

AN ANALYSIS OF SELECTED CHARACTERISTICS
RELATED TO ADULTS ATTENDING AND
DROPOUTS FROM THE EVENING DIVISION OF
THE RED RIVER COMMUNITY COLLEGE

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ABSTRACT

The purpose of this study was to determine whether adults attending and dropouts from the Evening Division of the Red River Community College differed significantly with respect to their socio-economic characteristics, educational background, occupation and extent they considered that attendance at college modified an adult's way of life. A secondary objective was to establish whether the evaluations of the adults in attendance, dropouts and instructors differed in terms of the extent they considered that certain factors affected an adult's progress, caused him difficulty and motivated him to attend college. Another secondary objective was to develop a statistical model capable of identifying potential dropouts.

Multiple-choice questionnaires were used to collect the required data from 272 adults in attendance, sixty dropouts and thirty-three instructors selected at random from the Evening Division population. The responses of the adult students and their instructors were tabulated, summarised, recorded on I.B.M. cards and analysed by the computer.

Whether an adult continued or discontinued his attendance at college in the evening was found to be partially determined by the following characteristics and evaluations:

1. The number of hours he studied a course outside of class.
2. The number of evening courses he had failed to complete.
3. His opinion of the opportunities available to discuss learning difficulties and personal problems with instructors.
4. How useful he considered his studies were in his occupation.
5. The extent he considered an adult was motivated to attend college by technological changes and pleasure.
6. The extent he felt that insufficient time to study retarded an adult's progress in college.
7. The extent he considered that attendance at college affected an adult's leisure pursuits and health.
8. The extent he considered that instructor-student relationships caused an adult difficulty.

Stepwise multiple regression analysis revealed that the number of hours an adult studied a course, the number of evening courses he had failed to complete and the extent he considered an adult was motivated to attend college by changes in technology explained forty per cent of the variability between the adults in attendance and dropouts. Furthermore a discriminant function with these three factors as independent variables was able to identify ninety-three per cent of the actual dropouts as potential dropouts.

According to the dropouts and instructors discontinuance of attendance was often caused by a change in working hours or the failure of a course to meet an adult's

interests and needs. Dropouts also considered that the emergence of a personal problem often prevented some adults from continuing their attendance. The instructors on the other hand felt inadequate background knowledge often induced adults to withdraw.

Analysis revealed that, though the evaluations of the instructors often differed significantly from those of the adults they taught, the evaluations of the adults in attendance differed very little from those of the dropouts.

Based on the findings of this study and the limitations established some tentative conclusions were drawn.

- (a) Identifying potential dropouts is difficult because of the many similarities between the dropouts and adults who continue their attendance. Only a few select factors can accomplish the task of selection.
- (b) Many factors contribute to an adult discontinuing his attendance therefore it is only possible to make tentative generalizations. Discontinuance can be associated with a change in working hours, personal problems, past experience, perception, self-discipline and insufficient knowledge.
- (c) Under existing conditions adult students do not have adequate opportunity to discuss their learning difficulties and personal problems with instructors. Therefore communication breaks down between the instructor and the adult who needs his assistance.
- (d) Most evening students are self-motivated, attending college to improve their knowledge and understanding of an occupation, often with the intention of gaining promotion or changing vocation.

- (e) Interest in post-secondary education usually arises after several years employment, when a change in circumstances or ambition induces an adult to improve his education.
- (f) Though differentiating potential dropouts is difficult, it can be accomplished by fairly sophisticated statistical techniques and data on a few select factors. Though the accuracy of prediction is not perfect it is sufficient to justify the effort involved.

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CHAPTER I

STATEMENT OF THE PROBLEM AND DEFINITION OF TERMS

Introduction

The demand for adult education has been stimulated in various eras by the changing needs of society, and thus adult education has been one of the principal instruments for meeting deep social needs such as educating people to read and write, assisting them to adjust to the technological and economic changes taking place around them, as well as encouraging them to make constructive use of leisure time. In recent years technological and social changes have taken place at a rapid rate, in fact mankind's knowledge of the world has increased at such a rate that no one man can hope to absorb or cope with all the knowledge in any one field. In agriculture and manufacturing output has been increased and the labour force decreased with the use of labour saving methods of production. Unskilled labour has become less and less in demand, even certain skills which would have guaranteed a craftsman a stable and well paid job have become obsolete. The demand for labour has been increasingly directed towards educated and trained people.

According to A.A. Liveright, social, economic and

technological changes are clustering together, moving in the same direction and supporting each other. He supports his argument by maintaining that:

The adjective 'more' characterizes most trends. There are more people and more people in cities. There is more mobility, more money for education and Federal activities, and more technical facilities. There is more rapid change in every aspect of life. There are more problems to face and more countries in a more complex and more closely interwoven world.¹

Our society requires specialists if it is to function efficiently, and reap the benefits of technological advances. It is therefore imperative that educational opportunities at the post-secondary level be expanded to encompass all levels of society. The community college has attempted to bring post-secondary education to the door step of the adult at a price that does not deter attendance. Furthermore, it offers a wide variety of programmes, that provide adults with the specialised skills they need to enter semi-professional and technical occupations, created by technological advancement. Thiemann and Mowat believe that the community college "helps to narrow the gap between what is and what might be, in providing for the needs of the individual and society." ²

¹A.A. Liveright, A Study of Adult Education in the United States. (Brookline: Centre for Study of Liberal Education for Adults, 1968), p. 17

²H.A. MacNeil, "Colleges to Meet Community Needs." in Report of the Hearing by the Canadian Commission for the Community College, ed. by Francis C. Thiemann and Gordon L. Mowat, (Edmonton Department of Educational Administration, University of Alberta, 1969), p. 1.

Many adults realise that their level of skills and standard of education are inadequate, but they are unable to continue their studies because they have families to support and a job to maintain. These people do not have either the time or the money to spend on a full-time educational programme at a community college, which would eventually place them in a position to compete for better paying jobs. The community college has come to the aid of such adults by offering programmes in the evening that enable them to obtain the knowledge and skills they desire. Also many adults are finding that their working day and life had been shortened, leaving them with more leisure time than they can utilise. Community colleges have been assisting many adults to use their increased leisure time constructively by providing them with cultural and recreational programmes.

To satisfy the needs of adults with widely varying interests, ambitions and cultural backgrounds is an ambitious objective difficult to accomplish. Many adults enthusiastically enroll for an evening course, but after attending for several weeks withdraw. Such withdrawals may be due to the adult's personality, unrealistic objectives, the character of the educational institution as well as many other social and environmental factors. Stewart Marsh in his article "Students at Dusk" maintains that:

It is often a struggle for the adult student simply to be at school on time. He gets off

work, dashes home, eats a hasty supper, heads for college, and takes a classroom seat just as the instructor begins. Family life is frequently interrupted. Perhaps there are those who gladly escape the turmoil of the home, but others regret the many nights spent away from the members of the family.... There are many reasons why the evening student may be absent from class, get behind with homework, and become discouraged.... The percentage of drop-outs is considerably higher at night than in the day school, but it's a tribute to evening students that an even greater number do not withdraw.³

The community college is obviously going to play a major role in providing adult educational programmes in the future, that will enable adults to live, work and play in a dynamic society.

Post-Secondary Education in the Province of Manitoba

The Province of Manitoba has not been a 'trend-setter' in terms of the post-secondary educational facilities it has provided for its citizens in the past ten years. Nevertheless, it has made an effort to provide the best facilities that existing conditions permitted.

Growth of knowledge and advances in technology have changed the structure of the labour force and the composition of industry in Manitoba. Peitchinis points out that:

The average worker cannot expect to remain in the same occupation all his life like his father and

³Stewart Marsh, "Students at Dusk." Junior College Journal, Vol. XXVIII, April, 1958, p. 428.

grandfather; instead he can expect to be trained for three or four different occupations, with each one usually requiring a⁴ higher level of skill than the previous one.

To enable the citizens of Manitoba to keep abreast of such changes, the Provincial Government has made an effort to widen the post-secondary educational opportunities available.

A study of the post-secondary educational needs in Manitoba, by the Manitoba Educational Research Council revealed that technological and social changes had affected the Province's Educational System both qualitatively and quantitatively. In qualitative terms the Government has encouraged the post-secondary educational institutions to provide new programmes that would assist the citizens of Manitoba to live and work in a rapidly changing society, while in quantitative terms educational facilities have been expanded, particularly in adult education, in an effort to meet the growing demand for post-secondary education in the Province.

The Province of Manitoba like other developing regions of the country is in a 'razor's-edge' situation in terms of the relationship between education and development. The Manitoba Educational Research Council in their report stated that:

⁴S.G. Peitchinis, The Economics of Labour Employment and Wages in Canada. (Toronto: McGraw-Hill, 1965), p. 168.

Skill and ability development is a fundamental necessity if Manitoba is going to develop a high productivity economy; on the other hand, education and training programmes not attuned to the other dimensions of Provincial economic and social development can run the risk in the short-run of depriving a region or the entire Province of those highly qualified individuals most likely to bring about potential productivity gains, and in the long-run of creating excess facilities relative to the needs of the declining communities.⁵

Evidently due consideration must be given to economic and social changes if modifications in the post-secondary educational system are to be effective.

One of the major social changes that has taken place in the last two decades has been the movement of population from the rural areas to cities such as Brandon and Winnipeg, which has contributed to the increase in demand for post-secondary education. Also Manitoba has been consistently losing population to other provinces and according to the Manitoba Economic Consultative Board "there is a continuing technological displacement of labour in the Manitoba economy, over and above that taking place in Canada as a whole."⁶ In assessing the overall influence of such migration, the Manitoba Economic Consultative Board found that the majority of the people migrating to other provinces were employed in unskilled service occupations.

⁵Manitoba Educational Research Council, Report on Post-Secondary Education Needs and Training in Manitoba, Part I: The Social and Economic Structure. (Winnipeg: The Manitoba Educational Research Council, 1969), p. viii.

⁶Manitoba Economic Consultative Board. Third Annual Report. (Winnipeg: Manitoba Economic Consultative Board, March 1966), p. 32.

TABLE I

LOCATION OF UNIVERSITIES AND COMMUNITY
COLLEGES IN THE PROVINCE OF MANITOBA

Region	Present Facilities	Proposed New Facilities
Metro-Winnipeg	University of Manitoba University of Winnipeg Red River Community College	St. Boniface Community College
South East		St. Boniface Community College
South Central		Portage la Prairie Community College
South West	University of Brandon	
North West		Lacks the population to warrant a college
Interlake		Selkirk Community College
Northern	The Pas Community College	Thompson Community College

Source: Manitoba Educational Research Council, Report on Post Secondary Education Needs and Training in Manitoba, Part III: The Administrative and Fiscal Policy. (Winnipeg: The Manitoba Educational Research Council, 1969), pp. 31-42.

According to the Board "problems in skill losses seem likely to arise only when net out-migration becomes very heavy."⁷

However any expansion of existing post-secondary educational facilities, must take into consideration the net out-migration, because greater Federal financing of post-secondary educational programmes would be warranted if a significant amount of the Province's investment in human capital was being transferred to other regions of the country.

Prior to the Second World War post-secondary education was a luxury that only a privileged class could afford, but since then social and economic changes have enabled a larger number of adults to experience and benefit from a college education. In many instances adults want to continue their education on a part-time basis and in Manitoba this demand has been partly satisfied by the Evening Division of the Red River Community College.

The Manitoba Educational Research Council in their third report recommended that new community colleges should be established throughout the Province to dispense more widely the opportunities for a post-secondary education, reduce the pressure on existing facilities and curtail the movement of young people from the rural areas to larger centres such as Brandon and Winnipeg. In their opinion such colleges would:

⁷Ibid. p. 35.

Spur local economic growth with manpower skill development, and promote the development of human resources by expanding and democratizing both vocational and general educational opportunities beyond high school.⁸

In the future the Adult Education Departments of these new community colleges will play a major role in the future development of Manitoba, by providing the skilled manpower and enlightened citizens that sustained growth requires.

Purpose of the Study

Post-secondary educational facilities in Manitoba have improved and will continue to improve in the future if the recommendations of the Manitoba Educational Research Council are accepted. However the development of adult educational activities in community colleges will be partly determined by whether characteristics associated with participation can be identified and whether adults who continue their attendance can be differentiated from those who discontinue.

Therefore the primary objective of this study was to determine whether the adults attending and the drop-outs from the Evening Division of the Red River Community College differed significantly with respect to their socio-economic characteristics, educational background, occupation

⁸Manitoba Educational Research Council, Report on Post-Secondary Education Needs and Training in Manitoba, Part III: The Administrative and Fiscal Policy, (Winnipeg: The Manitoba Educational Research Council, 1969), p. 31.

and extent they considered attendance modified an adult's way of life. Achieving this objective enabled characteristic norms to be established for the adults who continued their attendance and those who dropped out.

A secondary objective of this study was to establish whether the evaluations of the adults in attendance, dropouts and instructors differed significantly in terms of the extent they considered that certain factors affected an adult's progress, caused him difficulty and motivated him to attend college in the evening.

Correlates were established for those characteristics and evaluations that statistical analysis had identified as being able to distinguish a dropout from an adult who continued his studies. Another secondary objective of this study was to use these correlates in developing a statistical model that could be used to identify potential dropouts.

Delimitations

Only those adults enrolled in the programmes offered by the Evening Division of the Red River Community College were included in this study. No consideration was given to other programmes and courses of study offered by the College during the regular day session, or to courses, programmes and adults enrolled in other years.

Excluded from this study were adults enrolled in the following courses:

1. R.E.S.C. - 103N Physics (Pinawa) N = 12
2. M.A.N.S.C.E.T.T. Course
-C.E.T. 101 Mathematics N = 10
3. Scouting and Leadership
Programme N = 16
4. St. Johns Ambulance N = 21
5. Remedial Mathematics N = 17

The adults enrolled in these courses were excluded from this study because the classes were small, taught at an affiliated institution, or were unique in character.

Adults who attended college on a Saturday morning were included in the population studied because Saturday morning was considered to be part of the Evening Division by the College Administration.

The selected characteristics with which this study was concerned were:

1. Sex
2. Age
3. Marital status
4. Place of origin
5. Changes in residence
6. Number of members in family
7. Total family income before deductions
8. Locality where formal education was completed
9. Highest grade completed in school
10. Average grade attained in last year at school
11. Programme of studies followed at school
12. Commencement of post-secondary education
13. Source of encouragement to attend evening school
14. Time needed to complete programme of studies
15. Number of courses attended

16. Studying facilities
17. Average grade attained at college
18. Years of post-secondary education
19. Number of courses dropped
20. Hours spent studying
21. Employment status
22. Type of employment
23. Changes in employment
24. Usefulness of studies
25. Reasons for failing to complete a course
26. Whether they considered attendance at college affected an adult's financial position, leisure pursuits, domestic responsibilities and health.

The evaluations made by the adults in attendance, dropouts and instructors were concerned with the extent that:

1. Adults were able to discuss their learning difficulties and personal problems with instructors.
2. Adults were motivated to attend college in the evening by future advancement, technological changes, boredom, pleasure and a desire to improve their occupational skills.
3. Progress in college was retarded by insufficient time to study, inadequate mathematical knowledge, a deficiency in language skills, unsatisfactory study habits and a decline in learning capacity due to age.
4. Adults had difficulty in maintaining a good grade average, meeting student competition, taking examinations, obtaining counselling service, associating with other students and instructors.

Limitations

The investigator realised before he commenced this study, that whether an adult completed his programme of studies in the Evening Division was determined by more factors and forces than those examined. Therefore he was

aware that personality traits, aspirations and future career prospects as well as many other motivating forces partly determined whether an adult continued attending college. Furthermore he recognised that how an adult responded to a learning situation was greatly influenced by the adult's relationship with his family, friends, fellow students, work associates and teacher. The investigator acknowledged that such forces and relationships would have affected the results of his studies, if they had been taken into account. Consequently any findings are only tentative, since they could be completely offset or even rejected by the excluded factors.

The complexity and sophisticated nature of the factors and forces that determine whether an adult will terminate a course makes these limitations unavoidable.

Definitions of Terms

The terms used in this study are generally employed by persons familiar with the Evening Division of the Red River Community College, community colleges and adult education. To clarify the use of these terms in this study, the investigator has defined some of the important ones in great detail.

Open-Door Policy

The Red River Community College like many other colleges of this type allows adults to enroll in courses

of study if they can show that they are capable of mastering the skills and knowledge involved. This open-door policy for admissions is based on the assumption that a large number of adults would benefit from a post-secondary education if they were given the opportunity to attend college.

Tuition fees are nominal, which enables adults from different socio-economic backgrounds to attend college without financial hardship. An open-door policy also enables community colleges to provide all adults with an equal opportunity to receive a post-secondary education. If an open-door policy is to be effective Rice and Scofield suggest that:

It should be incumbent on the institution to strongly encourage each student into a programme where his initial probability of success is highest until he demonstrates a proficiency that will allow him more flexibility of choice.⁹

Dropout

In this study an adult who missed four consecutive classes at Evening School was considered to be a dropout. Upon examining the class registers the investigator realised that such a definition included adults who transferred from one class to another and adults who registered for a class but never attended. Since the above

⁹Gary A. Rice and William Scofield, "A Contrast Between the Successful and Dropout Student at Yakima Valley College," (Olympia: Washington State Board for Community College Education, 1969), p. 4 (Mimeographed).

definition was not sufficiently exclusive, all adults who had qualified under this definition were classified into one of the following categories:

1. Transfer dropout

An adult who missed four consecutive classes in a course because he had transferred from that course to another one.

2. Non-attending dropout

An adult who missed four consecutive classes in a course because he never attended college after registration.

3. Attending dropout

An adult who missed four consecutive classes in a course but had attended college at least once.

Adults who transferred into a class in the sample were included in the study, but those who transferred out of a class in the sample were excluded. Similarly those adults classified as non-attending dropouts were also excluded. This study was therefore only concerned with those adults classified as attending dropouts, consequently any future reference to dropouts in this study will only apply to this group.

Evening Division

The Evening Division of the Red River Community College offers adults, who want to continue their education on a part-time basis, a wide selection of vocational,

upgrading and leisure courses. The academic year in the Evening Division is divided into three terms of ten weeks duration each, with classes on Monday and Wednesday (7.30 p.m. - 9.30 p.m.) Tuesday and Thursday (7.30 p.m.- 9.30 p.m.), and Saturday (9.00 a.m. - 1.00 p.m.).

Community College

A Community college is an educational institution that is community oriented. Leyland L. Medsker, in his study of the United States Junior Colleges described the comprehensive community college as a post-high school institution which:

- offers a variety of educational programmes of an academic and occupational nature, day and evening, for full-time and part-time students.
- provides an opportunity for students to make up educational deficiencies.
- has a liberal admissions policy.
- emphasizes a well developed guidance programme.
- performs a variety of special services to the community.¹⁰

It is evident that the function of the community college is to serve the post-secondary educational needs of the community in which it is located and the adults who reside in that community, irrespective of their age, sex,

¹⁰ Leyland L. Medsker, The Junior College: Progress and Prospect, (New York: McGraw-Hill Book Co., Inc., 1960), quoted by H.A. MacNeil in Report of the Hearing by the Canadian Commission for the Community College, p. 4.

occupation, ability and educational background by providing a wide variety of courses in many fields of study.

Business Division

Companies to-day expect the personnel they employ in their business offices to be familiar with modern methods of communication and business practices, most of which are not part of a high school education. The Business Division therefore, provides students with a wide range of business administration courses and commercial courses, so they can acquire the new skills that business demands.

In the Business Division of the Evening School the following certificates are awarded to students when they have satisfactorily completed all the required subjects and have the Departments' recommendations:

- Business Administration
- Commercial and Industrial Sales
- Computer Programming and Analysis
- Commercial

Applied Arts and General Education Division

In the regular day session the Applied Arts and General Education Division offers a wide variety of arts courses and provides general education courses as a service to other divisions. However only two areas of specialisation are offered in the Evening Division,

Graphic Arts and Social Welfare Services.

Graduates of the Graphic Arts Programme may become apprentices and work towards their journeyman qualifications for a printing craft, while others may obtain employment in allied service industries. The Welfare Programme is designed to train men and women for employment in private and public Welfare Agencies. Their training is concerned with developing some skill and sensitivity in the effective use of community resources in meeting human needs.

Technology and Industrial Division

The Technology and Industrial Division offers pre-employment and apprenticeship training in trade and industrial areas and engineering technology courses for high school graduates. This division offers the widest range of certificate programmes in the Evening School as shown by the following list:

- Technology Diploma
- Drafting Certificate
- Chemistry Certificate
- Digital Circuits and Digital Computer Certificate
- Industrial Supervision Certificate
- Industrial Electrical Maintenance Certificate
- Radio and Television Electronics Certificate
- Quantity Control Certificate
- Town Planning Certificate

Courses are also offered for general interest apprenticeship training and trade up-grading, in the following areas:

- Trade Improvement
- Industrial
- Track and Field Officials and Administrators
- Scouting and Leadership
- Manitoba Municipal Recreation Directors Association.

Management Development and Extension Services

The Management Development Division was established to provide management education to supervisors in industry, business people and owner managers throughout the Province.

Pre-Requisites for Admission

Applicants for any course of study must meet the entrance requirements that are listed for that course. The requirements for any course are determined by the skills and knowledge that the Division concerned feels a student must possess in order to understand the subject matter taught. Grades required as pre-requisites are Manitoba standards, though equivalent grades from other provinces are acceptable. Students who have obtained standing in the Occupational Entrance Course are acceptable to certain courses, though they may be asked to sit entrance examinations.

Where an applicant lacks the formal pre-requisites,

the Admissions Committee of a Division may approve the student's direct admission to a course on the basis of a satisfactory personal interview and evaluation test. If a student is not approved, facilities exist that enable him to up-grade himself.

Part-Time Student

In this study the term part-time student refers to any adult whose full-time occupation is something other than college study; a person who is continuing his education through the Evening Division of the Red River Community College. It is possible that some regular day students, attend courses offered by the Evening Division, but their numbers were assumed to be sufficiently small that their exclusion was not warranted.

Continuing Education

The words 'adult education' mean different things to different people, consequently no one definition of adult education has gained general acceptance. Recently the term 'continuing education' has become accepted as being a synonym for the term 'adult education' because the former is less value loaded than the latter. Many people still believe that adult education is mainly concerned with remedial education. In this study, adult education and continuing education are considered to be synonymous, referring to the process of continuing or

life long learning offered by post-secondary educational institutions. The investigator recognises that such a definition is rather narrow and is being used in a restricted context.

Dr. Roby Kidd has indicated, that he prefers the term 'continuing education' to be used in a much broader context. He believes that "continuing education should refer to all of the experiences of life that are educational from the earliest to the latest years."¹¹ However Liveright maintained in his book A Study of Adult Education in the United States that:

New concepts of education such as 'life-long learning' and 'education for leisure' are only being given lip-service and have yet to be integrated into the educational establishment.¹²

¹¹J.R. Kidd, The Implications of Continuous Learning, (Toronto: W.J. Gage Ltd., 1966), p. 22

¹²A.A. Liveright, A Study of Adult Education in the United States, p. 15.

CHAPTER II

REVIEW OF LITERATURE

Adult Education

In the past twenty years adult education has been characterised by a growth in the number of institutions active in higher adult education, in the quality of students enrolled in adult educational programmes, in the variety of courses and the quality of education offered. The philosophy underlying such advances is that "every person must be offered an opportunity to develop fully his unique capabilities as an individual, family member, worker and citizen."¹³

Conditions in our society have created a situation whereby a person's education determines the kind and level of occupation open to him and it seems that the education required for entry into many occupations is rising. Thus individuals must accept continuing education as an integral part of their life, if they are to develop their capabilities, make a worthwhile contribution to society and cope with the demands of an ever changing world.

Homer Kempfer points out that two major facts

¹³A.A. Liveright, Study of Adult Education in the United States, p. 4

from the individual's stand point, make life long learning necessary. Firstly, he maintains that "no one during youth and young adulthood can acquire all the knowledge, skills, habits, attitudes and behaviour patterns needed to last him throughout life."¹⁴ Secondly, even if he could acquire such habits and attitudes Kempfer maintains that "rapid changes in our social, political, economic and physical world, brought on by the geometric development of the physical sciences makes it impossible to predict what these behaviour patterns should be."¹⁵ Similarly Snyder and Blocker view continuing education as a means of satisfying

... the need for reviewing one's employment skills and abilities several times throughout life and the need to develop continually one's awareness of the environment in terms of society,¹⁶ culture and natural and technological phenomena.

Also over the past century the life expectancy of man has been lengthened, the working week has been shortened and early retirement encouraged. The increase in leisure time that such changes have produced has caused many people emotional problems because they are not equipped to utilise it. Therefore in many adult education

¹⁴Homer Kempfer, "Adult Education in the Community College," Junior College Journal, Vol. XXI, (September, 1950) p. 20.

¹⁵Ibid, p. 20

¹⁶Fred A. Snyder and Clyde E. Blocker, The Adult Student Population. (Harrisburg Community College, 1971) p.24

institutions "it seems probable that the present emphasis on vocational education will soon be balanced by more leisure programmes."¹⁷ The contribution that adult education can make in assisting adults to adjust to increasing leisure time is clearly foreseen by Williams who suggests that "continuing learning can be effective to keep time as an opportunity rather than a dehumanising burden."¹⁸

In his book Challenge to Affluence Gunnar Myrdal points out "that there is an urgent need for the retraining of older workers in order to prevent the emergence of a group of second class citizens."¹⁹ If adult education institutions fail to provide retraining programmes for adults as they grow older the future then only holds promise of either casual employment or permanent unemployment for many of them.

