploma), with less consideration to the process of learning. This felt deficiency is also accompanied by a strong sense of immediacy. This view adults hold about the learning situation might influence learning effectiveness. In this regard Seaman (cited in Knox, 1982) stated the following:

When participants have expectation that a program is a panacea for their problems, they become disillusioned and discontinue their studies (p.139).

E) Level of Commitment to Learning

Some studies relate adult extension students' low academic performance to the level of commitment to learning. As reported by Axford, (1980); Anikeef, (1954); Cross, (1988); Knowles, (1990), and Knox, (1989) young regular students energy and time are mainly devoted to educational work. Thus, learning is a "primary" full-time commitment for young day time students. However, besides fulfilling their students roles adult evening entrants have to perform other additional social roles such as earning a living and raising a family. Hence, to adult extension students participation in educational activities is a secondary "part-time"

Commitment (Cross,1988; Lowe,1975; kundu,1986; Axford,1980; knowles,1990; Knox,1989). Because education is secondary for adult learners they come to class their minds occupied with several problems that stem from their domestic and occupational circumstances. Students do not learn well when half their mind is on cares, problems and worries(Apps,1982).

Furthermore, adult evening students home and job responsibilities and social obligations not only distract their mind from learning but also acts as a time related obstacle and make difficult for them to keep up with their course reading and other educative activities (Elsey, 1982; McMahon,1960;Darkenwaked and Merriam,1982).

F) Fatigue After Work

On the other hand, adult extension students lack of success was attributed to fatigue after work. In view of many researchers adult part-time learners are very busy carrying domestic and occupational responsibilities which leave them exhausted at the end of the day with little energy left for quite effective study (example Knowles,1980; Kundu,1986; Axford,1980;Lowe,1975). This fatigue after work plays an important part in any lack of success adults may have (McMahon,1960, Anikeef,1954; Kundu,1986; Knowels,1990). Moreover, absenteeism was regarded as a contributing factor

for adults low academic record. Because of the demands made upon the students' time by his family, his job, or social obligations absenteeism is some what prevalent among adult evening students and is likely to affect their learning progress (McMahon, 1960; Kundu, 1986).

G) Conflicting Pressures

According to some observers adult extension students low academic performance is due to conflicting pressures. For example, as reported by Apps, (1982) and Elsey, (1982) adults are subjected to more conflicting pressures compared to adolescents. To those researchers, an adult may experience a pressure to go to school for job advancement, but at the same time experience a greater pressure to be at home at night to help care for children or sick wife. According to Kuhlen (cited in Dyer, 1956) the serious dropout rate in adult education is due more to these conflicting pressures. Similarly, as reported by McMahon, (1960) adult evening students have conflicting interests of job and family. Because of this many faculty members believe that the standard to be exacted of such a student is not the same as those to be exacted of the full time student who had no conflicting interest.

H) Group Heterogeneity

The diversified nature of adult learners was regarded as a factor that influence adult extension student's learning progress. In view of many writers any group of adult learner is characterized by heterogeneity (example, Dyer,1956; Sylvia et.al,1987; Kundu, 1986; Knowles, 1990; Knox, 1989). This heterogeneity of adult learners makes satisfactory class grouping and effective teaching difficult(McMahon, 1960).

I) The Timing of the Evening Program

Furthermore, adult part-time students poor scholastic attainment was attributed to the timing of the program. Extension classes takes place late at night which is not good for classes(McMahon,1960;Dyer,1956).

J) Physiological Changes

Adults low academic performance is due to various physiological changes such as decline in visual acuity, reduction in speed reaction, and lowering of energy level that occur with age(Knowles,1980).



K) Inadequacy or Absence of Adult Counseling Services.

Several studies relate adult extension students low academic achievement to emotional(noncognitive) factors rather than intellectual deficiencies. According to research findings too many adults accept the prevailing notion that all adults cannot learn effectively and enter into the learning situation carrying additional feeling from which the young students are free. Adult learners acceptance of the stereotype of loss result in high anxiety, low academic self-confidence and negative attitude to learning. Adults anxiety and stress may also be the result of job pressure and relational problems with significant others. Furthermore, because most adults enter or reenter to formal education after a considerable absence they often lack basic skills of systematic learning.

The above mentioned problems of adult extension students call for adequate counseling services. Study results show that counseling improves adults capacity for effective study and learning and their social and occupational lives. For example, a study on counseling of adults made by Grabowski (cited in Knox,1982) revealed that there is more progress along educational, occupational and social dimensions among counseled participants than among non-counseled participants.

Counseling is relevant not only for adult extension students but also for learners of all ages. In a study summarized by Kidd, (1973) students of all ages who were extremely tense before writing examination were provided with exercises that relax them and lower tension level. The results of this study suggest that much can be accomplished with learners of all ages in helping them utilize their potentialities and respond more effectively under stress.

Despite those study findings mentioned above, adult counseling is a neglected area of development (Axford, 1980), still performed largely by persons who devote only part of their working time (Darkenwald and Merriam, 1982). Similarly Grabowski (cited in Knox, 1982) claims that counseling adults is the most impoverished but developing aspects of adult education because of the lack of commitment by adult educators, of adequate literature, and/or clear cut role distinction. Inadequate counseling is one of the factors that influences adult students learning achievement (Knox, 1982).

Adult counseling, besides being inadequate, is not geared to the particular need and problems of adult evening students (Sylvia et.al, 1987; Knox, 1982). In view of some writers counseling must address the particular need and problems of the target group. For example (Knox, 1982) reported:

For all students, practitioners can increase educational achievement by fitting instructional and counseling approach to the students intellectual and ethical development (p.239).

