AN INQUIRY INTO THE USE AND MISUSE OF TECHNICAL EDUCATION IN MONTREAL

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ABSTRACT

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AN INQUIRY INTO THE USE AND MISUSE
OF TECHNICAL EDUCATION IN QUEBEC.

Chapter one provides a brief history of technical education in general and as it developed in Quebec.

Chapter two describes the situation of technical education in high schools in Montreal as a result of the recommendations of the Parent Report.

Chapter three and chapter four present the results of a survey done in four Montreal area high schools.

Whereas technical education was intended to be an important part of the overall general education received in secondary schools, this study illustrates that those students who could benefit by the complement of technical education are not encouraged or permitted to do so.

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CHAPTER I

INTRODUCTION

Statement of the Problem

I began pondering the misuse of technical education, in Montreal area high schools when, as a student teacher, I encountered the problem face to face. Since I have been teaching technical education for seven years, I have witnessed the problem almost daily. During this period I have spent considerable time comparing notes with my colleagues and looking into the method of use of technical education in several high schools.

Knowing that the mushroom-like growth of so many new comprehensive high schools, in Quebec, was a result of the famous Parent Commission Report (1964), I wondered why these new schools were not following the recommendations of the famous report. Indeed it is now ten years since the first Parent patterned schools began their new programmes, yet the expected results have not materialized.

According to the Parent Report the badly needed technical education, in Quebec high schools, would improve overall general education, produce and better prepare students for university. As for improving, or broadening the scope of general education

the introductory technical courses were contributing some extra knowledge and experience at a very basic level. As for producing technicians and better preparing students for university the long vocational courses were required, and this was where the problem began to manifest itself.

First, there is such a division between the vocational curriculum and the academic that only the latter has the necessary prerequisites which lead to university. Second, the majority of students are placed into vocational courses, because they have failing grades in the academic curriculum. Obviously none of these students arrive at a university better prepared, for they don't arrive at all. In regard to producing technicians, the poorer students delegated to the vocational courses ensure a very high failure and drop-out rate. Those who manage to complete the programmes are not the better educated technicians that were desired.

The CEGEP, the other form of schooling resulting from the Parent recommendations, offers, in several cases, more advanced technical programmes. However there is no alignment of technical courses from high school to the CEGEP.

I actually began the work on this paper when I first became a technical teacher by checking the previous records of my students and noting the excessively high number of academic failures being dumped into my class. Numerous discussions with administrators

and guidance counsellors have thoroughly convinced me that they either sympathize and declare that little can be done, or remain confident in the belief that this is the only solution.

Very little has been written on the topic of technical education and its misuse in Quebec, in fact one if fortunate to find but a few very short articles. By doing a course project on the history of technical education in Ontario, I gained an understanding of problems and development in that province. A similar project on Quebec proved difficult, as Quebec, usually behind, failed to put any real effort into technical education until prompted by the Parent recommendations. However I was able to historically trace what little technical education there was in Quebec until the last decade. I also noted a parallel between Quebec and Ontario in regard to the forces which promote or hinder development of technical education.

In order to get a look at how techical education is being used in schools I prepared a fairly lengthy comprehensive questionnaire, and had one hundred students complete it. In order to broaden the scope of my research I had half these questionnaires prepared in French. To further broaden the scope I had twenty-five of the questionnaires completed at each of four different schools. The four schools were, an English academic high school, a French academic high school, an English technical high school and a French technical high school.

I selected the level of secondary four, or ninth grade, as that is the year during which students make the decision to enter

one of the technical programmes, or prepare for CEGEP and university. The comprehensiveness of the questionnaire yielded more information than was actually needed, however I was able to concentrate on the main points of interest.

The intention was to get the opinions held by students in regard to technical education, and determine whether those students with failing grades were opting for technical programmes, or whether students did select a technical programme as an augmentation to their general education. Furthermore I wanted to ascertain, on a broader scale, whether high school guidance counsellors and administrators were informing students of the benefits available to them through technical programmes.

The questionnaires (discussed in detail in a later chapter) indicate that students desiring to attend university, for the most part, choose a straight academic programme, and do not attempt to fit in one of the technical programmes. This stems partially from the lack of counselling. "Out there" still remains the strong general opinion that technical education cannot be combined with academic education, as technical education is the lower class substitute for academic education. This is a problem of attitude in which lie the roots of the whole problem.

Literature Review

1. Brief History of Technical Education in Canada

Considerable confusion is created by the terminology connected with the whole field of technical education. One hears the terms "Technical", "Vocational", "Technical-Vocational", "Industrial", "Industrial Arts", "Technical School", "Vocational School", and "Technical High School".

A great deal of the confusion stems from the use of different terminology in different regions of Canada and the United States since the outset of technical education. It is difficult to put concrete definitions to these terms which cannot be argued, but I shall attempt to clear as much of the confusion as I can in regard to these terms.

Just before the end of the last century "Manual Training" was introduced into Canadian schools. As the term suggests it involved the teaching of the use of hand tools and simple manual skills. Manual training was set into the regular curriculum of elementary schools.

The use of the expression "Technical Education" begins to appear in many educational writings of the province of Ontario just about the turn of the century. No doubt the term originated in the United States, or Britain, but Ontario was first in this country to establish an effective programme of technical education and there

the term took root. "Technical" was chosen because the new instruction was no longer simply the learning of manual skills. It now involved the learning and practical application of theories of technology as well as manipulative skills with machines. (Richard D. Heyman et al, 1972). "Technical Education" has been expanded as a general term to cover almost all of the understanding of machinery and scientific equipment as well as skills required for trades and professions. Even a graduate degree in engineering is referred to as technical education at times. It seems that "Technical Education" should apply to the various courses of instruction which lie between the skilled crafts and the engineering level. There are no set boundary lines except, of course, to distinguish technical courses from those of the regular classroom which are considered as academic subjects. Actually technical education was promoted in Ontario by industry and the term "Industrial" began to show up. "Industrial" implied that theories and skills were being taught which prepared the student for a specific function in industry. (R.L. Guild, 1943)

Ontario created two new types of schools around 1912. The Technical School and the Technical High School. The Technical School followed elementary school and actually taught the basics of industrial trades. It did not follow regular high school academic patterns. The term "Industrial Education" often got associated with the technical school, and often they were called

"Trade Schools". The Technical High School was a different breed in that it followed the educational pattern of regular academic high school curriculum. Students took a technical programme which included certain regular academic subjects.

The use of the term "Vocational" perhaps gives the greatest confusion. It seems to have appeared as the other provinces began patterning technical programmes after Ontario. "Vocational" is still much used in the United States. "Vocational" became associated with both the technical school and the technical high school. It was introduced to indicate that students were being given training which prepared them for a specific vocation. This term was used instead of "Technical", as a broader indication of what was being taught, when certain non-technical vocations such as office and business practices were included.

"Industrial Arts" is an American term. It began in high schools during the mid 1930's and was introduced to Montreal high schools during 1941. Industrial Arts courses are introductory or familiarization type courses which serve to give students a basic understanding of some aspect of industry. These courses are fitted into the regular academic curriculum, and it can be argued as to whether they are part of technical education.

Technical education is a broad term which has been expanded to include many new applications of technology. When the province of Quebec launched its technical education programme in the mid

1960's it introduced the term "Technical-Vocational" which encompasses not only those courses involved with theory and application of technology, but commercial and business courses as well.

The new schools offering technical vocational programmes are called "Polyvalent" in French, and referred to in English as "Comprehensive". I have used the term "Technical High School" to indicate a high school which offers technical programmes in contrast to the all academic high school. The polyvalent or comprehensive high school offers a wide selection of technical courses as well as regular academic courses

2. Status of Technical Education

Technical Education has always been earmarked by a badge of infamy in that it is viewed as some basic, crude instruction, totally separate from general education, that is given to those who are unable to cope with a regular academic programme. There must be, it seems, that sharp distinction between academic education and technical education, for never the twain shall meet. The problem lies in the failure to recognize the fact that all of an individual's learning and experiences are blended in that one receptacle housing what is called general education. What is needed is recognition of the reality that technical education, in conjunction with academic education, gives a broader expanse to one's overall, or general education. Furthermore it is true that

some function well in technical education when they did poorly in academics, but it is not true that anyone who does poorly in academic circles is suited for a technical programme.

Invariably, when the topic of education is discussed, there is considerable controversy over just what the actual aims or goals of education should be. Likewise, since its outset, technical education has been the subject matter of constant debate as to its intended role or purpose. Most discussions, concerning philosophy of education, become historically linked to Plato. According to Wild (1955), the idea of understanding education by understanding those things about human society, which distinguish it from animal communities, is the view of realists, and that, too, began with Plato. Wild goes on to comment on how the realist views the introduction of new subjects, to a school curriculum, as the creation of a chaotic situation. The realist insists on an ordered curriculum and distinguishing what is essential from what is incidental.

Technical education has suffered from the realist type of thinking, since it has been viewed as incidental, or superfluous to a regular curriculum. Going back to the earliest introductions of Manual Training in Ontario elementary schools, we find strong opposition from many teachers on the grounds that these new subjects, "Would encroach on the time alloted to the traditional subjects". (Richard D. Heyman et al, 1972)

As an indication of the strength of teacher opposition, Heyman goes on to quote part of the 1903 presidential address to the Ontario Educational Association, by provincial superintendent John Seath. Seath warned teachers that Manual Training was going to stay, and that they had best begin to put it to use, "For the proper ends of education". (Richard D. Heyman et al, 1972)

Seath did not force or frighten Ontario teachers into agreement with those who believed that the new subjects were re-enforcement to total education. The teachers may have reduced their public opposition toward manual training, but their general attitude has remained. The teachers in Ontario were not alone in their protest, for the general public got into the act as well. Heyman quotes Vincent Massey, who expressed his views a few years after the teachers, as referring to manual training as a "fetish". Massey went so far as to say that he disagreed with turning schools into carpenter shops. (Richard Heyman et al, 1972)

Ontario, being the first province to get technical education off the ground, was the Canadian pioneer in all respects including the problem created by the realists. The other provinces, influenced by Ontario, were to suffer the same situation.

Discussing Canadian technical education in general, a half century after Ontario began its technical education movement, B.F. Addy (1956) states that technical education has never been given its due recognition as a contributing part of general education.

Although Addy does not refer to the realist view it is much in evidence in what he says particularly when he states that the nearest technical education has been considered as a part of general education is, "At best a poor third cousin".

With the realist view being so firm we might ask how Ontario, and later the other provinces, managed to get technical education accepted into schools. Addy gives the clue when he claims that Ontario learned early to cooperate with industry in regard to technical education. Again let us look at what happened in Ontario the pioneer province.

John Seath has been proclaimed as "founder", "father", "advocate", "apostle", and given numerous other titles of praise to emphasize the leading part he played while superintendent of education, in establishing technical education in Ontario. As late as 1900 Seath was still attempting to defend manual training and technical education "On intellectual and cultural rather than on vocational grounds". (Richard Heyman et al, 1972). Education is a product that has to be sold in several areas. The first customer to be convinced is the sponser, and that is the tax paying general public. Seath tried to sell technical education on the grounds that it contributed useful knowledge to education in general. It didn't sell, and Seath changed his sales pitch.

It was around 1900 that Ontario soared ahead of the other provinces in establishing industries. In short she needed skilled workers. Heyman claims that the Canadian Manufacturers Association

and the Boards of Trade, from every major center in Ontario, convinced the provincial government that technical education, or training people for jobs in industry, was a project which required top priority in the province. Industries pay a large part of the taxes, therefore they get sympathetic ears when they speak. In fact industries often take on a dictatorship role when it comes to outlining their wants.

Seath began his new sales campaign on the grounds that technical education was needed because industry required trained people. He also prescribed technical education for the children who would fail in high school. With this sales pitch, technical education was sold throughout the province of Ontario. On the same grounds technical education was later sold in the other provinces. Quebec was, by far, the last province to institute technical education at the high school, or secondary, level, and it will be evident in the last part of this chapter that the pattern in this province was almost an exact duplicate of the pattern in Ontario more than a half century earlier.

We cannot ignore the fact that the low status accorded to technical education is greatly affected by the consciousness of social class. Canadians may boast that social class distinction does not exist in Canada, and one would no doubt be hard pressed to produce a system whereby evaluation of the various classes could be made. Certainly the evaluation cannot be made on the basis of

salary or economic means. It is generally accepted, in the circles of sociology, that teachers belong to the middle class, yet, in regard to economic means, most technicians, longshoremen, and, often, garbage collectors have higher salaries than many teachers. It seems to me that our Canadian social class system is imaginary to a great extent. However this quixotic opinion is at the root of the whole problem which technical education faces.

The social class consciousness of Canada is, naturally, an extension, or continuation of Britain. Canada adopted the manual training, and later technical education, programmes from those being used in Britain. It seems to have been a packaged deal, as Canada also adopted the low esteem accorded to skilled technicians who work with their hands and to technical education. Britain has always had perhaps the sharpest distinction between the academic, or liberal education, and the technical education. British elite were recognized by the academic letters they fastened behind their names and by the universities from which the letters came. Musgrave (1967) points out that the upper classes and universities of Britain have always had a dislike of science and industry. As I see it British universities turned out learned gentlemen above the level of those working in industry. Technical education was seen as being connected to industry, and there was no connection between technical education and a professional liberal education.

The Industrial Revolution just about ended the old system of

skilled craftsmen training in small shops. It made necessary the learning of theories of technology and their practical application, or as we know it technical education. Ashby (1961) points out that the great inventors and technicians of the Industrial Revolution were not of the educated or professional classes. Consequently the universities were not involved. This served to broaden the gap between liberal, or academic education and technical education. Technical education was associated with industries. Even the science taught in the universities was not seen as having its practical application in industry.

Cotgrove (Cotgrove, 1958) explains that this situation lasted in Britain until only recently, and it hindered industry particularly at levels of management. Management personnel who had risen from the ranks with only a technical education lacked the academic qualifications necessary to weigh all the factors present in making decisions. For management positions educated men were chosen, and, "The arts graduate was preferred". This, too, was a hindrance, for having a strictly academic, or liberal, education meant that the technical knowledge and background, also necessary in making industrial decisions, was absent.

This situation has been righted considerably in Britain, as efforts are now made to acquire industrial management personnel who possess both a good technical education and a good academic education. These desired men are better educated because the

technical education contributes more to their overall or total education. (Cotgrove, 1958). This in no way has convinced Britishers, as a whole, that technical education should be a complementary part of general education. The academic elite will still insist upon the sharp division between technical and academic education. Not every student can combine a good technical education with an academic degree or parts of a degree. As long as this separating, of what shall be parts of a whole education, exists the technical student will be cut short on the academic side and vice versa. Students are not encouraged to develop their full educational capabilities, we waste the potential of many students which lies dormant. It is all part of the problem connected with technical education. In Canada we seem to have adopted this from the British in the package deal.

In the United States there has been more opportunity and encouragement for students to combine technical and academic education. The term "Vocational Education" instead of technical education has been preferred and now the preference is to use a new term "Career Education". Regardless of the terminology used there has been a strong tendency to keep separate those parts of education deemed as belonging to the vocational from those parts deemed as belonging to the academics. Marland (1971) states that this practice serves to, "Divide what should be the entire enterprise against itself". A further claim by Marland is that the academic student

lacks a whole education because he has not the vocational aspect, and the vocational student is incomplete in his education, since he has a deficiency of academics. Much the same situation was described by Cotgrove in Britain.

"Academic Snobbery", claims Marland, is the cause of the entire problem. He goes on to say that this snobbery can be traced back to the ancient Greeks. What Marland is suggesting here is that the educated of ancient Greece were the decision makers. These educated academics could look down upon the slaves and dictate what slaves should learn. Perhaps ancient Greece could afford this snobbery at a time when little had to be taught to a slave. Today it is quite different, for the complexity of the American technical society demands more than slaves with some simple instruction or training. Yet there still is an academic elite who dictates that vocational students will be restricted in their academic subjects.

Marland's proposal is that high schools throughout the United States make every effort to combine vocational education with academic education, so that graduating students are able to go on to university having more confidence as a result of the broader scope of their education, or be better prepared for immediate employment. It will be interesting to see whether Marland's proposal receives any support and gets results. Seven years have now passed and I have not, as yet, read of any startling results.

Marland's proposal is much the same as that of John Seath

in Ontario shortly after 1900. When Seath proposed the union of technical subjects with academic subjects as a means of enriching the curriculum, and getting an end result of better educated, more competent students, his proposal was sadly rejected. Seath, as we have seen, was forced to change his proposal in order to get technical education into operation. Appearing, it would seem, as a turncoat Seath proposed that technical education was necessary to teach the skills necessary for industry. In so doing he catered to the realist view and set technical education apart as not being necessary to the required academic curriculum. Of course Seath also proposed technical education as being suited for those students who would fail in high school.

The problem with use and misuse of technical education has, really, three interrelated parts. The first is the insistence on keeping technical education separate and not a part of the regular curriculum. The second is insistence that technical education serves only to teach skills required in industry, and the third is the insistence that technical education is ideal for students who fail in high schools. The first part is a realist view and this type of thinking is traced back to the ancient Greeks. The second and third parts depict technical education as applying to the lower classes and this too has been lined back to ancient Greece.

All three parts of the problem result from "Snobbery" as Marland so simply puts it. This is the consciousness of a social class structure. It hinders technical education today as it did

when the first attempts were made to introduce technical education. The fact that class distinction goes so far back into history makes it more deeply rooted and that much more difficult to solve the problem with technical education.

3. Views of Some Learned Theorists

Many of the great educational thinkers have, in their writings, put forth some strong views in regard to technical education and its relationship to a liberal or academic education. There seems to be considerable agreement to the effect that technical education should be, simply, a part of one's total education with no great distinction or hint of separation.