Though advances have been made in adult education there is evidently still plenty of opportunity to provide a system that will enable adults to cope adequately with

¹⁷A.A. Liveright, Study of Adult Education in the United States, p. 29

¹⁸Robert G. Williams, "Adult Education in the Community College," (Seminar paper prepared for Dr. Arthur Cohen instructor of Education 261D, University of California, Los Angeles, June 9, 1969), p. 4

¹⁹Gunnar Myrdal, Challenge to Affluence, New York: Random House, 1963), p. 27

their problems. Hallenbeck suggests that if adult education institutions are to assist adults to meet the challenges of a dynamic society then more emphasis should be placed on:

- expanding communication skills
- developing flexibility
- improving human relations
- facilitating participation²⁰
- expediting personal growth²⁰

He also maintains that the social functions which adult education has to perform are significantly influenced by the following characteristics of our modern world:

- rapidity of change
- dominance of technology
- intensity of specialisation
- complexity of human relationships
- vastness of opportunity²¹

If education is to meet these challenges then it must not finish just when adults can benefit the most from what it has to offer. Burns and Houle point out that "the challenge is plain, and it is urgent."²²

²⁰Wilbur C. Hallenbeck, "The Function and Place of Adult Education in American Society" in Handbook of Adult Education in the United States, ed. by Malcolm S. Knowles, (Chicago: Adult Education Association of the U.S.A., 1960), pp. 36-37.

²¹Ibid, pp. 30-35.

²²Norman Burns and Cyril O. Houle, The Community Responsibilities of Institutions of Higher Learning, Proceedings of the Institute for Administrative Officers of Higher Institutions, Vol. XX, (Chicago: The University of Chicago Press, 1948), p. 88.

Whether an adult will participate in the adult educational activities provided by an institution, is to a considerable extent determined by the scheduling and nature of the programmes. In his review of research on adult education participants Knox reported that "most adult education agencies could attract almost any target audience if appropriate approaches to programme development and promotion were utilised."²³ Garner suggests that to build a sound adult education programme the following basic principles are essential:

- joint planning between the board of education and a citizen group
- education of adults should be publicly financed
- the curriculum must meet the different needs and interest of adults and it must appeal to a broad range of people ²⁴

Community involvement is obviously a key factor in determining whether an adult education programme will be a success. If a community is encouraged to participate in the planning and organisation of its adult education programme, it will tend to support and have greater interest in such a programme, than in one it did not assist in developing.

²³Alan B. Knox, "Clientele Analysis," Review of Educational Research, Vol. XXXV, (June, 1965) p. 239

²⁴Arthur E. Garner, "Problems and Prospects of Adult Education," Adult Leadership, Vol. XIX, (October, 1970), pp. 130-131.

Some educationalists believe that adult educational institutions are not offering the services and programmes for which they were originally designed. Boyle writing in Adult Leadership maintains that:

The Public Education System has failed the ordinary worker shamefully in preparing him for the work he performs, the security of his family and his life as a responsible citizen.²⁵

La Fountaine supports Boyle in his criticism of the Public Education System; he suggests that "to-day's dropout is a large portion of to-morrow's 'Adult Education Problem'".²⁶

Boyle also critically examined the Adult Education System and came to the conclusion that:

The vast bulk of workers who could benefit from adult education are never reached, never enroll and never complete the appropriate course of study.²⁷

The same criticism of adult education was expressed by Verner and Newberry in their review of research on adult education; they reported that "adult education is widening

²⁵George V. Boyle, "Defining Labour Education Needs," Adult Leadership, Vol. V, (January-February, 1966), p. 6

²⁶M.E. La Fountaine, "Adult Education - A Gross Illusion," Continuous Learning, Vol. V, (January-February, 1966), p.6

²⁷Boyle, "Adult Leadership," p. 278

the gap between the educated and the educationally underprivileged."²⁸

If adult education is going to play a major role in directing the course taken by our society, then a more diverse and encompassing adult education system must be established. Such a system would give the needs of the undereducated and the people from the lower strata of society more consideration and attention. They are the adults who would benefit the most from what adult education has to offer..

The unsatisfactory conditions that exist in adult education to-day were clearly identified by the Canadian Association for Adult Education in its White Paper on the Education of Adults in Canada. In the White Paper it was stressed that:

The total picture of Adult Education in Canada to-day is far from satisfactory. In spite of improvements, it remains a patchwork of courses, schools, programmes and systems, a confusing jumble of opportunities upon which too many adults have to stumble if they are to discover it at all.²⁹

²⁸Coolie Verner and John S. Newberry, "The Nature of Adult Participation," Adult Education, Vol. VIII, (Summer, 1958), p. 219.

²⁹White Paper on the Education of Adults in Canada, (Toronto: Canadian Association for Adult Education, 1964), p. 1.

Summary

In the literature reviewed it was maintained that the recent increase in demand for adult education was to a great extent caused by the pace at which technological changes have been taking place. Technological advances, according to the literature, have brought about drastic changes in the structure of the labour force and the composition of industry which have compelled many adults to acquire new vocational skills and improve their general education. Also it was reported that advances in technology have increased leisure time for the labour force, many of whom were unable to use it constructively. Thus it was proposed that continuous learning and retraining were necessary if adults were going to meet successfully the challenges of a complex technological world.

To meet the increase in demand for post-secondary education and satisfy the diverse needs of adults, adult educational institutions have been offering a great variety of educational programmes. However, according to the research reviewed, there is a great difference in the rates of participation of adults from various socio-economic levels. Therefore it appears that adults whose need for a better education is the greatest are the ones who are being least attracted to participate in adult educational activities. If the deficiencies in the existing system are to be remedied it is evident that a

more diverse adult education system must be established in Canada.

Most of the literature and research reviewed in this chapter was completed in the United States as there was relatively little available on adult education in Canada. However there are indications that more research on adult education will be forthcoming from Canadian Universities in the future.

The research completed in the past on adult education has been severely criticized in recent studies. It has been reported that in many early studies the total samples selected were often too small and unrepresentative of the population being studied. Furthermore it was also noted that unsophisticated statistical techniques were frequently used to analyse the data collected. In recent studies attempts have been made to overcome the sampling and statistical deficiencies of early studies, consequently their findings have greater validity.

If adult education is to assist adults in meeting the challenges of a technological age, the research and literature reviewed indicated that more research must be completed not only on the adult student but also on the administrative structure and instructional techniques of adult education.

Adult Education in the Community College

The nature of society is rapidly changing and some of the forces behind the changes that are taking place have already been identified. Furthermore it has been noted that such changes have had a great impact on industry and the labour force. Thus adults discover, sometimes with a shock, that the level of skills and understanding they attained at school and during their years of work are no longer adequate in their present occupation. They find that if they are to continue in their present employment or compete in the labour market, they have to return to their studies. However the majority of adults have neither the time nor the money to spend on a full-time education programme, therefore they turn to the Evening Division of the local community college to provide them with the skills and education they need.

In his book The Implications of Continuous Learning Kidd explained in simple terms how the community college could assist adults to cope with the dynamic environment in which they lived. He maintained that the community college could be:

An intellectual bank for many able people to draw upon, at any age, and over a wide range of intellectual interests and activities, . . . offer some people the education or training they need to enter upon a vocation bring to others the opportunity for developing

learning skills before entrance to higher education . . . foster cultural and artistic activities.³⁰

Regarded in this light the purposes of adult education are all positive, coherent and attainable, though they will not of course be realised without considerable thought, energy and sound planning.

If the adult educational programme provided by a community college is to achieve such challenging objectives, then the administrators of the programme should have a sound understanding of the dimensions of the community in which the college is located. According to Houle, Blackwell, Kallen and McGrath these dimensions are:

- population base
- organized social relationships
- community's value system
- social stratification
- informal social relationships
- power structure
- ecology³¹

Being aware of the community in which a college is located naturally enables administrators to better interpret the needs of the community and its citizens. However the interpretation of community needs is a difficult and challenging task under the best conditions because as Williams points out "people tend to hide their real needs by seeking the

³⁰Kidd, Implications of Continuous Learning, pp. 105-106

³¹Cyril O. Houle, Gordon W. Blackwell, Horace M. Kallen and Earl J. McGrath, Purposes of the Evening College: Reflections in 1953, Occasional Papers, Number XIII, (Brookline: Centre for the Study of Liberal Education for Adults, 1967), pp. 8-11

satisfaction of lesser needs.³² Furthermore, Griffiths in his address at the Third Annual Illinois Junior College Conference stressed that the challenge of developing a fully comprehensive community based programme of adult education required the following 'action steps' to be taken by adult education administrators:

- counteract forces that are attempting to prematurely crystalize the image of adult education in the Junior College.
- strengthen existing adult education agencies in the community.
- avoid duplication of existing offerings by other institutions.
- develop programmes that will increase the capacity of the individuals involved to deal with their problems.
- direct the administrators' attention to consciously and deliberately continuing their own adult education.³³

Also a community college must adopt a flexible class scheduling system if it is to satisfactorily serve the needs of adults. Some programmes and activities fit

³²Robert G. Williams, "Adult Education in the Community College," pp.8-11

³³William S. Griffith, "Adult Education: The Challenge of the Junior College." (Address presented at the Third Annual Illinois Junior College Conference, Rockford, Illinois, (October 25, 1968), pp.9-12

easily into a semester or term pattern of scheduling courses, but others of course do not. Kempfer suggests that "the time and place of meeting should fit the convenience of the adults."³⁴ Until recently most of the courses provided by community colleges for adults were offered in the evening, but now many colleges are offering courses for adults in the afternoon and at the weekend.

In the Adult Education Department of a community college a sound guidance and counselling service is important, because it is able to reduce the wastage of human resources. However O'Banion feels that in the area of student services the evening student is neglected. He maintains that:

In most community colleges, the evening student is the most ignored only rarely does the evening student become aware of the structure that provides his nourishment: the administration, the faculty, the business office, the library, and the student personnel services.³⁵

Writing in Adult Leadership Latta agrees with O'Banion. He points out that "many community colleges attempt to provide adult education programmes without guidance and counselling services."³⁶

³⁴Kempfer, "Junior College Journal," p. 21.

³⁵Terry O'Banion, "For Adults Only," Adult Leadership. Vol. XVIII, (June, 1968), p. 57.

³⁶Everetta Michael Latta, "Adult Education and the Comprehensive Community College," Adult Leadership, Vol. XIX, (January, 1971), p. 214.

The lack of guidance and counselling for adults in a community college is partly due to the fact that very few colleges have adequate records or background information on adult students. Also there is the problem of making adults aware of the counselling services and motivating them to make use of such services. Ryska suggests that "the major problem is one of available time to see a counsellor other than before class or during the coffee break."³⁷

Establishing a satisfactory guidance and counselling service in a community college is difficult according to O'Banion because:

- student personnel workers generally lack training to cope with the special needs of the evening student.
- student personnel workers often spend a great deal of time in the area of student activities, but what kind of activities should be provided for evening students?
- student personnel workers, like most college staff members, are tuned to daylight activities and schedules.
- most colleges have inadequate student personnel services for evening students because they also have inadequate services for day students.
- the Night Fighter [evening student] is an elusive student, and the student personnel worker doesn't often get an opportunity to communicate his services in a face to face situation.

³⁷John W. Ryska (Counsellor), "A Survey of Evening College Counselling Services," Fresno: Fresno City College, January 1968, p. 4. (Mimeographed).

-most tests in the counsellor's kit are inappropriate for the evening student.

-if student personnel programmes are to be successful, student personnel workers must work closely with the teaching faculty. But if the Night Fighter [evening student] is elusive, the fly-by-night [evening] faculty member is even more elusive.³⁸

Furthermore adults are unique in many ways and providing them with guidance and counselling requires that adequate consideration should be given to such unique characteristics. When adults are counselled Porter recommends that the counsellor should remember that adults:

- lack confidence
- are pressed for time
- have long range goals
- find budgeting time a problem
- have family life problems
- have more experience in living
- are usually employed
- are often frustrated by certain mechanics involved in attending educational institutions
- have bad memories of school
- attend on a voluntary basis
- lack continuity in contacts with faculty and counsellors
- expect a certain degree of formality in communications
- often resist too much direction³⁹

Summary

The literature reviewed on community colleges revealed that such educational institutions are going to

³⁸O'Banion, "Adult Leadership", pp. 57-58

³⁹Lee Porter, "Adults Have Special Counselling Needs," Adult Leadership, Vol. XVIII, (March, 1970), pp. 275-276

play a major role in the development of adult education in Canada. According to published enrollment statistics, the number of adults enrolling in the adult educational programmes offered by community colleges have increased in recent years.⁴⁰

It has been suggested that adults are attracted to the adult educational programmes offered by community colleges because the colleges provide adults with the post-secondary education they desire, at a price they can afford, at a time and place that causes them the minimum inconvenience.

Though there was evidence that ample research has been completed on community colleges with respect to their day-time sessions, a review of the literature revealed that research on the adult educational activities of the colleges was scarce. The investigator found it extremely difficult to secure research studies on the adults who attend community colleges in the evening. If community colleges are going to make as significant a contribution to the development of adult education in Canada as predicted by many adult educators, the reviewed literature indicated that more research should seek to identify the factors that affect enrollment and discontinuance of

⁴⁰ The Manitoba Educational Research Council,
Part I. The Social and Economic Structure, p. 73

attendance in the adult educational activities provided by community colleges.

Participants in Adult Educational Programmes

In the Public Education System, attendance is compulsory and the students have very little influence on the scheduling of classes which contrasts sharply with the adult education system. Verner and Neylan point out that "the content, structure and form of adult education is wholly dependent upon and shaped by the variable characteristics and behaviour patterns of participants."⁴¹

According to Verner and Buttedahl, by studying the characteristics of the adults who participate in adult educational programmes it is possible "to assess whether or not such programmes are appealing to a broadly based representative group of adults from all strata of society."⁴² If a study of participants indicates that certain groups in society are not participating in adult educational activities, programmes and curriculum can be changed to attract and encourage more members from those groups to

⁴¹Coolie Verner and Margaret S. Neylan, "Patterns of Attendance in Adult Night School Courses," Canadian Education and Research Digest, Vol. VI, (September, 1966), p. 230

⁴²Coolie Verner and Knut Buttedahl, "Socio-Economic Characteristics of Participants in Extension Classes," Adult Education, Vol. III, (January-February, 1964), p. 24

participate. Le Vine and Dole stress that "the voluntary nature of adult education necessitates classes that will attract and be closely aligned with students' needs, interests and aspirations."⁴³ In Adult Education Chapman reminds adult educators that they should always remember that "they are providing for mature students . . . whose needs are greatly diversified."⁴⁴

When adult educators attempt to satisfy the needs of adult students, it soon becomes apparent that the adult who attends college in the evening is much different from his day-time counterpart. Dyer in his book Ivory Towers in the Market Place, clearly differentiates between the day and evening student by pointing out that:

The average evening college student has been out of high school for a period of five to thirty years. Older than the day student, he is often much more in earnest about what he is trying to do he has problems which most of the day students have never experienced - earning a living, raising a family for example on the whole,

⁴³James Le Vine and Arthur A. Dole, "Salient Enrollment Determinants in Adult Classes," Adult Education, Vol. XIII, (Spring, 1963), p. 133.

⁴⁴Charles E. Chapman, "Some Characteristics of Adult Part-Time Students," Adult Education, Vol. X, (Autumn, 1959), p. 30.

the adult student is less impressionable than the younger day student, but there is a broad⁴⁵ background of experience upon which he draws.

Furthermore, it appears that participants in adult education are not members of the lower strata of society. According to Dyer adults who attend college in the evening are:

On the average middle class adults with ambition enough to seek a way of climbing a little higher on the ladder leading to a better life for themselves and their children.⁴⁶

In 1962 Johnstone identified a typical adult student as:

A he just as often as a she; under 40; has completed high school or better; enjoys above average income; works full-time and most often in a white collar occupation; is typically white and protestant; is married and is a parent; lives in an urbanised area.⁴⁷

While in their review of research that had investigated the relationships between educational participation and positional variables such as sex, age and marital status Douglass and Moss reported that:

- participation rates decline with age
- men and women with the same educational level participate at about the same rate
- people in the labour force participate to a greater extent than those not in the labour force

⁴⁵John P. Dyer, Ivory Towers in the Market Place, (New York: The Bobbs-Merrill Company, Inc., 1956), p. 11.

⁴⁶Ibid, p. 6

⁴⁷John Johnstone, Volunteers for Learning quoted in A.A. Liveright Study of Adult Education in the United States, p. 24

- participation is related to both level of income and level of occupation
- couples with children participate more than couples without children
- urban residents participate more than rural residents.⁴⁸

Thus as Verner and Newberry point out:

Participants in existing programmes of adult education are drawn in disproportionate numbers from limited segments of the population.⁴⁹

In recent years people at all levels of society have enjoyed an increase in leisure but according to the research reviewed people in the lower socio-economic groups do not usually turn to education as a way of using their spare time. This situation is very serious because the people in the lower socio-economic levels of society have frequently the fewest resources for using their leisure time constructively. According to Verner and Newberry one of the major reasons preventing people from lower socio-economic levels participating in adult educational activities is that "organised adult education requires considerable experience with formal learning situations and as a result, it cannot accommodate those with less

⁴⁸Mohammed Douglass and Gwenna Moss, "Differential Participation Patterns of Adults of Low and High Educational Attainment," Adult Education Journal, Vol. XVIII (Summer, 1968), p. 249

⁴⁹Verner and Newberry, "Adult Education," p. 219.

experience.⁵⁰ It therefore appears that adult educational programmes presently in existence do not generally cater for adults from lower socio-economic levels, where adult education is most needed.

If adults participating in adult educational activities are asked why they attend college they usually respond with a great variety of answers. Chapman reported in Adult Education that the primary reason given by adults for returning to school could be classified into the following broad categories:

- interest in leisure time skills
- interest in social skills
- interest in cultural and intellectual activities
- interest in economic advancement
- interest in educational advancement⁵¹

While Thornton in his book The Community Junior College maintains that "the list of motivations is endless."⁵²

Whatever the motive for attendance may be, it is sufficiently strong to lure the adult out of his home in the evenings.

White, Gaier and Cooley suggest that the adult student "wishes to go back to the 'fork in life's road' by enrolling in evening courses, he believes he can now do what he should have done if he had been more

⁵⁰Ibid, p. 219

⁵¹Chapman, "Adult Education", pp. 34-36

⁵²James W. Thornton, The Community Junior College, (New York: John Wiley and Sons, Inc., 1966), p. 43.

mature."⁵³ So often the realities of life and the need for more education are realised when a change occurs in the adult's marital status, job or family responsibilities. It therefore comes as no surprise that Dooley and White discovered in their study of adult evening college students that "wives and sweethearts undoubtedly exert a great influence on such students to continue their education."⁵⁴

Evidently many adults consider education to be a means of resolving their dissatisfactions with life and attaining their aspirations. The source of these dissatisfactions extends over a large area of man's experiences. According to Chapman sources of dissatisfactions include:

- a feeling of insecurity at home, on the job or in social relationships
- changes in one's position in life
- the sobering effect of age which is frequently accompanied by a realisation of the importance of education

⁵³William F. White, Eugene L. Gaier, and Gary M. Cooley, "Selected Personality Characteristics and Academic Performance of Adult Evening College Students," The Journal of Educational Research, Vo. LIX, (April, 1966), p. 340

⁵⁴Bobby Joe Dooley and William F. White, "Motivational Patterns of a Select Group of Adult Evening College Students," The Journal of Educational Research, Vo. LXII, (October, 1968), p. 66

- a feeling of uneasiness about world affairs and a desire to understand more about human behaviour
- the increase in leisure time
- a desire for material gain
- a rapidly changing environment.⁵⁵

Usually an adult's motive for attending college is the product of one or more of these sources which makes it impossible to generalise why an adult seeks to continue his education.

Though a sincere desire to learn and strong motivation are recognised as being characteristic of evening students, it is often claimed that evening students are not as academically capable as their day-time colleagues. Hackett and Farnum consider such a claim to be absurd, in their opinion:

The average evening student in college level courses has a generalised academic aptitude which is not only above the average for the general population, but is also at least equivalent to that of the average ability level of his day-time counter-part.⁵⁶

Furthermore, Schultz and Ulmer reported after analysing the achievement of day and evening students that:

⁵⁵Chapman, "Adult Education," p. 40.

⁵⁶John R. Hackett and Hollis B. Farnum, "A New Look at the Evening College Student," Adult Education, Vo. XIII, (Spring, 1963), p. 152.

- evening students achieved as well as, or better than, day students when achievement was measured by teacher-made and standardized tests covering course objectives

- students in evening classes excelled in the occupational courses

- students in evening classes achieved as well as, or better than, the day students in liberal arts courses

- evening students made a more consistent rate of gain in achievement throughout the semester than did day students

- the younger, low ability student enrolled in evening classes was found to achieve at a higher level than did the same ability student who was enrolled in the corresponding day classes⁵⁷

On the basis of such evidence it is quite clear that a high performance level should be expected of evening students; so it is not necessary for colleges to provide courses of a lower standard for evening students.

Summary

Research portrays the typical adult education participant as being young, well-educated, a full-time worker, enjoying above average income and living in an urban area. Such broad generalisations concerning the

⁵⁷Raymond E. Schultz, and R. Curtis Ulmer, "How do Day and Evening Students Compare," Junior College Journal, Vol. XXXVII, (September, 1966), p. 36.

adult who participates in adult educational activities are very likely to be unreliable due to the fact that adult education means different things to different people. However research does indicate that participants in adult educational programmes are not representative of the adult population, very few participants are members of the lower socio-economic groups.

Though adults attend educational institutions in the evening for a variety of reasons, adults who attend the adult educational programmes offered by community colleges are mainly interested in vocational improvement, which is directed at either advancement and upgrading in their present jobs or in preparation for new kinds of occupations.

The research studies examined revealed that the adult evening student differed in many ways from the regular day-student. Furthermore it was stressed in several studies that adults would not attend or continue to attend adult educational institutions if many of the characteristics that differentiated an adult student from his day-session counterpart were not given due consideration. Many factors have been identified as being related to attendance, yet no conclusive relationships have been established, partly because the findings of many studies have not been supported by statistical analysis.

Dropouts from Adult Educational Programmes

As the number of adults participating in adult educational activities has increased so has the number of dropouts. Though dropouts create organisational problems and increase the cost of providing adult education, the adult educator is more concerned with the wastage of human resources.

The dropout problem existed in adult education at the beginning of the nineteenth century when Thomas Pole suggested that an absentee book should be kept by adult educators "for entering an account of the visits paid by the conductor or teachers to learners after absentsing themselves from the school for two weeks in succession."⁵⁸ Thus adults withdrawing from their studies is not a new issue in adult education.

To-day many colleges attempt to reduce the number of dropouts from adult educational activities by offering a wide range of educational vocational and leisure courses in an effort to satisfy the diverse needs of the adults they serve. However many adults are still withdrawing from adult educational activities. Novak and Weiant in their study of Gregg Shorthand Classes at Frankford

⁵⁸Thomas Pole, A History of the Origin and Progress of Adult Schools, (New York: Augustus M. Kelley Publishers, 1969), p. 124

Adult Evening School reported that:

The opening of evening schools in the fall characteristically brings hordes of eager students seeking information, registering and professing great seriousness of purpose. After a couple of weeks initially crowded classrooms exhibit many vacant seats.⁵⁹

Research indicates that existing patterns of attendance at adult educational institutions are depressing, in fact one of the most difficult problems facing adult educators to-day is how to encourage more of the adults who enroll in adult educational activities to continue their attendance. However according to the literature and research reviewed the present situation is partly due to the fact that "colleges have very little idea of what happens to dropouts and therefore very little information about their reasons for attending college."⁶⁰ This viewpoint is supported by Ulmer and Verner who maintain that "adult education has done little to understand the causes of

⁵⁹Benjamin J. Novak and Gwendolyn E. Weiant, "Why do Evening School Students Drop out?," Adult Education, Vol. XI, (Autumn, 1960), p. 35

⁶⁰Rice and Scofield, "A Contrast Between the Successful and Dropout Student at Yakima Valley College," p. 19.

discontinuance of attendance."⁶¹

If the dropout problem is to be resolved it is evident that adult educational institutions must do more than merely encourage adults to enroll in the programmes they offer, they must make an effort to identify the dropout before he withdraws and provide him with the encouragement and assistance he needs to continue his studies. This can only be achieved if more research is devoted to discovering how the adults who continue differ from those who discontinue their studies.

Adults who drop out of an educational programme according to Pearce "represents a failure of the programme, . . . because the resources of the programmes were inadequate, the needed staff or material simply unavailable."⁶² However according to some studies reviewed the dropout problem involves more factors than those that can be associated with the learning situation. Merigold in his research on dropouts reported that "the

⁶¹Curtis R. Ulmer and Coolie Verner, "Factors Affecting Attendance in a Junior College Adult Program," Adult Education, Vol. XIII, (Spring, 1963), p. 153.