Inadequate preparation of adult counselors is also regarded as factor that influence the quality of the service. As reported by Thoroman(cited in Knox,1982)adult counselors are inadequately prepared to deal with their clientele. To him counselors trained to work with children or adolescents will not necessarily work well with adults. This statement suggests the need for special training for adult counselors. The three main important competencies of adult counselors are knowledge of the decision making process, an understanding of adult development, and an awareness of one's own age bias (Schlossberg, cited in Knox,1982).

L) The Unique Characteristics of the Evening Program.

According to some investigators adult extension students gain less from their college experience when compared to young full-time students. This is due to the unique characteristics of the evening program. As reported by Darkenwaled and Merriam,(1982)in most colleges and universities extension program is a secondary or ancillary activity. This result in the absence of departmental responsibility. This lack of departmental responsibilities

in turn tends to weaken the structure of the courses and lower the standards of evening programs (McMahon, 1960).

On the other hand the common practice of using part-time teachers from the day program is regarded as a possible factor that lowers adult extension student's learning gain. In view of many researchers evening teaching activity is an "overload teaching", that is the teaching of extra class for extra money (example, Darknwaled and Marriam, 1982; Lowe, 1975; McMahon, 1960). This excessive teaching load is one of the reasons for extension program's low academic standard (Lowe, 1975; McMahon, 1960).

The low quality of the evening program was also attributed to the fact that extension division employs faculty members whose basic interest lies elsewhere. As reported by Dyer, (1956) the basic interest of off-campus part-time instructor is in his business or profession. Because of this he may be unable to meet his classes regularly and his grading at times is incredibly lenient. Thus the charges of soft pedagogy may have some foundation in his classes.

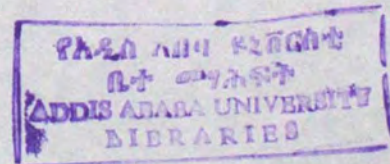
According to some investigators extension teachers lack of appropriate professional training and experience in teaching adults contribute to adults poor academic record (example, Lowe, 1975; Knox, 1989). Thus, as reported by many writers extension teachers must receive special training.

For example, in view of Knox, (1989) instructors of adults must not only know a subject matter well but must understand adult learners and have empathy for the problems that adult students face.

Furthermore, the low standard of extension program was attributed to fatigue after work. The evening courses could not be up to standards because both students and teachers had worked all day and were tired (Anikeef, 1954; McMahon, 1960).

M) The Practice of Duplicating the Day Program at Night.

On the other hand, adult evening students low academic performance was related to the practice of repeating at night the exact offerings of the day program. As reported by Schale and Parr (cited in Cross, 1988) adult learners perform better on learning tasks calling for integration, interpretation and application of knowledge. To these researchers adult learners gain low from traditional school learning that emphasizes on acquisition of large amount of new information and designed to capitalize on the learning strength of young people.



Furthermore, educational program's failure to consider adult learners loss of speed and quickness in learning is regarded as important factor that influence adults' learning

progress. As reported by some researchers adult learners seem to have most difficulties both in learning and recall when they are expected to learn under the same condition and the same speed as young students (example, Lowe,1975; Kidd,1973; Apps,1982; Knox,1989).

According to some investigators traditional methods of teaching is disadvantageous to adult learners. As reported by these researchers teaching adults is different from teaching children or adolescents. And they have offered some principles concerning how to teach adults as opposed to children or adolescents. One such principle was that advanced by Knowles(1980). In Knowles view "andragogical" or learner-center methods are more appropriate for adult learners than "Pedagogical" or teacher centered methods. Brookfield, (1986) has also presented the works of many writers that focus on adult learners characteristics and some basic principles that ought be used in teaching them.

As reported by the above mentioned investigators both the methods and contents of traditional schooling are disadvantageous for adult learners. This indicates the need to adjusting program contents and methods to what was known about intellectual abilities of adults, their experience, and motivations.

This chapter was devoted to the review of related literature. In the following chapter we will see the methodology of the study.

CHAPTER THREE

METHODOLOGY

In this chapter procedures of sample selection, data collection, analysis, and the instrument used are described.

3.1. Subjects

The population for this study were 4019 students who were admitted to the AACC in 1990/91 and 1991/92 academic years. Among them 1561 were regular and 2458 were extension students.

Out of those 4019 students 2645 were discarded from the analysis because they were dismissed before they completed their college studies. Therefore, the target population of which the present study is aimed at consists of 1374 (814 regular and 560 extension) students. Among this proportionate number of subjects were selected using random sampling technique (Table of Random Numbers). About 25% of the target population was thought to be sufficient. Thus, to constitute the sample, three hundred forty three subjects (203 regular and 140 extension) were selected.

The table below shows the number of participants (including mean and standard deviation of age).

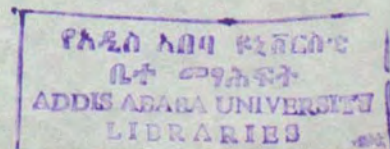


Table 1: Number of Participants

Study Group	Sex	No	Age		Mean Total	Standard deviation Total
			Mean	Standard deviation		
Regular	Male	116	18.6723	1.3942	18.4187	1.2416
	Female	87	18.0801	0.9054		
Extension	Male	63	27.4924	4.9353	26.4571	4.8789
	Female	77	25.6100	4.6741		
Total		343				

3.2 Variables Included in the Study

3.2.1 Independent Variables

Factors that possibly differentiate the learning gain of regular and extension students were selected based on the literature reviewed. These variables are:

- a. Number of year (s) elapsed between high school graduation and entrance into college.
- b. High School Grades(ESLCE GPA)
- c. Age
- d. Sex
0 = male
1 = female
- e. Marital Status
0 = married
1 = single

3.2.2. Dependent Variable

Academic Achievement: Four semesters CGPA of regular attender and eight semesters CGAP of extension entrant.