The earliest recommendation I was able to find which suggests incorporating forms of technical education with the regular school curriculum was that of John Locke late in the seventeenth century. Technical education, as we know it, or any form of it for that matter, was, in no way, a part of regular school systems in Locke's time. Since Locke is readily recognized as an initiator of the Age of Reason, it is only fitting that what should be common sense education should also have some initiating influence from Locke.

Locke outlined a recommended curriculum and a part of it was the learning of many crafts or trades, "Including carpentry engineering, metal work, working precious stones, grinding optical glasses" (M.V.C. Jeffreys, 1967). Locke was writing at a time when education was strictly to make gentlemen out of gentlemen's

sons. To suggest that those of upper social classes stoop to the lower levels of learning manual skills must have been seen as a cataclysmic suggestion. No doubt this is the primary reason why little, if any, attention was paid to Locke's suggestion about learning a trade.

We might easily question the relevance of this one suggestion, by Locke, to technical education. The answer can be found when we begin to ponder the reasons Locke had for this revolutionary recommendation. Jeffreys seems convinced that Locke stressed the learning of manual skills, as part of general education, only for their possible usefulness later. He goes on to mention how the social and economic changes in England, at the time, had wiped out many family fortunes. In other words only boys from families of means were being educated, and should a family be financially wiped out, the son could at least apply his trade to survive. I cannot accept this as the complete explanation, for Locke is known to have believed in the importance of learning about the workings of various phenomenon observed in one's immediate surroundings. This was the time of Newton's great contributions to science and mechanics. Locke was friend and advisor of Newton, and many other scientists, considering them as great, because they gave education a practical use. Locke seems to have believed very strongly that education was not to be strictly rote learning.

Locke appears to have been a reasoning man, but, for his time,

he was a radical in his educational thoughts, as he insisted that the activation of the body sensing systems was necessary for true education. In short he stated that the long standing, Greek inspired idea of education by reasonable thinking alone was not enough. Locke believed that education could only be effected through the use of the senses, "To see, hear, taste, feel, and touch". Rousseau was later to expound on this idea.(William Boyd & Edmund J. King, 1972)

With the rational intelligence shown by Locke I do not see how he could have overlooked the opportunity of exercising the body senses during the learning of the various trades. According to Boyd and King, Locke stressed the importance of the necessity to actuate the senses, and also placed importance upon the learning of crafts and skills, but he did not elaborate on the latter, nor stress an important connection between the two. Consequently it was almost two centuries before educators began to realize the value of Locke's recommendations.

Locke was concerned with a broader curriculum of general knowledge. Including the learning of crafts and skills helped to broaden the curriculum. Since he was concerned with educating gentlemen, the knowledge of the various trades was meaningful, worthwhile knowledge from the immediate world around them. Perhaps Locke considered the social conditions at the time, and decided against attempts at convincing the general ruling classes of the

added value to be gained, through co-ordination of mind and body, by simply learning a trade. The truth of Locke's intentions we may never know. However, we do know that technical education today does broaden the general curriculum, and more so than in Locke's time, it can utilize the body senses to give a more realistic understanding to learning through practical applications.

This common sense theory was Locke's idea. Many who came after, simply, expanded upon Locke's idea, and were able to give it more justification. Strange as it may seem there is almost as much difficulty today as there was in Locke's time to get acceptance of the worth of practical applications to general education.

Rousseau expanded greatly on Locke's theory of the necessity to utilize the body senses in order to impart true learning wherever possible.

For his imaginary student, "Emile", Rousseau described, what he considered, the complete curriculum of a boys education. Apart from some contradictions, and the fact that this curriculum leaves us wondering whether it would be possible to impart all the suggested learning, Rousseau gave the first vindicating explanation to Locke's suggestion of including the trade learning in general education.

"Stoop to the station of an artisan that you may rise above your own". Said Rousseau (R.L. Archer, 1964). Rousseau, like Locke was concerned with the education of upper classes. Here

Rousseau indicates the class difference, but his intention is to better educate the upper class boy by giving him the actual knowledge and experience of the lower class boy. Rousseau suggested that his model student would be made familiar with most every known hand tool and implement, and experienced in their use, at an early age. As a teenager the student would actually complete a trade apprenticeship. Rousseau was not educating a craftsman, but suggesting the craft training as part of the general education of an enlightened gentleman.

Rousseau maintained that the student's education should include an understanding of the existing conditions in society. In this way, when finally faced with the cruel outside world, the student would be prepared, for he would recognize and understand confronting situations, and thereby be better prepared to deal with them. The familiarization with tools and the learning of the trade was considered as actual knowledge and experience of a part of society. What was more, the student hadn't only read about, or witnessed this part of society, he had actually experienced through his body senses the real experience. The tool skills and trades training of Rousseau's time compare to the technical education of today. Just as Rousseau thought they were a necessary part of the student's whole education so should technical education be a necessary part of the whole education today.

Whereas Rousseau was concerned with the education of the

upper classes, or the rich, we next find Pestalozzi concerned with the education of the lower classes or the poor. Unlike Rousseau, Pestalozzi put his theories into actual school practice and his methods attracted much attention. Pestalozzi was greatly influenced by Rousseau's "Emile" (M.R. Heafford, 1967). Even though Pestalozzi may have found "Emile", to be to education what Thomas More's Utopia was to society in general, he was able to grasp a multitude of ideas and further develop them. The one idea with which we are concerned is the formation of a total, or whole, education through the unity of academic subjects and the existing forms of technical education.

In Pestalozzi's time, as today, the lower, or poorer, classes were found in positions of skilled labor. Industry had progressed so as to require some training for production skills. Pestalozzi was greatly disturbed by this situation of industrial education which taught the lower classes only what was required of them in a particular production task. He is quoted as stating, "Industrial education is not the education of a single miserable factory skill" (M.R. Heafford, 1967). He went on to argue that this teaching should not rightly be called education, for it was only part of what should be a whole education.

By advocating that these lower class students be given a substantial academic education, as well as their industrial training, Pestalozzi raised an issue that did not meet with favor in the eyes

of ruling or upper classes. Any suggestion of educating the lower classes posed as a threat to the upper classes. Pestalozzi was not suggesting the possibility of socially elevating the lower classes. He insisted that, through education, the lower class workers could overcome ignorance, become more appreciative of their situation, and be much better workers as a result of it.

Although Pestalozzi enjoyed some satisfaction, in his native Switzerland, by seeing his total education curriculum at work, his ideas got the greatest response in Germany. Froebel known for his kindergarten introduction, also put great effort into what he considered as a total curriculum for elementary schools. Froebel gave a prominent place to "Manual arts and industrial processes" (Cubberley, 1922). Cubberley goes on to say that Froebel never put his curriculum into practice, but his genius of educational thought and the influence it had upon others deserves recognition.

Just as the nineteenth century began with the sensible ideas of Pestalozzi and Froebel for a total education curriculum, it is only fitting that it should end with perhaps the greatest contributor of sensible ideas toward a total education curriculum. That contributor is none other than John Dewey. By this time the introduction of manual training into regular school curriculums had begun, and Dewey was able to tabulate the feedback. Writing shortly after 1900, Dewey appears to be considerably vexed over suggestions that manual training leads to "Production of specialists", "Detracts from

our present scheme of generous, liberal culture". (John Dewey, 1974).

Dewey explains that the notion of classifying manual training as technical, and leading to specialization helped explain what was wrong with the existing educational system. "One-sided and narrow" is how Dewey explained it. The "liberal culture" was, of course, in reference to the strictly academic education which was considered to be the ultimate.

Dewey would agree that all learning contributes a total education. Manual training could not be separated, for it was part of the whole education. Manual training would hold more value for Dewey in that it contributed a part of education which familiarizes students with real life experiences. In one of Dewey's later writings, Experience and Education, his theme was the necessity of permitting the student to learn by the actual experience of working or doing. He also stressed the need to educate students for the particular type of society in which they would pursue a livelihood. For the past century we have lived in an industrial society, therefore it is common sense to familiarize our students with as many sections of industry as we can. Technical education is actually a familiarization with segments of industry. Since technical education involves considerable experience by actually working or doing, it has to be a necessary part of our total or whole education.

By the third decade of this century technical education was

quite well installed as was the controversy over its relationship to a liberal or academic education. The general proneness to classify education as either technical or liberal attracted Whitehead's attention. It was Whitehead's opinion that the idea of a liberal education, based upon the intellectual model of Plato, was insufficient for the present world (Alfred Whitehead, 1967). Extending his explanation, Whitehead, claimed that science was now a great part of man's life. Science, he claimed, was incomplete unless the learning was followed by the discoveries of practical application. Technical education, according to Whitehead, was the practical application of science. Education, for Whitehead, could not be separated into either liberal, or technical, for education required goodly amounts of both. Whitehead also seems to have agreed with the Dewey idea of educating for an industrial society.

From Locke to Whitehead each of these educational theorists has proposed the inclusion of technical education within a regular curriculum. Their philosophies may differ, particularly in regard to student approach and student expectations, but the end result of education, intended by each, has a parallel. That end result was the preparation of students for adjustment into the particular society where they were to live. To adjust to any society one must have an understanding of that society. Technical education teaches students about certain aspects of society, therefore it is an

important part of any educational curriculum.

4. Technical Education in Quebec

In regard to the introduction of technical education into the regular school curriculum, Quebec province is unique in that it can be said to be both the first Canadian province to do so, and the last. Shortly after the mid-point of the seventeenth century Quebec had a school which actually gave technical instruction in conjunction with regular academic subjects. The arrival of the twentieth century saw all provinces attempting to incorporate technical education into existing schools. Quebec was to fall behind as the other provinces progressed, and only a short ten years ago began a gigantic catch-up programme.

Around 1668 Bishop Laval set up, at St. Joachim, Quebec, what was the first school in Canada to give what could be considered a comprehensive curriculum. As the name, "Ecole des Arts et Métiers" implies, the good bishop believed that the young should be made acquainted with a working knowledge of the society's labor field as well as receiving whatever academics were available at the time. (F. Henry Johnson, 1968).

This is interesting from the point of time, as Locke had not yet put forth his suggested curriculum which included the learning of trade skills. Unlike Locke, Bishop Laval actually operated such a school. According to Johnson several offshoots of Laval's school

met with favor in and around the Quebec City area, however by the time of the British takeover, in 1759, there is no record of the Laval school or any other like it.

The year 1900 is generally accepted as the date when manual training was ushered into most Canadian schools. The annual report by the Superintendent of Public Instruction, for Quebec, for the school year 1895-96, gives considerable mention to manual training. The report states that the High School for Boys, in Montreal, now had a wood shop and the High School for Girls in Montreal was being prepared to give courses in sewing. Cooking classes were also being given to girls at the Riverside and Aberdeen high schools. These were English Protestant schools. The general statement of the report mentions how the whole of Canada is debating the subject of manual training in its schools. Further on, the general statement mentions that it was, by then, an established practice for nuns to teach household science to girls in Catholic schools, boarding schools, and orphanages. I presume that these girls were both French and English Catholics. No mention is made of manual training for Catholic boys in the report.

During 1899, Macdonald, the tobacco millionaire, established the "Macdonald Manual Training Fund" (Richard Heyman et al, 1972). As a result of these funds manual training moved for the first time outside the Montreal area. The fund only lasted three years, therefore Quebec was back to having practically all its manual training

confined to Montreal.

Unlike Quebec, Ontario, as previously outlined, began its programme of extended manual training and progressed into truly technical education with technical high schools. One thing which happened in Ontario, and not in Quebec, was the allocating of provincial funds in support of this programme when the Macdonald money was exhausted (Richard Heyman et al, 1972). There are several reasons for Quebec's decision to remain backward, and we shall discuss them when a few more points have been considered.

In spite of remaining a controversial issue, manual training continued as part of the curriculum in elementary and high schools of Montreal's English Protestant sector. In the 1915-16 report by the Inspector for Catholic Schools of Montreal, Mr. Miller, mention is made of the manual training programme completed that year at the Catholic Commercial Academy which now brought the total number of Catholic schools, offering manual training, to seven. These were English catholic schools. Mr. Miller appears to fear for the future for manual training, as he strongly recommends that it be maintained in the schools, for he feels it "contributes to the child's general instruction and education." No doubt there were sneers and great cause for disbelief about this statement.

On the French catholic side there was no manual training for boys in elementary schools. The College Classique offered the only available source of secondary education, and they were private schools.

"There were no public secondary schools for the French population until 1956" (F. Henry Johnson, 1968). The Latin lined College Classique catered to French boys with parents, of above working class means, who desired their offspring to pursue a profession, therefore, it was felt there was no need for technical instruction of any kind. The Catholic Church, which fettered all education for French Catholics, was in full agreement with this policy.

The cultural and religious difference in Quebec maintained a divided population with different views in regard to educational needs. The French Catholics, forming the majority of the population, were not, it would seem, in favor of technical instruction in the schools. The household science courses, administered to both French and English Catholic girls, aided in preparing them for the duties of a housewife, therefore no further vocational preparation was necessary. Both Catholic and Protestant boys of the English sector did receive manual training in both elementary and high schools, nevertheless it was concentrated almost wholly in the city of Montreal. Moreover, it appears that in 1915 there was still controversy over the advantages of manual training, and no great clamoring by the minority English to get advanced technical education in their schools.

The period just discussed has brought us up to 1915, and earlier in this chapter we have seen that, by this time, the province of Ontario was well instituted into the programme of technical education in high schools. Quebec high schools had only manual training.

Quebec had a divided population which wasn't pushing for technical education. Ontario had a unity of English population which accepted technical education, but Ontario also had the big influence, and push of industries. Consequently, as technical education progressed in Ontario high schools and other provinces followed the example, Quebec was to remain behind for another fifty years.

Between the two World Wars manual training was maintained in numerous Montreal schools, and no great advances were made in other parts of the province. The outbreak of World War II, and the hurried attempts to set the armed forces into large scale mobility, revealed a general lack of basic technical skills on the part of the recruits. This prompted sufficient concern so that all provinces, at the war's end, were prepared to extend technical education programmes in their schools. It seems that all provinces, except Quebec, did increase the opportunities for technical education in high schools in their post war expansions of education.

During the Second World War Quebec, actually still the Montreal area, did make one change. The Montreal Central School Board, Protestant, has noted use of the term "industrial Arts" for the first time in the records of 1941-42. This borrowed American term replaced the former term "Manual Training". Quebec went with nothing but industrial arts until the reforms of the sixties. The industrial arts programmes hardly differed from those of the old manual training, which had been "Jsed and abused since the earliest

conception at the turn of the century." (Orville E. White, 1962)

The reconstruction of secondary school education which took place during the sixties, in Quebec, was the largest and most costly ever put forth by this province. In the French sectors the changes were revolutionary. Not only were public high schools made available to the French population, but both the French and English populations were introduced to the new polyvalent, or composite high school. These schools were erected province wide while the new curricula were also embodied in existing schools. At last technical education was made readily available to Quebec's high school students.

These sweeping changes came about as a result of the famous "Parent Commission Report". Apart from the complete overhaul recommended by this report, for all public schooling, it went to the point of seemingly presenting technical education as the febrifuge for all educational ailments. However, the report gave some sound, and logical, reasons why technical education was so badly needed. First, as might be expected, technical education was cited as necessary to provide a familiarization with technology, a means of providing a rediscovery of science through practical applications, and an opportunity to develop manual skills (Alphonse-Marie Parent, 1964).

The purpose of these new composite high schools, as outlined by the Parent report, was to give a more thorough education which

better prepared students either for university or employment. The term much used in the report to describe this more complete education was "well rounded". The better balanced education would result from the union of academic and technical courses, and the report went on to state that technical courses were to be elevated to a level of equality with academic courses. In this way, it was stated that better technicians would result, for the belief was that the absence of academic subjects, in technical schools, was part of the explanation why Quebec had not produced a body of top flight technicians. The report also stated that school "dropouts" could be reduced by allowing students, who found certain academic courses uninteresting, to rekindle their interests in technical courses (Alphonse-Marie Parent, 1964).

Having recommended the ideal situation for secondary schools, by offering a mixture of both technical and academic subjects, the Parent Commission continued by proposing, "A new kind of institution, different from the junior college". (Alphonse-Marie Parent, 1964). This new institution, which became known as the CEGEP, was to also provide a mixture of technical and academic subjects which would complement each other. The CEGEP was to be a sort of dual purpose establishment in that it would extend academic and technical courses which had been taken in the secondary school thereby yielding, to either university, or into a specialist vocation, a more knowledgeable and competent student product.

As described by the Parent Commission, the CEGEP's offerings were all of a positive nature. For a beginning it would furnish a two year maturity period for many students who would have otherwise entered university ill prepared. This interim period would introduce students to the university methods, such as research and project learning. The university bound student would leave the CEGEP with a much broader scope of knowledge and experience than that previously obtained at only the secondary school. Those who continued technical specialities, begun in secondary schools, would provide Quebec with the top flight technicians she had lacked, for, in conjunction to their technical abilities, they would have considerable post-high school, academic learning.

The recommendations of the Parent Commission resulted in Quebec getting the much needed educational reforms. In fact the building boom, which peaked during the 1968-73 period, provided composite high schools throughout the province, and a sufficient number of the new CEGEP , in every major center, which could subscribe to the needs of the students.

It would be refreshing if one could go on to record that Quebec finally acquired technical education in its high schools, because those in power accepted the suggestions of the Parent Commission that a broader expanse is given to education by combining both technical and academic courses. But, alas, I find I cannot so record. The Parent recommendations were excellent, and ideal for

Quebec's long overdue reform of secondary education, however I am thoroughly convinced that the Parent Commission Report was not the driving force behind the educational reforms of the sixties.