⁶²Frank C. Pearce, Dropout Patterns in the New Hope Project, (Modesto: Adult Division Modesto Junior College, October 1966), p. 1.

withdrawing student is plagued by a complexity of reasons, . . . acting upon him from every possible angle, intellectually, emotionally, psychologically and even morally."⁶³ Therefore isolating the factors that have the greatest influence on an adult who discontinues his attendance at an adult educational institution is an objective difficult to achieve.

The complexity of the dropout problem was clearly identified by Wenrich, Hannigan and Pfling who suggest that "for most high probability dropouts, academic difficulties cannot be separated from personal problems."⁶⁴ The limited research that has been completed on adult dropouts clearly indicates that adults usually withdraw from educational programmes for more than one reason and that often the different reasons become intertwined. Rice and

⁶³Frank Merigold, The Development and Testing of a Scale to Identify Male Dropouts at Liberal Arts Colleges, (U.S. Department of Health, Education and Welfare, 1967), p. 7

⁶⁴William J. Wenrich, Jane Hannigan and Raymond Pfling, Keeping Dropouts in: Retention of Students Identified as High Probability Dropouts, (Report submitted to Department of Health, Education and Welfare, San Mateo: College of San Mateo, March 1971), p. 28.

Scofield have proposed that:

Instead of simple causes there seems to be a cluster of interrelated factors acting on the student and the reported reason may be the precipitating event which culminates a long list of predisposing causes.⁶⁵

The reason given by an adult for withdrawing from a programme of studies may or may not be the real one according to the literature reviewed. Thus it is often difficult to learn the true reason for an adult withdrawing from a programme because the adult may not know himself why he withdrew or his reason for withdrawing may be associated with personal matters which he does not care to discuss. Reynolds believes that "a maximum of ingenuity may be needed to discover the real cause of withdrawals."⁶⁶

In their study of Night School Dropouts, Mubarka and Wright identified dropouts as "people who are taking

⁶⁵Rice and Scofield, "A Contrast Between the Successful and Dropout Student at Yakima College," p. 22

⁶⁶James W. Reynolds, "Responsibility for Dropouts," Junior College Journal, Vol. XXI, (February, 1951) quoted by John McGeever and R.L. Burton in Report of the Survey of Dropouts and Discontinuing Students of Palomar College for the Academic Year 1963-64, (San Marcos: Research Office of Palomar College, 1965), p. 9.

night school courses for the first time."⁶⁷ Attendance at Evening School does require a certain amount of effort, planning and time, and naturally adults who have never been subjected to such demands in the past often find them too great. Mubarka and Wright reported that "to try and accommodate the additional demands of night school requires commitments that many people cannot or will not make."⁶⁸ Adults, when enrolling for their programme of studies, should be made aware of the amount of studying that will be expected of them outside of college, such information would undoubtedly prevent many adults from committing themselves to a programme of studies they would find too demanding.

A wide variety of reasons have been formulated as to why adults withdraw from adult educational programmes, but as previously noted the complexity of the forces involved makes it impossible to make any generalisations. However it is worth reporting the findings of some research that has been completed in this area.

Mubarka and Wright reported in their study that "a considerable number of students dropped out of school

⁶⁷ Alam Mubarka and E.N. Wright, A Study of Night School Dropouts, (A Schedule 10 Project). (Toronto: Research Department, Toronto Board of Education, 1968, p. 66.

⁶⁸ Ibid, p. 66 .

because of 'personal and family reasons or because of their job."⁶⁹ Also they reported that "some students said that the combination of night school and their job was too much of a load."⁷⁰ In a survey of students enrolled in the Campbell California Adult Education Programme the most important reason for adults withdrawing was that they "discovered the class was not what you [they] thought it would be."⁷¹ Dropouts from the adult evening programme offered by the Mohawk Valley Community College maintained that "they found themselves in courses too difficult for them, or in classes different from what they expected."⁷² Thus the research findings of Siddoway and Stanley were confirmed by the research completed at the Mohawk Valley Community College.

On the basis of the research completed it appears that the number of adults presently withdrawing from adult educational programmes could be reduced if adults were made

⁶⁹Ibid, p. 54

⁷⁰Ibid, p. 54

⁷¹William R. Siddoway and Edward P. Stanley, "Know Your Clientele," Adult Education, Vol. IX, (Spring, 1959), p. 156

⁷²Robert D. Larsson, (Project Supervisor) and Glen W. Salsburg, (Project Director), A Study of Adult Part-Time Students in a Community College. (New York: Mohawk Valley Community College, 1969), p. 14

aware of the content of a course before they enrolled for a programme of studies.

In his study of dropouts from two Toronto re-training institutes Mann reported that "communication between some trainees and teachers, especially where the former seeks help and guidance, leaves much to be desired."⁷³ Mann maintained that the source of the conflict between the trainees and the teachers was that most of the teachers tended to bring into the classroom their middle class values.⁷⁴ Obviously teachers would be able to communicate better with their students if made more aware of the students' environment, value systems and aspirations. A teacher must show an interest in the adults he teaches and establish personal relationships with them, if he is to assist them in attaining their educational goals. Kidd maintains that "the good teacher seems to be one who is at home with people, and they with him."⁷⁵ The importance of the relationship between student and teacher was also recognised by Novak and Weiant in their study of why evening school students discontinue their attendance; they proposed that

⁷³W.E. Mann, "Adult Dropouts," Continuous Learning, Vol. V, (May-June 1966), p. 127.

⁷⁴Ibid, p. 127

⁷⁵J.R. Kidd, How Adults Learn, (New York: Association Press, 1959), p. 310.

"a student's duration in night school depends on the teacher's satisfaction of the student's original motivations."⁷⁶ Therefore according to the literature and research studied the present dropout problem could be partly resolved by teachers becoming more aware of the socio-economic, educational and occupational backgrounds of the adults they teach.

In an effort to reduce the number of dropouts from adult educational programmes, research analysts have tried to discover whether there is any significant difference between those adults who continue their attendance and those who discontinue in terms of sex, age, marital status, course load, number of children in the family, income, occupation and previous education. Verner and Davis in their review of research on adult education reported that "in the studies reviewed twenty-six personal factors had been tested with inconclusive results."⁷⁷

However Mubarka and Wright reported in their study of night school dropouts that:

Many differences exist, between stay-ins and dropouts and these differences often lie in

⁷⁶Novak and Weiant, "Adult Education." p. 36

⁷⁷Coolie Verner and George S. Davis (Jr.), "Completions and Dropouts: A Review of Research," Adult Education, Vol. XIV, (Spring, 1964), p. 172.

the character of the individual participant rather than in the programme.⁷⁸

Furthermore, a study of adult part-time students at the Mohawk Valley Community College revealed that "the successful student was older, had more education and was more education orientated."⁷⁹ It was also reported in the study that:

A student who is under 25, single with an income under \$5,000 and no education beyond high school is two and a half times more likely to be unsuccessful than other students.⁸⁰

Also Ulmer and Verner in their study of dropouts from the adult evening classes offered by the Meridian Mississippi Junior College reported that:

Sex, number of times class meets per week were significant and marital status, past educational achievement, age, number of courses taken had no significance on continuity of attendance.⁸¹

However the nature of the relationships established by research between certain characteristics and discontinuance of attendance have been inconsistent. This situation has to a great extent been caused by poor research techniques and inadequate statistical analysis. Though there is some evidence that indicates that certain socio-economic

⁷⁸Mubarka and Wright, A Study of Night School Dropouts, p. 10.

⁷⁹Larson and Salsburg, A Study of Adult Part-Time Students in a Community College, p. 11.

⁸⁰Ibid, p. 12

⁸¹Ulmer and Verner, "Adult Education," pp. 157-158

characteristics are related to attendance Verner and Davis in their review of research on participation in adult educational activities maintained that "in no case, however, is [was] the research sufficiently acute to clarify the nature and extent of the relationship."⁸² Furthermore, they reported that:

A Comparative analysis of the research procedures points up many deficiencies with respect to sampling procedures, sample sizes, data gathering processes and timing and analytic procedures.⁸³

It is now evident that one of the greatest challenges in adult education to-day is identifying the potential dropout before he withdraws. If a potential dropout could be identified at the beginning of a term, counselling and guidance could be provided that would prevent him from withdrawing. However Merigold points out that "few studies have been orientated towards predicting which students will not successfully complete their college education."⁸⁴

⁸²Verner and Davis, "Adult Education," p. 172

⁸³Ibid, p. 158

⁸⁴Merigold, The Development and Testing of a Scale to Identify Male Dropouts at Liberal Arts Colleges p. 1.

According to Baron, attempts to identify factors which are significantly related to academic achievements "have been primarily centred on intellectual factors and measures."⁸⁵ Though intellectual measures are useful in explaining why some adults succeed and others do not, research findings indicate that factors not related to intelligence play a major role in determining whether an adult will continue his attendance at college. Baron suggests that:

The solution of the problem of increasing the ratio of successful students will possibly be enhanced by identifying and isolating non-intellectual variables.⁸⁶

Rice and Scofield agreed with Baron that factors other than those associated with intelligence could be used to identify potential dropouts. In their study of successful dropout students at Yakima Valley Community College they found that:

Sex, high school G.P.A., declared major, proximity to college and father's occupation were . . . significant beyond the pre-established 0.05 level of significance.⁸⁷

⁸⁵Anthony R. Baron, "Non-Intellectual Variables Related to Successful and Unsuccessful Students in a Junior College," University of Missouri, 1968, p. 1 (Mimeographed).

⁸⁶Ibid, p. 1.

⁸⁷Rice and Scofield, "A Contrast Between the Successful and Dropout Student at Yakima Valley College," p. 64

According to the literature and research reviewed very few models have been developed to identify adult dropouts before they discontinue their attendance at college. However Sainty designed a model for identifying potential dropouts in an academic upgrading programme that made a valuable contribution to our knowledge of adult dropouts and ability to identify them before they drop out. On this basis of the research he had completed, Sainty reported that:

The four predictor variables having the highest correlations with the criterion variable of dropout or completion were: age .514, number of grades repeated .449, occupational status .462,⁸⁸ and number of jobs held in the past year .409.⁸⁸

When Sainty combined these predictor variables in a regression equation with intelligence and reading scores he obtained a multiple R of .799 which indicates that the predictor variables, intelligence and reading scores accounted for sixty-four per cent of the variance that existed between the two groups.

The research reviewed indicates that more research should be devoted to developing statistical prediction models for identifying potential adult dropouts, because such models provide information that enables guidance

⁸⁸Geoffrey E. Sainty, "Predicting Dropouts in Adult Education Courses," Adult Education, Vol. XXI, (Summer, 1971), p. 226.

counsellors to make an effort to assist many potential dropouts from discontinuing their attendance.

Summary

A review of the literature on dropouts indicates that there is a complexity of reasons which contribute to an adult's decision to withdraw from his programme of studies. Often the factors that cause an adult to discontinue his studies are so complex that he does not always know the real reason for his withdrawal.

Recently dropouts from adult educational programmes have been the subject of growing interest because as the number of adults enrolling in adult educational programmes has increased so has the number of dropouts. The dropout problem has serious repercussions on the adult education system because the content, structure and form of adult education is dependent upon and shaped by the characteristics and behaviour patterns of the participants.

Research findings indicate that many differences exist between an adult who continues his attendance and one who discontinues, though disagreements exist with respect to the relationship between many of these factors and whether an adult continues his studies. However there seems to be general agreement that withdrawal is associated more frequently with the characteristics of the adult and his personal values than dissatisfaction with either the course

of studies or teaching methods.

Though there is ample literature and research on the problem of adolescent dropouts from the Public School System there is very little literature or research on adult dropouts. The findings of the research that has been completed have frequently been inconclusive, in fact there was no agreement among the studies reviewed with respect to the identity of an adult dropout.

The literature and research published on adult dropouts revealed that studies designed to develop models for identifying potential dropouts, discovering ways of changing organisational patterns and modifying teaching methods to reduce the number of dropouts from adult educational programmes were very scarce. However it is evident from the literature reviewed that before any steps can be taken to resolve the dropout problem in adult education a more precise identification and analysis of the relationship between certain characteristics and discontinuance of attendance is needed.

Significance of the Literature Reviewed

After reviewing the literature and research presented in this chapter the investigator came to the conclusion that, if the Red River Community College was going to play a leading role in the development of adult education in the Province of Manitoba, then more had to be

known about the adults who presently participated in the adult educational programmes provided by the College. In addition he concluded that the future development of the Province would depend upon educational institutions like the Red River Community College providing adults with educational programmes that would enable them to acquire the skills and knowledge demanded by industry.

The demand for post-secondary education in the Province of Manitoba has increased as reflected in the high enrollments in the programmes offered by the College in the evening but, as noted in the literature, many of the adults who have enrolled in the courses offered have discontinued their attendance. Adults who discontinue their attendance represent a waste of human resources that a developing region such as Manitoba cannot afford.

The investigator discovered from the literature he reviewed that studies had been completed to determine how adults who continue their attendance in adult educational programmes differ from those who discontinue, but no conclusive relationships had been established. Thus he considered that more research was warranted in this area of education. According to the studies reviewed, discontinuance was associated with an adult's socio-economic characteristics, previous education, occupation, personal problems, academic difficulties and the failure of a course to meet his needs.

Findings such as these were given due consideration by the investigator when he formulated his hypotheses and developed his research design for this study.

One method of resolving the dropout problem proposed in several studies was to develop a prediction model for identifying potential dropouts before they discontinued their attendance, which would enable adult educational institutions to provide them with the assistance they needed to continue their studies. After critically examining these studies, the investigator concluded that potential dropouts in the Evening Division could be identified by a refined version of Sainty's prediction model.

Past studies were frequently criticised by present research analysts for poor sampling methods and inadequate statistical techniques. To avoid such criticism, the investigator critically examined his research design before commencing this study. To ensure that appropriate statistical techniques were being applied the investigator consulted members of the Department of Statistics for their advice.

In conclusion the literature indicated that only a small proportion of the population participated in adult educational activities, but even these adults were creating problems for adult educational institutions. Therefore the

investigator considered that a study of the adults attending and dropouts from the Evening Division of the Red River Community College would broaden our understanding of some problems that existed and also suggest courses of action for their partial reduction.

CHAPTER III

METHOD OF RESEARCH

Hypotheses

After discussions with adult educators, interviews with administrators and a review of the literature available on adult education the following two hypotheses and general objective were formulated:

Hypothesis H₁: There are significant differences between adults attending and dropouts from the Evening Division of the Red River Community College in relation to their socio-economic characteristics, formal education, post-secondary education, occupation and extent they consider that attendance at college modified an adult's life style.

Hypothesis H₂: There are significant differences among adults attending, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the opportunities available for adults to discuss learning difficulties and personal problems with instructors and the extent that certain factors motivate an adult to attend college, retard his progress and cause him difficulty.

General Objective: To develop through statistical analysis of characteristics and behaviour of adults attending and dropouts from the Evening Division of the Red River Community College, a model capable of identifying potential dropouts before they discontinue their attendance.

The characteristics, factors and personal evaluations contained in the hypotheses, in the opinion of some adult educators and research analysts have influenced adults' decisions to continue or discontinue their participation in adult educational activities.

Developing the Questionnaires

Prior to commencing this research project, provisional questionnaires were administered to a small sample of adults and instructors who attended the Red River Community College on a Saturday morning to determine the difficulties that might arise administering the questionnaires. The pilot study revealed that multiple-choice questionnaires were needed to reduce the ambiguity of the questionnaire items and facilitate a speedier collection of the information needed. A copy of the multiple-choice questionnaires used in this study can be found in Appendix A.

The multiple-choice questionnaire to be completed by the adults in attendance and dropouts was designed to secure information on their academic, personal and vocational background, as well as to provide them with the opportunities to discuss their learning difficulties. The adults in both groups were asked whether certain factors had retarded their progress or modified their style of living. The dropouts were also asked why they had failed to complete their studies.

Similarly the multiple-choice questionnaire to be completed by the instructors was designed to secure information on their academic, personal and vocational background, as well as to obtain their opinion on why adults attend college in the evening, why some adults fail to

complete their studies and the nature of the learning difficulties that retarded an adult's progress in college.

The Population and Sample

The adults enrolled in the Evening Division of the Red River Community College during the week ending the 30th of November 1970, numbered two thousand eight hundred and forty-four. Seventy-six of the adults enrolled were excluded from the population studies, because the classes in which they were enrolled were small, taught at an affiliated institution or were unique in character. The population was thus reduced to two thousand seven hundred and sixty-eight adults. In Appendix B a detailed analysis of the population has been presented.

Thirteen per cent of the population was selected as the sample to be studied, which required that 272 adults in attendance and sixty dropouts had to be selected at random from the population. To ensure that a representative sample of the adults in attendance and dropouts would be chosen a stratified sampling technique was adopted. The number of adults in attendance and dropouts selected from a division was therefore determined by the percentage of adults in attendance and dropouts in the population who had enrolled in the programmes offered by that division.

Analysis revealed that certain programmes within each division had higher enrollments than others;

this dispersion was accommodated by the sample taken from a division being subdivided into smaller programme and class samples. The number of adults in attendance and dropouts selected from each division, programme and class have been listed in Appendix B.

Administering the Questionnaires

During the last week of November and first week of December, the adults in attendance and instructors who had been selected at random were asked to complete the multiple-choice questionnaires. Prior to administering the multiple-choice questionnaires the investigator briefly discussed the project, explained the purpose of the study and the importance of their participation. While the questionnaires were being completed class lists were studied to secure the names and addresses of the dropouts. A copy of the multiple-choice questionnaire was then mailed to the dropouts with a letter of explanation and a stamped addressed envelope for their reply. Dropouts who failed to return the questionnaire after one week were interviewed over the telephone to obtain their responses to the questionnaire items or encouraged to complete the questionnaire they had been mailed.

Analysis of Data

To determine whether there was a significant difference between the adults in attendance and dropouts

with respect to the select group of characteristics being studies, the data that had been collected were analysed by a statistical computer programme⁸⁹ designed to calculate the value of chi-square for a contingency table and compare the calculated value with the theoretical value at the five per cent and one per cent levels of significance. A similar analysis was completed to establish whether there was a significant difference between the evaluations of the instructors and those adults in attendance and dropouts. A sample of output from the computer programme can be found in Appendix C.

The characteristics and evaluations found to be significant at the five per cent level or better by the chi-square analysis and those that were almost significant were noted. The data were examined and the responses of the adults to the items noted were recorded on I.B.M. cards. A coding system was adopted that identified at a glance the division, programme and class in which an adult had enrolled and whether he had continued his attendance.

Due to the personal nature of many items on the multiple-choice questionnaire, some of the adults in attendance and dropouts did not answer all the items. To complete a correlation analysis and develop a discriminant

⁸⁹Computer Centre, Statistical Packages
(Winnipeg: University of Manitoba, 1972), pp. 11-13.

function required a complete set of responses for each item. The missing data were generated by assigning to an adult who had failed to answer an item, a response that had been chosen at random from the observed responses of the other adults.⁹⁰

A computer programme⁹¹ was then used to determine the relationship between the characteristics and evaluations noted and continuance or discontinuance of attendance, to accomplish this computation a dichotomous variable was included in the analysis. The correlation coefficients that were significant at the five per cent level of significance or better were identified by a t-test.

Prior to developing the discriminant function, the dichotomous variable that identified an adult in attendance from a dropout was transformed into a dummy variable⁹² to facilitate a stepwise multiple regression analysis. The analysis was completed on the computer⁹³ and the dummy variable was assigned as the dependent variable and the variables that had been shown to be significantly correlated with

⁹⁰Francis J. Kelly, et al. Research Design in the Behavioural Sciences: Multiple Regression Approach. (Carbondale and Edwardsville: Southern Illinois University Press, 1969), pp. 249-250.

⁹¹Computer Centre, Statistical Packages, pp. 52-54.

⁹²R.A. Fisher, Contributions to Mathematical Statistics. (New York: John Wiley and Sons, Inc., 1950), p. 376

⁹³Computer Centre, Statistical Packages, pp. 82-84.

continuance or discontinuance of attendance were assigned as the independent variables. The output of the computer programme at each step of the analysis has been presented in Appendix C.

Twenty-five per cent of the adults in attendance and dropouts were withdrawn from the sample⁹⁴ in a manner that maintained the original stratification and the step-wise multiple regression analysis was repeated. The output of the second run of the programme at each step of the analysis can be found in Appendix C.

The first three variables in the two discriminant functions established were identical and in the same order. In addition these three variables contributed to the greatest proportion of the variance that existed between the adults in attendance and dropouts. The two discriminant functions were then used to compute two numerical values for the dependent variable assigned to each of the adults withdrawn from the original sample.

The numerical values obtained for the dependent variable were studied and several values were selected as critical values for discriminating between the adults in attendance and dropouts.⁹⁵ For each of the critical values the investigator estimated the percentage of actual dropouts

⁹⁴Paul Horst, Psychological Measurement and Prediction. (Belmont: Wadsworth Publishing Company, Inc., 1966), pp. 378-379

⁹⁵Sainty, "Adult Education," pp. 228-229

identified as potential dropouts and the percentage of actual adults in attendance identified as potential dropouts by each of the discriminant functions. Contingency tables were established for each critical value and on the basis of "cost" and "utility"⁹⁶ the best critical value for discriminating between adults in attendance and dropouts was chosen for each discriminant function.

⁹⁶Philip H. Du Bois, An Introduction to Psychological Statistics, (New York: Harper and Row, 1965), p. 253

CHAPTER IV

FINDINGS OF THE STUDY

Introduction

The data that were collected in this study has been summarised, analysed and commented upon in this chapter. To facilitate analysis and simplify presentation, the findings have been presented in sections.

The hypotheses stated in Chapter III were tested by comparing the responses of the adults in attendance, dropouts and instructors to the items on the multiple-choice questionnaires. A chi-square test was applied to determine whether there was a significant difference between the responses of the adults in any two groups being compared, and a five per cent level of significance or better was accepted as indicating a significant relationship.

At the base of each contingency table the computed chi-square statistic, number of degrees of freedom and level of significance have been stated. Furthermore to distinguish one set of values from another the following coding system was adopted:

x_{AD}^2 : Chi-square statistic obtained when the responses of the adults in attendance to an item on the questionnaire were compared with those of the dropouts.

x_{AI}^2 : Chi-square statistic obtained when the responses of the adults in attendance to an item on the questionnaire were compared with those of the instructors

χ^2_{DI} : Chi-square statistic obtained when the responses of the dropouts to an item on the questionnaire were compared with those of the instructors.

Only the contingency tables of items found to significantly differentiate an adult in attendance from a dropout have been presented in this chapter. The remaining contingency tables are given in Appendix D. Also a summary of the chi-square analyses completed can be found at the end of each section.

Socio-Economic Characteristics

Hypothesis H_1 : 1.0 There are differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in relation to each of the following socio-economic characteristics: sex; age; marital status; place of origin; changes in residence; number of members in family; total family income before deductions.

Analysis revealed that the adults in attendance and dropouts did not differ significantly in terms of sex, age, marital status, place of origin, changes in residence, number in family and total family income before deductions. Therefore the hypothesis that there are differences between adults in attendance and dropouts from the Evening Division in relation to their socio-economic characteristics was rejected.

The majority of the adults in attendance and dropouts were male, aged about twenty-nine years, married, born in Canada and had three or less members in their family. Furthermore they had not changed their residence

frequently in the past years and enjoyed a family income before deduction in excess of \$8,000.

TABLE II

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE
ADULTS IN ATTENDANCE AND DROPOUTS IN RELATION
TO THEIR SOCIO-ECONOMIC CHARACTERISTICS

Table	Item	Degrees of Freedom	χ^2	Significance (p)
XXX	Sex	1	0.00	N.S.
XXXI	Age	3	4.24	N.S.
XXXII	Marital status	2	1.62	N.S.
XXXIII	Place of origin	2	0.04	N.S.
XXXIV	Change in residence	4	6.44	N.S.
XXXV	Number in family	4	0.65	N.S.
XXXVI	Total family income before deductions	5	0.22	N.S.

Formal Education

Hypothesis H_1 : 2.0 There are differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in relation to the following aspects of their formal education: locality where formal education was completed; highest grade completed in school; average grade attained in last year at school; programme of studies followed at school.

Most of the adults in attendance and dropouts according to the data had completed their formal education in Metro-Winnipeg, followed a University Entrance Programme, attained Grade XII and achieved an average grade of B or C in their last year at school. Chi-square analysis confirmed that there was no significant difference between the adults in attendance and dropouts in

relation to the locality where their formal education was completed, the highest grade they completed at school and the programme of studies they followed in school. Thus the hypothesis that there are differences between adults in attendance and dropouts from the Evening Division in relation to their formal education was rejected.

TABLE III

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE
ADULTS IN ATTENDANCE AND DROPOUTS IN RELATION
TO THEIR FORMAL EDUCATION

Table	Item	Degrees of Freedom	χ^2	Significance (p)
XXXVII	Locality where formal education was completed	3	0.71	N.S.
XXXVIII	Highest grade completed in school	2	2.47	N.S.
XXXIX	Average grade attained in last year at school	2	0.53	N.S.
XL	Programme of studies followed in school	3	1.65	N.S.

Post-Secondary Education

Hypothesis H_1 : 3.0 There are differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in relation to the following aspects of their post-secondary education: commencement of post-secondary education; source of encouragement to attend college; time needed to complete programme of studies; number of courses attended; studying facilities; years of post-secondary education; number of courses dropped; hours spent studying outside of class.