3.3 Instruments Used

3.3.1. Document analysis (archival study) was used to obtain data pertaining to the independent variables in the study.

3.3.2. Five structured interview items were prepared. The items were used to get information about the position of regular and extension students with respect to their academic performance, and their learning problems. The questions also used to collect information regarding the status of guidance and counseling and the place of adult continuing education in the AACC (see Appendix D).

3.4. Procedure

3.4.1 Data Gathering

(a) The list of students who joined the regular programs of the AACC in 1990/91 and 1991/92 academic years were obtained from the Higher Education Main Department of the Ministry of

Education. By using this list high school grades /ESLCE GPA/ and four smesters CGPA were collected from the registrar's office of the AACC.

- b) The list of the 1990/91 and 1991/92 academic years evening program entrants of the AACC, their high school grades/ESLCE GPA/ and eight semesters CGPA were obtained from the registrar's office of the AACC.
- (c) Data pertaining to the number of year (s) elapsed between high school graduation and entrance into college, age, sex and marital status were collected from the registrar's office of the AACC.
- (d) Structured interviews were conducted with twenty instructors teaching both regular and extension classes, two counselors and the co-ordinator of the continuing education program at the AACC.

3.4.2. Data Analysis

Different statistical techniques were employed to analyze the obtained data. These include descriptive statistical values such as means, standard deviations, and minimum-maximum scores.

The main statistical analysis were carried out at two levels. First one way analysis of variance and t-test were made to see wether or not there is

a statistically significant difference between regular and extension students in academic achievement.

Second, one way analysis of variance was employed to find out the specific effects of each independent variables on academic achievement of students. And post hoc comparison was made by using Tukey/Kramer (TK) Method. This method was selected, among others, because of its appropriateness for unequal sample size mean comparisons.

CHAPTER FOUR

RESULT AND ANALYSIS

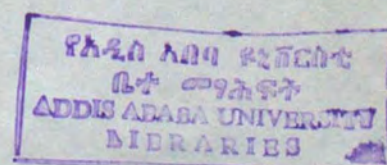
4.1 RESULT

CHARACTERISTICS OF THE STUDY GROUPS

The sample size (N) for the groups regular and extension was 343. Of this, 179 (52.17%) were males and 164 (47.81%) were females. From 203 regular entrants 116 (57.14%) were males and 87 (42.86%) were females. Out of 140 extension students 63 (45%) were males and 77 (55%) were females. Sex and age levels were not equally distributed in the two groups. The mean age for the regular group was 18.4187, while that of extension was 26.4571 (See Table 1 page 41).

Furthermore, the means and standard deviations of Cumulative Grade Point Average (CGPA) exhibited varying values between the two groups. It is to be noted that GPA range from 0 to 4.00 point.

The mean CGPA for the total population was 2.7318. The regular group got a mean CGPA of 3.0404 with a standard deviation of 0.3272. The mean CGPA of males was similar to that of females in the regular group. The mean CGPA of extension students was 2.2843 with a standard deviation of



0.2233. In this group the mean CGPA of males is similar with that of females.

A detailed descriptive figures on academic achievement of students are given across group and sex below in Table 2.

TABLE 2: Academic Achievement of Students By Group And Sex

Study Group	Sex	No	Academic Achievement (CGPA)			
			Mean	Standard deviation	Mean total	Standard deviation Total
Regular	Male	116	2.9990	0.2741	3.0404	0.3272
	Femal	87	3.0957	0.3816		
Extension	Male	63	2.2797	0.1845	2.2843	0.2233
	Female	77	2.2881	0.2517		
Total		343				

In the following section, we will present the various factors considered in the study that possibly differentiate the learning gain of regular and extension students and examine their relationship with the two categories of students.

A. Years Break in Study

According to the data years elapsed between high school graduation and entrance in to college ranges from 0 to 9. Out of the total population of 343 students 228(66.47%) entered college immediately following high school

graduation, 70(20.41%) joined college after a break of 1 to 5 years, and 45 (13.12%) after a gap of 6 and more years.

There is a noticeable variation in mean CGPA between those students who came to college directly from high school and those who entered college after an interruption of 1 to 5 and 6 and more years(See Table 3 below). As can be seen from the table those students who came to college directly from high school achieved a mean CGPA of 3.2683. Students who entered college after a break of 1 to 5 years got a mean CGPA of 2.3857. The mean CGPA for students who joined college after a gap of 6 and more years was 2.0818. The mean CGPA for the total group was 2.7318.

TABLE 3: Academic Achievement of Students By Sex and Years Break in Study

Years Break in Study	Academic Achievement (CGPA)					
	Male		Female		Total	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
0	2.9990	0.2741	3.0957	0.3816	3.2683	0.3272
1-5	2.3984	0.1845	2.3745	0.2517	2.3857	0.2233
6 and above	2.0632	0.1312	2.1004	0.2149	2.0818	0.1772

B. High School Grades (ESLCE GPA)

Out of the total population of 343 students 45 (13.12%) of them got high school grades of 2.40, 57 (16.62%) 2.60; 38 (11.08%) 2.80; 124 (36.15%) 3.00; and 79 (23.03%) 3.20.

There is a difference in mean CGPA between students with different high school grades. Students who obtained high school grade of 2.40, 2.60, 2.80, 3.00 and 3.20 received a mean CGPA of 2.1271, 2.3032, 2.5028, 2.9201; and 3.2294 respectively (See Table 4 below).