In the first part of this chapter I mentioned how Seath, in Ontario, had only been successful in gaining the acceptance of technical education, into high schools, when he presented it as a means of providing technicians for industry. Previous attempts by Seath to sell technical education as a means of augmenting general education had failed. Thus, the situation in Quebec, some fifty years later, was to parallel that of Ontario in regard to the acquisition of technical education in high schools. Just as industries had been the factor of force in Ontario, so they were in Quebec.

I cite as an example the report by Bell Telephone Company of Canada, presented at the Interprovincial Conference on Education in Montreal in 1966. Basically this report said that the Bell Company was convinced that basic technical skills should be taught in secondary schools, and students be given more specialized training so as to be better prepared to enter the labor market. The Bell report also stated its reason for this belief as being that a telephone company should stick to training its personnel in the specifics of the telephone industry.

In other words the Bell Company was losing time, and money, through the necessity of having to teach basic technical skills to

employees. "If the public schools taught these skills Bell would not only save money by discontinuing sections of the company school, which had previously taught them, but would acquire skilled technicians who could begin to earn money for Bell right from the start. There were other industries just as eager as Bell to see technical education instilled in Quebec schools for the same reasons, but the Bell Company, being so large, makes the best example.

Addy (Joseph Katz, 1956) explained it very clearly when he said that technical education has always been able to survive only when it caters to industry. Quebec was no exception, this province was long overdue for technical education, the Parent recommendations provided the outline on how to go about it, but the motivating force behind it all was the desire and influence of industry.

CHAPTER II

TECHNICAL EDUCATION IN THE COMPOSITE HIGH SCHOOL

Operational Set Up

In order to please the readers, a story, in typical storybook fashion must indicate as its ending that the wrongs, previously narrated, have been righted, and all concerned continue to operate under very gratifying conditions. The coming of the composite, or technical, high school to Quebec did correct the situation of having no technical education in high schools, but the method of applying technical education created additional wrongs, and consequently, we all have not lived happily thereafter.

The recommendations of the Parent Commission were followed very closely by the Quebec Education Department when it came to the programming of the new composite high schools. The two cycle concept was adopted whereby cycle one consists of the seventh and eighth grade students, while cycle two is comprised of the remaining high school grades. Further classifying was given by using the term "secondary" and the numbers one to five inclusive. Students in grade seven begin high school under the classification of secondary one. High school leaving requires the completion of secondary five. In

the English sector this is grade eleven, however in most French Polyvalent, or composite, high schools there is a twelfth year which is still secondary five.

These schools offer the full gamut of academic courses enabling students to avoid technical courses entirely. On the technical side, programmes are labelled as "technical-vocational", and this is where the shuffling occurs and we, the technical teachers, encounter the frustrations and disappointment of it all.

Technical courses are offered in a wide variety of many areas. The larger French schools have a surprisingly large number of specialist courses. In general the offerings are, auto mechanics, woodworking, machine shop, technical drawing and electricity and electronics. To these are added the business education courses, cosmetology and the household sciences of cooking, sewing and home management.

The technical vocational programmes of specialities are of two years duration and are separated into long and short programmes. The long vocational programme is given during secondary four and five, while the short programme is given during secondary three and four. The "long vocational student" is expected to acquire the technical theory and practical experience required for entry into industry in an apprenticeship. "The short vocational student" is less capable than the long vocational student in learning abilities and practical applications. For example, in auto mechanics, "the long vocational student" is prepared for the apprenticeship as a mechanic, while "the

short vocational student" is prepared for work as a service station attendant. Similarly, in woodworking, "the long vocational student" should become the carpenter, or specialist, while "the short vocational student" should become the carpenter's helper.

Technical Education Programmes In Quebec High Schools

1. Personal Experience of an Instructor

The reforms of education resulting from the Parent Commission recommendations provided me with the opportunity to begin a second career in life as a technical teacher in a high school. From the start of this career, seven years ago, there has been constant malcontent . My first long vocational course in auto mechanics consisted of twenty-one students. No teacher in a technical course can safely supervise a class of more than fifteen students. In fact the Quebec Department of Education did set the limit at fifteen students only to have the various local school boards increase this limit to suit their desires.

Before recovering from the shock of being given such a large class, I was struck the second stunning setback. Seventy-five percent of these students could not read and comprehend well enough to grasp the theory required for the course. Moreover they lacked the ability to do simple arithmetic problems in order to calculate engine displacement, horsepower, torque and the units of an electrical circuit. Half the student's work comes from his ability to practically

apply the theory he has learned to actual automobile components and systems. Unless one knows and understands the theory, which applies to the operation of a particular component or system, he will be helpless in attempts to recognize the symptoms of malfunction and isolate the fault.

Of the twenty-one students in my first class only five successfully passed into the eleventh grade and the final year. My moment of joy came, when I found that these five, as a class average, placed the highest in the province on the departmental examinations for auto mechanics students at completion of secondary five. We are now on our seventh long vocational course at our school and the situation seems quite constant. The average class size beginning a long vocational auto course in secondary four is twenty. The number who successfully complete secondary five averages from five to eight students.

With the short vocational courses the student numbers, in regard to enrolment and successful completion, is approximately the same as with the long vocational. The short vocational student is expected to be far less capable of grasping theory and using reason toward practical application. I found that the majority of short vocational students could not prepare a simple bill of sale as is required by the course in preparation for employment as a service station attendent.

When I began questioning my colleagues, in various other English,

Protestant, composite high schools around Montreal, I found their situations to be much the same as mine. In fact one colleague related a case where he had received a grade nine student, to begin the first year of a short vocational course in auto mechanics, only to find that this student could neither read nor write. When this teacher brought the matter to the attention of his vice principal, the vice principal replied, "Oh yes it is noted in his records that he cannot read nor write, but he is only in a technical course." It was, therefore, possible for this student to successfully complete eight years of schooling without being able to read or write.

This prompted me to begin checking the past records of students placed in auto mechanics courses. Two other auto mechanics teachers, who had previously done the same, provided me with their findings. Approximately seventy-five percent of the students placed into our long vocational auto courses had failed one or more of their academic subjects the previous year, and in many cases had failed several subjects. Many had failed several subjects for their past three school years.

As for the short vocational students the cases of failure in previous years had been unbelievable. We also found that the administration had begun to ship us students from what is termed the "special education section". Special education students are those who cannot contend with a regular curriculum and are herded into special classes for remedial work. Many of these students simply

have an I.Q. which is far below what is required to tussle with the simplicity of the short vocational course.

Several terms have been used in an attempt to emphasize how schools and school boards misuse technical education programmes. The most used is, perhaps, "dumping ground", although Addy (1956) used the term "slag heap" which I believe has more significance by way of explanation. During a smelting process the raw metal product enters the smelter as an ore. As the ore passes through the smelting process it is subjected to numerous operations which bring about changes to the ore. Several finished product metals of value are developed from the original body of ore. When the smelting process is complete there is always that part of the ore, which could not become a useful metal product, known as slag. Every smelter has a slag heap, well away from the smelting process, where the useless slag can be stored.

I believe that Addy compared a group of students to the body of ore entering a smelter. The useful metals, which develop as a result of change inflicted upon the ore, can be likened to those students who are successful and advance to other duties. Those student who do not develop into the desired product are the slag. When Addy referred to using technical programmes as a slag heap, I understand that he was saying educational systems store the slag students in technical programmes. This would resemble a smelter where the slag was being stored in one of the areas which should have been used for a necessary

operation of the metallurgy process.

Quebec did not devise the system of using technical programmes as a means of exile for failing students, for Addy, and others, had commented on this long before Quebec had technical high school programmes. It seems that another miscarriage of educational justice was well in progress and the formation of Quebec's technical programmes completed the perdition.

As happened elsewhere, Quebec schools followed what I call the "slackness of the sixties". Shortly after 1960 we began to hear a great deal of lament, from supposed educational authorities, about the evils of failing students in schools. I have already mentioned one case where a student was promoted all the way to grade nine without being able to read or write. There are hundreds of other examples which show that promotion, within the elementary school system, requires of the student only to be alive, to present a body at school, and refrain from serious crime.

The adoption of the non-failure system extended into the secondary schools through the multi-level subject scheme. If a student fails a regular level subject he carries on the next year in that subject, but at a lower level. These levels are often referred to as streams, and "regular stream" is meant to indicate a subject at the level which leads toward CEGEP and on to university. Some subjects have as many as four levels which a student, when asked, described to me as, normal, stupid, more stupid, and hopelessly

dumb.

When the academic subjects were fitted to the technical programmes they were set at the lower levels which made it almost impossible for a student to take one of the long vocational programmes and continue his education toward a university. A failing student whether he asks for a long vocational course, or is pushed into it, will naturally take low level academic subjects. The student who does'nt fail, but is interested in a long vocational course will take the path of least resistance, for he knows the lower level courses require less effort on his part. Furthermore the long vocational programmes are designed so that there is not room in the timetable to carry sufficient academic subjects to enable entry to the CEGEP.

The recommendation of the Parent Commission was that the technical or vocational speciality would be continued in the CEGEP. This has not been so, for the student in a long vocational programme, in high school is either taking low stream subjects or is missing some of the academic subjects required for entrance. In the case of my own son, who wishes to pursue mechanical engineering at university, I had to acquire special favours from guidance and the administration in order to get what I felt was best for him. I wished him to get the experience of the two years, long vocational course in auto mechanics. By juggling his timetable, and getting him back into high school for an extra year I was able to acquire, for

him, the long vocational course in auto mechanics and the necessary regular stream academic course required for CEGEP entry.

Within the board, where I teach, there are two technical, or composite, high schools which were built as a result of the Parent recommendations. Two smaller high schools, which existed within the board prior to the expansion and reform, have become known as academic high schools. The two composite high schools together house an annual student population of around three thousand five hundred. The two academic high schools have less than one thousand students. Each year the two academic high schools go through a large culling process which sees their failing students dumped into one of the two technical high schools.

I have spoken with several teachers from these academic schools, and they seem very pleased that they are able to maintain their academic image of success by sending us those failing students which would otherwise stain that image. A similar situation was described by Havighurst in the United States. (Havighurst, 1967). Havighurst claims that it is the middle class image which the academic high school teachers attempt to preserve. Lower school grades, or failure, according to Havighurst, are associated with lower social classes, and this is why academic high school teachers make every effort to transfer the undesirables to one of the vocational high schools. Since there is an increase in the number of failing students, it appears that the technical, or vocational, high schools

are being assured of a student population.

Since the Parent Commission had recommended that technical or vocational specialities, taken in high schools, be continued in CEGEP, I expected to find an excellent system of guidance, in the technical high schools, with arrangements for this set-up. I was greatly dismayed to find that this was not so. Entry to one of the technical programmes in a CEGEP requires the completion of the full table of regular stream high school courses. As we have seen the arrangement of long vocational courses in our high schools makes this impossible.

The CEGEP is producing some fine technicians, and I believe it is from these ranks that industry has been soothed in its demands for highly skilled personnel. Since I have been involved for thirty years in both automotive and aircraft mechanics these spheres attracted my greatest attention, I do not know of a CEGEP which offers a course in automotive mechanics, however there is a three year aircraft technician programme available at both an English and a French CEGEP. Since the basic principles of engines, tools, mechanical harware such as nuts, bolts, etc., as well as electrical and hydraulic tenets are the same, there is no better prerequisite for the aircraft technician programme than the long vocational high school course in auto mechanics. This is also true in regard to a relationship between the mechanical technology programme in the CEGEP and the long vocational machine shop course. Likewise there

should be a continuation from the long vocational electricity and electronics and the CEGEP's electrotechnology.

The long vocational courses are not confined to being useful only as beforehand preparation for the CEGEP technical courses, but can be prolific as a footing for the fields of engineering and science in general. However the students which should be getting the advantage of these long vocational courses, in preparation for CEGEP, either for further technical courses or for university, are not doing so. Some students, like my son, have returned for the extra year of high school in order to obtain the necessary academic credits for CEGEP entry.

During the winter of 1977 I joined with several other technical teachers in an attempt to get students, who intended to enter one of the fields of engineering or one of the CEGEP technical programmes, informed of the advantages offered by our long vocational programmes. The administration was very cool toward our intentions. The general excuse given was that we had no hope of enticing students to return for an extra year of high school when it could be avoided. We devised a timetable which would give a student the long vocational programme, and all the necessary academic subjects, if one history course could be taken during the one month summer school. This proposal met a very icy reception. Many technical teachers stated that good students could not be lured into technical courses, and, since, the administration wished to send us the failures as an only

means of filling classes there was too much risk of loosing one's teaching job.

In my survey of one hundred grade nine students I asked if they had ever been told by an administrator or guidance counsellor that it was possible to take one of the long vocational courses and at the same time complete the necessary academic subjects required for CEGEP. Ninety-five had not been told, three did not answer, and the two who answered "yes" were obviously from our school.

2. Comparison of Personal Experiences: Technical Education in other School Boards

Knowing that thus far everything I had compiled was the actual experiences of myself and several colleagues, within our own school board, I wished to get the picture from other school boards. I was granted an interview with the director of public relations and information for the Commission Scolaire Regionale de Chambly, the neighbouring South Shore French Catholic school board. The director Mrs. Aline Foster, granted me two hours of her time and was very informative (date of interview, March 1977).

I began by asking Mrs. Foster if there was a problem with technical education in her school board, and if so, could she describe it. She began by saying that the relaxed atmosphere of schools developed during the sixties had brought about many failing students. Using the expression "Le reform", to indicate the reconstruction brought about by the recommendations of the Parent Commission (1964),

Mrs. Foster stated that the Polyvalent school, with its technical courses, provided a large storage space for academic failures.

The intention of "Le reform", said Mrs. Foster, was to give an extended, or well rounded, high school education through the union of technical courses and the regular academics. Mrs. Foster went on to explain that the overall quality of secondary education in many ways had been reduced as a result of the introduction of technical programmes. As in our school board, the long vocational student may acquire a high school leaving certificate with the reduced, or lower, levels of academic subjects. On this basis Mrs. Foster claimed that technical education was used to lower secondary school standards rather than raise them.

Mrs. Foster stated that schools are administered with an academic bias, and as long as administrators and academic teachers look down upon technical programmes they will never be given their proper place as equivalent in importance with the academics.

I was very pleased when Mrs. Foster brought up my favorite beef about long vocational students being unable to continue their speciality at CEGEP, or to enter CEGEP in preparation for university. Mrs. Foster mentioned that some serious consideration had been given to this problem within her board, and the addition of an extra year, as secondary six, was being looked into as a means of solution. She also mentioned that it had been suggested that this problem could also be solved by the addition of a qualitfying entrance year

at the CEGEP.

After my enlightening interview with Mrs. Foster it became quite clear to me that the problems surrounding the use and misuse of technical education in high schools were neither French nor English, catholic nor protestant, but were common to all. Perhaps the only thing that can be said is that, since the French have more schools and many more students, they are experiencing the problem on a larger scale.

I had not completed the compilation of my notes from Mrs. Foster's interview when, as though in answer to my prayers, the cats began tumbling from the bag in the form of published articles, all about me. A group of technical teachers in the Jerome Le Royer Commission Scolaire published an article (Meqnews, January 1977). Their article was in protest of the misuse of technical education. Basically, these teachers stated that technical education was downgraded by administrations who attempted to use technical education instead of general education, when it should be used as part of general education.

It was the belief of this group of teachers that technicians must be prepared for the technological culture in which we live. Technicians, they claimed, must have technical education, but , due to the complexity of today's industrial society, technicians must stem from a solid general education. The article went on to state that the good students shy away from the low status technical

programmes while adminstration fills the technical areas with students who are failing and have learning difficulties. To go along with this situation technical teachers are expected to reduce the standards of testing and assessment so that students with learning difficulties may be promoted. This I had experienced within my own board, and as I previously mentioned knew that many technical teachers went along with the request as employment insurance.

The technical teachers of the Jerome le Royer Commission stress the need of acquiring respect for technical courses by elevating them to a status of equality with the regular academic courses. This was one of the recommendations of the Parent Commission which was not followed. I particularly like the new term which these teachers gave to technical education, a change from "dumping ground" and "slag heap", when they stated that, in general, technical courses merely served as "parking areas" for students with learning difficulties.

At the same time a fourteen page report prepared by Professor Dolan, of McGill University, Education Faculty, was circulated throughout English composite high schools. This report summarized the complaints of the technical teachers within the English protestant school boards of the island of Montreal. The general feeling of these English, protestant, technical teachers was that the coming of technical education had provided holes in the school timetables.

Students were herded in to ensure that all the holes are filled, and no system of guidance or achievement was being utilized.

Professor Dolan's report also stated that no attempts were being made in Montreal's English, Protestant, composite schools to blend technical education with regular academic education in order to give a good general education. It was felt that schools were attempting to make specialists (ie.technicians) out of students via technical education alone. This was deemed wrong, as the general agreement was that specialists should emerge from the background of a good general education. A major complaint of Professor Dolan's report was the filling of the short vocational courses with students from the special education classes, or classes with learning difficulties. All in all, the complaints of English Protestant technical teachers are much the same as those of the French Catholic teachers in the Jerome le Royer Commission.

After hearing the same laments from several school boards, in the Montreal area, it was rather like a grand finale to come upon an article which referred to the ills of technical education in Quebec secondary schools in general. Briefly Chevrier (Joanne Chevrier, 1977) stated that technical education was not a success in the new Quebec composite high schools. She claimed that the problem arose from attempts to teach technical programmes within a regular high school format to students who were unable to contend with the regular stream academic subjects. Chevrier strongly suggests that Quebec

return to the old system of trade schools as a method of teaching trades to those students who cannot meet regular academic standards.

I mention the Chevrier article not because I agree with her suggestions, but, because it says that technical education is not working in Quebec secondary schools. Furthermore the problem centres around the issue of technical education and students who fail the regular academic curriculum.