Chi-Square analysis disclosed that there was no significant difference between adults in attendance and dropouts in relation to their source of encouragement to attend college, when they commenced their post-secondary education, the number of years they estimated their studies would take to complete, the number of courses they were taking in the Fall Term, where they studied outside class and the number of years they had been studying since leaving school.

The majority of the adults in attendance and dropouts had been self motivated to attend college, allowed four or more years to elapse between leaving school and entering college, expected their programme of studies to be completed in two years or less, taken one course in the Fall Term, completed their studying at home and had studied for two years or less since leaving school. A review of the data that had been collected on the adults in attendance and dropouts post-secondary education also revealed that one out of every three adults who enrolled in programmes offered by the Evening Division had been encouraged to attend college in the evening by either his spouse or employer. Furthermore it was found that only thirty-five per cent of the adults in attendance and twenty-seven per cent of the dropouts expected their programme of studies to take more than two years to complete, though two years or

more are needed to complete the courses for a certificate of proficiency in a trade or occupation.

The adults in attendance did however differ significantly from the dropouts in relation to the number of courses they had failed to complete at Evening School and the number of hours they studied a course outside of class. According to Table IV eighty-eight per cent of the adults in attendance had never failed to complete a course at Evening School compared with twenty-three per cent of the dropouts. In contrast fifty-eight per cent of the dropouts stated they had failed one course at Evening School compared with only seven per cent of the adults in attendance. The data indicated that an adult who had failed to complete a course at Evening School in the past was more likely to discontinue his attendance than an adult who had never failed to complete a course.

To satisfy the requirements of many courses offered by the Evening Division, an adult has to allocate a portion of his leisure time to studying the material presented in class. Naturally the nature of a course determines the amount of studying an adult is expected to undertake. However chi-square analysis revealed that an adult who continued his attendance at college usually spent more time studying a course outside class than an adult

TABLE IV

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND
DROPOUTS BY NUMBER OF COURSES THEY HAD
FAILED TO COMPLETE AT COLLEGE

Number of Courses	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
None	240	88.1	14	23.4	254	76.5
One	19	7.0	35	58.3	54	16.3
Two or More	2	0.7	8	13.3	10	3.0
No Response	11	4.2	3	5.0	14	4.2
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 125.46, \text{ d.f.} = 2, p \leq 0.01$$

who discontinued. In Table V it can be seen that almost sixty per cent of the adults in attendance stated they studied for three or more hours outside class in comparison to only thirty-two per cent of the dropouts. Furthermore twice the percentage of dropouts as adults in attendance maintained that they only studied outside class for one hour or less.

TABLE V
COMPARISON BETWEEN ADULTS IN ATTENDANCE AND
DROPOUTS BY TIME THEY SPENT STUDYING
A COURSE OUTSIDE OF CLASS

Number of Hours Per Week	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Less than one	35	12.9	14	23.3	49	14.8
One	21	7.7	11	18.4	32	9.6
Two	51	18.8	10	16.7	61	18.4
Three	52	19.2	9	15.0	61	18.4
Four	49	18.1	5	8.3	54	16.3
Five or More	54	19.8	5	8.3	59	17.8
No Response	10	3.6	6	10.0	16	4.7
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 125.46, \text{ d.f.} = 2, p < 0.01$$

Based upon the analysis completed the hypothesis was accepted, that there are differences between adults in attendance and dropouts in relation to their post-secondary education. Analysis also indicated that the following

TABLE VI

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE
ADULTS IN ATTENDANCE AND DROPOUTS IN RELATION
TO THEIR POST-SECONDARY EDUCATION

Table	Item	Degrees of Freedom	χ^2	Significance (p)
XLI	Commencement of post-secondary education	3	3.05	N.S.
XLII	Source of encouragement to attend college	4	0.40	N.S.
XLIII	Time needed to complete programme of studies	2	0.91	N.S.
XLIV	Number of classes attended in the Fall Term	2	0.88	N.S.
XLV	Studying facilities	2	1.92	N.S.
XLVI	Years of post-secondary education	4	1.84	N.S.
IV	Number of courses dropped	2	125.46	≤ 0.01
V	Hours spent studying outside class	5	13.80	≤ 0.05

sub-hypothesis must be rejected:

Hypothesis H₁: 3.1 There are differences between adults in attendance and dropouts in relation to the commencement of their post-secondary education, source of encouragement to attend college, time needed to complete programme of studies, number of classes attended, studying facilities and years of post-secondary education.

There was a clear indication that adults who continued their attendance at the Evening Division had more frequently completed courses they attended and spent more time studying a course than adults who discontinued.

Occupation

Hypothesis H₁: 4.0 There are differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in relation to each of the following occupational characteristics: employment status; type of employment; changes in employment; usefulness of studies in present occupation.

The majority of the adults in attendance and dropouts according to the data were working full-time, had not changed their place of employment very frequently in the past five years and were employed in a business, industrial or sales-service position. A study of Table VII however reveals that the setting in which the majority of the adults in attendance and dropouts were employed, varied from one division to another.

TABLE VII

DISTRIBUTION OF THE ADULTS IN ATTENDANCE IN EACH
EVENING SCHOOL DIVISION BY TYPE OF EMPLOYMENT

Type of Employment	Business Division		Applied Arts and General Education Division		Technology and Industrial Division		Management Development Division		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Industrial	15	10.1	4	28.6	44	43.6	2	25.0	65	23.9
Business	72	48.4	2	14.3	6	5.9	6	75.0	86	31.6
Sales- Service	31	20.8	2	14.3	8	7.9	0	0.0	41	15.1
Professional	14	9.4	3	21.4	15	14.9	0	0.0	32	11.8
Self Employed	2	1.3	0	0.0	2	1.9	0	0.0	4	1.4
Other	7	4.7	1	7.1	16	15.9	0	0.0	24	8.8
No Response	8	5.3	2	14.3	10	9.9	0	0.0	20	7.4
Total	149	100.0	14	100.0	101	100.0	8	100.0	272	100.0

When asked whether the courses they were studying would be useful in their present occupation, fifty-eight per cent of the adults in attendance compared with thirty-seven per cent of the dropouts maintained that their courses were frequently useful. In contrast sixty per cent of the dropouts compared with thirty-eight per cent of the adults in attendance stated that their courses were only occasionally useful.

TABLE VIII

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND
DROPOUTS BY USEFULNESS OF STUDIES
IN PRESENT OCCUPATION

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Very useful	101	37.1	11	18.4	112	33.7
Frequently Useful	56	20.6	11	18.4	67	20.2
Occasionally Useful	57	21.0	20	33.3	67	20.2
Never Useful	46	16.9	16	26.6	62	18.7
No Response	12	4.4	2	3.3	24	7.2
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 9.32, \text{ d.f.} = 3, p < 0.05$$

Chi-square analysis established that there was no significant difference between the adults in attendance and dropouts in relation to their employment status, type of employment and changes in employment. A significant difference was found to exist between the two groups of adults in relation to their evaluation of whether the courses they attended were useful in their occupation. Therefore analysis resulted in the acceptance of the hypotheses, that there are differences between adults in attendance and dropouts in relation to their occupation. However the following sub-hypothesis was rejected:

Hypothesis H₁: 4.1 There are differences between adults in attendance and dropouts in relation to their employment status, types of employment and changes in employment.

The evidence indicated that adults who considered the courses they attended to be only occasionally useful in their occupation were more likely to discontinue their attendance at Evening School than adults who considered them to be frequently useful.

Affect of Attendance on an Adult's Life Style

Hypothesis H₁: 5.0 There are differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in their evaluations of the extent that attendance at college affected an adult's financial position, leisure pursuits, domestic responsibilities and health.

TABLE IX

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE
ADULTS IN ATTENDANCE AND DROPOUTS IN RELATION
TO THEIR EDUCATION

Table	Item	Degrees of Freedom	χ^2	Significance (p)
XLVII	Employment Status	1	0.15	N.S.
XLVIII	Type of employment	4	4.93	N.S.
XLVIX	Changes in employment	4	5.72	N.S.
VIII	Usefulness of studies in present occupation	3	9.32	<0.05

Chi-square analysis revealed that there was no significant difference between the adults in attendance and dropouts in relation to their evaluation of the effect that attendance at college had on an adult's financial position and domestic responsibilities. Most of the adults in both groups felt that attending college in the evening had very little effect on an adult's financial position and domestic responsibilities.

The majority of the adults in attendance considered that attending college to some extent affected an adult's participation in leisure activities, a viewpoint that was not supported by the majority of the dropouts.

Though most of the adults in attendance and dropouts believed that attending college had no effect on an adult's health, a third of the dropouts stated that attending college in the evening did affect an adult's health to some extent.

Therefore analysis resulted in the acceptance of the hypothesis, that there are differences between adults in attendance and dropouts in their evaluations of the extent that attendance at college modified an adult's life style. The following sub-hypothesis however was rejected:

TABLE X

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS BY
EXTENT THEY CONSIDERED THAT ATTENDANCE AT COLLEGE
AFFECTED THEIR LEISURE PURSUITS

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Not at all	39	14.3	23	38.3	62	18.7
Very little	84	31.0	13	21.7	97	29.2
Some	100	36.8	16	26.7	116	34.9
Very much	31	11.4	4	6.7	35	10.5
No Response	18	6.6	4	6.7	22	6.5
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 16.84, \text{ d.f.} = 3, p < 0.01$$

TABLE XI

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS BY
EXTENT THEY CONSIDERED THAT ATTENDANCE AT COLLEGE
AFFECTED THEIR HEALTH

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Not at all	126	46.4	30	50.0	156	47.0
Very little	73	26.8	7	11.6	80	24.10
Some	42	15.5	11	18.4	53	16.0
Very much	3	1.1	8	13.3	11	3.3
No Response	28	10.2	4	6.7	32	9.6
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 22.36, \text{ d.f.} = 3, p < 0.01$$

Hypothesis H₁: 5.1 There are differences between adults in attendance and dropouts in their evaluations of the extent that attendance at college affected an adult's financial position, family relationships and completion of household chores.

Evidently adults who continued their attendance at the Evening Division were more likely to consider that attendance affects an adult's leisure pursuits but not his health than adults who discontinued.

TABLE XI

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE ADULTS IN ATTENDANCE AND DROPOUTS IN RELATION TO THEIR EVALUATION OF THE EXTENT THAT ATTENDANCE AT COLLEGE AFFECTED AN ADULT'S LIFE STYLE

Table	Item	Degrees of Freedom	x ²	Significance
L	Financial position	4.78	3	N.S.
X	Leisure pursuits	16.84	3	< 0.01
LI	Family relationships	4.91	2	N.S.
LII	Household chores	5.30	2	N.S.
XI	Health	22.36	3	< 0.01

Reasons for Discontinuance

The responses of the adults in attendance were excluded from this section of the analysis because less than ten per cent of them answered the item on the questionnaire concerning the reasons why some of the adults attending the Evening Division failed to complete their studies.

Also the responses of the dropouts and instructors were not tested by chi-square analysis because their responses were so widely dispersed and the structure of the items prevented their responses being regrouped.

According to Table XIII the dropouts considered that adults discontinued their attendance at college in the evening for more reasons than those given by the instructors. The largest percentage of the dropouts stated that they had failed to complete the course they were attending because it had failed to meet their interests and needs. Furthermore this was the reason given by the greatest percentage of the instructors for adults withdrawing from their studies.

Seventeen per cent of the dropouts and twenty-seven per cent of the instructors also felt that a change in working hours often caused an adult to discontinue his attendance. Inadequate background knowledge and skill were considered by a third of the instructors to be the reason for some adults dropping out, though less than two per cent of the dropouts stated this as their reason for withdrawal. However thirteen per cent of the dropouts did claim that they had discontinued their attendance due to the sudden emergence of a personal problem, yet none of the instructors perceived that discontinuance was associated with such problems. Teaching methods, assignments, relationships with instructors and other students were considered to have very little influence on whether an adult discontinued his studies

by both the dropouts and instructors.

It appears that the major reasons for discontinuance in the opinion of both the dropouts and instructors were an adult's expectations of a course and conditions of employment. Personal responsibilities and inadequate background knowledge were also considered by the dropouts and instructors respectively to be factors that contributed to some adults withdrawing.

TABLE XIII

NUMBER AND PERCENTAGE DISTRIBUTIONS OF REASONS
GIVEN BY DROPOUTS AND INSTRUCTORS
FOR ADULTS WITHDRAWING
FROM A COURSE

Reasons for Discontinuance	Dropouts		Instructors	
	No.	%	No.	%
Change in working hours	10	16.7	9	27.2
Inadequate knowledge	1	1.7	11	33.3
Assignments too Demanding	4	6.7	2	6.2
Course failed to meet adult's interests and needs	16	26.7	11	33.3
Unsatisfactory relationship with instructor	1	1.7	0	0.0
Unsatisfactory relationship with other students	0	0.0	0	0.0
Inappropriate teaching methods	3	5.0	0	0.0
Emergence of a personal problem	8	13.4	0	0.0
Other	7	11.7	0	0.0

Learning Difficulties and Personal Problems

Hypothesis H₂: 1.0 There are differences among adults in attendance, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the opportunities available to discuss learning difficulties and personal problems with instructors.

A study of Table XIV reveals that the adults in attendance had the best opinion of the opportunities available to discuss learning difficulties with instructors. Thirty-five per cent of the adults in attendance compared with seventeen per cent of the dropouts and twenty-four per cent of the instructors stated that existing facilities were excellent. A large percentage of the instructors agreed with the adults in attendance that existing conditions were good, but almost twenty-five per cent thought they were poor. Nearly half the dropouts also maintained that facilities for discussing learning difficulties could be improved.

In Table XV it can be seen that the majority of the adults in attendance felt the opportunities available to discuss personal problems with instructors were also good, a point of view with which few dropouts agreed. The instructors according to the data, were divided in their evaluations, half agreed with the adults in attendance that facilities were good and half agreed with the dropouts that they needed improving.

TABLE XIV

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR EVALUATIONS OF THE OPPORTUNITIES AVAILABLE
TO DISCUSS LEARNING DIFFICULTIES WITH INSTRUCTORS

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Excellent	95	35.0	10	16.7	8	24.2	113	31.0
Good	107	39.4	19	31.7	13	39.5	139	38.1
Satisfactory	43	15.8	16	26.6	4	12.1	63	17.2
Poor or Unsatisfactory	18	6.6	13	21.6	8	24.2	39	10.7
No response	9	3.3	2	3.4	0	0.0	11	3.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 18.24, \text{ d.f.} = 3, p < 0.01$$

$$\chi^2_{AI} = 9.21, \text{ d.f.} = 3, p < 0.05$$

$$\chi^2_{DI} = 1.98, \text{ d.f.} = 3, p \text{ is N.S.}$$

TABLE XV

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR EVALUATION OF THE OPPORTUNITIES AVAILABLE
TO DISCUSS PERSONAL PROBLEMS WITH INSTRUCTORS

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Excellent	42	15.4	4	6.7	6	18.2	52	14.3
Good	76	28.0	8	13.4	9	27.3	93	25.4
Satisfactory	62	22.8	19	31.6	7	21.2	88	24.1
Poor or Unsatisfactory	30	11.0	15	25.0	11	33.3	56	15.4
No response	62	22.8	14	23.3	0	0.0	76	20.8
Total	272	100.0	60	100.0	33	100.0	365	100.0

$\chi^2_{AD} = 11.88$, d.f. = 3, $p < 0.01$
 $\chi^2_{AI} = 4.81$, d.f. = 3, p is N.S.
 $\chi^2_{DI} = 1.49$, d.f. = 3, p is N.S.

Chi-square analysis established that the evaluations of the adults in attendance were significantly different from those of the dropouts and instructors with respect to the opportunities available to discuss learning difficulties with instructors, though there was no significant difference between the evaluations of the dropouts and instructors. Similarly analysis revealed that there was a significant difference between the adults in attendance and dropouts with respect to their evaluations of the opportunities available to discuss personal problems with instructors, but there was no significant difference between the evaluations of the instructors and those of the adults in attendance and dropouts.

Therefore the hypothesis was accepted, that there are differences among adults in attendance, dropouts and instructors in their evaluations of the opportunities available to discuss learning difficulties and personal problems with instructors. Based on the analysis completed the following sub-hypotheses were however rejected:

Hypothesis H₂: 1.1 There are differences between the dropouts and instructors in their evaluations of the opportunities available to discuss learning difficulties with instructors.

Hypothesis H₂: 1.2 There are differences between the adults in attendance and instructors in their evaluations of the opportunities available to discuss personal problems with instructors.

TABLE XVI

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE
THE EVALUATIONS OF ADULTS IN ATTENDANCE, DROPOUTS
AND INSTRUCTORS OF THE OPPORTUNITIES AVAILABLE
TO DISCUSS LEARNING DIFFICULTIES AND
PERSONAL PROBLEMS WITH INSTRUCTORS

Table	Item	Subject	Degrees of Freedom	χ^2	Significance (p)
XIV	Learning difficulties	Adults in Attendance -Dropouts	18.24	3	≤ 0.01
		Adults in Attendance -Instructors	9.21	3	≤ 0.05
		Dropouts - Instructors	1.98	3	N.S.
XV	Personal Problems	Adults in Attendance -Dropouts	11.88	3	≤ 0.01
		Adults in Attendance -Instructors	4.81	3	N.S.
		Dropouts - Instructors	1.49	3	N.S.

Hypothesis H₂: 1.3 There are differences between the dropouts and instructors in their evaluations of the opportunities available to discuss personal problems with instructors.

Analysis therefore indicated that adults who considered facilities to discuss learning difficulties and personal problems with instructors needed improving were more likely to discontinue their attendance at Evening School than adults who were favourably impressed by existing conditions.

Motivations

Hypothesis H₂: 2.0 There are differences among adults in attendance, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the extent that future advancement, a desire to keep up with changes in technology, a desire to gain knowledge related to their occupation, boredom and pleasure motivated an adult to attend college in the evening.

The majority of the adults in attendance, dropouts and instructors felt that adults were motivated to attend college to some extent by future advancement and a desire to gain knowledge related to their occupation. In fact future advancement was considered by nearly half the adults who had enrolled in evening programmes to be a strong motivational force. In contrast very few of the adults in attendance or dropouts considered boredom to be a strong motivational force. However nearly forty per cent of the instructors stated that adults were motivated

to a limited extent by boredom to continue their education.

According to Table XVII the adults in attendance and dropouts did not agree as to the extent that adults were motivated to attend college by changes in technology. Twenty-five per cent of the adults who continued their studies claimed that a desire to keep up with changes in technology was a very strong motivational force, an opinion expressed by only thirteen per cent of the dropouts and eighteen per cent of the instructors.

As shown in Table XVIII the adults in attendance and dropouts also disagreed as to the extent that adults were motivated to attend college for pleasure, fifty-two per cent of the dropouts compared with thirty per cent of the adults in attendance thought that adults were motivated very little to continue their education by pleasure. The majority of the instructors agreed with the dropouts that pleasure was a weak motivational force.

Chi-square analysis revealed that there was no significant difference among the evaluations of the adults in attendance, dropouts and instructors in relation to the extent that adults were motivated to attend college in the evening by future advancement and a desire to gain knowledge related to their occupation. Also analysis established that the evaluations of the adults in attendance and dropouts did not differ significantly

TABLE XVII

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
 BY EXTENT THAT KEEPING UP WITH CHANGES IN TECHNOLOGY
 WAS ASSESSED AS BEING A FACTOR THAT MOTIVATED
 ADULTS TO ATTEND COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at all or Very little	54	19.9	24	40.0	6	18.2	84	23.0
Some	82	30.1	19	31.6	20	60.6	121	33.0
Very much	95	35.1	8	13.4	6	18.2	109	30.0
No response	41	15.0	9	15.0	1	3.0	51	14.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$\chi^2_{AD} = 14.36, d.f. = 2, p < 0.01$
 $\chi^2_{AI} = 7.82, d.f. = 2, p < 0.05$
 $\chi^2_{DI} = 5.77, d.f. = 2, p \text{ is N.S.}$

TABLE XVIII

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY EXTENT THAT PLEASURE WAS ASSESSED AS BEING A FACTOR
THAT MOTIVATED ADULTS TO ATTEND COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at all	52	19.2	20	33.3	8	24.2	80	21.9
Very little	28	10.3	11	18.3	13	39.4	52	14.3
Some	96	35.4	13	21.8	10	30.3	119	32.6
Very much	59	21.5	11	18.3	2	6.1	72	19.7
No response	37	13.6	5	8.3	0	0.0	42	11.5
Total	272	100.0	60	100.0	33	100.0	365	100.0
$\chi^2_{AD} = 8.06, d.f. = 3, p < 0.05$								
$\chi^2_{AI} = 16.93, d.f. = 3, p < 0.01$								
$\chi^2_{DI} = 4.78, d.f. = 3, p \text{ is N.S.}$								

concerning the extent that adults were motivated to attend the Evening Division by boredom, but a significant difference was found to exist between the evaluations of the instructors and the adults they taught. However, there was a significant difference between the evaluations of the adults in attendance and those of the dropouts and instructors as to the extent that a desire to keep up with technological changes and pleasure motivated adults to continue their education. No significant difference existed between the evaluations of the dropouts and instructors in this respect.

Therefore analysis resulted in the acceptance of the hypothesis, that there are differences among adults in attendance, dropouts and instructors in their evaluations of the extent that future advancement, a desire to keep up with changes in technology, a desire to gain knowledge related to their occupation, boredom and pleasure motivated an adult to attend college in the evening. Analysis also established that the following sub-hypotheses must be rejected:

Hypothesis H_2 : 2.1 There are differences among adults in attendance, dropouts and instructors in their evaluations of the extent that future advancement and a desire to gain knowledge related to his present occupation motivated an adult to attend college in the evening.

Hypothesis H_2 : 2.2 There are differences between dropouts and instructors in their evaluations of the extent that a desire to keep up with changes in technology and pleasure motivated an adult to attend college in the evening.

Hypothesis H₂: 2.3 There are differences between adults in attendance and dropouts in their evaluations of the extent that boredom motivated an adult to attend college in the evening.

According to the instructors and the adults they taught future advancement and a desire to gain knowledge related to an occupation were considered to be factors that greatly influenced an adult to continue his education. Also adults who continued their attendance were more likely than those who discontinued to consider that a desire to keep up with technological changes and the pleasure that studying affords were factors that considerably motivated adults to attend college in the evening.

Progress in College

Hypothesis H₂: 3.0 There are differences among adults in attendance, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the extent that insufficient time to study, inadequate mathematical skills and knowledge, unsatisfactory study habits and a decline in learning capacity due to age retarded an adult's progress in college.

The majority of the adults in attendance and dropouts stated, that in their opinion the progress made by an adult in college was retarded very little by inadequate mathematical skills, unsatisfactory study habits and a decline in learning capacity due to age. However thirty per cent of the adult students did consider that unsatisfactory study habits retarded an adult's progress to some extent. The majority of the instructors agreed with

TABLE XIX
SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE ADULTS IN ATTENDANCE,
DROPOUTS AND INSTRUCTORS BY EXTENT THEY ASSESSED CERTAIN FACTORS
MOTIVATED ADULT'S TO ATTEND COLLEGE

Table	Item	Subjects	Degrees of Freedom	χ^2	Significance (p)
LIII	Future advancement	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	0.23 1.79 2.32	2 2 2	N.S. N.S. N.S.
XVII	Keep up with changes in technology	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	14.36 7.82 5.77	2 2 2	<0.01 <0.05 N.S.
LIV	Gaining knowledge related to present occupation	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	0.02 5.66 5.16	2 2 2	N.S. N.S. N.S.
LV	Boredom	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	0.49 10.72 9.07	2 2 2	N.S. <0.01 <0.05
XVIII	Pleasure	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	8.06 16.93 4.78	3 3 3	<0.05 <0.01 N.S.

the evaluations of the adults they taught, but a greater percentage of the instructors considered that these factors had some effect on an adult's progress.

In Table XX it can be seen that the majority of the dropouts disagreed with most of the adults in attendance and instructors that an adult's progress in his studies was to some extent retarded by an adult having insufficient time to study. Twice the percentage of dropouts as adults in attendance and instructors however stated that insufficient time to study retarded an adult's progress very much.

Statistical analysis revealed that there was no significant difference among the adults in attendance, dropouts and instructors in their evaluations of the extent that inadequate mathematical skills and unsatisfactory study habits impeded an adult's progress. Furthermore there was no significant difference between the adults in attendance and dropouts in their evaluations of whether a decline in learning capacity due to age prevented an adult from progressing in his studies satisfactorily, though a significant difference was found to exist between the evaluations of the instructors and adult students. Analysis also indicated, that the evaluations of the dropouts were significantly different from those of the adults in attendance and instructors with respect to the extent that insufficient time to study retarded an adult's progress.

TABLE XX

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR ASSESSMENT OF WHETHER INSUFFICIENT TIME TO
STUDY RETARDED AN ADULT'S PROGRESS IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at all	68	25.0	23	38.5	4	12.1	95	26.0
Very little	54	19.9	8	13.2	6	18.2	68	18.6
Some	90	33.1	9	15.0	18	54.6	117	32.1
Very much	35	12.9	13	21.7	4	12.1	52	14.3
No response	25	9.1	7	11.6	1	3.0	33	9.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$\chi^2_{AD} = 10.53, d.f. = 3, p < 0.05$
 $\chi^2_{AI} = 6.02, d.f. = 3, p \text{ is N.S.}$
 $\chi^2_{DI} = 18.37, d.f. = 3, p < 0.01$

Hence the hypothesis was accepted, that there are differences among adults in attendance, dropouts and instructors in their evaluations of the extent that insufficient time to study, inadequate mathematical skills and knowledge, unsatisfactory study habits and a decline in learning capacity due to age retarded an adult's progress in college. However analysis indicated that the following sub-hypotheses must be rejected:

Hypothesis H_2 : 3.1 There are differences among adults in attendance, dropouts and instructors in their evaluations of the extent that inadequate mathematical skills and unsatisfactory study habits retarded an adult's progress in college.