TABLE 4: Academic Achievement of Students By Sex and High School Grades (ESLCE GPA)

High School Grades	Academic Achievement (CGPA)					
	Male		Female		Total	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
2.40	2.1577	0.1032	2.0978	0.0711	2.1271	0.0924
2.60	2.3714	0.1177	2.4100	0.2713	2.3032	0.2265
2.80	2.3175	0.2382	2.2872	0.2115	2.5028	0.2234
3.00	2.8987	0.2164	2.9461	0.3512	2.9201	0.2850
3.20	3.1410	0.2862	3.3661	0.2720	3.2294	0.3000

C. Age on Entry

Out of the total population of 343 students, 133 (38.76%) attended college between ages 18 years and below,

102 (29.74%) 19 to 22 years and 108(31.49%)23 years and above.

Furthermore, there is a considerable variation in academic achievement between age levels. The mean CGPA of those students who entered college at age 18 years and below was 3.0464. The mean CGPA of those students who joined college at ages between 19 to 22 years was 2.7690. And those students who came to college at ages between 23 years and above got a mean CGPA of 2.3093. Further descriptive figures are given below in Table 5.

TABLE 5: Academic Achievement of Students By Sex and Age on Entry

Age on Entry	Academic Achievement (CGPA)					
	Male		Female		Total	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
≤ 18	2.9934	0.2839	3.0955	0.3834	3.0464	0.3418
19-22	2.8515	0.4150	2.6512	0.5096	2.7690	0.4646
23 and above	2.3424	0.2391	2.2749	0.2368	2.3093	0.2393

D. Sex

Out of ^{the} total population 179(52.19%) were males and 164(47.81%) females. Furthermore, in the total population the mean CGPA for males doesn't differ from that of females. Hence, female subjects got a mean CGPA of 2.7165, while male

subjects achieved mean CGPA of 2.7458. The mean CGPA for the total population was 2.7318

Moreover, among regular students 116(57.14%) were males and 87(42.86%) were females. Out of the extension subjects, 63(45%) were males and 77(55%) were females. The mean CGPA of male subjects doesn't differ from that of females when male and female subjects in the two groups were considered separately. The mean CGPA values were 2.9990 and 3.0957 for male and female regular subjects respectively; and 2.2797 and 2.2881 for male and female extension subjects respectively (See Table 2).

E. Marital Status

Marital status was another factor studied in relation with academic achievement of students. Out of the total population, 71(20.69%) students were married and 272(79.30%) were single. There is a considerable mean CGPA difference between married and single subjects. The mean CGPA for married subjects was 2.3077, while those of single subjects was 2.8425 (see Table 6 below).

TABLE 6: Academic Achievement of Married and Single Subjects

Marital Status	No	Academic Achievement (CGPA)	
		Mean	Standard Deviation
Married	71	2.3077	0.2234
Single	272	2.8425	0.4560
Total	343		

4.2. ANALYSIS

Based on the data presented in the result section, an attempt was made to analyse the academic achievement status of regular and extension entrants and the effect of each differentiating factors considered in the study on the scholastic performance of the two groups of students.

one way and two way ANOVA, t-test and Tukey/Kramer (TK) post hoc comparison method were selected as statistical models.

4.2.1. Academic Achievement Status of Regular and Extension Students

Primarily, a t-test was made to see whether or not there is a significant difference in academic achievement

between regular and extension students. Thus, mean, standard deviation, and standard error values were computed in each group. The mean CGPA for regular students was 3.0404 with a standard deviation and standard error of 0.3272, and 0.0230, respectively. Like wise, extension entrants scored mean CGPA of 2.2843 with a standard deviation and standard error of 0.2233 and 0.0189, respectively. The observed t value for the difference between means was 47.22.

The critical value of t for 341 degree of freedom assuming a two-tailed test at $\alpha = 0.001$ is 3.29. Hence, there is a statistically significant difference in academic achievement between the two groups of students. This indicates that the regular group performed better than extension subjects.

Furthermore, one way analysis of variance was carried to pry for a possible statistically significant difference between regular and extension students in relation with their academic achievement. Table 7 reveals the result of one way ANOVA concerning academic achievement of regular and extension students.

TABLE 7: Summary of One Way ANOVA Concerning Academic Achievement of Regular and Extension Subjects

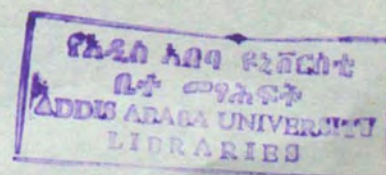
Source	df	SS	MS	F
Between	1	47.38	47.38	565.70
Within	341	28.56	0.08	
Total	342	75.93		

The analysis from the above table indicates that there is a statistically significant difference $F(1,341)=565.70$, $p < 0.0001$ between regular and extension students in their academic achievement. Regular students were found to be superior than extension entrants. The mean CGPA of regular students (3.0404) significantly exceeds the mean CGPA of extension subjects (2.2843).

The aforementioned t-test and one way ANOVA results have shown that there is a statistically significant difference between regular and extension students with respect to their academic achievement.

4.2.2. Factors Affecting Academic Achievement of Students

Following the above mentioned results which indicates significant difference in academic achievement between regular and extension subjects, we will try to examine the



effects of each factors considered in the study on scholastic performance of the two groups of students.

A. Years Break in Study And Academic Achievement

Amount of years elapsed between high school graduation and entrance into college was studied in relation with the possible effect it may have on academic achievement of students. Here, years break in study was categorized in to three levels. (i) 0 (ii) 1-5 (iii) 6 and above.