I understand Chevrier to believe that the atmosphere of a secondary school suggests an academic domain. Since these students cannot function within the academic realm they must be removed and placed in trade schools where the emphasis on practical application will put them more at ease.

I cannot see the return to the old system of trade schools as a solution. The trade school system in Quebec was not a success. The Parent Commission stated very clearly that these technical, or trade, schools had not produced the top quality technicians that were needed. The reason, stated by the commission, for a lack of capable technicians, was the absence of a good academic education in conjunction with the actual technical aspects. The reason for introducing technical programmes into secondary schools was to combine them with regular academic subjects and provide a solid general education for future technicians. The complexity of industry today demands more learned technicians. It has been my experience that, most often, the student who fails regular academic subjects

also fails in technical subjects. It is a known fact that technicians are required to know more and more, therefore it would be folly to return to teaching them less and less.

If the educational dynasty of Quebec should begin to entertain thoughts of returning to the old system of trade schools perhaps they should take a moment to ponder the evolution of technical education in Ontario. As mentioned in chapter one, John Seath promoted technical education in Ontario by declaring it as a means of producing skilled workers for industry, and as ideal for students who would fail in a regular high school curriculum. Seath's great dream was to promote the industrial or trade schools rather than the technical high school. The trade type school was overshadowed by the technical high school (R. Patterson et al, 1974). Ontario has been more successful at producing competent technicians than Quebec, and Ontario has done this by means of technical education within secondary schools.

The practice of attempting to use technical education for failing students, who cannot master a regular secondary school curriculum, simply does not work in Quebec, nor in any of the other provinces.

3. Effects of General and Parental Attitude Toward Technical Education on Student Decisions

By now it should be clearly evident that there is a general

attitude toward technical education which views it as inglorious. In fact I am convinced that this view extends to the point of belief that it is degrading to attend regular high school classes in a school where technical education is taught. Appearing in The Montreal Gazette, on October 5th of last year, was a short article entitled "Vocational Tag Out". The article referred to the Hamilton, Ontario School Board and its decision to remove the word vocational from the names of high schools. "Vocational" had been fitted into the names of high schools which taught technical education.

This article stated that school board trustees agreed there is a stigma attached to vocational schools where technical courses are taught. The Board of Trustees was told that academic subjects were the same at these high schools as they were at other schools which taught only academic subjects. One trustee was quoted as saying that his first reaction on hearing a school called vocational was, "I'm not sending my kid there".

I telephoned the Hamilton School Board, the same day, and was told this trustee was not available. I was, however, allowed to speak to the assistant superintendent, a Mr. Miller. I assumed that this decision had been prompted by a parents group and asked Mr. Miller what had brought about action. Stuttering and stammering, Mr. Miller assured me that this was the first he had heard of the matter. He took my name and address and assured me that if he should hear anything on the matter he would mail it immediately.

To date I have received no correspondence. A further check with the Canadian Press confirmed that their office in Hamilton had forwarded the article to Montreal.

I rather doubt that the Canadian Press would risk the possibility of a gigantic lawsuit over such a small publication. I also sensed that I had stuck my nose into a very touchy situation by making the inquiry. We shall probably never know the truth of the matter, at least not in the near future. Nevertheless, I am satisfied with the content of the article as evidence of a general attitude which views technical education as being low in respect.

A few days earlier the Montreal Gazette, on September 28, 1978, had also published a quote from an address delivered to the Insurance Bureau of Canada at the annual dinner. This quote was in reference to the speaker Mr. James Ham, president of the University of Toronto. "A serious problem facing universities is the shift by students to more job oriented programmes in the professions from liberal education". Mr. Ham also went on to state that the purpose of education at the undergraduate level is to develop a capacity for independence of judgement.

I could not agree more that a good liberal education is a prime factor in bringing about one's ability to make independent judgements. My disagreement is with the suggestion that one takes either a vocational, job oriented, education, or a liberal education. Mr. Ham's reference to "the professions" cannot include doctors, lawyers, dentists, engineers, etc., for they are subjected to

sufficient liberal education and are expected to demonstrate the quality of independent judgement. The reference to job oriented programmes refers to vocational programmes which are, under the skin, for the most part technical programmes.

There was no effort, by Mr. Ham, to stress the need of a liberal education interlaced with the vocational programme so as to accrue a well rounded general education. The general attitude that one must receive either an academic education, or a technical education remains. Furthermore, Mr. Ham appeared to be thoroughly puzzled over students opting for vocational courses when they could pursue a straight academic programme. This, of course, runs contrary to the general attitude that vocational education is only for those who are unable to imbibe the greatness of an academic education.

In speaking of a general attitude we might well use the term public opinion, or general public belief, for actually that is what it is. Naturally, a good portion of what we visualize as the general public is made up of parents, therefore parents, for the most, share the general public view. I am thoroughly convinced that the influence of the parents has the greatest effect upon students in regard to selection of educational programmes. In my survey of one hundred grade nine students, forty stated that they wish to go full time to university immediately after high school, and another twenty-two claimed that they wish to attend university on a part

time basis. Of these sixty-two students, sixty stated that they were most encouraged to attend university by their parents.

Just as a matter of interest I also found in my research last year, with immigrant children, that the success of the immigrant student, in a new culture, could be attributed to the influence and desire of the parents. There is no doubt in my mind that the opinions and aspirations, held by the parents, will be the largest factor in determining both the type of, and how much, education students will receive (J. Mugridge, 1978).

I just mentioned that there is a general attitude, or public opinion, that a student must be in either an academic, or a technical programme. The general opinion holds that it must be one or the other, and the two must be kept well apart. The two newspaper articles bear witness to this opinion. Parents share the common belief that technical programmes must be separate from regular academic programmes in high schools. However, they may be divided into two groups, one group wanting a strictly academic education for their children, and the second group in favor of technical education for their children. Once again it is pretty much the snobbery, or social class consciousness, which I mentioned in chapter one. Havighurst (Robert Havighurst & Bernice Neugarten, 1975) claims that there is ample research now to show that students from middle and upper class families do better, and register higher grades, in schools than students from lower, or working class

families. He further states that middle and upper class parents have greater aspirations for their offspring in regard to education.

Looking first at the middle or upper class parents we find them with the greater aspirations for the education of their sons and daughters. This group strongly encourages the university route. Their general attitude toward vocational, or technical, education would resemble the quote by the Hamilton school board trustee, in other words they wish to keep their children away from anything that suggests the lowness of working with one's hands.

The majority of students entering university in the faculties of engineering, physics, or straight science tend to come from the middle or upper class group. They, in particular, should be utilizing the benefits of a long vocational course while in high school. These are the students who could really do well and gain the most from technical education.

Of the sixty-two students, from my one hundred student survey, who stated that they wish to go to university only one was planning to take a long vocational programme as a means of better preparing himself for university. This lone student was in a private high school, had excellent grades in all subjects, and stated that the long vocational course in electronics was an excellent preparation for beginning a degree programme in electronics at university. This boy stated that his parents had explained the advantage of getting the basics and practical experience before beginning university.

Since this boy's father is in one of the professions, and certainly in the upper social class, this type of "sensible" reasoning does not go with the thinking norms of the upper class. However this boy represents one out of a group of sixty-two students. We just do not get students from middle and upper class families in the technical programmes.

This is indeed sad in two ways. First the students are missing out on some excellent preparatory experience and learning. Secondly the long vocational programmes are missing out on the type of students who would succeed and prove these programmes to be most beneficial. I still snigger when I think of an incident which occurred three years ago at our school. The physics teacher asked me if I could supply him with an old automotive generator and alternator to use as teaching aids in his physics classes. This teacher had to ask which was the generator and which was the alternator, as he claimed he had never seen the real thing, but could recognize the difference in his charts and overhead transparencies.

This tells me right away that something is wrong. These physics students were being told about alternators and generators, and being shown pictures, but never the real thing, If these students were also taking a long vocational auto mechanics programme they would not only disassemble and check these components, but would test and observe them under actual operating conditions as well.

The physics student is referred to as an academic student and

is either university bound, or headed for one of the technology programmes in a CEGEP. It is a sad situation, and it is all due to the old social snobbery. The general attitude that academic education, and technical education are separate entities, and technical education is given, instead of academic education, to those of lesser ability, is responsible for this situation. The only hope is to be able to run a few of the long vocational programmes with some of these talented students. I am sure that the general attitude could be changed by emphasizing the fact that these students were an elite in that they were actually completing two high school programmes at once. This is the sales campaign that must be followed if we are to get students from higher social rank into the technical programmes.

On the other side of the coin we have the students who come from lower or working class families. These students are found in the technical programmes. A Canada Manpower Study published in 1972, stated that students found in the high school technical programmes have, "Lower mental ability and social class origin." (Raymond Breton, 1972). The same study also stated that thirty-five percent of the students in technical programmes were, "Rejects from university programmes."

This study was carried out before Quebec province really had its technical programmes in full operation. Therefore Quebec couldn't be represented in these statistics. As in the rest of Canada Quebec has, in its technical programmes, students with lower

mental ability and social class. In regard to the thirty-five percent rejects, or failing students found in the technical programmes, the school where I teach is above the national average. In seven years the number of students, with failing grades, dumped into our technical programmes is over fifty percent. Nevertheless the provincial average, if taken over the past seven years, would no doubt be very close to the national average.

It has been my experience, in dealing with working class parents, that they, like the middle and upper class parents, also are convinced that technical and academic education should be two separate ventures. Whereas the middle and upper class parents wish their progeny to be in the strictly academic domain, the lower, or working class, parents are content to have their children in the technical programmes.

In reference to several studies in Britain, and the United States, Morrison and McIntyre (Morrison and McIntyre, 1971) show that middle and upper class parents are much more persistent in guiding their children in educational selections which will lead toward employment in what is considered suitable and respectable jobs. The same studies show that working class parents are inclined to give their children a great deal of freedom in the selection of educational courses and programmes. In reference to another study in the United States Havighurst, (R.J.Havighurst and B.L. Neugarten, 1975), claims that students of working class status, if there is a choice, will choose, or the parents will choose for them, a high school

programme that is non-college preparatory.

The situation in Canada is much the same. I have found the attitudes of the parents with which I have dealt to parallel those just mentioned. At one period I was teaching both technical and academic subjects. The parent teacher interviews, which take place three times per school year, provide evidence that the middle and upper class parents take much more interest in the progress of their children at school than the working class parents. I noted that it was not uncommon to be visited by the parents of over eighty percent of the students in an academic course while only about thirty percent of the parents with children in the technical courses would make the effort.

In chapter one I mentioned that, Marland (Stanly Elam, 1971), had stated that the disrespect accorded to technical education was nothing but snobbery on the part of the academics. There seems to be an equal air of snobbery on the part of the working class toward success in the academics and the idea of going to university. In the past seven years I have dealt with a far greater majority of working class parents. I have noted that there has been a common opinion of these parents to maintain a strong belief that university is entirely unnecessary. These parents actually seem to hold contempt toward university. They quickly mention that the newspapers constantly refer to the many university graduates who are unable to find work. One mother described this general feeling when she said,

"I never went to no college and it never hurt me none, and I never got nothing unless I worked."

Working class parents seem to be very happy if their children are in a technical programme and their is evidence that a skilled or semi-skilled job may be obtained as a result. Working class parents, as a whole, have always shunned my suggestions that students should acquire as many academic subjects as they can while in a technical programme. I have also been amazed at the number of parents who agree to their children opting for a short vocational programme rather than the long vocational programme. The idea of a son or daughter spending one year less in school seems to appeal to many working class parents. They do not seem to care about the reduced level of ability of the short vocational programmes, but jump at the possibility of a son or daughter going to work one year earlier.

From my one hundred student survey I noted that of the nineteen students applying for actual technical programmes only five had a passing grade in all subjects. I did not include the eleven girls who were opting for business education and office practice. One of these passing students was the rare bird, already mentioned, who wishes to take long vocational electronics in preparation for a degree in electronics at university. His parents are university graduates, in upper class professions, and the only one of the nineteen who claims his parents strongly encourage him to go to

university.

Of the eight students who claim their parents give them some encouragement to go to university six of them have parents who finished high school and the other two do not know the level of their parents education. Of the remaining ten students, who claimed their parents gave them mo encouragement to go to university, only two stated that their parents had finished high school. The other eight had parents ranging from some elementary school to some high school. It seems to me that the more education the parents have the more apt they are to encourage their children to acquire more education. This is in keeping with what has been generally taken for granted all along.

Snobbery, then, is no doubt the root cause behind the general attitude which maintains the separation of technical education from a general or academic education. The middle, and upper class parents create an air of superior snobbery toward the working classes. Technical education belongs to the less intelligent working classes, and has no place among the more talented. This attitude rubs off on the students, of middle and upper class parents, and is at least partially convincing. The greater insistence, by middle and upper class parents, that their children acquire a higher level of education, is perhaps the real strength which diverts these children away from technical education in high schools.

Snobbery on the part of working class parents toward academic education and its association with the middle, and upper, classes

generates an anti-extended education attitude within working class homes and social circles in general. Many will claim that this is envy, or plain jealousy, on the part of lower, or working class, people who are either mentally, or economically, unable to acquire any amount of academic education. We are not concerned with the arguments which attempt to explain this situation in this paper, but are concerned only with the fact that the situation exists. This general attitude of the working class influences their children, and develops in them an anti-academic attitude. The children opt for technical education, as it appears to offer an easier time in high school and less risk of failure.

I have noted that, should the child of a middle or upper class family suggest that he, or she, doesn't wish to attend university, the parents will strive to get a regular academic programme completed in case there is a change of mind later on. Working, or lower class, parents, as a whole, do not think the same, for they don't seem to worry about the future of their children in this regard.

As long as this snobbery exists, on the part of social classes, the general attitude will continue in regard to maintaining a separation of technical education from the academic. School boards and school administrations follow along with the general attitude, as it seems to best promote harmony. In the long run it is the students who are short changed on their education. The student who follows the technical programme lacks the academics necessary to

make him that better technician. The academic student has missed out on some excellent experience, an opportunity to acquire first hand knowledge of parts of his industrial society, and a firmer grounding in science via actual practical applications.

This general attitude is the first and greatest obstacle to be overcome if we are ever to unionize our technical and academic secondary school programmes so as to give our students that well rounded general education about which the Parent Commission spoke so strongly.

CHAPTER III

FINDINGS I: DESCRIPTION OF THE SAMPLE

General Characteristics

Chapter I and Chapter II traced the history of technical education and the experiences of instructors of technical education as found in the literature in general and in Canada and Quebec in particular. Chapter II was based mostly on the seven years of experience of one technical education instructor in Quebec. To supplement this personal account by some more direct evidence about the selection process by which the students are placed or opt for technical education programmes, a special questionnaire was prepared and administered in 4 different types of high school in Montreal. The questionnaires were given to students in the secondary IV classes (or 9th grade) as that's the year during which students make the decision to enter one of the technical programmes or prepare for CEGEP/university. This chapter describes the general findings based on the results of the questionnaire (see Appendix I for the questionnaire).

The one hundred students who participated in the survey were picked at random by either the administration, or teachers of four different schools. The sample was purposely divided to give a cross

section of both French and English sectors of secondary schools. Moreover the sample was further divided so as to survey twenty-five students from each of, an English all academic high school, a French all academic high school, a French polyvalent, or technical high school, and an English composite or technical high school.

Since the French system of secondary education has, "all academic", high schools only available as private institutes, where the parents must pay a tuition, it was necessary to choose one of these. The school which I chose is situated in one of the suburban centres of Montreal's South Shore, and houses approximately three hundred students. These students come from every South Shore community and parts of Montreal. The majority of parents, with students attending this school, are considered to belong to the middle class, while a limited number of the students stem from working class families. The working class students have earned financial assistance, on the basis of their ability, in the form of bursaries donated by either private firms or corporations.

The English academic high school houses slightly less than five hundred students, from a South Shore suburban centre, of largely middle and upper class families.

The French polyvalent, or technical, high school has a student population of approximately two thousand eight hundred. Due to the density of the French population, and the relatively small radius of service area which this school spans, it could be said to be a

community school. However this school serves parts of three, closely knit South Shore communities, and the students are said to be a well balanced group of both middle and working class families.

The English composite, or technical, high school is inhabited by approximately two thousand students. Unlike its French counterpart, this English technical high school caters to a rather homogeneous mixture of middle class to very low income students. Although considered a suburban school, the students come from a variety of communities in the area extending from the New York state border north to Sorel, and east from the St. Laurence River to a distance of over thirty miles at the greatest point.

The sample consisted of sixty-seven boys and thirty-three girls. The majority, sixty-nine, of these students were either fifteen or sixteen years of age. Twenty-five were under fifteen years of age, five were seventeen years of age, and only one student was eighteen years of age.

Seventeen of the students claimed to have no participation in any sport. Basketball was the sport with the most participation claimed by fifty-two students. Most other sports had limited participation except for wrestling, tennis and golf which were not listed as being participated in by any of the students.

The response to the question of how many evenings per week were spent at home ranged from three claiming to remain at home every evening to four claiming they never stay at home in the evening.

The greatest concentration was in the area of four or five evenings per week.

The fact that the majority of these students are bussed to school, and in some cases to a distance of almost fifty miles, may account for the fifty-one students who did not participate in any of the clubs at their school. However, thirty students did belong to one school club, and another thirteen claimed to participate in two school clubs. One student actually claimed to participate in six clubs at his school.

In spite of complaints about the high price of going to the movies these days, forty-seven students claim to attend a movie about once a month, twenty-three students claimed they never, or almost never, attend a movie. Another twenty-four claimed to attend a movie every two or three weeks, five students claimed a weekly attendance and one student claimed to attend more than twice a week.