Hypothesis H_2 : 3.2 There are differences between adults in attendance and instructors in their evaluations of the extent that insufficient time to study retarded an adult's progress in college.

Hypothesis H_2 : 3.3 There are differences between adults in attendance and dropouts in their evaluations of the extent that a decline in learning capacity due to age, retarded an adult's progress in college.

It can be concluded that dropouts considered insufficient study time to be less retarding on an adult's progress than did the adults in attendance and instructors. Also instructors more often than the adults in attendance and dropouts believed that a decline in learning capacity due to age prevented an adult from progressing satisfactorily in his studies.

TABLE XXI

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE ADULTS IN ATTENDANCE,
DROPOUTS AND INSTRUCTORS BY THE EXTENT THEY ASSESSED THAT CERTAIN
FACTORS RETARDED AN ADULT'S PROGRESS IN COLLEGE

Table	Item	Subjects	Degrees of Freedom	χ^2	Significance
XX	Insufficient time to study	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	3 3 3	10.53 6.02 18.37	<0.05 N.S. <0.01
LVI	Inadequate Mathematical skills and knowledge	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	2 2 2	2.16 5.53 4.03	N.S. N.S. N.S.
LVII	Unsatisfactory study habits	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	3 3 3	6.04 3.64 4.80	N.S. N.S. N.S.
LVIII	Decline in learning capacity due to age	Adults in Attendance - Dropouts Adults in Attendance - Instructors Dropouts - Instructors	2 2 2	3.00 7.11 9.26	N.S. <0.05 <0.01

Difficulties

Hypothesis H₂: 4.0 There are differences among adults in attendance, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the extent that maintaining a good grade average, meeting student competition and instructor-student relationships caused an adult difficulty.

The majority of the adults in attendance and dropouts felt that maintaining a good grade average, meeting student competition and instructor-student relationships caused an adult very little difficulty. Though a large percentage of the instructors agreed with the evaluations of the adult students, a greater percentage of the instructors than the adult students believed that those factors caused an adult some difficulties, especially with respect to an adult student maintaining a good grade average. Chi-square analysis revealed that there was no significant difference between the evaluations of the adults in attendance and those of the dropouts. However analysis indicated that there was a significant difference between the evaluations of the instructors and those of the adults they taught. Therefore analysis resulted in the acceptance of the hypothesis, that there are differences among adults in attendance, dropouts and instructors in their evaluations of the extent that maintaining a good grade average, meeting student competition and instructor-student relationships caused an adult difficulty. However analysis also established that the

TABLE XXII

SUMMARY OF CHI-SQUARE ANALYSES CALCULATED TO COMPARE ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS BY THE EXTENT THEY ASSESSED THAT CERTAIN FACTORS CAUSED AN ADULT DIFFICULTY IN COLLEGE

Table	Item	Subjects	Degrees of Freedom	χ^2	Significance
LX	Maintaining a good grade average	Adults in Attendance - Dropouts	2	3.15	N.S.
		Adults in Attendance - Instructors	2	30.35	≤ 0.01
		Dropouts - Instructors	2	20.20	≤ 0.01
LXI	Meeting Student Competition	Adults in Attendance - Dropouts	2	4.82	N.S.
		Adults in Attendance - Instructors	2	22.89	≤ 0.01
		Dropouts - Instructors	2	22.33	≤ 0.01
LXII	Instructor-student relationships	Adults in Attendance - Dropouts	2	5.33	N.S.
		Adults in Attendance - Instructors	2	38.86	≤ 0.01
		Dropouts - Instructors	2	20.02	≤ 0.01

following sub-hypothesis must be rejected:

Hypothesis H₂: 4.1 There are differences between adults in attendance and dropouts in their evaluations of the extent that maintaining a good grade average, meeting student competition and instructor-student relationships caused an adult difficulty.

It can be concluded that, instructors in the Evening Division were more likely than the adults they taught to consider that an adult who attended college in the evening would have some difficulty maintaining a good grade average, meeting student competition and establishing a good rapport with instructors.

Instructors

The tables containing the information provided by the instructors as to their sex, years of industrial experience, years of experience teaching adults and full-time occupation have been presented in Appendix F.

According to the data collected four out of five of the instructors were male, which in the opinion of the investigator was partially determined by the nature of the courses offered. Though the majority of the instructors had a sound industrial background, only forty per cent had four years or more experience teaching adults. During the day most of the instructors were employed either in a profession, an educational institution or a business, however almost forty per cent of the instructors were teaching during the day as well as in the evening.

The administrative procedures suggested by the investigator would not, in the opinion of the majority of the instructors, reduce the number of adults presently withdrawing from their studies. Making students aware of upgrading courses, raising promotion standards and contacting potential dropouts by telephone would in the opinion of the instructors encourage some adults to continue their attendance at college.

Correlation Analysis

The point biserial correlation coefficients presented in Table XXIII show the nature of the relationships that were found to exist between each of the eleven variables ($x_2, x_3, x_4 \dots x_{10}, x_{11}, x_{12}$) stated and the dichotomous variable (x_1) which distinguished an adult in attendance from a dropout. Chi-square analysis indicated, that the eleven variables selected were able to significantly differentiate an adult in attendance from a dropout. The mean and standard deviation for each variable and the correlation matrix for the eleven variables have been presented in Appendix C.

To determine whether the correlation coefficient established between the dropout-continue criterion and each of the variables noted did not occur simply as a matter of random sampling variation. The hypothesis that $\rho = 0$ was tested against the alternative hypothesis that $\rho \neq 0$ in each instance, thus establishing whether a

TABLE XXIII

VALUE AND LEVEL OF SIGNIFICANCE OF POINT
BISERIAL CORRELATION COEFFICIENTS WITH
DROPOUT-CONTINUE CRITERION

Variable	Description	Correlation Coefficient	Significance (t)
x2	Usefulness of studies in present occupation	-0.164	0.01
x3	Opportunities available to discuss learning difficulties with instructors	-0.262	0.01
x4	Extent that an adult is motivated to attend college by changes in technology	0.281	0.01
x5	Hours spent studying outside class	0.212	0.01
x6	Extent that an adult is motivated to attend college by pleasure	0.127	0.05
x7	Extent that insufficient time to study retarded an adult's progress in college	0.121	0.05
x8	Number of courses dropped	-0.562	0.01
x9	Opportunities available to discuss personal problems with instructors	-0.212	0.01
x10	Extent that attendance at college affected an adult's leisure pursuits	0.179	0.01

... CONTINUED ...

TABLE XXIII

(CONTINUED)

Variable	Description	Correlation Coefficient	Significance (t)
x11	Extent that attendance at college affected an adult's health	-0.114	0.05
x12	Extent that instructor- student relationships caused an adult difficulty in college	-0.108	0.05

significant relationship existed.⁹⁷ Since the correlation coefficients were computed from large samples small coefficient values were significant.⁹⁸

In Table XXIII the positive correlation coefficient established between the dropout-continue criterion variable and the number of hours an adult studied a course outside of class, indicates that adults who continue their attendance spend more time studying a course than those who discontinue. Similarly the negative correlation coefficient established between the dropout-continue criterion variable and usefulness of studies in present occupation indicates that adults who discontinue their attendance consider their studies to be less useful in their occupation than those who continue their attendance.

⁹⁷Edward W. Minium, Statistical Reasoning in Psychology and Education, (New York: John Wiley and Sons, Inc., 1970), p. 319-320.

⁹⁸Henry E. Garrett and R.S. Woodworth, Statistics in Psychology and Education, (New York: David McKay Company, Inc., 1967), p. 202.

Discriminant Function

General Objective: To develop through statistical analysis of characteristics and behaviour of adults attending and dropouts from the Evening Division of the Red River Community College, a model capable of identifying potential dropouts before they discontinue their attendance.

In order to develop a discriminant function that would identify potential dropouts the dropout-continue criterion variable was transformed into a dummy variable. Once the transformation had been completed, a stepwise multiple regression analysis was carried out on the computer with the dummy variable as the dependent variable and the variables found to be significantly correlated with the dropout-continue criterion as the independent variables. Stepwise multiple regression analysis selects the best regression equation for a dependent variable in terms of a group of independent variables by examining at every stage of the regression, the variables included in the regression equation in the previous stages. Draper and Smith describe this procedure as follows:

A variable which may have been the best single variable to enter at an early stage may, at a later stage, be superfluous because of the relationships between it and other variables now in the regression. To check on this, the partial F criterion for each variable in the regression at any stage of calculation is evaluated and compared with a preselected percentage point of the appropriate F distribution. This provides a judgment on the contribution made by each variable as though it had been the most recent variable entered, irrespective of its actual point of entry into the model. Any

variable which provides a nonsignificant contribution is removed from the model. This process is continued until no more variables will be admitted to the equation and no more are rejected.⁹⁹

The discriminant function was developed by stepwise multiple regression analysis because "discriminant analysis reduces to a multiple regression analysis but it cannot be overemphasized that this reduction holds only in the two-group case."¹⁰⁰

In Run I of the computer programme the response of three hundred and thirty-two adults to the nine items selected were analysed by the stepwise multiple regression programme. The discriminant function established was:

$$y = - 0.336 x_8 + 0.071 x_4 + 0.030 x_5 - 0.051 x_3 \\ + 0.032 x_6 + 0.031 x_7 - 0.021 x_2 + 0.037 x_{11} \\ + 0.031 x_{10} + 0.023 x_{12} + 0.002 x_9 - 0.127 \\ (R^2 = 0.4396, S^2 = 0.086)$$

A study of the discriminant function revealed, that the eleven independent variables were able to explain forty-four per cent of the variability that existed between the two groups of adults being studied.

The number of independent variables was then reduced to three, because the remaining eight variables

⁹⁹N.R. Draper and H. Smith, Applied Regression Analysis. (New York: John Wiley and Sons, Inc., 1968) p. 171

¹⁰⁰Ibid, p. 173

added very little to the amount of variability identified by the discriminant function. Thus the discriminant function established in Run I of the computer programme was modified to:

$$y = -0.372 x_8 + 0.083 x_4 - 0.033 x_5 - 0.151$$

$$(R^2 = 0.3969, S^2 = 0.091)$$

The order of entry of the independent variables into the above equation was:

- y: Adult in attendance/dropout
(dependent variable)
- x_8 : Number of courses dropped
- x_4 : Extent that an adult is motivated to attend college by changes in technology
- x_5 : Hours spent studying outside class
(independent variables)

The consistency of the discriminant function established in Run I of the computer programme was tested by randomly withdrawing twenty-five per cent of the adults from the sample and running the programme again. The discriminant function established was:

$$y = -0.286 x_8 + 0.072 + 0.036 x_5 + 0.040 x_6$$

$$- 0.042 x_3 - 0.030 x_2 + 0.034 x_{10} - 0.046 x_{11}$$

$$+ 0.026 x_7 + 0.030 x_{12} + 0.006 x_9 - 0.156$$

$$(R^2 = 0.4251, S^2 = 0.089)$$

In this discriminant function the eleven independent variables were able to explain forty-three per cent of the variability existing between the two groups of adults. It

should be noted that the order of entry was changed for some of the independent variables, but this was expected since, the intercorrelations between the variables were changed by the reduction in the sample size.

The number of independent variables was reduced to three, because the remaining variables added very little to the amount of variability identified by the discriminant function. Hence, the discriminant function, established in Run II of the computer programme, was modified to:

$$y = -0.329 x_8 + 0.091 x_4 + 0.039 x_5 - 0.191$$

$$(R^2 = 0.3758, S^2 = 0.094)$$

The order of entry of the independent variables, into the above equation, was the same as that in the modified discriminant function established in Run I of the programme

In Table XXIV it can be clearly seen, that the two modified discriminant functions varied very little in their structure, which indicated that the modified discriminant function established in Run I of the computer programme was fairly consistent for sample sizes greater than two hundred and forty-nine.

Furthermore the discriminant y values established by the two functions for any adult would differ by approximately 0.04. Both functions would therefore in most instances identify the same adults as potential dropouts.

TABLE XXIV
A COMPARISON OF THE MODIFIED DISCRIMINANT FUNCTIONS

Run	Discriminant Function	Sample Size (N)	R ²	S ²
I	$y = -0.372 x_{12} + 0.083 x_4$ $+0.033 x_5 - 0.151$	332	0.3969	0.091
II	$y = -0.329 x_{12} + 0.091 x_4$ $+0.039 x_5 - 0.191$	249	0.3758	0.094

The discriminant y values established by the two discriminant functions for each of the eighty-three adults withdrawn from the sample have been presented in Appendix C. Five discriminant y values -0.10 , -0.11 , -0.12 , -0.15 and -0.16 were chosen by the investigator as the critical values for discriminating between the adults who continued their attendance and those who did not. The contingency tables established by these critical values have been presented in Appendix G.

A study of the contingency tables reveals that when a critical value for y of -0.10 was selected as the cut-off point for discriminating between the adults in

attendance and the dropouts, ninety-three per cent of the actual dropouts were identified as potential dropouts and eighty-two per cent of the actual adults in attendance as potential adults in attendance by the first modified discriminant function. Using the same critical value for y as a cut-off point one hundred per cent of the actual dropouts were identified as potential dropouts and eighty-five percent of the actual adults in attendance as potential adults in attendance. The best critical value for discriminating between the adults in attendance and dropouts was selected "in terms of 'cost', defined as the percentage of satisfactory individuals rejected at a given cut-off point, and 'utility', defined as the percentage of unsatisfactory individuals rejected."¹⁰¹ In terms of this criterion the best critical values for the first and second modified discriminant functions were -0.16 and -0.12 respectively. Using a critical value of -0.16 the first modified discriminant function identified ninety-three per cent of the actual dropouts as potential dropouts and eighty-eight per cent of the actual adults in attendance as potential adults in attendance. Similarly the second modified discriminant function was able to identify ninety-three per cent of the actual dropouts as potential dropouts and eighty-seven per cent of the actual adults in attendance as potential adults in attendance.

¹⁰¹Du Bois, An Introduction to Psychological Statistics, p. 253

The evidence indicated that a modified discriminant function could be established for any sample of adults taken from the Evening Division of the Red River Community College greater than two hundred and forty-nine. Furthermore such a discriminant function was able to discriminate between potential adults in attendance and dropouts with a fair degree of precision. However to complete such a discriminant analysis a critical value for the discriminant variable y has to be chosen. Analysis has revealed that the critical value for a discriminant variable could be established for a discriminant function by noting the difference between the intercept of that function and the intercept of the second modified discriminant function. The new critical value was obtained by reducing the critical value of -0.12 by the amount the intercepts differ. Once the critical value for the discriminant function has been computed the function can be used to identify potential dropouts in the sample of adults being studied.

Therefore analysis established that a model could be developed to identify potential dropouts from the Evening Division of the Red River Community College before they discontinue their attendance.

CHAPTER V

SUMMARY, CONCLUSIONS AND SIGNIFICANCE OF THE STUDY

The Problem

This study was undertaken to determine whether the adults attending and the dropouts from the Evening Division of the Red River Community College differed significantly with respect to their socio-economic characteristics, educational background, occupation and extent they considered that attendance at college modified an adult's way of life. A secondary objective of this study was to establish whether the evaluations of the adults in attendance, dropouts and instructors differed in terms of the extent they considered that certain factors affected an adult's progress, caused him difficulty and motivated him to attend college. Another secondary objective was to develop a statistical model capable of identifying potential dropouts.

Methodology

The adults in attendance, dropouts and instructors provided the information needed for this study by completing multiple-choice questionnaires. To ensure that the sample studied would be of a sufficient size and representative of the adult population, a stratified sampling technique was adopted to select at random thirteen per cent of the adult population. The responses of the adults in

attendance, dropouts and instructors to the items on the questionnaires were tabulated, summarised and recorded on I.B.M. cards.

The hypotheses formulated were tested by analysing the data collected on a computer programme designed to complete a chi-square analysis for a contingency table. Characteristics and evaluations found to be significant at the five per cent level or better were noted. In addition one evaluation found to be insignificant was also noted because the chi-square statistic established by analysis was approximately equivalent to the critical value at the five per cent level. The data were re-examined and the responses of each adult to the items noted were recorded on I.B.M. cards. Missing data were acquired by assigning to an adult who had failed to answer an item, a response chosen at random from the observed responses of the other adults. A correlation analysis was then completed on the computer to determine the nature of the relationships between the characteristics and evaluations noted and a dropout-continue criterion. Correlation co-efficients that were significant at the five per cent level or better were identified by a t-test.

The dropout-continue criterion variable was transformed into a dummy variable to enable a discriminant function to be established by stepwise multiple regression analysis. The necessary analysis was completed on the computer and the structure of the discriminant function was noted. Twenty-five per cent of the adults were randomly

withdrawn from the sample and the stepwise multiple regression analysis was repeated to determine the consistency of the function.

Modified forms of the two discriminant functions were then used to compute two numerical values for the discriminant variable assigned to each of the adults withdrawn from the original sample. The numerical values were studied and critical values were selected for discriminating between adults in attendance and dropouts. For each critical value, the percentage of actual dropouts identified as potential dropouts and the percentage of adults in attendance identified as potential adults in attendance by each of the modified discriminant functions was recorded. This information was then summarized in contingency tables and the best critical value for identifying potential dropouts was chosen for each function.

Findings

Analysis resulted in the partial acceptance of the following hypothesis:

Hypothesis H_1 : There are significant differences between adults in attendance and dropouts from the Evening Division of the Red River Community College in relation to their socioeconomic characteristics, formal education, post-secondary education, occupation and extent they considered that attendance at college modified an adult's life style.

Investigation revealed that three of the twenty-four characteristics and two of the evaluations studied

were able to differentiate an adult in attendance from a dropout.

Adults who continued their studies were more likely, than those who discontinued, to consider their studies were frequently useful in their occupation, spend more than two hours studying a course outside of class and never have dropped out of an evening course. Also adults who continued their studies, more often than those who discontinued, considered that attendance affected their health very little, but prevented them to some extent from participating in leisure pursuits.

The majority of the adults in attendance and dropouts were young married Canadians, who had three members or less in their family and enjoyed an above average family income. Most of the adults had completed their formal education in Metro-Winnipeg, attaining Grade XII in a University Entrance Programme and presently were employed full-time in a business, industrial or sales-service occupation. Neither the adults in attendance nor the dropouts had continued their education immediately upon leaving school, for most of them a period of four years or more had elapsed before the need for a post-secondary education emerged. Attendance at college in the evening was viewed by the majority of the adults as a short term commitment, only a few of them expected their studies to continue for the period of time required to qualify for a certificate

of competence in an occupation.

The reason given by the greatest percentage of the dropouts for discontinuance was, that the course they attended failed to meet their interests and needs. Other reasons for discontinuance in order of frequency were a change in working hours and the emergence of a personal problem. Very few of the adults who dropped out expressed dissatisfaction with teaching methods, assignments and relationships with instructors. Also most of the instructors agreed with the adults who discontinued, that the failure of a course to meet an adult's needs and a change in working hours often caused many adults to withdraw from college. None of the instructors however considered that adults discontinued their attendance due to the emergence of a personal problem, but this was to be expected since most dropouts do not inform their instructors why they discontinued their attendance.

In the opinion of the instructors, inadequate background knowledge was a factor that caused many adults to withdraw, though few dropouts expressed this opinion. This difference of opinion could be explained by the fact that the adults who dropped out were often unaware their knowledge was deficient or unwilling to accept their own inadequacy.

Based on the analysis completed the following hypothesis was also partially accepted:

Hypothesis H₂: There are significant differences among adults attending, dropouts from and instructors in the Evening Division of the Red River Community College in their evaluations of the opportunities available for adults to discuss learning difficulties and personal problems with instructors and the extent that certain factors motivated an adult to attend college, retarded his progress and caused him difficulty.

Though the evaluations of the instructors often differed significantly from those of the adults they taught, the evaluations of the adults in attendance differed very little from those of the dropouts.

The adults in attendance disagreed with the dropouts that the opportunities available to discuss learning difficulties and personal problems with instructors needed improving, which could be partly due to the fact that very few of the adults in attendance had ever needed to approach instructors for assistance and advice. Though many of the instructors agreed with the adults in attendance that existing conditions to discuss learning difficulties with instructors were good, many of them agreed with the dropouts that they needed improving. Under existing conditions an instructor usually discussed learning difficulties with adult students at the coffee break or beginning and end of class, none of which were suitable times for adequate guidance and counselling.

The adults in attendance, dropouts and instructors all agreed that future advancement and a desire to gain knowledge related to an occupation to some extent motivated an adult to attend college in the evening. Boredom however was considered by most of the adult students to be an insignificant motivational force, though a number of instructors disagreed with them.

The adults in attendance and dropouts disagreed as to the extent an adult was motivated to continue his education by changes in technology and pleasure. The majority of the adults in attendance maintained that technological changes and pleasure were strong motivational forces. Though the instructors agreed with the adults in attendance that changes in technology were important motivational forces they considered that an adult was motivated very little by pleasure to attend college.

It appears that the adults who continued their attendance were often more aware of the impact that technological changes had on their jobs. The difference of opinion between the adults in attendance and dropouts as to the extent an adult was motivated to continue his education by pleasure can partially be explained by the fact that the dropouts were failing to succeed, thus, it is doubtful they would consider pleasure to be a strong motivational force. In contrast, the adults, who continued their attendance,

were having some degree of success, hence they would be inclined to consider that attendance was motivated by pleasure.

An adult's progress in college according to adult students was retarded very little by inadequate mathematical skills, unsatisfactory study habits and a decline in learning capacity due to age. Though many of the instructors agreed with the evaluations of the adults they taught, a greater percentage of the instructors than the adult students considered such factors had some effect on an adult's progress. The majority of the instructors also agreed with the adults in attendance that insufficient time to study to some extent retarded the progress an adult made in his studies, an opinion expressed by only a few dropouts.

Maintaining a good grade average, meeting student competition and instructor-student relationships in the opinion of the adult students caused an adult very little difficulty, though many instructors disagreed with their evaluations.

Analysis revealed that the instructors, who taught in the Evening Division, were usually men who had a sound industrial background but limited experience in teaching adults. During the day most of the instructors were employed in a profession, educational institution or

business, however the greatest percentage were employed as teachers. The majority of the instructors did not feel that the administrative procedures proposed by the investigator would significantly reduce the number of dropouts. Raising promotion standards, making adults aware of upgrading courses and contacting potential dropouts by telephone would to some extent in their opinion encourage some of the potential dropouts to continue their attendance.

Analysis also resulted in the following general objective being attained:

General Objective: To develop through statistical analysis of characteristics and behaviour of adults attending and dropouts from the Evening Division of the Red River Community College, a model capable of identifying potential dropouts before they discontinue their attendance.

Stepwise multiple regression analysis derived a discriminant function that explained forty-four per cent of the variance between the two groups of adults being studied. Further regression analysis of the sample, after it had been reduced by twenty-five per cent, established a discriminant function very similar in structure. The number of independent variables in both functions was reduced to three, because the remaining variables added very little to the amount of variability identified by the functions. The modified discriminant functions were then used to compute discriminant values for the adults who had been randomly withdrawn from the sample, prior to the second regression analysis.

Using a critical discriminant value of -0.16 to discriminate between adults who continued and discontinued their attendance, the first modified discriminant function was able to identify nine-three per cent of the actual dropouts as potential dropouts and eighty-eight per cent of the actual adults in attendance as potential adults in attendance. Furthermore, the second modified discriminant function was able to identify ninety-three per cent of the actual dropouts as potential dropouts and eighty-seven per cent of the actual adults in attendance as potential adults in attendance, using a critical discriminant value of -0.12 . Thus the two modified discriminant functions were able to identify potential dropouts with a fair degree of precision.

Conclusions

Based on the findings of this study and the limitations established, it was possible to draw some tentative conclusions.

1. Identifying potential dropouts in the Evening Division of the Red River Community College is difficult because of the many similarities between dropouts and adults who continue their attendance. Though many factors are often associated with discontinuance of attendance only a few can actually accomplish the task of differentiating potential dropouts.
2. Many factors contribute to an adult discontinuing his attendance at college in the evening. Therefore it is only possible to make tentative generalizations. Some adults are compelled to drop out by circumstances over which they have little or no control, such as a change in their conditions of employment, which prevents them from attending class or the

emergence of a personal problem, which does not allow them time to study. Other factors associated with discontinuance are related to an adult's past experience, perception and self-discipline. Some dropouts lack adequate background knowledge for a course, while others fail to perceive the nature of a course when they enroll or are unwilling to devote an adequate amount of their leisure time to studying. Therefore they had difficulty comprehending the subject matter taught which leads to frustration, loss of interest, boredom and finally withdrawal.