The result obtained after a treatment of one way ANOVA has shown that there is a statistically significant difference in academic achievement between the three categories $F(2,340) = 282.03, p < 0.0001$. Hence, those students who entered college directly from high school got a mean CGPA of 3.2683 and those who have a break of 1 to 5 years obtained a mean CGPA of 2.3857, and those who came to college after a gap of 6 and more years received a mean CGPA of 2.0818. The result of one way ANOVA is given in a summarized form in Table 8 below.

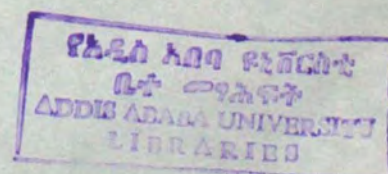
TABLE 8: Summary of One Way ANOVA Concerning Academic Achievement of Direct Entrants and Those Students who entered College After A Gap of 1 to 5 and 6 and More Years.

Source	df	SS	MS	F
Between	2	47.38	23.69	282.03
Within	340	28.56	0.08	
Total	342	75.93		

After finding an over all significant difference among mean values, it is necessary to conduct a post hoc multiple comparison analysis. This is done in order to identify pair of means that differed one from another. Since the sample size are unequal in all the three categories, the usually recommended appropriate test is Tukey Kramer(TK). The test statistics for this procedure is Q (Studentized Range). Thus, three paired comparisons with mean square within value of 0.08 were computed (for calculated Q values see Appendix A).

Critical Q value (table value) was 3.31 for r (number of means being compared)= 3, dfw(degrees of freedom Within)= 340 and alpha = 0.05. This critical value was compared to the three pair comparisons.

According to the result significant difference exist between the three groups with respect to their mean CGPA. The maximum mean CGPA difference was between direct entrants



and those students who came to college after a gap of 6 and more years ($Q=36.3689$). A summary of the Tukey/ Kramer (TK) test along with group mean CGPA is given below in Table 9.

TABLE 9: Mean Comparison of Groups By Years Break in Study On Academic Achievement (Tukey/Kramer (TK) procedure)

Group Mean CGPA	Years Break in Study	0	1-5	6 and above
3.2683	0	\		
2.3857	1-5	*	\	
2.0818	6 and above	*	*	\

* Pair of groups significantly different at $p < 0.05$

B. High School Grades(ESLCE GPA) and College Academic Achievement

High school grades were categorized in to five groups.

i) 2.40 ii) 2.60 iii) 2.80 iv) 3.00 v) 3.20.

And these variation in high school grades were examined if they have any effect on college academic achievement. The result obtained after a treatment of one way ANOVA has shown that there is a statistically significant difference in college academic achievement among the five categories

$F(4,338) = 205.73$, $P < 0.0001$. Hence, the mean CGPA of students who got high school grades of 2.40, 2.60; 2.80; 3.00; and 3.20 were found to be 2.1271, 2.3032; 2.5028; 2.9201; and 3.2294, respectively. A summary table is given below showing the result of one way ANOVA.

TABLE 10: Summary of one Way ANOVA Regarding Academic Achievement of Students With Different High School Grades (ESLCE GPA)

Source	df	SS	MS	F
Between	4	53.83	13.46	205.73
Within	338	22.11	0.07	
Total	342	75.93		

An over all significant difference obtained after one way A NOVA calls for a detailed look at which pair of means significantly differ. Therefore, Tukey/Kramer (TK) post hoc comparison test was used to see differing paired mean values. As a result ten paired comparisons with mean square within value of 0.07 were worked out (for calculated Q values see Appendix B).

With $\alpha = 0.05$, $r=5$, with 338 dfw, the critical value of Q is found to be 3.86. This critical value of Q was compared to the ten pair comparisons.

Here, all the ten pairs of means were found to differ significantly. The greatest mean CGPA difference was

between those students who entered college with a high school grade of 2.40 and those who came to college with a high school grades of 3.20 ($Q=31.5294$). The following table presents mean comparison results using the Tukey/Kramer(TK) method.

TABLE 11: Mean Comparison of Groups By High School Grades on College Academic Achievement (Tukey/Kramer (TK) procedure).

Group Mean CGPA	High School Grades	3.20	3.00	2.80	2.60	2.40
3.2294	3.20	\				
2.9201	3.00	*	\			
2.5028	2.80	*	*	\		
2.3032	2.60	*	*	*	\	
2.1271	2.40	*	*	*	*	\

* Pair of groups significantly different at $p < 0.05$

C. Age On Entry and Academic Achievement

In this study an effort was made to see if there is a significant difference in academic achievement between age groups. Age is categorized into three levels. (i) ≤ 18 ii) 19-22 iii) 23 and above. The result of one way ANOVA indicates that there is a statistically significant difference in academic achievement among the three age groups $F(2,340) = 127.80, p < 0.0001$. Hence, mean CGPA

values were 3.0464, 2.7690 and 2.3093 for those students who entered college at age 18 and below, 19 to 22, and 23 and above, respectively. The result of one way ANOVA is given below in Table 12.

TABLE 12: Summary of One Way ANOVA Concerning Academic Achievement of Students with Different Age Levels.

Source	df	SS	MS	F
Between	2	32.59	16.26	127.80
Within	340	43.35	0.13	
Total	342	75.93		

The significant difference among mean values were followed by Tukey/Kramer (TK) post hoc comparison test. Thus, three pairs of comparisons were made (for calculated Q values see Appendix C).

The critical Q value was 3.31 for dfw = 340, r = 3 and alpha = 0.05. This critical value of Q was compared with the three pairs of comparisons.

Here, all the three pairs of means were found to differ significantly. The maximum mean CGPA difference was between those students who entered college at age 18 and below and those who came to college at age 23 and above (Q=22.3364). The table below shows the result of Tukey/kramer (TK) test.