Television gets a fair share of the student's time, as fifty-nine students claimed to watch from one-half to two hours daily. Twenty-three claimed to watch television three or more hours per day, while at the other extreme fourteen claimed to never watch television.

In regard to hobbies and spending leisure time almost half the sample preferred an indoor activity of some sort. Outdoor activities were claimed by only eleven students. Twenty-eight students

claimed to prefer a sports activity as a means of spending leisure time, while eleven students claimed a sports activity as a hobby.

The majority of students encountered in the sample seemed to feel that they are involved in family decisions which pertain to them. Seventy-nine students claimed to have from some influence to a lot of influence in decisions affecting them. Mothers seem to take more interest in the school work of their offspring than fathers, as forty-one students regarded their mothers as knowing a great deal about their school work, while only eighteen gave the same credit to fathers.

When asked what they would most like to be, twenty-eight of the students preferred to be a self-employed businessman, and twenty-six an airline pilot. Sixteen wished to be a teacher, and, of these sixteen, eleven were French students. As a group the French students were inclined to place the teacher much lower than the English students in order of importance of various occupations.

None of the students surveyed was an only child in the family. Forty students were the oldest child in the family, and twenty-four students were the youngest. Sixty-six of these students were born in the Montreal area, another sixteen students were born outside Montreal, but in Quebec province, while another ten were born elsewhere in Canada. Eight of the students were immigrants, all of whom had been in Canada more than one year, with five of the eight having lived in Canada for more than seven years.

Of the parents, thirty-six fathers and forty-one mothers were born in the Montreal area. Twenty-seven of the fathers and thirty-two of the mothers were born elsewhere in Quebec province. Twenty of the fathers and eleven of the mothers were born in other Canadian provinces. Seventeen of the fathers and sixteen of the mothers were immigrants born outside Canada.

The greatest number of the fathers, forty-one, were classified as being employed in skilled occupations. The next highest classification was professional occupations with twenty-eight. Seventeen fathers were classified as employed in clerical positions, with five in small businesses, ten teachers, one unskilled and one unemployed. Five students failed to answer this question.

Seventy-two of the mothers were classified as being housewives. Fifty-nine were shown as not working outside the home, while twenty-four mothers had full time jobs outside the home and another seventeen worked part time outside the home.

Seventy-five of the students live with both parents. Fourteen live with the mother only, while only one lived with the father only. Seven students lived with the mother and stepfather, but only one lived with the father and a stepmother. Two students claimed to live under other arrangements.

Of the one hundred students surveyed forty-eight were Roman Catholics, forty-four Protestants, none were Jewish, and six were classified as belonging to other religions. Two students did not

answer this question.

Forty of the students claimed to never attend a religious service. Students in both of the academic high schools appeared to be more inclined to attend religious services. All the students in the French academic high school claimed to be Roman Catholics, ten students claimed to attend services every week, and seven students claimed that they never attended a religious service. In the English academic high school, of the twenty Protestants, six students claimed to attend services every week with three claiming to never attend a religious service. Three of the English students at this school were Roman Catholics, one claimed to attend services every week, one claimed to never attend, and the third attended once or twice each month.

In the two technical high schools, religion seemed less popular, as only two of the twenty-three protestants in the English composite high school claimed to attend religious services every week, and thirteen students claimed to never attend. In the French composite high school of the twenty-one Roman Catholics only four claimed to attend religious services every week, and twelve claimed to never attend a religious service. Of the six students claiming to belong to religions other than Roman Catholic, Protestant, or Jewish not one student indicated the religion to which he belonged. It seems that English Protestants and French Roman Catholics have moved closer together in regard to attendance at religious services if not in

other ways.

More than half the students surveyed, a total of fifty-nine, had part-time jobs outside the home. It was surprising to learn that ten of these students work more than twenty hours per week during the school year. One might suspect that the greatest number of students working part-time would be found in the school which house more of a working class group of students. However this did not appear to be true. The French and English technical high schools, which are considered to be inhabited by more or less working class students, each had fifteen students working part time. Of the fifteen, at each school, who worked part time three, from each of the fifteen, worked twenty hours or more per week.

In the English academic high school, which is said to house a majority of middle and upper class students, nineteen students worked part time which represents the greatest number of students in any of the four schools. Only one student worked twenty or more hours per week. In the French academic school, a private school with paid tuition where the majority of students come from milddle class homes, ten students worked part time, and four of the ten worked twenty or more hours per week.

An indication of the family income could not be established, as fifty-five of the students stated that they did not know the amount. I would put little faith in the responses to this question, as students are inclined to answer falsely even when they do not know

the figure of the family income.

Being popular seems to hold greater importance, as forty-two students selected "most popular student", as the way they would wish to be remembered at their school. Thirty-three wished to be remembered as a brilliant student and twenty-two as an athletic star.

When asked about themselves, sixty-five students declared that they would like to stay pretty much as they are with no change, twenty-six claimed there were a great many things about themselves they would like to change. Only seven claimed they did not like themselves and would like to change completely. Two students did not answer the question.

Of the eight occupations given for the students to rank in what they considered to be the order of importance the "poor old" welder didn't get a single vote for first place. French and English students appeared to be equal in agreement about the welder. Almost eighty percent of the students positioned the welder in sixth, seventh or eighth position with the greatest number, thirty-three, for any one position, being eighth or lowest position.

The French students, as a whole, appeared to have a lower regard for the teaching profession than the English students. Of the ten students placing the teacher in number one position only two were French. Of the twelve students placing the teacher in number two position only two were French. All of the nine who placed the teacher in eighth, or last position, were French students.

Of the listed professions, and occupations, the doctor was placed in number one position fifty-three times which was, by far, much preferred to the lawyer, who had the second highest listing for number one position, with only eleven selections. The lawyer was selected for second position thirty-four times and third position nineteen times.

As expected, the doctor was selected more, for number one position, by the students at the academic high schools. The English academic high school and the French academic high school were equal in that each selected the doctor eighteen times for number one position. The French technical high school selected the doctor only ten times for number one position, while the English technical high school selected the doctor seven times for the number one position.

For the other given occupations, or professions, the selections by the students were pretty much a similar pattern within the four schools. The one exception was perhaps the position of the carpenter which was noticeably higher in the French schools than in the English schools. The carptenter was selected once for number one position, and once for number two position, each time by French students. In general the French students tended to place the carpenter at a slightly higher level of occupational importance than their English counterparts.

Educational Characteristics

The fifty English students who participated in the survey were all in the ninth grade, and the fifty French students were in the tenth grade. Nevertheless all the students were in secondary three, the year during which they must select their programme of studies for high school leaving. Originally I had stated that all one hundred students would be in grade nine. The French secondary school begins with grade eight as secondary one, while the English secondary school begins with grade seven as secondary one. Consequently the French students complete secondary five, or high school graduation, aftern twelve years, and the English students complete secondary five after eleven years.

All of the students were in what is considered regular high school programmes. Some confusion existed as a result of asking the students whether they were in the general course or college preparatory. Actually at the secondary three level there should be no difference, however it is possible that some students have one or more subjects at a level lower than what is required for continuing on to university. Eighty-two students stated that they were in the general programme and eighteen stated that they were in the college preparatory programme.

Some confusion existed among the students in regard to the questions about their intentions to take technical-vocational

programmes and technical-vocational courses during the coming year. By a technical-vocational programme was meant the actual two year long vocational programme. Seventeen students stated their intent to take a long vocational programme. However, the two students who stated they were taking, "other", programmes were signed up for actual long vocational courses. Therefore there were actually nineteen students intending to take a long vocational programme. Four of the students had chosen the business education programme which is classified with the actual technical programmes.

When asked whether they intended to take any of the technical-vocational courses which are offered twenty-nine students answered in the affirmative and seventy-one answered negatively. By a technical-vocational course was meant a single course which would be a one period per day option. The total of twenty-nine represents the students who had previously stated intent to take a technical-vocational programme plus an additional seven girls who planned to take a single course in typing. When asked why they were choosing the course in typing all seven girls stated that a knowledge of typing was valuable regardless of their future plans. Four of the seven girls stated that they planned to go to university and wished to save time and money by typing their own term papers.

Sixty-five of the students had a pass standing in all subjects with thirty-five students failing in at least one subject. At the English technical high school fifteen of the twenty-five surveyed

students had failing grades. At the French academic high school none of the students had a failure in any subject.

At the French technical high school one student was failing in four subjects, two students were failing in two subjects and the remaining ten students were failing in one subject. At the English technical high school three students were failing in three subjects, three students were failing in two subjects, and nine were failing in one subject. At the English academic high school the seven failing students had a failure in one subject only.

The greatest number of failures were found in Math and Science with seventeen. Languages were next with fourteen while only three students were failing in social studies and one student was failing in another subject.

Of the nineteen students opting for technical vocational programmes fourteen of them had failing grades, three of the fourteen were failing in two subjects and three were failing in three subjects. It is only known for certain that one of the five students selecting a technical vocational programme, with passing grades in all subjects, was taking regular stream courses. Of the other four with passing grades there could have been subjects at lower stream levels which would not enable entry to a CEGEP. Of the four girls selecting the business education programme two of them had failing grades. One of the two was failing in two subjects and the other was failing in only one subject.

When asked what their parents considered as satisfactory grades for them at school, the greatest number, forty-eight, stated as an answer "above average". All schools were relatively close in this response with the English academic high school having the greatest number of responses with fifteen. The French academic high school had twelve students selecting this response, the English technical high school had ten with this response while the French technical high school had eleven.

Strange as it may seem the one student who selected the answer saying that his parents did not care about his school grades was from the French academic, private, high school. However, this school had eleven of the twenty-one students claiming their parents wished them to make one of the highest marks in the class. The English academic high school had only four students claiming their parents wished them to make one of the highest markes in the class. Each of the technical high schools had only three students claiming to have parents with such high aspirations for them.

Of the one hundred students surveyed, fifty-seven agreed that students got a fair deal from teachers and principals at their particular school. The French academic high school was the only one, of the four schools, where a greater number of students figured they were not getting a fair deal. Fourteen figured they were not getting a fair deal from teachers and principals. This, I believe, is quite understandable when we consider that this is a private school, and the standards of discipline are much higher than in any

of the public schools.

In response to the same question where the students answered either, "yes", or "no", to indicate whether they felt students got a fair deal from teachers and principals, the French technical high school had seventeen "yes", and eight "no" answers, the English technical high school had thirteen "yes", and twelve "no" answers, and the English academic high school had sixteen "yes", and nine "no" answers. The French technical high school seemed to be more lax, in regard to discipline, than the English technical high school which probably explains why the French students were more inclined to agree that they got a fair deal than their English counterparts. The students at the English academic high school appeared to work well and require little correction in any way. When I commented on this to one of the teachers he simply stated that low marks and discipline problems usually went together and these problems were shipped to one of the technical high schools.

As for their opinions of the teachers in their schools forty-eight selected "friendly" as the term best fitting. Eleven claimed teachers understood problems of students, and three selected, "willing to help in activities". The remaining students selected one of the "brickbat" answers. At each of the four schools the number of students, selecting each of these responses, was so close that it cannot be said that any one school differed in students' opinions of teachers. The fact that only three students saw teachers as,

"willing to help out in activities", could be a result of the issue which loomed large at the signing of the last Quebec teachers contract. The issue was the refusal of teachers to supervise extra curricular activities in excess of their normal teaching day.

Eighty-five of the students disagreed with the statement which said they were unable to keep up with the rest of the students. Of the remaining fifteen students who agreed with this statement there were only two from the academic high schools, one from the French side and one from the English side. The other thirteen students who agreed that they were unable to keep up with the rest were from the technical high schools. Seven from the English side and six from the French side. When we consider that the greatest number of failing students was found in the technical high schools, and only in the technical high schools were found students failing in more than one subject, this must be a fairly honest response by these students.

Fifty-one of the one hundred students agreed that the school was run by only a few students while the rest were left out. The other forty-nine disagreed. Sixty-nine students agreed that, in order to be part of the leading crowd, students sometimes have to go against their principles. Thirty students disagreed with this and one did not answer. The number of students, either agreeing or disagreeing with these statements, was almost equally divided between the four schools. No reasons were asked of the students for their response, but it would have been interesting to have pursued

it a bit further.

Ninety-four of the students stated their intention to finish high school. All of the fifty students from the academic high schools were included in this figure. Three students at the French technical high school did not intend to finish high school, and one was undecided. The remaining two students not intending to finish high school were from the English technical high school. If we look at the nineteen students going into technical-vocational programmes, and the four students going into business education, we have a considerable group of students stating their intention to complete high school. Of this twenty-three only one student intended to finish a technical programme with sufficient academic subjects to go on to university.

Usually we think of finishing high school as being prepared to go on to university if desired. The twenty-two students, from the technical high schools, opting for technical programmes will not be able to go to university with their high school leaving. From the ninety-four students, then, there would be actually seventy-two intending to finish high school with sufficient prerequisites to continue to university.

When asked about the extent of discussing their going to university with teachers and guidance counsellors seventy-five percent stated they didn't discuss their university plans with either teachers or guidance counsellors. Twenty percent claimed

to discuss university plans, "quite a lot", with teachers and guidance counsellors.

I found in all four schools that students tended to mistrust guidance counsellors as a rule. For example, one student told me that an older friend of his was losing a year, by having to make up courses for CEGEP entry, simply because the guidance counsellor had not worked out the correct programme of courses. There seemed to be a majority agreement among the students that guidance counsellors were in schools to guide those students who are not bright enough to select the proper courses for themselves.

Forty of the one hundred students said they wanted to go full time to university after high school (CEGEP first was understood). The English and French academic high schools had the lions share of this figure with sixteen students and fifteen students respectively. The English and French technical high schools had five students and four students respectively, wishing to go full time to university immediately after high school.

Eighteen students stated the intention to never attend a university. The French academic high school had no students in this category, while the English academic high school had one. The English technical high school had nine students never intending to go to university and the French technical high school had five students never intending to go to university. The figures for the students, considering university later on and part-time, were almost

equal in the four schools.

Almost half, forty-five to be exact, of the students were undecided about, or did not answer to the question of what they intended to study at university. The largest concentration, or group, of students in one area was for medicine or dentistry. Of the thirteen students in this group each of the academic high schools had six while the remaining one was from the French technical high school. No student at the English technical high school was considering going into medecine or dentistry.

The next highest group or concentration were those opting for engineering. Here the gap was greately narrowed with the English academic high school having four students, the French technical high school having three, while the other two schools had two students each. The other selections were either a single faculty, or could be considered quite well balanced. The only exception being that all three students bent on studying architecture were from the French academic high school.

Fifty-two of the one hundred students were either undecided or did not answer the question which asked what they considered to be the ideal university to attend if they had a choice. Nevertheless the remaining forty-eight students compiled a list of fourteen universities. Actually the universities listed totaled thirteen. The one student who stated, as an ideal university to attend, "anyone in Ontario", was a French Canadian student at one of the French

schools surveyed.

The university most selected by students was the University of Montreal, chosen eighteen times. This university was chosen by twelve students from the French academic high school and six students from the French technical high school. None of the English students stated a desire to attend one of the French universisites. However some of the French students are determined to attend English universities.

McGill University was second, behind the University of Montreal, with twelve selections. Of the twelve students, selecting McGill, six were English and six were French. Each of the French schools had three students selecting McGill while the English academic high school and English technical high school had four and two students, respectively, selecting McGill. Further to this equality of English and French, in regard to selecting McGill, perhaps I should add that, of the two students stating a desire to attend "Magil", one was English and one was French.

The Royal Military College was chosen by one student from each of the academic high schools. However there were considerable differences to be noted between these two students. The student from the French academic high school who stated that he wished to pursue engineering at RMC, participates very actively in several rugged sports and his most liked subject is mathematics. The student from the English academic high school stated that he was physically

incapable of playing any sports, did not have a programme of study and geography was his best subject. Being very familiear with the physical, mental and academic standards required at the Military Colleges, I would venture a guess that the English student in this case is ill advised, or daydreaming.

Concordia University was favored by one French student from the technical high school and by one of the English academic students. Concordia was stated as second choice, after McGill, by two of the French students. The one student wishing to go to Harvard was a girl at the French academic high school wishing to study medecine. This, I thought, was perhaps the highest aspiration of any student in the survey. This girl's father is a physician, she has a keen interest in her father's work, seems extremely intelligent, and will no doubt make it.

When asked what their most important reason was for not going to university, eighty-two did not answer. Eleven of the students stated that university was not necessary. These eleven responses were from students in the technical high schools who hope to pursue a career as askilled worker. The three students who simply stated they were not interested were from the academic high schools. Only one student stated that the family didn't have the money to pay for university.

Ninety-five of the students stated that they had never been told by a guidance cousellor or administrator that it was possible

to take both a long technical programme and a regular academic programme at the same time. The two students who claimed they had been told that this was possible were from the English technical high school. At least the efforts attempted by our little group made a bit of an impression.

Sixty-one of the students felt that a combination of technical-vocational education and academic education would give a better overall, or general education. Twenty of these students were from the English academic high school. The lowest number of students, from the group of sixty-one, came from the French academic high school where only eight felt this combination was an advantage. The French technical high school and English technical high school had seventeen and sixteen students respectively agreeing to the combination of technical and academic education.

Fifty-six students felt that the combination of a technical-vocational programme and the regular academic programme would better prepare students for university in the fields of engineering and science. As a whole the students were reluctant to comment on the reasons for their answer to these two questions. The English academic high school did have comments by all twenty students who agreed to the combination of both technical and academic programmes. The comments could all be placed under a general feeling that the result of combining the two programmes would give a broader expanse of knowledge, therefore no matter where such a student ended up he

could not help but be better prepared. It was noted that more than half these students used the expression, "They would have more knowledge...", indicating that perhaps this type of education was suitable for students other than themselves.