3. Under existing conditions adult students do not have adequate opportunity to discuss their learning difficulties and personal problems with instructors. Communication breaks down between the instructor and the adult who needs his assistance, as a result instructors are often unaware of the problems encountered by their students. The adult who is unable to satisfactorily resolve his difficulties frequently discontinues attendance.
4. Most evening students are self-motivated which accounts for their willingness to devote a considerable portion of their leisure time to improving their education. Adults attend college to improve their knowledge and understanding of an occupation, often with the intention of gaining promotion or changing vocation.
5. Interest in post-secondary education usually arises after several years' employment when possibly a change in marital status, family responsibilities or ambition induces an adult to seek advancement and improve his education. Few adults commit themselves to a programme of studies that leads to a certificate of competence in an occupation, probably because they lack foresight, have simple needs or require immediate reward for their efforts. Furthermore the period of study a certificate requires can result in disillusionment and withdrawal.

6. Identifying potential dropouts is difficult, but efforts to reduce the dropout rate could be made more effective through the use of a prediction model. Though the accuracy of prediction is not perfect it is sufficient to justify the effort involved. However the model's usefulness is limited because it does not include personality traits, intelligence and personal relationships which could reduce the validity of predictions to some extent.

Significance of the Study

Based on the literature reviewed and the findings of this study, some suggestions have been proposed for broadening our understanding of the dropout problem and reducing the dropout rate in the Evening Division.

1. The investigator believes that the variance, between adults attending and dropouts from the Evening Division which this study was unable to explain, could possibly be identified by studying an adult's communication skills, intelligence score, personal problems and his evaluation of courses studied in the past. Furthermore, our understanding of the issues associated with discontinuance would be enlightened by discussion with adults who continue their attendance, dropouts and instructors.
2. Findings in this study indicate that the following policies, designed to reduce difficulties encountered by the adults as a group, would encourage more adults to continue their attendance:
 - (a) Encouraging adults to examine course outlines before enrolling in a programme of studies, would prevent many of them from enrolling in courses unable to satisfy their interests and needs.

(b) Informing adults that many courses offered by the Evening Division require at least two hours study outside class, would discourage many of them from enrolling in more courses than they had time available to study.

(c) Discouraging adults from enrolling in more than one course each term, unless they have shown themselves capable of handling the studying involved, would prevent them from committing themselves to an unrealistic work load.

(d) Encouraging the instructors to maintain constant standards of promotion would ensure that adults had adequate background knowledge before enrolling in a more advanced course.

(e) Encouraging adults, with poor mathematical and communication skills, to enroll in appropriate upgrading courses would enable them to better understand the subject matter presented in class.

(f) Recommending adults to transfer, to a course offered during the day, when a change in their working hours prevents them from continuing their attendance in the evening, would probably encourage many of them to complete their studies.

(g) Contacting adults by telephone, who fail to attend college for two consecutive weeks, would make them feel that the College was interested in their welfare, which would encourage some to continue their attendance.

In the investigator's opinion these policies directed at the difficulties encountered by the adult student body, could reduce the dropout rate by nearly a third.

3. Evidence from this study suggests that the present dropout rate in the Evening Division could be reduced if instructors had more time available to discuss learning difficulties and personal problems with the adults they teach. Since time is at a premium for the

adult student and instructor, adults would be informed that the instructors would be available for guidance and counselling upon request.

4. Adults are motivated to continue their education by many factors and though only a few were examined in this study it was shown that they play an important role in determining whether an adult continues his attendance. If more adults, who enroll, are to be encouraged to continue their attendance, the investigator believes their motives for continuing their education and their expectations of a course require further study.
5. The findings of this study suggest that if adults were awarded an intermediate certificate after two years of study, fewer of them would discontinue their attendance and possibly, more would try and obtain a certificate of competence in an occupation.
6. In the opinion of the investigator the prediction model developed in this study is able to provide information for more effective counselling, which could result in nearly a third of the potential dropouts unaffected by the recommended policies being encouraged to continue their attendance.

The combined recommendations outlined could result in changes that might encourage nearly a half of the potential dropouts to continue their studies. However for the recommendations to be effective over a period of time, the clientele served by the Evening Division must be periodically studied to determine whether it has significantly changed. Significant changes in the clientele might require the recommendations to be reviewed and modified. Finally these recommendations apply specifically to the adult students who attend the Red River Community College in the evening and cannot be generalised for other categories of students who attend the College or for students who attend other community colleges.

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APPENDIX A

St. James,
Winnipeg 12, Man.

Dear Sir/Madam:

The Red River Community College, like any other educational institution, is very concerned about providing broader educational opportunities for students with a wide range of ability and experience.

Due to my interest in Adult Education and experience as a part-time student, I have undertaken a research project as part of my Master of Education programme at the University of Manitoba, designed to study how certain factors may assist a student in his studies.

Though the results of this study will be available to the staff and administration of the Red River Community College, I would like to assure all students who participate, that the findings will be presented in a form which will not permit the identification of any individual.

The material contained in the questionnaire will be examined in the strictest confidence. It will have absolutely no influence on a student's grade, college record or relationship with instructors.

It is the nature of the problem being studied which makes the identity of those who participate necessary.

Yours sincerely

A QUESTIONNAIRE RELATED TO SELECTED CHARACTERISTICS
OF THE EVENING DIVISION STUDENTS ATTENDING
THE RED RIVER COMMUNITY COLLEGE

WINNIPEG, MANITOBA

FALL TERM 1970

TO BE COMPLETED BY THE STUDENTS

STUDENT
DIVISION

DATE
CLASS

PLEASE CIRCLE OR CHECK THE MOST APPROPRIATE ANSWER

1. Sex
 - a) Male
 - b) Female
2. Age
 - a) 19 and over
 - b) 20-24
 - c) 25-34
 - d) 35-44
 - e) 45-54
 - f) 55-64
 - g) 65 and over.
3. Marital Status
 - a) Single
 - b) Married
 - c) Widowed
 - d) Divorced or Separated
4. Place of Origin
 - a) Canada
 - b) U.S.A.
 - c) Europe
 - d) Asia
 - e) Africa
 - f) Other
5. Present Residence
 - a) Winnipeg Postal District No.
1, 2, 3, 4, 5, 6, 8, 9, 10,
12, 13, 14, 15, 16, 17, 19, 20,
21, 22, 23, 25, 27, 28, 29.
 - b) Manitoba Rural
6. How frequently have you changed your residence in the past 5 years?
 - a) None
 - b) Once
 - c) Twice
 - d) Three
 - e) More than three
7. Total Number of people in your family. (Married student include children and spouse. Single student should consider himself a one member family unit).
 - a) One
 - b) Two
 - c) Three
 - d) Four
 - e) Five
 - f) Six
 - g) More than six

8. Total Family Personal income (before deductions) Married Student include the income of all members of the family who are working. A single student should state only his own income)
- a) under \$2000
 - b) \$2000-\$3999
 - c) \$4000-\$5999
 - d) \$6000-\$7999
 - e) \$8000-\$9999
 - f) \$10,000-\$14,999
 - g) over \$15,000
 - h) Supported by Family
9. Your formal education was completed in
- a) Metro-Winnipeg
 - b) Rural Manitoba
 - c) Other Province (State) _____
 - d) Other Country (State) _____
10. Highest Grade completed at school
- a) XII
 - b) XI
 - c) X
 - d) IX
 - e) VIII
 - f) Lower than Grade VIII
11. In your last year at school your average grade was?
- a) A
 - b) B
 - c) C
 - d) D
 - e) F
12. In which of the following programmes were you enrolled while at school?
- a) University Entrance
 - b) General
 - c) Commercial
 - d) Vocational
 - e) Occupational Entrance
 - f) Other
13. How many years had elapsed between your leaving school and returning to your studies?
- a) None
 - b) One
 - c) Two
 - d) Three
 - e) Four
 - f) Five or more
14. Were you encouraged to continue your studies again by any of the following people?
- a) Wife
 - b) Relative
 - c) Teacher
 - d) Employer
 - e) Friend
 - f) Other

- | | | | |
|-----|---|---|--|
| 15. | How many years will your present programme take to complete? | a) Under 1 yr.
b) 1 yr.
c) 1½ yrs.
d) 2 yrs. | e) 2½ yrs.
f) 3 yrs.
g) More than 3 yrs. |
| 16. | How many classes are you taking at evening school this year? | a) 1
b) 2
c) 3 | d) 4
e) More than 4 |
| 17. | On the average how many hours per week outside of class do you spend on <u>this</u> course? | a) Less than 1 hr.
b) 1 hr.
c) 2 hrs.
d) 3 hrs. | e) 4 hrs.
f) 5 hrs. or more |
| 18. | Where do you study, outside of class? | a) College Library
b) Local Library
c) Place of employment
d) Home (study room)
e) Home (other room than study)
f) Other | |
| 19. | What has been your average grade for other college courses? | a) A
b) B
c) C | e) D
f) F |
| 20. | How many courses have you dropped since you started attending the evening division of the R.R.C.C.? | a) None
b) One
c) Two
d) Three | e) Four
f) More than four |
| 21. | How many years have you been studying (full or part-time) since leaving school? | a) Less than 1 yr.
b) 1 yr.
c) 2 yrs.
d) 3 yrs. | e) 4 yrs.
f) 5 yrs. or more |
| 22. | Besides attending college in the evening, are you, | a) Working full time
b) Working part-time
c) Studying full-time | d) Unemployed
e) A Housewife
f) Other |
| 23. | If you are working what type of work are you doing? | a) Industrial
b) Business
c) Sales/Service
d) Professional | e) Self-employed
f) Other |

24. To what extent is the course you are taking of assistance in your present occupation?
- a) Very useful
b) Frequently useful
c) Occasionally useful
d) Never useful
25. How often in the last 5 yrs. have you changed your place of employment?
- a) Never
b) Once
c) Twice
d) Three times
e) Four times
f) More than four times
26. The opportunities available to discuss learning difficulties with the lecturer are-
- a) Excellent
b) Good
c) Satisfactory
d) Poor
e) Very unsatisfactory
27. The opportunities available to discuss personal problems with the lecturer are-
- a) Excellent
b) Good
c) Satisfactory
d) Poor
e) Very unsatisfactory
28. Your main reason for dropping a course was (to be answered only by those students who have dropped a course)
- a) A Change in working hours
b) Inadequate background knowledge and skill
c) Class assignments that were too demanding
d) The course failed to meet your interests and needs
e) An unsatisfactory personal relationship with the instructor (excluding the teaching methods)
f) An unsatisfactory personal relationship with other students in the class
g) Teaching methods were considered inappropriate for the course
h) The sudden emergence of a personal problem outside college
i) Other
29. To what extent does your attendance at college affect your
- | | <u>Not at all</u> | <u>Very Little</u> | <u>Some</u> | <u>Very Much</u> |
|--|-------------------|--------------------|-------------|------------------|
| a) Financial Position | _____ | _____ | _____ | _____ |
| b) Leisure pursuits | _____ | _____ | _____ | _____ |
| c) Family relationships | _____ | _____ | _____ | _____ |
| d) Household chores | _____ | _____ | _____ | _____ |
| e) Health (feeling of tiredness, anxiety etc.) | _____ | _____ | _____ | _____ |

	<u>Not at</u> <u>all</u>	<u>Very</u> <u>Little</u>	<u>Some</u>	<u>Very</u> <u>Much</u>
30. To what extent did the following factors motivate you to continue your education?				
a) Future Advancement	_____	_____	_____	_____
b) Keep up with changes in technology	_____	_____	_____	_____
c) Gain knowledge related to present occupation	_____	_____	_____	_____
d) Relieve boredom	_____	_____	_____	_____
e) Pleasure	_____	_____	_____	_____
31. To what extent have the following factors frequently retarded your progress in college?				
a) Insufficient time to study	_____	_____	_____	_____
b) Inadequate mathematical knowledge and skills	_____	_____	_____	_____
c) Deficiency in language skills (reading, writing and oral expression)	_____	_____	_____	_____
d) Unsatisfactory study habits and a deficiency in self discipline	_____	_____	_____	_____
e) Decline in learning capacity due to age	_____	_____	_____	_____
32. To what extent have the following factors ever caused you difficulty during your years of study at R.R.C.C.?				
a) Maintaining a good grade average	_____	_____	_____	_____
b) Meeting student competition	_____	_____	_____	_____
c) Taking examinations	_____	_____	_____	_____
d) Obtaining counselling service	_____	_____	_____	_____
e) Instructor-student relationships	_____	_____	_____	_____
f) Relationships with other students	_____	_____	_____	_____

Please check to see whether you have answered all the questions
This is most important

Thank you very much for your assistance
 and co-operation

Peter James Murphy

DEPARTMENT OF YOUTH AND EDUCATION

Community Colleges Division

153/

RED RIVER COMMUNITY COLLEGE

2055 Notre Dame Avenue, Winnipeg 23

Telephone 786-6311

November 14, 1970

TO WHOM IT MAY CONCERN:

The Evening Division of the Red River Community College hereby gives _____ he authority to administer a questionnaire to a select group of students and staff. I would very much appreciate your cooperation in this matter.

Yours truly,

ADULT EDUCATION - EVENING DIVISION

Assistant Supervisor

CVG/dmd

St. James,
Winnipeg 12, Man.

Dear Sir/Madam:

The Red River Community College, like many other educational institutions is very concerned about providing broader educational opportunities for students with a wide range of ability and experience, so more people can take advantage of the facilities the college has to offer.

In the past ten years, the college has witnessed a very rapid demand for the programmes offered by the Evening Divisions. Obviously more and more adults want to continue their education. In order to adequately meet the needs of these adults, more detailed information is needed on the adult who attends college in the evening.

Due to my interest in Adult Education and experience as a part-time student, I have undertaken a research project, as part of my Master of Education programme at the University of Manitoba. designed to study how certain factors may assist a student in his studies.

A select sample of students who attend college, were asked to complete the enclosed questionnaire related to their personal background, opinions and judgment. The class in which you enrolled earlier this year, was one of the groups chosen to participate in this project. Consequently as a member of that class your co-operation in completing the same questionnaire would be very much appreciated.

All questions are multiple choice, and completing the questionnaire should not take more than ten minutes of your time. Your participation will be a very valuable contribution to the project.

I realise that you are busy and have many commitments, nevertheless, I hope your support will be forthcoming on a study that is of great concern to all part-time students.

Though the results of this study will be available to the staff and administration of the Red River

Community College, I would like to assure all students who participate, that the findings will be presented in a form which will not permit the identification of any individual.

The material contained in the questionnaire will be examined in the strictest confidence. It will have absolutely no influence on a student's college record.

It is the nature of the problem being studied which makes the identity of those who participate necessary.

Yours sincerely

FALL TERM 1970

DATE _____

CLASS

Sex	a) Male	b) Female
How many years have you been teaching adults?	a) Less than 1 yr. b) 1 yr. c) 2 yrs. d) 3 yrs.	e) 4 yrs. f) 5 yrs. g) more than 5 yrs.
How many years industrial experience do you possess?	a) 1 yr. b) 2 yrs. c) 3 yrs. d) 4 yrs.	e) 5 yrs. f) 6 yrs. g) more than 6 yrs.
When you are working full time what kind of work are you doing?	a) Industrial b) Business c) Profession (teaching) d) Professional (other than teaching) e) Sales/Service f) Self employed g) Other	
What proportion of the students in your class appear to have major learning difficulties? - (circle one)	10% 20% 30% 40% 50% 60% 70% 80% 90% 100%	
The opportunities available for students to discuss their learning difficulties with you are-	a) Excellent b) Good c) Satisfactory	d) Poor e) Very unsatisfactory
The opportunities available for students to discuss their personal problems with you are-	a) Excellent b) Good c) Satisfactory	d) Poor e) Very unsatisfactory

8. On the average, how many hrs. per week outside of class should a student spend on your course?
- | | |
|--------------------|-----------|
| a) Less than 1 hr. | e) 4 hrs. |
| b) 1 hr. | f) 5 hrs. |
| c) 2 hrs. | or more |
| d) 3 hrs. | |
9. In your opinion what are the major reasons for students withdrawing from your class? (check more than one if necessary)
- | |
|---|
| a) A change in working hrs. |
| b) Inadequate background knowledge and skill |
| c) Class assignments that were too demanding |
| d) The course failed to meet the student's needs and interests. |
| e) An unsatisfactory personal relationship with the instructor (excluding the Teaching Methods) |
| f) An unsatisfactory personal relationship with other students in the class |
| g) The student seemed dissatisfied with the teaching methods used. |
| h) The sudden emergence of a personal problem for the student outside of college. |
10. In your opinion to what degree are the following factors important in motivating your students to continue their education?
- | | <u>Not at</u>
<u>All</u> | <u>Very</u>
<u>Little</u> | <u>Some</u> | <u>Very</u>
<u>Much</u> |
|---|-----------------------------|------------------------------|-------------|----------------------------|
| a) Future Advancement | _____ | _____ | _____ | _____ |
| b) Keep up with changes in technology | _____ | _____ | _____ | _____ |
| c) Gain knowledge related to present occupation | _____ | _____ | _____ | _____ |
| d) Relieve boredom | _____ | _____ | _____ | _____ |
| e) Pleasure | _____ | _____ | _____ | _____ |
11. In your opinion to what degree have the following factors frequently retarded a student's progress in your course?
- | | | | | |
|---|-------|-------|-------|-------|
| a) Insufficient time to study | _____ | _____ | _____ | _____ |
| b) Inadequate mathematical knowledge and skills | _____ | _____ | _____ | _____ |
| c) Deficiency in language skills (reading, writing and oral expression) | _____ | _____ | _____ | _____ |

11. (continued)	<u>Not at</u> <u>All</u>	<u>Very</u> <u>Little</u>	<u>Some</u>	<u>Very</u> <u>Much</u>
d) Unsatisfactory study habits and a deficiency in self discipline	_____	_____	_____	_____
e) Decline in learning capacity due to age	_____	_____	_____	_____
12. In your opinion to what degree could the following proposals reduce the number of students withdrawing from your class each term?				
a) Making classes smaller so students can be given more individual attention	_____	_____	_____	_____
b) Making students more aware of the different types of upgrading courses available	_____	_____	_____	_____
c) Encouraging students to take advantage of the counselling service	_____	_____	_____	_____
d) Raising the promotion standards, so students have a good understanding of the basic essentials before being allowed to study more advanced topics	_____	_____	_____	_____
e) Contacting by telephone any student who fails to attend class twice in succession.	_____	_____	_____	_____
13. In your opinion to what degree do the following factors cause difficulty for adult students at evening school?				
a) Maintaining a good grade average	_____	_____	_____	_____
b) Meeting student competition	_____	_____	_____	_____
c) Taking examinations	_____	_____	_____	_____
d) Obtaining counselling service	_____	_____	_____	_____
e) Instructor-student relationships	_____	_____	_____	_____
f) Relationships with other students	_____	_____	_____	_____

Thank you very much for your assistance and co-operation.

Peter James Murphy

APPENDIX B

TABLE XXV

DISTRIBUTION OF THE NUMBER AND PERCENTAGE OF THE ADULT
POPULATION, TRANSFER DROPOUTS, NON-ATTENDING DROPOUTS,
ATTENDING DROPOUTS AND ADULTS IN ATTENDANCE IN EACH
EVENING SCHOOL DIVISION

Division	Adult Population		Transfer Dropouts		Non- Attending Dropouts		Attending Dropouts		Adults in Attendance	
	No.	%	No.	%	No.	%	No.	%	No.	%
Business	1568	56.8	120	79.0	127	60.0	296	63.79	1145	54.73
Applied Arts and General Education	131	4.7	0	0.0	9	4.3	11	2.37	111	5.31
Technology and Industrial	989	35.7	32	21.0	69	32.4	147	31.68	773	36.95
Management Development	80	2.8	0	0.0	7	3.3	10	2.16	63	3.01
Total	2768	100.0	152	100.0	212	100.0	464	100.00	2092	100.00

TABLE XXVI

DISTRIBUTION OF THE NUMBER AND PERCENTAGE OF ADULTS IN
ATTENDANCE AND DROPOUTS INCLUDED IN THE SAMPLES
TAKEN FROM EACH EVENING SCHOOL DIVISION

Division	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Business	149	54.73	38	63.79	187	56.3
Applied Arts and General Education	14	5.31	2	2.37	16	4.8
Technology and Industrial	101	36.95	19	31.68	120	36.2
Management Development	8	3.01	1	2.16	9	2.7
Total	272	100.0	60	100.00	332	100.0

TABLE XXVII

DISTRIBUTION OF THE NUMBER AND PERCENTAGE
OF ADULTS IN ATTENDANCE AND DROPOUTS IN
THE PROGRAMMES OFFERED BY THE
FOUR EVENING DIVISIONS

Division	Programme	Adults in Attendance No.	%	Dropouts No.	%
Business	Business Administrative Certificate	593	51.79	122	41.22
	Computer Programming and Analysis Certificate	271	23.67	74	25.00
	Special Courses	156	13.62	63	21.28
	Commercial Certificate	125	10.92	37	12.50
	Total	1145	100.00	296	100.00
Applied Arts and General Education	Social Welfare Certificate	47	42.34	8	72.73
	Graphic Arts Certificate	64	57.66	3	27.27
	Total	111	100.00	11	100.00
Technology and Industrial	Trade Improvement	221	28.59	50	34.01
	Radio and Television				
	Electronics Certificate	138	17.85	35	23.81
	Industrial	78	10.09	32	21.77
	Drafting Certificate	66	8.54	13	8.84
	Technology Diploma	75	9.70	3	2.04
	Industrial Supervision				
	Certificate	31	4.01	5	3.41
	Others	164	21.22	9	6.12
	Total	773	100.00	147	100.00
Management Development	Personnel Management	63	100.00	10	100.00
	Total	63	100.00	10	100.00

TABLE XXVIII

DISTRIBUTION OF THE NUMBER AND PERCENTAGE OF ADULTS IN ATTENDANCE AND DROPOUTS INCLUDED IN THE SAMPLES TAKEN FROM THE PROGRAMMES OFFERED BY THE EVENING DIVISION

Division	Programme	Adults in Attendance		Dropouts	
		No.	%	No.	%
Business	Business Administration Certificate	78	51.59	16	41.22
	Computer Programming and Analysis Certificate	35	23.67	9	25.00
	Special Courses	20	13.62	8	21.28
	Commercial Certificate	16	10.92	5	12.50
	Total	149	100.00	38	100.00
Applied Arts and General Education	Social Welfare Certificate	6	42.34	1	50.00
	Graphic Arts Certificate	8	57.66	1	50.00
	Total	14	100.00	2	100.00
Technology and Industrial	Trade Improvement	29	28.59	6	34.01
	Radio and Television	18	17.85	4	23.81
	Electronics Certificate	10	10.09	4	21.77
	Industrial	9	8.54	2	8.84
	Drafting Certificate	10	9.70	1	2.04
	Technology Diploma	4	4.01	1	3.41
	Industrial Supervision Certificate	21	21.22	1	6.12
	Others	101	100.00	19	100.00
Management Development	Personal Management	8	100.00	1	100.00
	Total	8	100.00	1	100.00

TABLE XXIX

DISTRIBUTION OF THE ADULTS IN ATTENDANCE AND DROPOUTS
IN THE SAMPLE BY DIVISION, PROGRAMME AND CLASS

Division	Programme	Class	Adults in Attendance No.	Dropouts No.
Business	Business Administration Certificate	Business Communications I	20	(15) 3 (2)
		Business Psychology	20	(15) 6 (5)
		Marketing IIB	20	(15) 1 (1)
		Principles of Management II	18	(13) 0 (0)
		Principles of Management I	0	(0) 3 (2)
	Computer Programming and Analysis Certificate	Total	78	(58) 16 (12)
		PL/I Programming	4	(4) 1 (2)
		Colbol Programming	8	(6) 3 (2)
		Int. to Data Processing	12	(9) 2 (2)
		Int. to Data Processing	11	(8) 3 (2)
	Special Courses	Total	35	(27) 9 (7)
		Report Writing	4	(3) 2 (1)
		Creative Writing	4	(3) 4 (3)
		Med. Secretaries and Receptionists	4	(6) 2 (0)
		Med. Secretaries and Receptionists	8	(3) 0 (2)
Commercial Certificate	Business Machines Shorthand II Key Punch	Total	20	(15) 8 (6)
		Business Machines	6	(4) 2 (2)
		Shorthand II	6	(5) 3 (2)
		Key Punch	4	(3) 0 (0)
		Total	16	(12) 5 (4)
	Total		149	(112) 38 (29)

TABLE XXIX
(CONTINUED)

Division	Programme	Class	Adults in Attendance No.	Dropouts No.
Applied Arts and General Education	Social Welfare Certificate	Social Welfare Services	6 (5)	1 (1)
		Total	6 (5)	1 (1)
	Graphic Arts Certificate	Design Layout	8 (6)	1 (0)
		Total	8 (6)	1 (0)
Total			14 (11)	2 (1)
Technology and Industrial	Trade Improvement	Automotive	10 (7)	5 (4)
		Electrical Term I	10 (7)	0 (0)
		D.C. Fundamentals	9 (7)	0 (0)
		Blue Print Reading	0 (0)	1 (1)
		Total	29 (21)	6 (5)
Radio and Television Electronics Certificate Industrial	Radio and Television Electronics Certificate	Television Electronics I	9 (6)	1 (1)
		Industrial Electronics	9 (7)	3 (2)
		Total	18 (13)	4 (3)
		Arc Welding	5 (4)	3 (2)
		Oxy-Acetylene Welding	5 (4)	0 (0)
		Pneumatic Controls	0 (0)	1 (1)
		Total	10 (8)	4 (3)

TABLE XXIX

(CONTINUED)

Division	Programme	Class	Adults in Attendance No.	Dropouts No.
Drafting Certificate Total	Architectural Drafting		9	(7) 2 (1)
			9	(7) 2 (1)
Technology Diploma Total	Eng. - 101N Communications Maths. 109N		10	(8) 0 (0)
			0	(0) 1 (0)
			10	(8) 1 (0)
Industrial Supervision Certificate Total	Foremanship I Foremanship I		4	(3) 0 (0)
			0	(0) 1 (1)
			4	(3) 1 (1)
Other Total	Programme Planning Int. to Chief Judge Level Research Method II Dimensional Measurements Logic Circuits and Industrial Controls		5	(3) 0 (0)
			4	(3) 0 (0)
			4	(3) 0 (0)
Total	Personnel Management Development Total		4	(3) 1 (1)
			21	(15) 1 (1)
			101	(75) 19 (14)
Management Development Total	Personnel Management Total		8	(6) 1 (1)
			8	(6) 1 (1)
			8	(6) 1 (1)

*The bracketed numbers represent the numbers of adults in attendance and dropouts selected for the reduced sample.