TABLE 13: Mean Comparison of Groups By Age on Academic Achievement (Tukey/Kramer(TK) Procedure)

Group Mean CGPA	Age on Entry	≤ 18	19 - 22	23 and above
3.0464	≤18	\		
2.7690	19-22	*	\	
2.3093	23 and above	*	*	\

* pair of groups significantly different at $p < 0.05$

D. Sex and Academic Achievement

An inquiry into the possible effect of gender on academic achievement was raised and examined. To this end, a two way ANOVA (2x2) which was meant to see the effect of the groupings (Regular and Extension) on academic achievement of male and female subjects was computed. Here, mean CGPA values of rows (females 2.7165 and males 2.7458) and columns (Regular 3.0404 and Extension 2.2843) as well as the grand mean 2.7318 were taken into consideration. A Summary Table showing the results of a two-way ANOVA is given below.

TABLE 14: Summary ANOVA for The Effects of Groupings on The Academic Achievement of Male and Female Subjects

Source	df	SS	MS	Fob.	Fcv, $\alpha = 0.001$
Rows (Sexes)	1	0.07	0.07	0.89	10.8
Column (Groupings)	1	47.61	47.61	574.59	10.8
Interaction	1	0.16	0.16	1.93	10.8
Within	339	28.09	0.08		
Total	342	75.93			

At 0.001 level of significance with 1 and 339 degree of freedom the observed value of F for Sexes (Rows) doesnot exceed the critical value. Thus, the test is not significant and this indicates that, in the population the mean CGPA for males doesnot differ from the mean CGPA for females. On the other hand at $\alpha = 0.001$ with 1 and 339 degree of freedom the computed F ratio in the columns effect exceeds the critical value. This indicated that, in the population the mean CGPA for the two groupings (Regular and Extension) differ significantly.

For the interaction, the conclusion is that, in the population there is no interaction between kind of grouping and subjects sex at 0.001 alpha level.

E. Marital Status and Academic Achievement.

An examination into the effect of marital status on academic achievement has shown that this variable causes a significant difference $F(1,341) = 91.76, P < 0.0001$.

Out of the total population of 343 students 272 (79.30%) were single and 71(20.69%) married. Those single subjects scored a mean CGPA of 2.8425 with a standard deviation and standard error of 0.4560 and 0.0276, respectively. The 95% confidence interval limits are 2.7881 and 2.8969. Similarly, married subjects got a mean CGPA of 2.3077 with a standard deviation and standard error of 0.2234 and 0.0265, respectively. The 95% confidence interval for the mean is found between 2.2548 and 2.3606. A Summary of one way ANOVA concerning academic achievement of single and married subjects is presented below in Table 15.

TABLE 15: Summary of One way ANOVA Concerning Academic Achievement of Single and Married Subjects

Source	df	SS	Ms	F
Between	1	16.10	16.10	91.76
Within	341	59.83	0.18	
Total	342	75.93		

CHAPTER FIVE

DISCUSSION

The major subtopics that are going to be discussed in this section are the following:

5.1 Is there a significant difference between regular and extension students in terms of their academic achievement?

5.2 What factors can affect the academic achievement of regular and extension students?

5.1 Academic Achievement of Regular and Extension Students.

A Statistically significant difference existed between regular and extension students in terms of their academic achievement $F(1,341)=565.70$, $p<0.0001$. That is, extension students were performing significantly lower than regular entrants. This finding is also supported by data obtained from the responses of instructors teaching both regular and extension classes, counselors, and a co-ordinator of the continuing education program at the AACC. All of these persons expressed dissatisfaction with their extension students. According to these persons the teaching of extension classes on an overload basis, the practice of repeating at night of day time courses, the non-availability

of guidance and counseling services for extension students and the timing of the evening program are among the reasons for the low academic achievement of extension students. Moreover, as reported by these persons higher education institutions consider the extension program as a secondary activity. To them this is the other factor that negatively affect the academic achievement of extension students. As noted in the review of literature, some researchers also related the low academic achievement of extension entrants to those factors identified by instructors, counselors and the co-ordinator of the continuing education program at the AACC.

The superior academic achievement of regular students over extension enrollees go in line with the research findings of the studies which compared the scholastic performance of the two groups of students, (Anikeef, 1954; Astin, 1977; and Checkering, 1974 cited in Cross, 1988).

Furthermore, the result of the present study is contrary to research findings reported by the Staff of the Center for the Study of Liberal Education for Adults at Roosevelt University (cited in Dyer, 1956) and Sorenson (cited in McMahon, 1960).

5.2. Factors that can Affect Academic Achievement of Regular and Extension Students.

5.2.1. Number of Years Break in Study

Number of years break in study was categorized in to three levels as indicated earlier. As mentioned in the analysis section, the difference in academic achievement between the three groups were tested using one way ANOVA. And it was found that there is a statistically significant difference $F(2,340)=282.03$, $p<0.0001$. The Tukey/kramer (TK) test revealed a significant difference between all pairs of means. That is significant differences were observed between direct entrants and those students who entered college after a gap of 1 to 5 years ($Q=32.3028$), direct entrants and those subjects who joined college after a break of 6 and more years ($Q=36.3689$), those subjects who came to college after an interruption of 1 to 5 and 6 and more years ($Q=8.6091$). According to the result the mean CGPA value of direct entrants differed significantly from all other mean CGPA values of the two groups. This indicates that the lapse of time between the completion of high school and joining college is a factor that contributes to low academic performance.

The result of the present study agrees with the findings reported by some researchers (example, knowles, 1990; Apps, 1982; Sylvia et.al,1987; Cross, 1988; knox,

1989; Steltenpohe and Shipton, 1986). According to these researchers years break in study is an important factor that contributes to low academic achievement. This may be because of the fact that students who are involved in formal learning after the lapse of some years may feel high anxiety and lack confidence in their ability to learn and succeed.