At the French academic high school five students commented similarly by stating that more knowledge would result in better preparation for any walk of life. One student thought that the combination of technical education and academic education would only better prepare the student who goes to work right after high school.

On the negative side the comments were few. Six students at the French academic high school said they felt that a combined programme such as this would reduce the quality of a university oriented programme. One student felt that the combined programmes would be too great a workload for a high school student. One student at the English academic high school also felt this combined programme would present too much work.

The two technical high schools offered few comments on the idea of a combined technical and academic education. Of the seventeen students in agreement at the French technical high school only six offered favoring comments. Their comments were also to the effect that more knowledge would result in a better prepared individual. Ten of the students at the English technical high school offered comments along the same line. On the negative side, six students at the French technical high school felt that technical education was

not necessary at all. Three students at the English technical high school thought there was already too much academic work attached to technical programmes.

Sixty-three of the one hundred students stated that they were not counselled by the guidance department, nor the administration, in regard to choosing their courses for next year. Thirty-three students stated that they had been counselled and four did not answer. Counselling seemed to be somewhat more in use in the technical high schools, as the French technical high school and the English technical high school had ten and eleven students, respectively, stating they had been counselled while each of the academic high schools had six students.

When asked if they had been counselled, by guidance or administration, and told it was possible to take both a technical-vocational long programme and a regular academic programme twenty-one students stated that they would have opted for the combined programme. Seventy-one students claimed they would not have changed their previously selected programme, and eight students did not answer.

Of the twenty-one students stating that they would have taken the combined programme, five were from the French academic high school and nine were from the English academic high school. All of this group of fourteen were enrolled in regular academic programmes. At the technical high school two students, who were enrolled in regular academic programmes, said they would have chosen the combined

programme. Not one student at the French technical high school indicated that he, or she, would have taken the combined programme.

Again the students were reluctant to offer comments as support to a simple "yes", or "no", however, several did mention their intended field, and the experience they could have gained from technical education.

Among the students replying in the negative there were sufficient comments to indicate that perhaps some students were not so much against the combination of the two programmes as they were against guidance counsellors. Three English and three French students stated flatly that they did not trust guidance counsellors. Another ten students stated that they discussed the selection of their programme and its courses only with their parents. This, I believe, is further indication of the mistrust in guidance counsellors and administrators.

I had not anticipated this, and now wish I had worded the question so that there was no reference to administration or guidance counsellors contained within. Perhaps the term "reliable source" would have brought more results.

In summary, it was noted of the students in the four schools that the two academic high schools presented much more serious students than either of the technical high schools. In both technical high schools the students were inclined to give "smart alec" type answers. This did not occur with any of the students in the academic

high schools. As a whole the French students wrote much more neatly, especially the students at the French academic high school. The poorest writing was demonstrated by the students at the English technical high school.

All in all the survey went well, and the students supplied the desired information.

CHAPTER IV

FINDINGS II: FURTHER ANALYSIS OF RESULTS

The Dependent and Independent Variables

For the purpose of further analysis of results it was decided to select eighteen of the background or antecedent variables, which showed an interesting distribution. These were:

1. Type of school
2. Sex (male or female)
3. Pass standing in all subjects
4. Failure subjects
5. Best liked subjects
6. Use of an extra hour at school
7. Frequency of father's praise for accomplishments
8. Frequency of mother's praise for accomplishments
9. Would most like to be (position or occupation)
10. Father's birthplace
11. Father's education
12. Mother's education
13. Father's occupation
14. Mother's occupation
15. Religious preference
16. Students get a fair deal from teachers and principals

17. Received counselling for course selections
18. Teachers are more interested in practical applications than in theory

The next attempt was to see the relationship these variables had to some of the outcome, or dependent, variables. On examination there were found to be eight such variables which had an interesting distribution. They were:

1. Type of programme selected for next school year
2. Planning to take any technical-vocational courses
3. Planning to attend university
4. Planned programme of studies at university
5. Most important goal provided by university
6. Intended occupation
7. Combining technical and academic programmes gives better overall or general education
8. Combining technical and academic programmes better prepares students for engineering and science

We then proceeded to cross tabulate these variables and the results obtained are discussed in the following pages.

Cross Tabulation of Variables

1. Programme Planned for Next School Year

Eight of the eighteen independent variables were related signifi-

cantly to this outcome variables as follows:

1. Type of school (.0001)
2. Sex (.005)
3. Pass standing in all subjects (.014)
4. Failure subjects (.046)
5. Best liked subjects (.0001)
6. Would most like to be (.001)
7. Religious preference (.0004)
8. Students get a fair deal from teachers and principals (.07)

(Appendix II, Table I).

Sixty-eight percent of the students at the English comprehensive school were planning to take a technical or business programme during the next school year as opposed to only 8 percent of the students at the English academic high school. Eight percent of the students at the French polyvalent were planning to take either a business or technical programme during the next school year while no students at the French academic school claimed to be planning one of these programmes.

Sixty percent of the students at the English academic high school claimed to be taking the general programme during the next year while 32 percent claimed to be opting for the college preparatory programme. At the English comprehensive school only 24 percent of the students were opting for the general programme with only 8 percent desiring the college preparatory programme. At the French academic

school 68 percent of the students claimed to be headed for the general programme with the remaining 32 percent claiming to be headed for the college preparatory programme. The French polyvalent had 60 percent of the students aligned with the college preparatory programme, and 32 percent claiming to be aligned with the general programme.

The large number of students, at the English comprehensive school, opting for either a technical or business programme, would be expected at the English academic high school. Sixty percent of the students surveyed at the English comprehensive school had failing grades, and several of these students had been transferred to the comprehensive school, from an academic school, because of failing grades and executive decisions which determined such students were designed for technical programmes.

The relatively low number of students, at the French polyvalent opting for technical or business programmes, is not a representative figure for the entire secondary three section of that school. It must be borne in mind that 52 percent of the polyvalent students had failing grades. The majority of the polyvalent students stated an intention not to take technical or business courses. Since that polyvalent has a very large technical and business department with many programmes, there is no guarantee that many of these failing students did not end up in one of the technical or business programmes.

Actually there should be no difference between the general and college preparatory programme, Many of the students were confused

with the selection of a response to this question. It is possible for a student to follow a general programme while having subject levels lower than that required for university entrance. The confusion is best noted by the fact that only 32 percent of the French academic students claimed to be entering a college preparatory programme, but 80 percent of these students wished to go to university immediately after high school. In effect there was one French academic student planning to take a technical programme, but, due to the fact that be intends to go to university he selected "college prep" as his intended programme.

Twenty-five percent of the boys surveyed were opting for one, of the technical or business programmes while only 12 percent of the girls were intending to take one of these programmes. Fifty-four percent of the girls claimed the college preparatory programme and 33 claimed their intention for the general programme while only 22 percent of the boys claimed college preparatory.

Girls are less inclined to opt for a technical or business programme than boys. Actually none of the girls were planning on taking a technical programme, as all the girls so listed were destined for the business programmes. In the four schools only one girl was found who actually was enrolling in a technical programme, but she was not included in the survey.

Thirty-seven percent of the students with failure subjects were enrolling in technical or business programmes while only 12 percent

of the students with a pass standing in all subjects were enrolling in a technical or business programme. Likewise 37 percent of the failing students claimed entry to the general programme and 25 percent of the failing students claimed entry to the college preparatory programme. Fifty percent of the students with a pass standing in all subjects claimed entry to the general programme with 36 percent claiming entry to the college preparatory.

The thirty-seven percent of the failing students opting for a technical or business programme represents the students who had selected these programmes on their own. Another 37 percent had selected the general programme and the remaining 25 percent claimed the college preparatory programme. The 25 percent intending to go to university will most certainly have to do some picking up and repeating of subjects if they are to go to university. Likewise the 37 percent with failing grades, intending to remain in the general programme, will have to make some vast improvements. As I have noted there is a tendency for failing students to continue to fail. These students are at the point of programme selection where administration begins to look at their possible potential. No doubt a good number of these failure students, who do not catch up, will find themselves heading into one of the technical or business programmes.

Forty-seven percent of the students failing in languages or social studies were enrolling in a technical or business programme

while only 29 percent of those failing in math and science were enrolling in these programmes. Thirty-three percent of those failing languages or social studies had selected the general programme with 22 percent of the language or social studies failures claiming the college preparatory programme. Forty-one percent of the math and science failures claimed the general programme with a further 29 percent of the math and science failures were claiming the college preparatory programme.

At least the number of failing students in each group claiming the college preparatory programme, is less than those selecting the other programmes. However failing students cannot go on to university, and failing students do not complete the general programme. It is possible that students failing in languages and social studies, could be a success in one of the technical programmes, they would, however, be a terminal case at the end of high school in regard to going on to university. For those opting for technical or business programmes, and failing in math and science, the future would appear grim. The greatest obstacle for the business students is the business math portion, and for technical students it is both math and science.

Seventy-six percent of the students claiming technical-vocational as their best liked subjects had chosen a technical or business programme while the remaining 23 percent was equally divided between the general and college prep programmes. Only 5 percent of those students, with math and science as their best liked subjects, had

chosen a technical or business programme. Sixty percent of the math and science liking students were enrolling in the general programme while the remaining 35 percent were heading into the college preparatory programme. Fourteen percent of the students having languages as their best liked subjects were opting for a technical or business programme. Forty-six percent of the language liking students were headed for the general programme with the remaining 39 percent claiming entry to a college preparatory programme.

It would be expected that over three quarters of the students claiming technical subjects as their best liked subject would opt for a technical or business programme. However there appears to be a difference between liking a technical subject and liking an academic subject. In most cases when a student claims to like an academic subject that student works well and is a success in the subject. Many students like a technical subject from the point of being in a shop and doing some actual work, yet they do not learn the theory and give no concern to failure. This also accounts for the relatively low number of students, with technical-vocational or business subjects, opting for the general and college prep programmes.

The real sadness lies in seeing that only 5 percent of the students, having math and science as best liked subjects are entering a technical or business programme. These students will no doubt be a success in their programmes. Of the remaining 60 percent going into a general programme, and 35 percent preparing for university

not one student will gain the advantage, of expanding his knowledge of math and science, through the benefits of a technical programme.

Fourteen percent of the language liking students were opting for a technical or business programme, this could indicate a dislike for math and science in which case the technical programmes, being instilled in math and science, might not prove to be so interesting after all. Of the remaining language liking students 40 percent were enrolling in a general programme with 39 percent claiming to enter the college preparatory programme.

Languages, math and science are academic subjects, and, as it can be seen, students who do well in academic subjects are not so inclined to choose a technical or business programme. Likewise the students claiming to like a technical-vocational subject are far less inclined to pursue a regular academic programme.

When given several positions or occupations, and asked which they would most like to be only 17 percent of those wishing to be a self-employed businessman were opting for a technical or business programme while 42 percent were heading for the general programme and 39 percent claimed to be in the college preparatory programme.

Of those stating a desire to be an airline pilot only 19 percent were selecting a technical or business programme, 53 percent were entering the general programme with 26 percent claiming to enter the college preparatory programme.

As for wishing to be a famous athlete only 18 percent, stating

this desire, were choosing a technical or business programme, while 50 percent claimed to be heading for the general programme, and 31 percent claiming the college preparatory programme.

None of the students stating a desire to be an auto mechanic were entering the college preparatory programme, only 37 percent were entering the general programme while 72 percent were entering a technical or business programme.

None of the students stating a desire to be a teacher were opting for a technical or business programme, while 43 percent were entering the general programme and 56 percent were entering the college preparatory programme.

Of those wishing to be either a self-employed businessman, an airline pilot, or a famous athlete the percentage of students, in each case, is far lower among those opting for a business or technical programme than either the general or college preparatory programmes. Each of these three occupations, or positions, are of the prestigious nature, and a desire to attain them requires considerable aspirations on the part of the students. The aspirations of the students opting for a technical or business programme are much lower than those selecting either a general or college preparatory academic programme.

As would be expected almost three quarters of the students stating a desire to be an auto mechanic were opting for a technical or business programme. The fact that none of those desiring to be an auto mechanic were entering the college preparatory programme

indicates the separation which exists between the technical programmes and the possibility of going on to university.

Obviously none of the students heading for a technical or business programme desire to be a teacher. A teacher represents the academic, or dark side of the world to most technical students. As the 56 percent indicates the greatest number of students desiring to be a teacher were preparing for university. Technical and business teachers must also go to university, but it appears that even technical and business teachers represent the academic, or dark side, of the world to their students.

In regard to religious preference 38 percent of the protestants selected a technical or business programme only 4 percent of the catholics did so. Thirty-six percent of the protestants were opting for a general programme with 52 percent of the catholics selecting a general programme. Twenty-five percent of the protestants claimed to be heading into the college preparatory programme with 43 percent of the catholics claiming to enter a college preparatory programme.

Of the students surveyed, the catholics showed, by far, less preference for technical or business programmes. The catholics were, naturally, more inclined to show a preference for a general academic and college preparatory programme. All but three of the catholic students were in the French schools, and 50 percent of the students surveyed at the French polyvalent had failing grades. These French

students, with failing grades, might show a preference not to enter one of the technical or business programmes, but there is no guarantee that they will not be placed in a technical or business programme as a result of their failure in academic programmes.

Of the students who believed that they got a fair deal from teachers and principals 42 percent were enrolling in the college preparatory programme, 38 percent were enrolling in the general academic programme while only 19 percent were enrolling in a technical or business programme. Fifty-five percent of the students who considered they were not given a fair deal by teachers and principals were enrolling in the general programme, while 23 percent were enrolling in a college preparatory programme.

Of the students agreeing with the statement that they are given a fair deal by teachers and principals 42 percent or the greatest number of them were heading into the college preparatory programme and the least number, or 19 percent, were opting for a technical or business programme. Usually, students preparing for university have a goal, and work well toward it. Consequently, these students have fewer problems with teachers and principals. This no doubt accounts for more than twice as many college preparatory students agreeing with the statement than those colllege preparatory students which disagreed.

Actually the technical or business students and the general programme students were almost equally divided, in numbers, in their

opinion regarding the fair deal statement. In the case of the technical or business programmed students they never seem to be really oriented toward a specific goal, and are often up in the air when it comes to making an honest decision. I believe this is the reason behind the divided opinion given by the technical and business students. I also believe this is the reason behind the similar situation with the general programme students.

2. Planning to Take any Technical-Vocational Courses

Seven of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.0001)
2. Failure subjects (.05)
3. Best liked subject (.0001)
4. Would most like to be (.0001)
5. Father's birthplace (.04)
6. Father's education (.06)
7. Religious preference (.0001)

(See table 2).

Thirty-two percent of the English academic students stated an intention to take a technical-vocational course during the next school year, 76 percent of the English comprehensive students stated an intention to take a technical vocational course, while only 4 percent of the students at each of the French schools stated an

intention to take a technical-vocational course.

This variable was intended to show the number of students intending to take a single technical-vocational course which would be fitted into the regular academic programme. The students did not recognize the distinction between the term "technical-vocational programme" and "technical vocational courses". As a result, in most every case, the students opting for a technical programme also indicated an intention to take a technical-vocational programme. I shall attempt a bit of a boil-off and separate the students actually intending to take technical courses from those students entering a technical-vocational programme.

At the English academic high school instead of eight students representing 32 percent there were six students actually taking one of the technical vocational courses which would be 24 percent.

The six students were all taking a typing course. The reason for their taking this course is perhaps best explained by the fact that all of these students stated that typing was useful. Four of the six students stated that they intended to go to university and would save time and money by typing their own term papers.

It would seem that these students were taking typing courses because they readily saw an actual useful application of what they learn, and it provided economic gain.

At the English comprehensive school instead of nineteen students, representing 76 percent, there were two students intending to take

technical-vocational courses which is 8 percent. One of the students was planning on taking a typing course, and the other was planning on taking one of the industrial arts courses.

Since 68 percent of the English comprehensive students were entering a technical programme it would be expected that the number of students choosing a technical course would be small. In general the number of students choosing to take technical courses is small, and often the academic student with a hole in his time table is shoved into one of these courses.

At the French academic school the one student shown as intending to take a technical course was, in reality, taking a technical programme. This student intended to take both academic and technical programmes, but did not so state. Since he intended to go to university he selected the college preparatory programme as his planned programme for next year. (See table 1).

This was the only student taking a technical-vocational programme as a means of providing a basis for his intended programme at university. He was encouraged to do this by his parents and not by school administrators or guidance counsellors. Students at the French academic school would have to attend one of the polyvalent schools in order to take any type of technical course or programme. These students were all intending to go to university. The French academic students, except for one, were very set in their academic track, and very anti-technical.

The one student at the French polyvalent, shown as intending to take a technical-vocational course, is one of the two students opting for technical programmes. (See table 1). This means that no students at the French polyvalent were intending to take technical-vocational courses. The French polyvalent students surveyed were also quite anti-technical in regard to courses.

Twenty-one percent of the students not failing in any subjects stated their intentions to take a technical-vocational course, while 50 percent of those students failing languages and social studies intended to take a technical-vocational course, and 35 percent of the students failing math and science stated an intention to take a technical-vocational course.

Instead of fourteen students, or 21 percent, with no failing subjects, intending to take technical-vocational courses there were only six students, or 9 percent. As was noted seven of the eight students, from the surveys, intending to take technical courses, had selected typing because of the obvious future use it would serve. We have to agree that these students are taking advantage of what the school offers to a greater extent than the majority of students. Having no failure subjects indicates that perhaps this small group has a greater desire to succeed. They also appear to have the foresight which enables them to prepare in advance so as to succeed in the future.

Instead of nine students, failing languages and social studies,

opting to take technical courses there was actually one student. Likewise instead of six students, failing math and science, opting to take technical courses there was one. In each case this represents 5 percent.