APPENDIX C

CHI-SQUARE TEST OF INDEPENDENCE
ON A CONTINGENCY TABLE

168

20 LEARNING DIFF NO 26 AD

4 ROWS X 2 COLUMNS

INPUT DATA, EXPECTED FREQUENCIES AND CONTRIBUTION
OF EACH CELL TO CHI-SQUARE

ROW	COLUMN	1	2	Totals
1	OB FREQ	95.00	10.00	105
	EX FREQ	86.03	18.97	
	CELL X2	0.83	3.78	
2	OB FREQ	107.00	19.00	126
	EX FREQ	103.23	22.77	
	CELL X2	0.10	0.47	
3	OB FREQ	43.00	16.00	59
	EX FREQ	48.34	10.66	
	CELL X2	0.48	2.20	
4	OB FREQ	18.00	13.00	31
	EX FREQ	25.40	5.60	
		1.87	8.50	

COLUMN		
TOTALS	263.00	58.00

GRAND TOTAL = 321.

CHI-SQUARE = 18.24 WITH 3 DEGREES OF
FREEDOM

THEORETICAL CHI-SQUARE = 7.82 - 5% 11.34 - 1%

CHI-SQUARE WAS ADJUSTED VIA YATE'S CORRECTION FOR
CONTINUITY FACTOR.

GROUP I RESPONSES OF ADULTS IN ATTENDANCE

GROUP II RESPONSES OF DROPOUTS

SIMPLE CORRELATION PROGRAMME

MEANS AND STANDARD DEVIATIONS

N = 332

M = 12

VARIABLE	MEAN	STANDARD DEVIATION
NO.		
1	-0.0007	0.3854
2	1.2892	1.1294
3	2.1054	1.0390
4	1.8886	1.0978
5	2.6747	1.6479
6	1.6175	1.1135
7	1.7651	0.8993
8	0.2560	0.5530
9	1.4699	0.9904
10	1.4067	0.9362
11	0.7500	0.8935
12	0.3343	0.6501

CORRELATION MATRIX

VARIABLE	1	2	3	4	5	6
1	1.000					
2	-0.164	1.000				
3	-0.262	0.062	1.000			
4	0.281	-0.159	-0.043	1.000		
5	0.212	-0.104	-0.093	0.080	1.000	
6	0.127	0.019	0.017	0.106	-0.027	1.000
7	0.121	0.014	0.059	0.044	0.003	-0.027
8	-0.562	0.084	0.226	-0.062	-0.094	-0.037
9	-0.212	0.167	0.501	-0.071	-0.036	-0.078
10	0.179	-0.032	0.043	0.080	0.123	0.112
11	-0.114	0.093	0.107	-0.072	0.006	0.071
12	-0.108	-0.013	0.167	-0.058	-0.081	0.035

CORRELATION MATRIX (CONTINUED)

VARIABLE	7	8	9	10	11	12
1						
2						
3						
4						
5						
6						
7	1.000					
8	-0.091	1.000				
9	0.148	0.254	1.000			
10	0.308	-0.137	0.031	1.000		
11	0.205	0.087	0.075	0.274	1.000	
12	0.016	0.198	0.107	0.039	0.165	1.000

STEPWISE MULTIPLE REGRESSION MODEL RUN I

NUMBER OF OBSERVATIONS	332.0
NUMBER OF VARIABLES	12.0
NUMBER OF SELECTIONS	1.0
CONSTANT TO LIMIT	
VARIABLES	0.0

MEANS AND STANDARD DEVIATIONS

VARIABLE	MEAN	STANDARD DEVIATION
NO.		
1	-0.0007	0.3854
2	1.2892	1.1294
3	2.1054	1.0390
4	1.8886	1.0978
5	2.6747	1.6480
6	1.6175	1.1135
7	1.7651	0.8993
8	0.2560	0.5530
9	1.4699	0.9904
10	1.4067	0.9362
11	0.7500	0.8935
12	0.3343	0.6501

CORRELATION MATRIX

VARIABLE	1	2	3	4	5	6
1	1.000					
2	-0.164	1.000				
3	-0.262	0.062	1.000			
4	0.281	-0.159	-0.043	1.000		
5	0.212	-0.104	-0.093	0.080	1.000	
6	0.127	0.019	0.017	0.106	-0.027	1.000
7	0.121	0.014	0.059	0.044	0.003	-0.027
8	-0.562	0.084	0.226	-0.062	-0.094	-0.037
9	-0.212	0.167	0.501	-0.071	-0.036	-0.078
10	0.179	-0.032	0.043	0.080	0.123	0.112
11	-0.114	0.092	0.107	-0.072	0.006	0.071
12	-0.109	-0.013	0.167	-0.058	-0.082	0.035

CORRELATION MATRIX (CONTINUED)

VARIABLE	7	8	9	10	11	12
1						
2						
3						
4						
5						
6						
7	1.000					
8	-0.091	1.000				
9	0.148	0.254	1.000			
10	0.308	-0.138	0.031	1.000		
11	0.205	0.087	0.075	0.274	1.000	
12	0.016	0.198	0.107	0.039	0.165	1.000

SELECTION..... 1

DEPENDENT VARIABLE 1
 NUMBER OF VARIABLES FORCED 0
 NUMBER OF VARIABLES DELETED 0

STEP I

VARIABLE ENTERED 8

SUM OF SQUARES REDUCED IN THIS STEP 15.523
 PROPORTION REDUCED IN THIS STEP 0.316
 CUMULATIVE SUM OF SQUARES REDUCED 15.523
 CUMULATIVE PROPORTION REDUCED 0.316 of 49.161

FOR 1 VARIABLE ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.562
 (ADJUSTED FOR D.F.) 0.562
 F-VALUE FOR ANALYSIS OF VARIANCE 152.280
 STANDARD ERROR OF ESTIMATE 0.319
 (ADJUSTED FOR D.F.) 0.319

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
8	-0.3916	0.0317	-12.340
INTERCEPT	0.0995		

STEP II

176

VARIABLE ENTERED 4

SUM OF SQUARES REDUCED IN THIS STEP 2.980
 PROPORTION REDUCED IN THIS STEP 0.061
 CUMULATIVE SUM OF SQUARES REDUCED 18.503
 CUMULATIVE PROPORTION REDUCED 0.376 of 49.161

FOR 2 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.613
 (ADJUSTED FOR D.F.) 0.612
 F-VALUE FOR ANALYSIS OF VARIANCE 99.279
 STANDARD ERROR OF ESTIMATE 0.305
 (ADJUSTED FOR D.F.) 0.306

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.38084	0.03040	-12.528
4	0.08661	0.01531	5.655
INTERCEPT	-0.06677		

STEP III

VARIABLE ENTERED 5

SUM OF SQUARES REDUCED IN THIS STEP 0.984
 PROPORTION REDUCED IN THIS STEP 0.020
 CUMULATIVE SUM OF SQUARES REDUCED 19.487
 CUMULATIVE PROPORTION REDUCED 0.396 of 49.161

FOR 3 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.630
 (ADJUSTED FOR D.F.) 0.627
 F-VALUE FOR ANALYSIS OF VARIANCE 71.801
 STANDARD ERROR OF ESTIMATE 0.301
 (ADJUSTED FOR D.F.) 0.302

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.37197	0.03007	-12.369
4	0.08288	0.01513	5.477
5	0.03333	0.01011	3.299
INTERCEPT	-0.15116		

STEP IV

177

VARIABLE ENTERED 3

SUM OF SQUARES REDUCED IN THIS STEP..... 0.720
 PROPORTION REDUCED IN THIS STEP 0.015
 CUMULATIVE SUM OF SQUARES REDUCED 20.208
 CUMULATIVE PROPORTION REDUCED 0.411 of 49.161

FOR 4 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.641
 (ADJUSTED FOR D.F.) 0.637
 F-VALUE FOR ANALYSIS OF VARIANCE 57.056
 STANDARD ERROR OF ESTIMATE 0.298
 (ADJUSTED FOR D.F.) 0.299

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.35302	0.03048	-11.580
4	0.08185	0.01497	5.466
5	0.03128	0.01002	3.121
3	-0.04624	0.01621	-2.852
INTERCEPT	-0.05123		

STEP V

VARIABLE ENTERED 6

SUM OF SQUARES REDUCED IN THIS STEP 0.399
 PROPORTION REDUCED IN THIS STEP 0.008
 CUMULATIVE SUM OF SQUARES REDUCED 20.607
 CUMULATIVE PROPORTION REDUCED 0.419 of 49.161

FOR 5 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT..... 0.647
 (ADJUSTED FOR D.F.) 0.642
 F-VALUE FOR ANALYSIS OF VARIANCE 47.053
 STANDARD ERROR OF ESTIMATE 0.296
 (ADJUSTED FOR D.F.) 0.298

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.35052	0.03034	-11.552
4	0.07842	0.01498	5.235
5	0.03206	0.00998	3.214
3	-0.04714	0.01613	-2.923
6	0.03141	0.01471	2.134
INTERCEPT	-0.09638		

STEP VI

VARIABLE ENTERED 7

178

SUM OF SQUARES REDUCED IN THIS STEP 0.281
 PROPORTION REDUCED IN THIS STEP 0.006
 CUMULATIVE SUM OF SQUARES REDUCED 20.888
 CUMULATIVE PROPORTION REDUCED 0.425 or 49.161

FOR 6 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.652
 (ADJUSTED FOR D.F.) 0.645
 F-VALUE FOR ANALYSIS OF VARIANCE 40.018
 STANDARD ERROR OF ESTIMATE 0.295
 (ADJUSTED FOR D.F.) 0.297

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.34468	0.03041	-11.334
4	0.07722	0.01494	5.168
5	0.03212	0.00994	3.231
3	-0.04957	0.01613	-3.073
6	0.03238	0.01467	2.207
8	0.03271	0.01819	1.798
INTERCEPT	-0.14998		

STEP VII

VARIABLE ENTERED 2

SUM OF SQUARES REDUCED IN THIS STEP 0.236
 PROPORTION REDUCED IN THIS STEP 0.005
 CUMULATIVE SUM OF SQUARES REDUCED 21.124
 CUMULATIVE PROPORTION REDUCED 0.430 or 49.161

FOR 7 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.656
 (ADJUSTED FOR D.F.) 0.647
 F-VALUE FOR ANALYSIS OF VARIANCE 34.872
 STANDARD ERROR OF ESTIMATE 0.294
 (ADJUSTED FOR D.F.) 0.297

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.34154	0.03039	-11.238
4	0.07345	0.01508	4.871
5	0.03077	0.00995	3.093
3	-0.04876	0.01610	-3.030
6	0.03324	0.01464	2.270
8	0.03348	0.01815	1.845
2	-0.02413	0.01462	-1.650
INTERCEPT	-0.11339		

STEP VIII

VARIABLE ENTERED 11

179

SUM OF SQUARES REDUCED IN THIS STEP 0.188
 PROPORTION REDUCED IN THIS STEP 0.004
 CUMULATIVE SUM OF SQUARES REDUCED 21.312
 CUMULATIVE PROPORTION REDUCED 0.434 of 49.161

FOR 8 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.658
 (ADJUSTED FOR D.F.) 0.649
 F-VALUE FOR ANALYSIS OF VARIANCE 30.897
 STANDARD ERROR OF ESTIMATE 0.294
 (ADJUSTED FOR D.F.) 0.297

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.33764	0.03045	-11.088
4	0.07179	0.01509	4.756
5	0.03131	0.00994	3.150
3	-0.04712	0.01610	-2.926
6	0.03515	0.01468	2.395
8	0.03936	0.01855	2.122
2	-0.02262	0.01463	-1.546
16	-0.02776	0.01880	-1.477
INTERCEPT	-0.11073		

STEP IX

VARIABLE ENTERED 10

SUM OF SQUARES REDUCED IN THIS STEP 0.226
 PROPORTION REDUCED IN THIS STEP 0.005
 CUMULATIVE SUM OF SQUARES REDUCED 21.538
 CUMULATIVE PROPORTION REDUCED 0.438 of 49.161

FOR 9 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.662
 (ADJUSTED FOR D.F.) 0.651
 F-VALUE FOR ANALYSIS OF VARIANCE 27.895
 STANDARD ERROR OF ESTIMATE 0.293
 (ADJUSTED FOR D.F.) 0.297

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.33107	0.03064	-10.804
4	0.07032	0.01508	4.662
5	0.02940	0.00998	2.945
3	-0.04838	0.01608	-3.008
6	0.03269	0.01472	2.221
8	0.03141	0.01914	1.641
2	-0.02185	0.01460	-1.497
16	-0.03517	0.01930	-1.822
15	0.03095	0.01907	1.623
INTERCEPT	-0.12285		

STEP X

VARIABLES ENTERED 12

180

SUM OF SQUARES REDUCED IN THIS STEP 0.066
 PROPORTION REDUCED IN THIS STEP 0.001
 CUMULATIVE SUM OF SQUARES REDUCED 21.604
 CUMULATIVE PROPORTION REDUCED 0.439 of 49.161

FOR 10 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.663
 (ADJUSTED FOR D.F.) 0.651
 F-VALUE FOR ANALYSIS OF VARIANCE 25.165
 STANDARD ERROR OF ESTIMATE 0.293
 (ADJUSTED FOR D.F.) 0.297

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.33539	0.03105	-10.802
4	0.07089	0.01510	4.694
5	0.02996	0.01001	2.994
3	-0.04995	0.01619	-3.085
6	0.03228	0.01473	2.192
8	0.03155	0.01915	1.647
2	-0.02109	0.01463	-1.441
16	-0.03738	0.01947	-1.920
15	0.03050	0.01908	1.598
17	0.02269	0.02587	0.877
INTERCEPT	-0.12687		

STEP XI

VARIABLES ENTERED 9

SUM OF SQUARES REDUCED IN THIS STEP 0.001
 PROPORTION REDUCED IN THIS STEP 0.000
 CUMULATIVE SUM OF SQUARES REDUCED 21.605
 CUMULATIVE PROPORTION REDUCED 0.439 of 49.161

FOR 11 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.663
 (ADJUSTED FOR D.F.) 0.650
 F-VALUE FOR ANALYSIS OF VARIANCE 22.807
 STANDARD ERROR OF ESTIMATE 0.293
 (ADJUSTED FOR D.F.) 0.298

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.33589	0.03156	-10.642
4	0.07093	0.01513	4.688
5	0.02992	0.01003	2.983
3	-0.05073	0.01831	-2.770
6	0.03240	0.01481	2.188
8	0.03128	0.01940	1.612
2	-0.02129	0.01482	-1.437
16	-0.03732	0.01951	-1.913
15	0.03049	0.01912	1.595
17	0.02267	0.02591	0.875
14	0.00182	0.01966	0.092
INTERCEPT	-0.12720		

STEPWISE MULTIPLE REGRESSION
MODEL RUN II

181

NUMBER OF OBSERVATIONS 249.0
NUMBER OF VARIABLES 12.0
NUMBER OF SELECTIONS 1.0
CONSTANT TO LIMIT
VARIABLES 0.0

MEANS AND STANDARD DEVIATIONS

VARIABLE NO.	MEAN	STANDARD DEVIATION
1	-0.0007	0.3856
2	1.2731	1.1385
3	2.0683	1.0196
4	1.8675	1.1010
5	2.6546	1.6489
6	1.5582	1.0840
7	1.7872	0.8974
8	0.2490	0.5700
9	1.4217	1.0135
10	1.3655	0.9196
11	0.7390	0.8845
12	0.3173	0.6284

CORRELATION MATRIX

VARIABLE	1	2	3	4	5	6
1	1.000					
2	-0.199	1.000				
3	-0.256	0.057	1.000			
4	0.304	-0.158	-0.064	1.000		
5	0.244	-0.130	-0.075	0.050	1.000	
6	0.165	-0.023	-0.005	0.143	-0.023	1.000
7	0.110	-0.006	0.056	0.073	0.026	-0.047
8	0.528	0.081	0.262	-0.076	-0.136	-0.056
9	-0.227	0.186	0.483	-0.069	-0.038	-0.109
10	0.198	-0.053	0.042	0.088	0.115	0.078
11	-0.139	0.071	0.091	-0.093	0.013	0.060
12	-0.079	0.002	0.155	-0.026	-0.127	0.053

CORRELATION MATRIX (CONTINUED)

VARIABLE	7	8	9	10	11	12
1						
2						
3						
4						
5						
6						
7	1.000					
8	-0.077	1.000				
9	0.166	0.285	1.000			
10	0.305	-0.190	0.072	1.000		
11	0.158	0.106	0.092	0.257	1.000	
12	0.085	0.184	0.099	0.057	0.193	1.000

SELECTION 1

DEPENDENT VARIABLE 1

NUMBER OF VARIABLES FORCED 0

NUMBER OF VARIABLES DELETED 0

STEP I

VARIABLE ENTERED 8

SUM OF SQUARES REDUCED IN THIS STEP	10.293
PROPORTION REDUCED IN THIS STEP	0.279
CUMULATIVE SUM OF SQUARES REDUCED	10.293
CUMULATIVE PROPORTION REDUCED	0.279 of 36.869

FOR 1 VARIABLE ENTERED

MULTIPLE CORRELATION COEFFICIENT	0.528
(ADJUSTED FOR D.F.)	0.528
F-VALUE FOR ANALYSIS OF VARIANCE	95.661
STANDARD ERROR OF ESTIMATE	0.328
(ADJUSTED FOR D.F.)	0.328

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
8	-0.3574	0.0366	-9.781
INTERCEPT	0.0883		

STEP II

185

VARIABLE ENTERED 4

SUM OF SQUARES REDUCED IN THIS STEP 2.590
 PROPORTION REDUCED IN THIS STEP 0.070
 CUMULATIVE SUM OF SQUARES REDUCED 12.883
 CUMULATIVE PROPORTION REDUCED 0.349 of 36.869

FOR 2 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.591
 (ADJUSTED FOR D.F.) 0.589
 F-VALUE FOR ANALYSIS OF VARIANCE 66.063
 STANDARD ERROR OF ESTIMATE 0.312
 (ADJUSTED FOR D.F.) 0.313

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.34382	0.03489	-9.855
4	0.09309	0.01806	5.154
INTERCEPT	-0.08895		

STEP III

VARIABLE ENTERED 5

SUM OF SQUARES REDUCED IN THIS STEP 0.984
 PROPORTION REDUCED IN THIS STEP 0.027
 CUMULATIVE SUM OF SQUARES REDUCED 13.867
 CUMULATIVE PROPORTION REDUCED 0.376 of 36.869

FOR 3 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.613
 (ADJUSTED FOR D.F.) 0.609
 F-VALUE FOR ANALYSIS OF VARIANCE 49.231
 STANDARD ERROR OF ESTIMATE 0.306
 (ADJUSTED FOR D.F.) 0.308

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.32904	0.03454	-9.526
4	0.09077	0.01774	5.117
5	0.03858	0.01192	3.237
INTERCEPT	-0.19072		

STEP IV

186

VARIABLE ENTERED 6

SUM OF SQUARES REDUCED IN THIS STEP..... 0.412
 PROPORTION REDUCED IN THIS STEP 0.011
 CUMULATIVE SUM OF SQUARES REDUCED 14.279
 CUMULATIVE PROPORTION REDUCED 0.387 of 36.869

FOR 4 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.622
 (ADJUSTED FOR D.F.) 0.616
 F-VALUE FOR ANALYSIS OF VARIANCE 38.556
 STANDARD ERROR OF ESTIMATE 0.304
 (ADJUSTED FOR D.F.) 0.306

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.32538	0.03434	-9.475
4	0.08547	0.01779	4.804
5	0.03950	0.01184	3.334
6	0.03806	0.01804	2.109
INTERCEPT	-0.24347		

STEP V

VARIABLE ENTERED 3

SUM OF SQUARES REDUCED IN THIS STEP 0.405
 PROPORTION REDUCED IN THIS STEP 0.011
 CUMULATIVE SUM OF SQUARES REDUCED 14.683
 CUMULATIVE PROPORTION REDUCED 0.398 of 36.869

FOR 5 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.631
 (ADJUSTED FOR D.F.) 0.623
 F-VALUE FOR ANALYSIS OF VARIANCE 32.164
 STANDARD ERROR OF ESTIMATE 0.302
 (ADJUSTED FOR D.F.) 0.305

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.30667	0.03524	-8.701
4	0.08377	0.01769	4.736
5	0.03854	0.01177	3.274
6	0.03862	0.01792	2.155
3	-0.04112	0.01954	-2.105
INTERCEPT	-0.15323		

STEP VI

VARIABLE ENTERED 2

187

SUM OF SQUARES REDUCED IN THIS STEP 0.347
 PROPORTION REDUCED IN THIS STEP 0.009
 CUMULATIVE SUM OF SQUARES REDUCED 15.030
 CUMULATIVE PROPORTION REDUCED 0.408 of 36.869

FOR 6 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.638
 (ADJUSTED FOR D.F.) 0.629
 F-VALUE FOR ANALYSIS OF VARIANCE 27.758
 STANDARD ERROR OF ESTIMATE 0.300
 (ADJUSTED FOR D.F.) 0.303

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.30348	0.03508	-8.652
4	0.07869	0.01777	4.427
5	0.03589	0.01178	3.047
6	0.03856	0.01781	2.165
3	-0.04013	0.01943	-2.065
2	-0.03358	0.01713	-1.960
INTERCEPT	-0.10172		

STEP VII

VARIABLE ENTERED 10

SUM OF SQUARES REDUCED IN THIS STEP 0.175
 PROPORTION REDUCED IN THIS STEP 0.005
 CUMULATIVE SUM OF SQUARES REDUCED 15.204
 CUMULATIVE PROPORTION REDUCED 0.412 of 36.869

FOR 7 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.642
 (ADJUSTED FOR D.F.) 0.631
 F-VALUE FOR ANALYSIS OF VARIANCE 24.162
 STANDARD ERROR OF ESTIMATE 0.300
 (ADJUSTED FOR D.F.) 0.304

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.29410	0.03565	-8.249
4	0.07711	0.01778	4.338
5	0.03435	0.01181	2.909
6	0.03705	0.01781	2.080
3	-0.04297	0.01950	-2.204
2	-0.03310	0.01710	-1.935
15	0.02980	0.02139	1.393
INTERCEPT	-0.13011		

STEP VIII

188

VARIABLE ENTERED 11

SUM OF SQUARES REDUCED IN THIS STEP 0.275
 PROPORTION REDUCED IN THIS STEP 0.007
 CUMULATIVE SUM OF SQUARES REDUCED 15.479
 CUMULATIVE PROPORTION REDUCED 0.420 of 36.869

FOR 8 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.648
 (ADJUSTED FOR D.F.) 0.635
 F-VALUE FOR ANALYSIS OF VARIANCE 21.710
 STANDARD ERROR OF ESTIMATE 0.299
 (ADJUSTED FOR D.F.) 0.303

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.28516	0.03586	-7.952
4	0.07370	0.01781	4.139
5	0.03469	0.01176	2.950
6	0.03910	0.01778	2.200
3	-0.04183	0.01943	-2.154
2	-0.03125	0.01706	-1.832
15	0.04087	0.02221	1.840
16	-0.03991	0.02272	-1.756
INTERCEPT	-0.12038		

STEP IX

VARIABLE ENTERED 7

SUM OF SQUARES REDUCED IN THIS STEP 0.119
 PROPORTION REDUCED IN THIS STEP 0.003
 CUMULATIVE SUM OF SQUARES REDUCED 15.598
 CUMULATIVE PROPORTION REDUCED 0.423 of 36.869

FOR 9 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.650
 (ADJUSTED FOR D.F.) 0.635
 F-VALUE FOR ANALYSIS OF VARIANCE 19.474
 STANDARD ERROR OF ESTIMATE 0.298
 (ADJUSTED FOR D.F.) 0.303

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.28301	0.03588	-7.887
4	0.07215	0.01784	4.043
5	0.03488	0.01175	2.968
6	0.04098	0.01784	2.297
3	-0.04300	0.01944	-2.212
2	-0.03146	0.01705	-1.845
15	0.03407	0.02296	1.484
16	-0.04259	0.02282	-1.866
8	0.02592	0.02243	1.156
INTERCEPT	-0.15382		