Furthermore, students who entered college after a gap of same years lack basic academic skills (Steltenpohe and Shipton, 1986, and Sylvia et.al,1987) and suffer from insufficient background in some basic subjects (Apps, 1982, and Steltenpohe and Shipton, 1986).

Thus, lack of academic self confidence, high anxiety, lack of basic academic skills, and insufficient background in some basic subjects might have contributed to low academic achievement of students.

As can be seen in the analysis section, the greatest mean CGPA difference was observed between those student who entered college directly from high school and those who joined college after a gap of 6 and more years. This finding indicates that an increase in the number of years break in study results in lower achievement. The result of the present study is in harmony with the findings reported by Belaye (1990) and Daniel (1992). According to these researchers, as years after the completion of secondary education gets longer and longer, students' academic

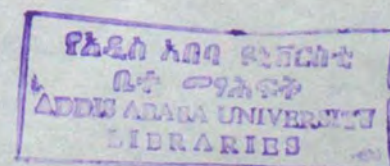
competence tends to decrease and eventually decrease student's ability to succeed academically.

5.2.2. High School Grades (ESLCE GPA).

High school graders (ESLCE GPA) were categorized in to five groups and one way ANOVA was carried out. The result of one way ANOVA showed that there is a statistically significant difference among the mean CGPA of the five groups $F(4,338)=205.73, p<0.0001$.

Based on this result, Tukey/Kramer(TK) post hoc Comparison test was made to find out the difference between pair of means. Thus ten paired comparisons were worked out. A statistically significant difference was found among all ten pairs of means. Hence, subjects with lower high school grades, i.e, 2.40, 2.60, and 2.80 got lower mean CGPA, and those students with higher high school grades i.e; 3.00 and 3.20 received higher mean CGPA. The greatest mean CGPA difference was between those students who entered college with a high school grades of 2.40 and those who came to college with a high school grades of 3.20($Q=31.5294$). This indicates that low high school grades is a factor which contributes to the poor college performance of subjects.

This finding is in line with Knoxs' (1989) statement that low achievement scored in the past is among the obstacles to students scholastic achievement.



According to some researchers, students with poor educational background frequently lack interest in learning or lack confidence in their ability to learn (Cross, 1988; Wlodkowski, 1991 and Knox, 1989). Thus, factors such as students' lack of interest or lack of confidence in their ability to learn might have contributed to their low college academic performance.

5.2.3. Age on Entry

Age on entry was categorized into three groups. The analysis of one way ANOVA as indicated in the aforementioned section yielded a statistically significant difference among the mean CGPA of ^{the} three age groups $F(2, 340) = 127.80, p < 0.0001$.

Following this an over all significant difference post hoc comparison tests were made using Tukey/Kramer (Tk) method. A statistically significant difference was found among all the three pairs of means. That is significant differences were observed between those students who attended college at age 18 and below and 19 to 22 years ($Q=8.2559$) those students who entered college at age 18 and below and 23 and above years ($Q=22.3364$); and those students who came to college at age 19 to 22 and 23 and above years ($Q=13.0597$). This indicates that those students who joined college at age 18 and below years got the highest mean CGPA value than all other mean CGPA values of the two groups.

Thus, age is seen as one of the factors that contributed to low academic achievement of students.

The negative effect of age on academic achievement may be explicable in terms of the relation of age with physiological condition, which is an important factor in determining academic performance. As noted by Knowles, (1980) various physiological changes, such as decline in visual acuity, reduction in speed reaction, and lowering of energy level occur with age. It is therefore reasonable to infer that an increase in age results in various physiological changes, which in turn might have been reflected in the negative effect of age on students' academic achievement.

5.2.4. Sex

The difference in academic achievement between the two sexes was tested by a two way ANOVA. The Row effect (Sexes) in the two way ANOVA showed that there is no significant difference in academic achievement between the two sexes either in extension or regular programmes.

There are studies which are in line with the present finding. For example, Kidd, (1973) reported that there is no significant difference between men and women extension students in academic achievement.

5.2.5. Marital Status

A one way ANOVA which was employed produced a result which shows a statistically significant difference between single and married subjects $F(1,341) = 91.76, p < 0.0001$

Here, married subjects got lower mean CGPA than single students. This indicates that marriage is a factor in low academic achievement of students.

Marriage implies shouldering home and family responsibilities. Thus, married subjects are required to combine home and family responsibilities with academic work. As noted by many researchers combining education with other obligations (family, job and community) lowers the academic achievement (Apps, 1982; Elsey, 1982; McMahon, 1960; and Darkenwaled and Merriam, 1982). The result of this study confirms the argument of the above researchers. According to these persons combining academic work with home and family responsibilities result in lack of enough time for study, conflicting pressure, difficulties of concentration and absenteeism. The low academic achievement of married subjects might be viewed in relation to these conditions.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATION

6.1. SUMMARY

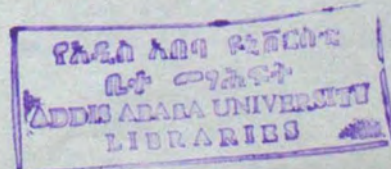
The study investigated if there is a significant difference in academic achievement between regular and extension students and attempted to find out the effect of certain factors on the scholastic performance of the two groups of students.

Cumulative Grade point Average (CGPA) was used to compare the subjects' academic achievement.

The major methods of analysis employed were the t-test, one way and two way ANOVA and Tukey/Kramer (TK) post hoc comparison method.