The number of students taking advantage of technical courses is very small, in fact there were only eight students from the entire sample. As a rule students are very much against adding one of these courses to their academic curriculum. The student failing languages and social studies and the student failing math and science were both opting for a typing course. If these two students continue to fail they will not finish high school. In this case they would have the option of entering a technical-vocational programme or leave school. It would appear that these students are also preparing for the future. If they must enter a technical-vocational programme later, they will at least have some experience and knowledge of whether to continue or not. On the other hand, if they leave school, they will have some ability as a typist.

Twenty percent of the students having languages and social studies as their best liked subjects showed an intention to take a technical-vocational course, while 17 percent of the students, with math and science as their best liked subjects, showed an intention to take a technical-vocational course, and 76 percent of the students with technical-vocational subjects as their best liked subjects claimed an intention to take a technical-vocational course.

In regard to the actual students taking technical-vocational courses, again disallowing those entering technical programmes, there were three students with languages and social studies as their best liked subjects which was 6 percent. The actual number of students, with math and science as their best liked subjects, taking technical-vocational courses was five which was 12 percent. The thirteen students claiming technical-vocational subjects as their best liked subjects were all entering technical-vocational programmes, therefore there were no students intending to take technical-vocational courses who claimed technical-vocational subjects as their best liked subjects.

In spite of the very small number of students intending to take technical courses, we find that, of the eight, five were those students which had math and science as their best liked subjects. It was noted that math and science students seemed to be more inclined to associate their education with skills for getting ahead and ensuring a higher income. Since seven of the eight students, taking technical courses, were taking typing, and four of these students stated the advantages, and economic gain, attached to a typing ability as a means of aiding progress at university, this determination by the science and math students seems to show up here as well. (See table 5).

This determination could also be true in the case of the three language and social studies students opting for technical courses.

Yet, by number, the science students appear to be somewhat more determined. In any case 87 percent of the students intending to take technical courses were going for typing. Typing can readily be seen as advantageous, and directly related to economic means. What is surprising is the low number of students, found in this sample, who did recognize the obvious asset.

The fact that there were not students opting for technical-vocational courses from the group which claimed technical-vocational subjects as their best liked subjects might seem somewhat strange. However 76 percent of this group were entering technical programmes which is another kettle of fish. At this point in high school technical vocational subjects have been at the introductory level, and many of the students are placed in these subjects rather than by choice. Not gaining much insight into the technical realm, a great many students, at this stage, do not enjoy these subjects. Those students intending to complete the academic programme usually are annoyed with their having to take one of these technical subjects. Perhaps this is why this sample did not unearth any students opting for a technical course who at the same time considered technical-vocational subjects as their best liked subjects.

Seventeen percent of the students claiming they would most like to be a self-employed businessman stated their intentions to take a technical-vocational course. Of the students most wanting to be an airline pilot 34 percent stated an intention to take a technical-

vocational course. Twelve percent of the students wishing to be a famous athlete were shown as intending to take a technical-vocational course. Eighty percent of the students wishing to be an auto mechanic claimed to be taking a technical vocational course the next year, and 25 percent of the students wishing most to be a teacher were shown as intending to take a technical-vocational course.

By separating the students actually taking a technical-vocational course from those entering a technical-vocational programme, we find that none of the students wishing to be a self-employed businessman were intending to take technical-vocational courses. Four of the students wishing most to be an airline pilot were planning to take a technical-vocational course which represents 15 percent. None of the students wishing to be an auto mechanic were planning to take technical-vocational courses. Twenty-five percent of the students wishing to be a teacher were planning to take technical-vocational courses.

The desire to be a self-employed businessman can be seen as the goal of a determined student. However, becoming a self-employed businessman can also be seen as a dream of greatness. As discussed, it appears that the majority of the eight students intending to take technical-vocational courses showed determination. This determination was divided toward specific professions of which none included being a self-employed businessman.

Of the eight students opting for technical-vocational courses we

know that seven were girls. Of the four students wishing most to be an airline pilot, therefore at least three of them had to be girls. Although females have now become airline pilots, it is no longer just a dream for females. However all four of these students were intending to go to university, and not one of them selected airline pilot as their intended occupation. I believe that these four students were determined to contribute to their university success by taking technical-vocationl courses, but the idea of most wanting to be an airline pilot was just fantasy.

The two students wishing most to be a famous athlete are two of the three students enrolling in a technical-vocational programme, therefore in effect there were no students, planning to take technical-vocational courses, who wished most to be a famous athlete. Of the five positions, or occupations given, the famous athlete is the one which presents the most uncertain difficulties to overcome. It has, perhaps, more uncertain difficulties to overcome than would be realized in attempting to reach the status of a self-employed businessman. As noted, this group of eight students, stating an intention to take technical courses, seemed to be a determined group with certain definite future plans. The dream of being a famous athlete did not seem to appeal to them.

All of the students most wishing to be an auto mechanic were enrolling in technical-vocational programmes, and could not take any of the technical courses.

The four students wishing most to be a teacher, and planning to

take one of the technical-vocational courses, appear to be the most determined with quite definite plans for their intended occupation. All four students were planning to take typing, and mentioned the usefullness and advantages of being able to type while attending university.

In regard to the father's birthplace, or immigration status, 20 percent of the students with father's born in Quebec stated an intention to take technical courses, with 40 percent of the students having fathers born in Canadian provinces, other than Quebec, are shown as intending to take a technical-vocational course, and 47 percent of the students, with fathers born outside Canada, are shown as intending to take technical courses.

By separating the students actually planning to take one of the technical courses from the students planning to enter one of the technical programmes we end up as follows: Four students with fathers born in Quebec were planning to take a technical-vocational course which represents 4 percent. Two students with fathers born in a Canadian province other than Quebec were planning to take a technical-vocational course which represents 10 percent.

Three students with fathers born outside Canada were planning to take technical-vocational courses which represents 17 percent.

Although the total number of students planning to take technical courses is very small, there is still evidence that, of the three groups, the group with the greatest percentage planning to

take technical courses was the one with fathers born outside Canada. The group with the smallest percentage planning to take technical courses was the one with fathers born in Quebec.

Technical education has gained more respect in other countries than it has in Canada, and is more respected as contributing to general education. Technical education is relatively new to Quebec province whereas the other provinces have been exposed to it for three quarters of a century. Quebec has not fully recognized the advantages of combining forms of technical education with regular education. (See table 8). Parental influence seems to remain as the strongest factor in determining and directing students in regard to education, and it appears to be evident here.

Twenty-one percent of the students having fathers with education ranging from some grade school to some high school are shown as intending to take technical courses, as are 40 percent of the students having fathers who finished high school, 20 percent of the students having fathers with education ranging from some university to graduate school are shown as intending to take technical courses, and 53 percent of the students not knowing the extent of their father's education are shown as intending to take technical courses.

Again by separating the students enrolling in technical programmes we find the students actually intending to take technical courses to be grouped as: Father's education, some grade school to some high school, one student or 3 percent; father's education, finished

high school, two students or 10 percent; father's education, some university to finished graduate school, five students or 17 percent. None of the students were planning to take technical courses from the group who did no know the extent of their father's education.

In this case it appears that the more education possessed by the father, the more apt the students are to take technical courses. Usually, when a student does not know the extent of his father's education, or claims not to know, the father has not acquired much education.

All of the eight students considered here were planning to attend university. The more education possessed by the parents the more the students are directed and encouraged to make the best of their educational plans. Since these students had the technical courses plotted as an asset toward success at university, and the greatest number of students came from the group whose fathers had at least some university education, this situation seems to also hold true in this particular case.

Fifty-four percent of the protestant students are shown as intending to take technical courses, while 6 percent of the catholic students are shown as intending to take technical courses.

Actually all eight of the students planning to take technical courses were protestant, which represents 18 percent. None of the catholic students were planning to take technical courses.

Of the catholic students surveyed 93 percent were found at the

two French schools. It is not a true picture of the situation in French schools in general. However the group of French students in this survey had a very anti-technical attitude in general. The total number of students intending to take advantage of technical courses was very low indeed. The few protestant students, going after this advantage, had perhaps been given more opportunity to see the possibilities of these advantages offered by technical courses.

3. Planning to Attend University

Twelve of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.0001)
2. Pass standing in all subjects (.02)
3. Failure subjects (.09)
4. Best liked subjects (.0081)
5. Frequency of father's praise for accomplishments (.03)
6. Frequency of mother's praise for accomplishments (.06)
7. Would most like to be (.03)
8. Father's education (.04)
9. Mother's education (.008)
10. Father's occupation (.01)
11. Religious preference (.03)
12. Students get a fair deal from teachers and principals (.02)

(See table 3).

At the English academic high school 64 percent of the students planned to go to university either full, or part, time right after high school, while 24 percent planned to attend university, but not right after high school, and only 12 percent were either undecided or claimed they would never attend university.

At the English comprehensive school 60 percent of the students were either undecided or claimed they would never attend university, 28 percent planned to attend university full, or part, time right after high shcool, while only 12 percent planned to attend university some time after high school.

At the French academic high school 80 percent of the students planned to attend university full, or part, time right after high school, and the remaining 20 percent planned to attend university at a later date.

At the French polyvalent 29 percent of the students planned to attend university right after high school, another 29 percent planned to attend university at a later date, and 41 percent were either undecided or intended not to go to university.

At the French academic high school there were no students planning never to go to university or in the undecided category. At the English academic high school only 12 percent of the students were undecided or planned not to attend university. The English and French technical high schools had 60 and 41 percent respectively of the students either undecided or planning not to attend university.

The English and French technical high schools had but 28 and 29 percent, repectively, of the students planning to attend university right after high school.

The academic high schools have more ambitious students, and the, "university bound", atmosphere was evident. At the English comprehensive high school 68 percent of the students were entering a technical or business programme and will be academically unable to carry on to university. At the French polyvalent there were only 8 percent of the students entering a technical or business programme. However at both technical high schools there were very high failure rates among the students surveyed. At the technical high schools I sensed an "anti university" attitude.

Fifty-seven percent of the students, with a pass standing in all subjects, were planning to attend university right after high school while another 22 percent planned to attend university at a later date, with only 19 percent planning never to attend.

Of the students failing in one or more subjects 46 percent stated either an indecision or intention never to attend university, 36 percent claimed to wish to attend university, right after high school and 16 percent stated the intention to attend university some time after completing high school.

As would be expected the greatest number of passing students planned to attend university right after high school. At least the 19 percent with passing grades who were undecided or planned never

to attend university will be prepared should they have a change of heart at a later date.

The 46 percent of the failing students planning not to attend university is what would be expected. However the 36 percent stating an intention to enter university right after high school causes one to ponder how they intend to do so. It could be that the 16 percent with failing grades intending to attend university at a later date are aware of the mature entry programme at some universities, but I heard no mention of it. Many of these failing students seemed to be of the understanding that they would be automatically progressed on to university just as they had been progressed automatically in high school in spite of failures.

In regard to failure subjects the figures for students with no failures are the same as those quoted for the students having a pass standing in the previously described part 2 of table 3.

Forty-seven percent of the students failing languages or social studies planned not to attend university while 41 percent of this group planned to attend university right after high school, while the remaining 11 percent stated an intention to attend university at a later date after high school. Forty-six percent of the students failing math and science intended not to attend university, with 30 percent stating an intention to attend university right after high school, and the remaining 23 percent stated an intention to attend university at a later date.

Math and scinece seems to figure somewhat in regard to university attendance. Of the failing students planning to attend university right after high school the lesser number, 30 percent, indicated failures in math and science. The 41 percent failing languages or social studies and intending to go to university right after high school were passing in math and science. Although all subjects should be of equal importance, it seems that those students passing in math and science are stronger in their desires to attend university. A math and science background provides a broader base, from which the student can operate, than one of only languages and social studies.

In regard to best liked subjects 50 percent of the students, having languages or social studies as their best liked subjects were planning to attend university right after high school, 32 percent had no plans or planned to attend university at a later date. Of the students having math and science as their best liked subject 63 percent planned to attend university right after high school, 25 percent planned to attend university at a later date, and only 11 percent were undecided or planned never to attend university.

The students having technical-vocational subjects as their best liked subject showed as 58 percent either undecided or planning never to attend university, 23 percent stating the intention of going to university right after high school, and 17 percent intending to go to university at a later date.

Again math and science show as the big contributing factor in the

students decision to attend university. Students with a good basis of math and science seem more sure of themselves and more determined to succeed.

Of the students having technical-vocational subjects as their best liked subject it should be expected that few would be planning to attend university. These students are all going into technical or business programmes and will not have the necessary course requirements for university. Furthermore the greatest majority of these students have failing grades. The 23 percent intending to attend university right after high school and the 17 percent intending to attend university at a latter date will have a great deal of catching up to do by way of taking and passing regular academic subjects. Technical subjects remain separated from the regular academic subjects when there should be more interrelations between the two. The math and science students would do well in technical courses and thereby expand their knowledge, understanding and ability. However math and science are academic subjects and remain separated from the technical programmes.

Sixty-one percent of the students who claimed they received praise very often from their fathers were intending to go to university right after high school with 15 percent intending to go to university at a later date while 23 percent were undecided or claiming their intent to never attend university.

Of the students claiming their father's praise was not often

44 percent planned to attend university right after high school, 33 percent planned to attend at a later date, while 22 percent were undecided or never intended to go to university.

Fifty-two percent of the students claiming to almost never get praise from their fathers were undecided or planned never to attend university, while only 23 percent planned to attend university right after high school with another 23 percent planning to attend university at a later date.

This is evidence of the fact that parental interest and encouragement remain the strongest among the factors which contribute toward the success of the student. Of those students receiving the father's praise very often the greatest portion, 61 percent, planned to go to university right after high school. Of those being praised almost never the greatest portion, 52 percent, were planning never to attend university or were undecided. Even with the father's praise being not often we find the greatest portion, 44 percent, of this group intending to go to university right after high school.

It remains that the more interest and encouragement the father gives the more the student desires to succeed and the more likely the student is to succeed.

The frequency of the mother's praise has the same effect on the student's university plans as that of the father. Fifty-eight percent of the students praised very often by their mothers planned to attend university right after high school, while 22 percent

planned to attend university at a later date, while only 19 percent were undecided or planned to never attend university. Half, or 50 percent, of the students not being praised often by the mother were undecided or planned not to attend university, while 30 percent planned to attend university right after high school, and 20 percent planned to attend university at a later date. Of those receiving praise from the mother almost never 44 percent planned to attend university right after high school, 44 percent were undecided or planned never to attend university, with 11 percent planning to attend university at a later date.

It shows that the mothers were inclined to give praise more often than the fathers, and that fewer mothers gave praise almost never, or in 9 cases, as compared to 17 cases of the father, almost never giving praise. The mother's influence, through frequency of giving praise, is perhaps somewhat more effective than that of the father. This seems evident when we find 50 percent of the students receiving praise from the mother, not often were undecided or planning never to attend university when only 22 percent not praised often by the father were undecided or planned never to attend university.

Of the students claiming they would most like to be a self-employed businessman 42 percent intended to go to university right after high school, 23 percent planned to go to university at a later date, and 34 percent were undecided or planned never to go to

university.

Of those stating they would most like to be an airline pilot 50 percent were planning to attend university right after high school, 29 percent were undecided or planned to never attend university, and 20 percent planned to attend university at a later date.

Of those students stating they would most like to be a famous athlete 64 percent were planning to attend university right after high school, while 28 percent were undecided or planning never to attend, with only 7 percent planning to attend university at a later date.

Of the students stating they would most like to be an auto mechanic only 9 percent were planning to attend university right after high school, while the remainder of this group was divided with 45 percent being undecided or planning to never attend university and 44 percent planning to attend university at a later date.

Of the students stating that they would most like to be a teacher 90 percent were intending to attend university right after high school, 10 percent planned to attend university at a later date and none of this group was undecided or not planning to attend university.

The self-employed businessman, the airline pilot and the famous athlete are all positions of prestige. In each case the greatest percentage of students, showing a preference for one of these positions, were planning to attend university right after high school.

It is possible to attain any of these three without going to university. To become any one of these three requires talent, determination and endless hard work. Since these are the same qualities required of the student who intends to be a success by going immediately to university, it would be expected that the more determined and ambitious students would be more inclined to favor one of these three positions.

Only 9 percent of the students, wishing most to be an auto mechanic, were intending to go to university right after high school. The student taking the auto mechanics programme in high school would not have the necessary academic courses for university. Unless, of course, this student combined the regular academic programme with the technical-vocational, and this requires more determination, talent and hard work than the regular academic programme. As a rule the student going into auto mechanics does not intend, and is not expected, to attend university. Auto mechanics students are not encouraged to go to university, and too often the students entering the auto mechanics programmes are unable to cope with the programme let alone go on to university.

In order to be a teacher the student must go to university, therefore it should be expected that none of the students preferring to be a teacher were undecided or planned never to go to university, and that 90 percent were planning to attend university right after high school. Students deciding to be a teacher seem to have given

much more thought and serious consideration to their future than most of the other students.

With the father's education ranging from some grade school to some high school 39 percent of these students were planning to attend university right after high school, 34 percent were undecided or planning never to attend university, and 26 percent planned to attend university at a later date.

The students having a father who finished high school showed as 43 percent planning to attend university right after high school, and 43 percent undecided or planning never to attend university, and 12 percent planning to attend university at a later date.

Sixty-seven percent of the students having fathers with an education ranging from some university to graduate school were planning on attending university right after high school, 21 percent planned to attend university at a later date and only 10 percent were undecided or planned to never attend university.

Fifty-four percent of students claiming they did not know how much education their fathers had were undecided or planned never to attend university, while 27 percent planned to go to university right after high school, and 18 percent were planning to attend university at a later date.