STEP X

VARIABLE ENTERED 12

189

SUM OF SQUARES REDUCED IN THIS STEP 0.078
 PROPORTION REDUCED IN THIS STEP 0.002
 CUMULATIVE SUM OF SQUARES REDUCED 15.676
 CUMULATIVE PROPORTION REDUCED 0.425 of 36.869

FOR 10 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.652
 (ADJUSTED FOR D.F.) 0.635
 F-VALUE FOR ANALYSIS OF VARIANCE 17.604
 STANDARD ERROR OF ESTIMATE 0.298
 (ADJUSTED FOR D.F.) 0.304

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.28772	0.03625	-7.938
4	0.07232	0.01785	4.052
5	0.03614	0.01183	3.054
6	0.04011	0.01787	2.245
3	-0.04468	0.01953	-2.288
2	-0.03083	0.01707	-1.807
15	0.03347	0.02298	1.456
16	-0.04578	0.02309	-1.983
8	0.02461	0.02248	1.095
17	0.02958	0.03168	0.933
INTERCEPT	-0.15614		

STEP XI

VARIABLE ENTERED 9

SUM OF SQUARES REDUCED IN THIS STEP 0.005
 PROPORTION REDUCED IN THIS STEP 0.000
 CUMULATIVE SUM OF SQUARES REDUCED 15.681
 CUMULATIVE PROPORTION REDUCED 0.425 of 36.869

FOR 11 VARIABLES ENTERED

MULTIPLE CORRELATION COEFFICIENT 0.652
 (ADJUSTED FOR D.F.) 0.633
 F-VALUE FOR ANALYSIS OF VARIANCE 15.946
 STANDARD ERROR OF ESTIMATE 0.299
 (ADJUSTED FOR D.F.) 0.305

VARIABLE NUMBER	REGRESSION COEFFICIENT	STD. ERROR OF REG. COEFF.	COMPUTED T-VALUE
12	-0.28590	0.03708	-7.710
4	0.07228	0.01789	4.041
5	0.03622	0.01186	3.054
6	0.03965	0.01800	2.203
3	-0.04238	0.02172	-1.951
2	-0.03008	0.01738	-1.731
15	0.03386	0.02308	1.467
16	-0.04584	0.02313	-1.982
8	0.02546	0.02279	1.117
17	0.02953	0.03175	0.930
14	-0.00554	0.02269	-0.244
INTERCEPT	-0.15585		

APPENDIX D

TABLE XXX

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY SEX

Sex	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Male	207	76.1	45	75.0	252	75.9
Female	65	23.9	15	25.0	80	24.1
No Response	0	0.0	0	0.0	0	0.0
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.00, \text{ d.f.} = 1, p \text{ is N.S.}$$

TABLE XXXI

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY AGE

Age in Years	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Under 25	72	26.5	23	38.4	95	28.6
25-34	116	42.6	17	28.3	133	40.1
35-44	62	22.8	14	23.3	76	22.9
45 and over	22	8.1	6	10.0	28	8.4
No Response	0	0.0	0	0.0	0	0.0
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 4.24, \text{ d.f.} = 3, p \text{ is N.S.}$$

TABLE XXXII

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY MARITAL STATUS

Marital Status	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Single	70	25.7	18	30.0	88	26.5
Married	189	69.5	37	61.7	226	68.1
Widowed, Divorced or Separated	11	4.0	5	8.3	16	4.8
No Response	2	0.8	0	0.0	2	0.6
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 1.62, d.f. = 2, p \text{ is N.S.}$

TABLE XXXIII

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY PLACE OF ORIGIN

Place of Origin	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Canada	205	75.3	43	71.8	248	74.7
Europe	37	13.6	9	15.0	46	13.9
Other	16	5.9	3	5.0	19	5.7
No Response	14	5.2	5	8.2	19	5.7
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 0.04, d.f. = 2, p \text{ is N.S.}$

TABLE XXXIV

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND
DROPOUTS BY HOW OFTEN THEY CHANGED THEIR
RESIDENCE IN THE PAST FIVE YEARS

Frequency	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
None	88	32.4	23	38.4	111	33.4
Once	76	28.0	8	13.3	84	25.3
Twice	44	16.1	8	13.3	52	15.7
Three	33	12.2	11	18.3	44	13.3
More than three	27	9.8	10	16.7	37	11.1
No Response	4	1.5	0	0.0	4	1.2
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 6.44, \text{ d.f.} = 4, p \text{ is N.S.}$$

TABLE XXXV

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND
DROPOUTS BY NUMBER OF
PEOPLE IN FAMILY

Number of People in Family	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
One	52	19.1	13	21.7	65	19.5
Two	54	19.9	13	21.7	67	20.2
Three	57	21.0	12	20.0	69	20.8
Four	66	24.3	11	18.3	77	23.2
Five or More	43	15.7	11	18.3	54	16.3
No Response	0	0.0	0	0.0	0	0.0
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.65, \text{ d.f.} = 4, p \text{ is N.S.}$$

TABLE XXXVI

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY TOTAL FAMILY
PERSONAL INCOME BEFORE DEDUCTIONS

Total Family Personal Income Before Deductions	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Under \$3999	30	11.0	5	8.3	35	10.5
\$4000 - \$5999	29	10.7	6	10.0	35	10.5
\$6000 - \$7999	49	18.0	12	20.0	61	18.4
\$8000 - \$9999	64	23.5	13	21.7	77	23.3
\$10,000 - \$14,999	63	23.2	14	23.4	77	23.2
Over \$15,000	24	8.8	5	8.3	29	8.8
No Response	13	4.8	5	8.3	18	5.4
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.221, \text{ d.f.} = 5, \text{ p is N.S.}$$

TABLE XXXVII

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY LOCALITY WHERE
FORMAL EDUCATION WAS COMPLETED

Locality	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Metro-Winnipeg	144	52.9	31	51.7	175	52.7
Rural Manitoba	23	8.5	7	11.7	30	9.0
Other Province	51	18.8	11	18.3	62	18.7
Other Country	31	11.4	10	16.7	41	12.3
No Response	23	8.5	1	1.6	24	7.3
Total	272	100.00	60	100.0	332	100.0

$$\chi^2_{AD} = 0.71, \text{ d.f.} = 3, \text{ p is N.S.}$$

TABLE XXXVIII

195

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY HIGHEST GRADE COMPLETED IN SCHOOL

Grade	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
XII	141	51.8	39	65.0	180	54.2
XI	79	29.0	12	20.0	91	27.4
X or Lower	49	18.1	9	15.0	58	17.5
No Response	3	1.1	0	0.0	3	0.9
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 2.47$, d.f. = 2, p is N.S.

TABLE XXXIX

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY AVERAGE GRADE ATTAINED IN THEIR
FINAL YEAR AT SCHOOL

Grade Average	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
A	27	9.9	4	6.7	31	9.3
B	110	40.4	23	38.3	133	40.1
C or Less	120	44.3	30	50.0	150	45.2
No Response	15	5.4	3	5.0	18	5.4
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 0.53$, d.f. = 3, p is N.S.

TABLE XL

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY PROGRAMME OF
STUDIES FOLLOWED IN SCHOOL

Programme	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
University						
Entrance	122	44.9	32	53.4	154	46.4
General	71	26.1	14	23.3	85	25.6
Commercial	31	11.4	5	8.3	36	10.8
Other	24	8.8	9	15.0	33	9.9
No Response	24	8.8	0	0.0	24	7.3
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 1.65$, d.f. = 3, p is N.S.

TABLE XLI

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY NUMBER OF YEARS THAT
ELAPSED BETWEEN THEIR LEAVING SCHOOL
AND ENTERING COLLEGE

Number of Years	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
One or Less	56	20.6	12	20.0	68	20.5
Two	25	9.2	5	8.3	30	9.0
Three	17	6.3	8	13.3	25	7.5
Four or More	171	62.8	32	53.4	203	61.2
No Response	3	1.1	3	5.0	6	1.8
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 3.05$, d.f. = 3, p is N.S.

TABLE XLII

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY SOURCE OF ENCOURAGEMENT TO ATTEND COLLEGE

Source of Encouragement	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Wife	39	14.3	9	15.0	48	14.4
Relative or Teacher	18	6.6	5	8.3	23	6.9
Employer	54	19.9	9	15.0	63	19.1
Friend	15	5.5	3	5.0	18	5.4
Other	83	30.5	19	31.7	102	30.7
No Response	63	23.2	15	25.0	78	23.5
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.40, \text{ d.f.} = 4, \text{ p is N.S.}$$

TABLE XLIII

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY NUMBER OF YEARS THEY ESTIMATED THEIR PROGRAMME
OF STUDIES WOULD TAKE TO COMPLETE

Number of Years	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
One or Less	98	36.0	24	40.0	122	36.8
More than One but No Greater than Two	62	22.8	10	16.7	72	21.7
More than Two	90	33.1	16	26.6	106	31.9
No Response	22	8.1	10	16.7	32	9.6
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.91, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE XLIV

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY NUMBER OF COURSES TAKEN IN THE FALL TERM

Number of Classes	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
One	192	70.6	44	73.4	236	71.1
Two	38	14.0	11	18.3	49	14.7
Three or More	35	12.9	5	8.3	40	12.1
No Response	7	2.5	0	0.0	7	2.1
Total	272	100.0	60	100.0	332	100.0

$$\chi^2_{AD} = 0.88, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE XLV

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY LOCATION WHERE THEY STUDIED OUTSIDE OF CLASS

Location	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Library or Place of Employment	45	16.6	6	10.0	51	15.5
Home (Study)	74	27.3	17	28.3	91	27.5
Home (Other Room than Study)	139	51.2	31	51.7	170	51.3
Other	11	4.1	4	6.7	15	4.5
No Response	2	0.8	2	3.3	4	1.2
Total	272	100.0	60	100.0	332	100.0

$$\chi^2 = 1.92, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE XLVI

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY NUMBER OF YEARS THEY HAD BEEN
STUDYING SINCE LEAVING SCHOOL

Number of Years	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Less than One	88	32.4	24	40.0	112	33.7
One	27	9.9	5	8.3	32	9.6
Two	43	15.8	9	15.0	52	15.7
Three	37	13.6	7	11.7	44	13.3
Four or More	62	22.8	9	15.0	71	21.4
No Response	15	5.5	6	10.0	21	6.3
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 1.84, d.f. = 4, p \text{ is N.S.}$

TABLE XLVII

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY EMPLOYMENT STATUS

Employment Status	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Working						
Full-Time	230	84.6	48	80.0	278	83.7
Not Working						
Full-Time	38	14.0	6	10.0	44	13.3
No Response	4	1.4	6	10.0	10	3.0
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 0.15, d.f. = 1, p \text{ is N.S.}$

TABLE XLVIII

COMPARISON BETWEEN ADULTS IN ATTENDANCE
AND DROPOUTS BY TYPE OF EMPLOYMENT

Type of Employment	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Industrial	66	23.4	9	15.0	75	22.6
Business	86	31.6	17	28.3	103	31.0
Sales/Service	41	15.1	16	26.7	57	17.2
Professional	22	8.1	4	6.7	26	7.8
Self Employed						
and Other	28	10.3	8	13.3	36	10.8
No Response	29	10.6	6	10.0	35	10.6
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 4.93$, d.f. = 4, p is N.S.

TABLE XLVIX

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY HOW OFTEN THEY HAD CHANGED THEIR
EMPLOYMENT IN THE PAST FIVE YEARS

Frequency	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Never	145	53.4	23	38.4	168	50.6
Once	52	19.1	17	28.4	69	20.8
Twice	19	7.0	8	13.3	27	8.1
Three Times	26	9.6	4	6.7	30	9.1
Four Times						
or More	22	8.1	7	11.6	29	8.7
No Response	8	2.8	1	1.6	9	2.7
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 5.72$, d.f. = 4, p is N.S.

TABLE L

201

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY EXTENT THEY CONSIDERED THAT ATTENDANCE AT
COLLEGE AFFECTED THEIR FINANCIAL POSITION

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Not at All	39	14.3	23	38.2	62	18.7
Very Little	84	31.0	13	21.7	97	29.2
Some	100	36.8	16	26.7	116	34.9
Very Much	31	11.4	4	6.7	35	10.6
No Response	18	6.5	4	6.7	22	6.6
Total	272	100.0	60	100.0	332	100.0

$\chi^2 = 4.78$, d.f. = 3, p is N.S.

TABLE LI

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY EXTENT THEY CONSIDERED ATTENDANCE AT COLLEGE
AFFECTED THEIR FAMILY RELATIONSHIPS

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Not at All	108	39.7	36	60.0	144	43.4
Very Little	80	29.4	12	20.0	92	27.7
Some or						
Very Much	63	23.2	12	20.0	75	22.6
No Response	21	7.7	0	0.0	21	6.3
Total	272	100.0	60	100.0	332	100.0

$\chi^2 = 4.91$, d.f. = 2, p is N.S.
AD

TABLE LII

202

COMPARISON BETWEEN ADULTS IN ATTENDANCE AND DROPOUTS
BY EXTENT THEY CONSIDERED THAT ATTENDANCE AT
COLLEGE AFFECTED THE COMPLETION OF
HOUSEHOLD CHORES

Evaluation	Adults in Attendance		Dropouts		Total	
	No.	%	No.	%	No.	%
Not at All	119	43.8	37	61.6	156	47.0
Very Little	59	21.7	7	11.6	66	19.9
Some or						
Very Much	65	23.9	11	18.5	76	22.9
No Response	29	10.6	5	8.3	34	10.2
Total	272	100.0	60	100.0	332	100.0

$\chi^2_{AD} = 5.30, d.f. = 2, p \text{ is N.S.}$

TABLE LIII

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS
AND INSTRUCTORS BY EXTENT THAT FUTURE
ADVANCEMENT WAS ASSESSED AS BEING
A FACTOR THAT MOTIVATED ADULTS
TO ATTEND COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All or								
Very Little	41	15.1	11	18.3	2	6.1	54	14.8
Some	72	26.5	15	25.0	10	30.2	97	26.6
Very Much	127	46.7	26	43.3	20	60.7	173	47.4
No Response	32	11.7	8	13.4	1	3.0	41	11.2
Total	272	100.0	60	100.0	33	100.0	365	100.0

$\chi^2_{AD} = 0.23, d.f. = 2, p \text{ is N.S.}$

$\chi^2_{AI} = 1.79, d.f. = 2, p \text{ is N.S.}$

$\chi^2 = 2.32, d.f. = 2, p \text{ is N.S.}$

TABLE LIV

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY EXTENT THAT GAINING KNOWLEDGE RELATED TO PRESENT OCCUPATION
WAS ASSESSED AS BEING A FACTOR THAT MOTIVATED ADULTS
TO ATTEND COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All or								
Very Little	62	22.8	15	25.0	2	6.0	79	21.6
Some	70	25.7	15	25.0	12	36.4	97	26.6
Very Much	92	33.8	20	33.3	18	54.6	130	35.6
No Response	48	17.7	10	16.7	1	3.0	59	16.2
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$x^2_{AD} = 0.02, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$x^2_{AI} = 5.66, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$x^2_{DI} = 5.16, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE LV

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
 BY EXTENT THAT BOREDOM WAS ASSESSED AS BEING A FACTOR
 THAT MOTIVATED ADULTS TO ATTEND COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	123	45.2	31	51.7	12	36.4	166	45.5
Very Little	31	11.4	5	8.3	13	39.4	49	13.4
Some or								
Very Much	55	20.3	15	25.0	7	21.2	77	21.1
No Response	63	23.1	9	15.0	1	3.0	73	20.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 0.49, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$\chi^2 = 10.72, \text{ d.f.} = 2, \text{ p} < 0.01$$

$$\chi^2 = 9.07, \text{ d.f.} = 2, \text{ p} < 0.05$$

TABLE LVI

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR ASSESSMENT OF WHETHER INADEQUATE MATHEMATICAL SKILLS
AND KNOWLEDGE RETARDED AN ADULT'S PROGRESS IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	133	49.0	37	61.7	15	45.5	185	50.7
Very Little	57	21.0	8	13.3	5	15.2	70	19.2
Some or								
Very Much	41	15.0	9	15.0	12	36.3	62	17.0
No Response	41	15.0	6	10.0	1	3.0	48	13.1
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 2.16, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$\chi^2_{AI} = 5.53, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$\chi^2_{DI} = 4.03, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE LVII.

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR ASSESSMENT OF WHETHER UNSATISFACTORY STUDY HABITS
AND A DEFICIENCY IN SELF DISCIPLINE RETARDED AN ADULT'S
PROGRESS IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	78	28.7	19	31.7	5	15.2	102	28.0
Very Little	54	19.9	6	10.0	9	27.3	69	18.9
Some	87	32.0	18	30.0	13	39.4	118	32.2
Very Much	14	5.2	8	13.3	3	9.1	25	6.9
No Response	39	14.2	9	15.0	3	10.0	51	14.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 6.04, \text{ d.f.} = 3, \text{ p is N.S.}$$

$$\chi^2_{AI} = 3.04, \text{ d.f.} = 3, \text{ p is N.S.}$$

$$\chi^2_{DI} = 4.80, \text{ d.f.} = 3, \text{ p is N.S.}$$

TABLE LVIII

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR ASSESSMENT OF WHETHER A DECLINE IN LEARNING CAPACITY
DUE TO AGE RETARDED AN ADULT'S PROGRESS IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	154	56.6	42	70.0	15	45.5	211	57.8
Very Little	51	18.8	6	10.0	9	27.3	66	18.1
Some of								
Very Much	20	7.4	3	5.0	8	24.2	31	8.5
No Response	47	17.2	9	15.0	1	3.0	57	15.6
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 3.00, \text{ d.f.} = 2, p \text{ is N.S.}$$

$$\chi^2_{AI} = 7.11, \text{ d.f.} = 2, p < 0.05$$

$$\chi^2_{DI} = 9.26, \text{ d.f.} = 2, p < 0.01$$

TABLE LIX

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS
AND INSTRUCTORS BY THE AMOUNT OF TIME THEY
ESTIMATED AN ADULT SPENT STUDYING
OUTSIDE CLASS

Number of Hours	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Two or Less	107	39.4	35	58.4	11	33.3	153	41.9
More than Two	157	57.7	19	31.6	21	63.7	197	54.0
No Response	8	2.9	6	10.0	1	3.0	15	4.1
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 9.74, \text{ d.f.} = 1, p < 0.01$$

$$\chi^2_{AI} = 0.23, \text{ d.f.} = 1, p \text{ is N.S.}$$

$$\chi^2 = 6.31, \text{ d.f.} = 1, p < 0.05$$

TABLE LX

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
 BY THEIR ASSESSMENT OF WHETHER MAINTAINING A GOOD GRADE
 AVERAGE CAUSED AN ADULT DIFFICULTY IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	125	46.0	31	51.7	2	6.2	158	43.3
Very Little	56	20.6	8	13.3	13	39.4	77	21.1
Some or								
Very Much	37	13.6	14	23.3	17	51.4	68	18.6
No Response	54	19.8	7	11.7	1	3.0	62	17.0
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 3.15, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$\chi^2_{AI} = 30.35, \text{ d.f.} = 2, \text{ p is N.S.}$$

$$\chi^2_{DI} = 20.20, \text{ d.f.} = 2, \text{ p is N.S.}$$

TABLE LXI

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
BY THEIR ASSESSMENT OF WHETHER MEETING STUDENT COMPETITION
CAUSED AN ADULT DIFFICULTY IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	127	46.7	37	61.6	4	12.1	168	46.0
Very Little	59	21.7	10	16.7	20	60.7	89	24.4
Some or								
Very Much	24	8.8	13	21.7	8	24.2	45	12.3
No Response	62	22.8	0	0.0	1	3.0	63	17.3
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$\chi^2_{AD} = 4.82, \text{ d.f.} = 2, p \text{ is N.S.}$$

$$\chi^2_{AI} = 22.89, \text{ d.f.} = 2, p < 0.01$$

$$\chi^2_{DI} = 22.33, \text{ d.f.} = 2, p < 0.01$$

TABLE LXII

COMPARISONS AMONG ADULTS IN ATTENDANCE, DROPOUTS AND INSTRUCTORS
 BY THEIR ASSESSMENT OF WHETHER INSTRUCTOR-STUDENT
 RELATIONSHIPS CAUSED AN ADULT DIFFICULTY
 IN COLLEGE

Evaluation	Adults in Attendance		Dropouts		Instructors		Total	
	No.	%	No.	%	No.	%	No.	%
Not at All	173	63.6	38	63.4	7	21.2	218	59.7
Very Little	30	11.0	6	10.0	17	51.5	53	14.5
Some or								
Very Much	13	4.8	9	15.0	6	18.2	28	7.7
No Response	56	20.6	7	11.6	3	9.1	66	18.1
Total	272	100.0	60	100.0	33	100.0	365	100.0

$$x^2_{AD} = 5.33, \text{ d.f.} = 2, p \text{ is N.S.}$$

$$x^2_{AI} = 38.86, \text{ d.f.} = 2, p < 0.01$$

$$x^2_{DI} = 20.02, \text{ d.f.} = 2, p < 0.01$$

APPENDIX E

STATEMENTS WRITTEN BY DROPOUTS
ON THEIR QUESTIONNAIRES

"My being sent out of town during week days
I was unable to attend classes so I had to quit."

"Not impressed by the calibre of instruction."

"The sudden emergence of personal responsibilities
outside of class."

"I dropped the evening course that I was taking
as I had the worst instructor imaginable. He was totally
unable to transmit any knowledge, appeared to be unprepared
for his lessons, wasted valuable time with students who
should not have been there in the first place as they had
not taken the pre-requisite course. It is very disappoint-
ing for a student to make an effort to advance himself and
feel that he has wasted this effort due to "rotten" in-
structors. Last year my teacher was excellent!!! They
should be all round a specified standard, not just some-
one who happened to know some facts about a subject."

"Change of evenings from original schedule."

"No time."

"My husband passed away. Did not return to
course after the 3rd lesson."

"Just not enough time."

"Change of employment."

"I would like to comment on my first couple of nights at evening school. The R.R.C.C. is a large strange building to a newcomer. The day student probably has a couple of days to become familiar with his surroundings but the evening student who has sent his application in by mail is faced with a barn like series of hallways. No one seems to be able to answer questions, there are no signs. Even the second night of classes leaves a newcomer a complete stranger."

"I attempted Shorthand II in the Fall, but found it too demanding on my health, job, etc. Also some family problems (illness) intervened. Also another reason was that the Fall Instructor attempted more lessons a week which I could not handle."

"The course was too much like the one I took last year. I was bored. Also two nights a week are too much. I preferred the Sat. Morn. arrangement - four straight hours. One learns more in a concentrated time period."

APPENDIX F

TABLE LXIII
NUMBER AND PERCENTAGE DISTRIBUTIONS
OF INSTRUCTORS BY SEX

Sex	Instructors	
	No.	%
Male	27	81.8
Female	6	18.2
Total	33	100.00

TABLE LXIV
NUMBER AND PERCENTAGE DISTRIBUTIONS OF INSTRUCTORS
BY YEARS OF INDUSTRIAL EMPLOYMENT AND
EXPERIENCE TEACHING ADULTS

Number of Years	Industrial Employment		Teaching Experience	
	No.	%	No.	%
One or Less	0	0.0	7	21.2
Two	5	15.2	9	27.3
Three	2	6.1	4	12.1
Four	3	9.1	4	12.1
Five	1	3.0	0	0.0
More than five	20	60.7	9	27.3
No response	2	6.1	0	0.0
Total	33	100.0	33	100.0

TABLE LXV

NUMBER AND PERCENTAGE DISTRIBUTIONS OF INSTRUCTORS
BY TYPE OF EMPLOYMENT FOLLOWED OUTSIDE
THE EVENING DIVISION

Type of Employment	Instructors	
	No.	%
Industrial	2	6.1
Business	7	21.2
Professional (teaching)	13	39.5
Professional (other than teaching)	6	18.2
Sales/Service	0	0.0
Self Employed	2	6.1
Other	2	6.1
No response	1	3.0
Total	33	100.0

APPENDIX G

CONTINGENCY TABLES ESTABLISHED FOR THE TWO MODIFIED
DISCRIMINANT FUNCTIONS USING DIFFERENT CRITICAL
VALUES FOR DISCRIMINATING DROPOUTS FROM
ADULTS IN ATTENDANCE

Discriminant Function	Critical Value	Actual	Predicted				Total	
			Dropouts		Adults in Attendance			
			No.	%	No.	%	No.	%
Function I	-0.10	Dropout	14	93	1	7	15	100
		Adults in Attendance	12	18	56	82	68	100
		Total	26	31	57	69	83	100
	-0.11	Dropout	14	93	1	7	15	100
		Adults in Attendance	10	15	58	85	68	100
		Total	24	29	59	71	83	100
	-0.12	Dropout	14	93	1	7	15	100
		Adults in Attendance	10	15	58	85	68	100
		Total	24	29	59	71	83	100
Function II	-0.10	Dropout	15	100	0	0	15	100
		Adults in Attendance	10	15	58	85	68	100
		Total	25	30	58	70	83	100
	-0.11	Dropout	14	93	1	7	15	100
		Adults in Attendance	10	15	58	85	68	100
		Total	24	29	59	71	83	100
	-0.12	Dropout	14	93	1	7	15	100
		Adults in Attendance	9	13	59	87	68	100
		Total	23	28	60	72	83	100