A t-test and one way ANOVA made to examine the academic achievement status of regular and extension students has shown that there is a statistically significant difference between the two groups of students. Hence, the regular group surpasses extension entrants in academic achievement.

The responses of instructors, counselors and the coordinator of the continuing education program at the AACC indicate that the observed significant difference in



academic achievement between regular and extension students could be because of the teaching of extension classes on an overload basis, the non-availability of guidance and counseling services for extension students, the timing of the evening program and the consideration of extension program as a secondary activity. Some researchers also related the low academic achievement of extension students to the aforementioned factors.

The result of the present study supports the research outcomes that reported differences in academic achievement between regular and extension students, with higher academic achievement score for regular entrants.

Analysis of one way ANOVA to assess the effect of years break in study on academic achievement has shown that this variable cause difference. Following this result Tukey/Kramer (TK) post hoc comparisons were performed in order to find pairs of means that differ one from the other. Thus, three pair comparisons were made. All the three pairs of means were found to differ significantly. According to the result, as the number of years break in study increases academic achievement decreases.

The result obtained after a treatment of one way ANOVA has shown that there is a statistically significant difference in college academic achievement due to variation in high school grades (ESLCE GPA). The post hoc comparison

test that followed this result showed that all ten pairs of means differ significantly. According to the result as high school grades (ESLCE GPA) decreases, college academic achievement also decreases.

By employing one way ANOVA, test of difference in academic achievement among the three age levels was made. The test showed that the mean CGPA of the three age groups differ significantly. Following this result TuKey/Kramer post hoc comparisons were performed. Here, all the three pairs of means were found to differ significantly. According to the result an increase in age cause negative effect on academic achievement.

The difference between sexes in academic achievement was not significant. Hence, the mean CGPA for males doesn't differ from the mean CGPA for females.

Marital status was found to have a significant effect on academic achievement, with single students having the highest mean CGPA.

5.2. CONCLUSION

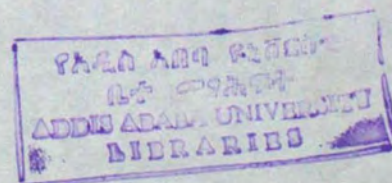
Based on the results of this study the following conclusions are presented.

1. There is a statistically significant difference in academic achievement between regular and extension students at the AACC. Regular students outrank extension entrants in academic achievement.
2. Differences in the number of years break in study, high school grades (ESLCE GPA), age on entry and marital status cause a significant difference in academic achievement.
3. Sex has no effect on academic achievement.

6.3. RECOMMENDATION

Based on the findings in this research, the following recommendations are given.

1. Results in this study indicated that regular students outrank extension enrollees in academic achievement. Therefore, higher education institutions should take the necessary measures that might help extension students get more out of their educational experience. This may include:
 - a) The provision of intensive guidance and counseling services for extension students with particular



emphasis on confidence building and development of efficient study and learning skills.

- b) The training of counselors who can appropriately deal with both young and adult clients.
2. The observed significant difference between regular and extension students in terms of their academic achievement call for repeating the same research on a wider population by including some other relevant variables that possibly differentiate the learning gain of the two groups of students.

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A P P E N D I C E S

APPENDIX A

Q Values Computed Based on Differences in the Number of Years Break in Study After a Significant ANOVA Findings

Differences in the number of Years Break in Study	Q values
G1-2	32*.3028
G1-3	36*.3689
G2-3	8*.6091

* Differing groups interms of mean CGPA.

G1= those students who entered college directly from high school.

G2= those students who came to college after a gap of 1 to 5 years.

G3= those students who came to college after a gap of 6 and more years.

The number of means being compared (r)=3.

Degree of freedom within = 340.

Studentized Range (Q) table Value = 3.31.

Alpha = 0.05.

$$Q = \frac{\bar{X}_i - \bar{X}_k}{\sqrt{MSW \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}}$$

APPENDIX B

Q Values Computed Based on differences in High School grades
(ESLCE GPA) After a significant ANOVA findings

Differences in High School grades (ESLCE GPA)	Q Values
G1-2	11*.4732
G1-3	19*.6626
G1-4	28*.4985
G1-5	31*.5294
G2-3	12*.0259
G2-4	20*.6321
G2-5	24*.4000
G3-4	5*.0918
G3-5	9*.1189
G4-5	4*.7212

*Differing groups interms of mean CGPA.

G1= Students with high School grades (ESLCE GPA) of 3.20
 G2= " " " " " " " 3.00
 G3= " " " " " " " 2.80
 G4 = " " " " " " " 2.60
 G5 = " " " " " " " 2.40

The number of means being compared (r) = 5.

Degree of freedom within =338.

Studentized Range (Q) table value = 3.86.

Alpha =0.05.

APPENDIX C

Q values Computed Based on age Differences After a Significant ANOVA Findings

Age Differences	Q values
G1-2	8*.2559
G1-3	22*.3364
G2-3	13*.0597

* Differing groups interms of mean CGPA.

G1= those students who entered college at age 18 and below years.

G2= those students who entered college at age 19 to 22 years.

G3= those students who entered college at age 23 and above years.

The number of means being compared (r) = 3.

Degree of freedom Within = 340.

Studentized Range (Q) table Value = 3.31.

Alpha = 0.05.

APPENDIX D

Interview Items Prepared for Instructors, Counselors, and a Co-ordinator of the Continuing Education Program at the AACC

1. Do you teach adult extension students any differently from the way you teach young regular students?
2. Do you use identical evaluation methods in both regular and extension classes?
3. What are the academic problems of regular and extension students?
4. Which groups of students (regular or extension) perform less academically? and why?
5. Is guidance and counseling service available for extension students?