In these groups the more education attained by the fathers the greater the percentage of students intending to go to university right after high school. Of the students having fathers with some

university to graduate school education the 67 percent planning to attend university right after high school is by far the largest group with definite university plans. This group had only 10 percent, which was by far the lowest of any group, which was undecided or planned never to attend university. When the father has at least some university education the more apt he is to encourage and influence his children to attend university.

The greatest number, 54 percent, of the students who did not know the extent of their father's education were undecided or planned never to attend university. This was the highest percentage of any of the groups not intending to go to university, or being undecided. If the students do not know the level of the father's education it would seem that education is not discussed to any extent in the home. Obviously, there is little encouragement for the student to acquire education.

Forty-two percent of the students, with mothers having an education ranging from some grade school to some high school, were planning on attending university right after high school, with another 23 percent planning to attend university at a later date, and 34 percent were undecided or planning not attend university.

Of the students having mothers who finished high school 44 percent were planning on attending university right after high school, with 34 percent planning to attend university at a later date, and 32 percent were undecided or planning not to attend

university.

A whopping 81 percent of the students, having mothers with education ranging from some university to graduate school, were planning on attending university right after high school, 18 percent were planning on attending university at a later date, and no students of this group were undecided or planning not to attend.

The group of students claiming not to know the amount of education possessed by their mothers had 57 percent who were undecided or planning not to attend unviersity, while 28 percent planned to attend university right after high school, and only 14 percent planned to attend university at a later date.

Just as was noted in regard to the father's education, the higher the level of education attained, by the mother, the more apt the student is to be inclined to pursue a higher level of education. Eighty-one percent of the students, having mothers with at least some university education, were planning to attend university right after high school. Only 67 percent of the students having fathers with at least some university education were planning to attend university right after high school. The education level of the parents and parental influence seem to be the motive force behind the students desire to attain a higher education. It would seem that mothers are more apt to encourage and influence their offspring to acquire more education than the fathers. It seems to be further supported by the 57 percent, not knowing the extent of their mothers' education, who were undecided or planned not to attend

university. This was the highest percentage of any of the groups who were undecided or planning not to attend university.

Sixty-eight percent of the students, having fathers in one of the professions or small business, were planning on attending university right after high school, with another 21 percent planning to attend university at a later date, and only 9 percent were undecided or planning not to attend university.

Of the students having fathers in a clerical occupation, 60 percent were planning to attend university right after high school, 13 percent planned to attend university at a later date, and 26 percent were either undecided or planning not to attend university.

Forty-seven percent of the students having fathers in a skilled occupation were either undecided, or planning not to attend university, with only 35 percent of this group planning to attend university right after high school, and 17 percent planned to attend university at a later date.

The fathers in the professions would have a university education, while those fathers operating a small business would, if they lacked a university education, be self-educated to some extent so as to appreciate the advantages of their children getting a higher education. Besides the parental encouragement and influence, in this group, there would be more economic means to provide for higher education which always helps eliminate one of the obstacles from the path to higher education.

Sixty percent of the students, with fathers in clerical occupations, compared to only 35 percent of the students with fathers in skilled occupations planned to attend university right after high school. Clerical workers seem more apt to relate the advantages of university to their occupations than skilled workers. Technical people seem more inclined to divorce their occupations from university. For example the office clerk, bank teller, etc., can relate more readily to a degree in administration or commerce than the machinist, or mechanic, to a degree in science or engineering.

Thrity-nine percent of the protestants were planning to attend university right after high school, while 41 percent of them were undecided or planning never to attend university, while 18 percent were planning to attend university at a later date.

Of the catholics, 64 percent were planning to attend university right after high school, 18 percent were planning to attend university at a later date, and only 16 percent were undecided or planning not to attend university.

The catholic students surveyed showed a greater indication of wishing to attend university, and a greater reluctance to enter the technical programmes than the protestant students. Had the survey been carried out on a greater number of students, from both religions, the gap would no doubt have been narrowed. If we bear in mind that 27 percent, of the catholic students, had failing grades the situation takes on a bit more of the appearance to the effect that more of the catholic students state a desire to attend university than will

be academically capable.

Forty-six percent of the students who claimed they got a fair deal from teachers and principals were intending to go to university right after high school, 30 percent of them were planning to attend university at a later date, and only 22 percent were undecided or planned not to attend university, and only 7 percent planned to attend university at a later date.

Fifty-five percent of the students who claimed they didn't get a fair deal from teachers and principals were planning to attend university right after high school, 36 percent were undecided or planned not to attend university, and only 7 percent planned to attend university at a later date.

Of these two groups the greatest percentage of each stated an intention to go to university right after high school. Stating the intention to go to university right after high school shows more forethought and determination. Whether the students agreed or disagreed with the fair deal statement it should be expected that the more thinking and determined students would stick to their ideas and opinions. The students who felt they did not get a fair deal had a greater percentage of their group undecided or planning not to attend university at a later date than the group of students who felt they got a fair deal. As a group the students who felt they got a fair deal from teachers and principals were more prepared to go to university than the group who felt they did not get a fair

deal from teachers and principals.

4. Planned Programme of Studies at University

Nine of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.0001)
2. Pass standing in all subjects (.01)
3. Failure subjects (.07)
4. Best liked subjects (.008)
5. Frequency of father's praise for accomplishments (.10)
6. Frequency of mother's praise for accomplishments (.08)
7. Would most like to be (.008)
8. Mother's education (.02)
9. Father's occupation (.10)

(See table 4).

At the English academic high school 28 percent of the students were undecided or planning not to attend university, another 28 percent planned to enter either engineering, military college, astronautics or commerce, 24 percent planned to enter either medicine, dentistry, or pharmacy, 12 percent were planning to get a degree in either music, journalism, education, administration or arts, and 8 percent were planning to get degrees in either architecture, meteorology, or science.

At the English comprehensive school 72 percent were undecided or planning not to attend university, 12 percent were planning to

enter either engineering, military college, astronautics, or commerce, none of the students were planning to enter either medicine, dentistry or pharmacy, 4 percent were planning to get a degree in either music, journalism, education, administration or arts, and 12 percent were planning on a degree in either architecture, meteorology, or science.

At the French academic high school only 24 percent were undecided or planning not to attend university, 12 percent were planning on entering either engineering, military college, astronautics, or commerce, 24 percent were planning to enter either medicine, dentistry, or pharmacy, 16 percent were planning to get a degree in either music, journalism, education, administration, or arts, and 24 percent were planning to get degrees in either architecture, meteorology, or science.

At the French polyvalent 56 percent of the students were either undecided or planning not to attend, 8 percent were planning on entering either engineering, military college, astronautics, or commerce, only 8 percent were planning on getting a degree in either music, journalism, education, administration or arts, and no students were planning on degrees in either architecture, meteorology, or science.

The English academic high school had a group of more capable students with a rather typical distribution throughout the groups of university faculties. The 28 percent who were either undecided or planning not to attend university can be considered low for a group of students at this level. If we note that just over half,

or 52 percent of the students at this school were planning to enter either engineering, military college, astronautics, commerce, medicine, dentistry or pharmacy, it shows determination, and would be expected from this group of students. It seems that within a group of more capable and ambitious students there is always a leaning toward the "heavies" such as medicine, engineering and science.

The English comprehensive high school showed the highest percentage of undecided students or those not planning to attend university. This school had a 60 percent failure rate and 69 percent entering technical programmes which do not enable the students to go on to university. No students at this school were planning to enter the field of either medicine, dentistry, or pharmacy, and there was a low showing in the sciences in general. The English comprehensive students were lower in regard to academic success.

The French academic high school had all its surveyed students planning to attend university. Of the 24 percent shown, none were planning never to attend, therefore this 24 percent represents those who were simply undecided as to the field they would enter at university. All students at this school had passing grades in all subjects, and did place above the English academic school in regard to academic success and determination by the students. This school matched the English academic school in regard to students intending to enter medicine, dentistry and pharmacy. Although showing fewer students opting for engineering, etc., than the English academic

school, there would be equalizing via the larger percentage of French academic students opting for architecture, meteorology and science. Like the English academic high school the French academic school showed more successful and capable students, and there always seems to be a greater leaning toward the sciences with such students.

The French polyvalent, like the English comprehensive school, had a high percentage of undecided students or those intending never to go to university. Both schools had high failure rates which seems to reflect in proportion with the indecision or plans not to attend university. The French polyvalent showed only 8 percent planning to enter the medicine, etc. group. No students were planning to enter the architecture, etc. group. The greatest percentage of French polyvalent students, planning on attending university, were opting for the music, journalism, education, arts, etc. Both technical high schools had high failure rates and, as noted, in a group of less successful students there is a tendency to steer away from the fields related to science and math.

The students with a pass standing in all subjects showed, in regard to their university plans, as, undecided or planning not to attend 33 percent, engineering, military college, astronautics, or commerce 13 percent, medicine, dentistry or pharmacy 18 percent, music, journalism, education, administration or arts 18 percent, architecture, meteorology, or science 15 percent.

The students not having a pass standing in all subjects showed in regard to their university plans, as, undecided or planning not to attend 65 percent, engineering, military college , astronautics or commerce 17 percent, medicine, dentistry or pharmacy 5 percent, music, journalism, education, adminjstration or arts 8 percent, architecture, meteorology or science 2 percent.

We would expect that the percentage of failing students being undecided or planning never to attend university would be greater than the percentage of passing students being undecided or planning never to attend university. No doubt the indecision, on the part of the failing students, is an interim measure adopted until they either improve their grades and get into position to honestly think about university, or continue to fail and drop out of school.

The percentage of passing students opting for each of the grouped faculties at university are actually quite well balanced, and there doesn't seem to be much to discuss, as it appears to be a normal situation with each group of faculties getting a fair share.

In regard to the failing students the 5 percent claiming to be heading for medicine, dentistry, or pharmacy has to be a dream unless these students get on the ball and conquer failure. The same can be said of the 8 percent of these failing students claiming to be heading for a degree in music, journalism, etc. The 2 percent showing architecture, meteorology, or science is also a dream selection unless the failing grades are overcome.

The percentage of passing students opting for each of the groups of faculties is much higher than the percentages of failing students so opting in every case except the groups of engineering, military college, astronautics or commerce.

Failing students, as a rule, are aware of their fate and do not make university plans to the same extent as students who continue to maintain a pass standing. In this case, where a greater percentage of the failing students have showed an intent on entering one of engineering, military college, astronautics or commerce than the percentage of passing students I believe I found the possible answer by questioning the students. First of all, no failing students were opting for commerce or military college. There is always something that induces even the least talented students to claim their intent to enter the field of engineering. In this case only 5 percent of the failing students were dreaming of engineering, and none of this group were opting for a commerce degree.

The remaining 12 percent were rather excited about this new field of astronautics. After talking with the students and doing some checking, to the best of my knowledge, this new scientific degree is only now available in the United States. The fact that astronautics involves space study etc., it creates a fantasy situation and is a typical dream situation by failing students.

In regard to the independent variable "Failure subjects" the students and percentages listed as "none", for failing subjects, are

the same as those listed as having a "Pass standing in all subjects" are the same. This was discussed above, therefore it is not necessary for further comment.

Of the students failing languages and social studies 72 percent were undecided or planning not to attend university. Sixteen percent stated their intention to enter either engineering, military college, astronautics or commerce. No students failing languages and social studies were intending to enter the group of, medecine, dentistry or pharmacy, or the scientific group of, architecture, meteorology or straight science. However, 11 percent of the students failing languages and social studies showed an intention to enter one of the degree programmes in, music, journalism, education, administration or arts.

Fifty-eight percent of the students failing math and science were undecided or planning not to attend university, 17 percent stated their intention to enter either engineering, military college, astronautics or commerce, 11 percent stated their intention to enter medicine, dentistry or pharmacy, 5 percent stated their intention to enter one of the degree programmes in, music, journalism, education, administration or arts, and another 5 percent stated their intention to enter either architecture, meteorology or science.

A greater percentage of the students failing languages and social studies were undecided or planning not to attend university than the students failing science and math. The dreaming done by

students in regard to university plans would seem to be quite in evidence here. The highest percentages of each of these failing groups were claiming to be headed for engineering, military college, astronautics or commerce. As mentioned the new found dream of entering the field of astronautics does seem to have some effect here. The 11 percent of the students failing math and science and shooting for medicine, dentistry or pharmacy has to be wishful thinking, as any of these fields require a sound basis of both math and science.

The same wishful thinking would appear to be evident with the 11 percent claiming to be heading for a degree in either music, journalish, education, administration or arts. These fields require a good grounding in languages especially, and social studies. I have encountered many students who are of the belief that they are progressed automatically whether they have passing grades or not.

Of the students having languages and social studies as their best liked subjects 53 percent were undecided or planning not to attend university, 7 percent were planning on entering one of engineering, military college, astronautics or commerce, 14 percent were planning on entering medicine, dentistry or pharmacy, 16 percent were planning on a degree in music, journalism, education, administration or arts, and 9 percent showed their intentions to enter the programme toward a degree in either architecture, meteorology or science.

Of the students having math and science as their best liked subjects only 22 percent were undecided or planning not to attend university, 22 percent were intending to enter engineering, military college, astronautics or commerce, 20 percent stated their intentions to enter medicine, dentistry or pharmacy, 17 percent wished to pursue a degree in either music, journalism, education, administration or arts, and 17 percent wished to obtain a degree in either architecture, meteorology or science.

Among the students having technical-vocational subjects as their best liked subjects a big 76 percent were either undecided or plannning not to attend university, 17 percent stated their intention to enter either engineering, military college, astronautics or commerce, none of the students having technical-vocational subjects as their best liked subjects, were intending to enter medicine, dentistry, pharmacy, architecture, meteorology or science, while 5 percent stated their intent to pursue a degree in music, journalism, education, administration or arts.

As usual the students, having math and science as their best liked subjects, had by far the smallest percentage, of the three groups, to be undecided or intending not to go to university. Students who do well in math and science seem to be more definite and determined in their plans. As would be expected, these students showed the highest percentages intending to enter each of the grouped university faculties which involve a good basis of math

and science.

The greatest percentage of the students having languages and social studies as best liked subjects were intending to pursue a degree in either music, journalism, education, administration or arts. This is understandable, as each of these fields is more associated with languages and social studies. The fact that a slightly higher percentage of the math and science students, than the language and social studies students, stated their intentions to enter one of these fields is not really so strange. Students who have a good grasp, and are able to work well, within the realm of math and science, seem to have a broader and more flexible base from which to work. They also seem to be more capable of fitting into fields which do not require extensive use of math and science.

The students having technical-vocational subjects as best liked subjects showed by far the greatest percentage of the three groups to be undecided or intending not to go to university. Students entering technical-vocational programmes are usually those students which claim to like these subjects best. Once in a technical programme, these students will not be taking university prerequisites. Students entering technical programmes are often from working class homes and have an anti-university attitude. Furthermore the majority of students entering technical programmes have failing grades.

Among the grouped faculties, requiring science and math, we

find the technical-vocational students only opting for the engineering, military college, astronautics or commerce. In this survey, none of the technical students indicated a desire to enter military college or commerce. As mentioned the new field of astronautics creates a fantasy. Also, among failing students, it is evident that they are attached to the status of an engineer. They are unaware of exactly how one becomes an engineer. Somehow they do not associate becoming an engineer with an actual university programme.

In regard to the frequency of the father's praise for accomplishments, among the students claiming to receive praise very often 31 percent were undecided or planning not to attend university, 19 percent were planning on entering engineering, military college, astronautics or commerce, another 19 percent were planning on entering medicine, dentistry or pharmacy, 14 percent were planning on obtaining a degree in music, journalism, education, administration or arts while 15 percent planned to enter one of architecture, meteorology or science.

Of the students who claimed they did not receive their father's praise often, 60 percent were undecided or planning not to attend university, 13 percent were planning on entering engineering, military college, astronautics or commerce, 4 percent were planning on studying medicine, dentistry or pharmacy, 17 percent planned on a degree in music, journalism, education, administration or arts, and 4 percent planned on studying architecture, meteorology or

science.

Among the students claiming to almost never receive praise from their fathers, 65 percent were undecided or planning not to attend university, 5 percent planned to enter engineering, military college, astronautics or commerce, 10 percent were planning on entering one of medicine, dentistry or pharmacy, 15 percent were planning on a degree in music, journalism, education, administration or arts, and 5 percent planned on studying architecture, meteorology or science.

We notice that the smallest percentage of students who were undecided or planning not to attend university were those who received their fathers' praise most often. We also notice that this group of students had the highest percentage intending to enter the grouped faculties engineering, etc., medicine, etc., and meteorology, etc. These are the faculties requiring a thorough knowledge of science and math. Students doing well in math and science are more confident and more determined to attend university (see table 3).

Parental encouragement and influence seems to still be the greatest factor contributing toward the success of students, and the father who gives praise is giving encouragement. It usually requires more on the part of the student to succeed in math and science than in other subjects. It would seem that students are inclined to succeed more in science and math when they get help

and encouragement from the father.

We notice the greatest percentages of the students receiving the father's praise either not often, or almost never, were opting for the music, journalism etc., or the non science and math degrees. Although this is not positive proof, it may be that students who get less encouragement and praise from their fathers are more liable to opt for the degree programmes which do not require math and science.

The fact that a greater percentage of the students, who almost never received their fathers' praise for accomplishments, planned to enter medicine, dentistry or pharmacy, than the students who received the fathers' praise not often, seems to reflect a situation that has shown in other tables. The students receiving praise very often show a greater tendency to be determined to succeed. In this case the percentage of students, receiving praise, almost never, and opting for medicine etc., is higher than the percentage of those students receiving praise not often. What shows up, I believe, is a small number of students, rather isolated from the parents, who develop a determination to succeed on their own. Perhaps it is sort of a determination developed in hopes of proving themselves to the parents.

As for the frequency of the mother's praise for accomplishments among the students receiving praise very often 34 percent were undecided or planning not to attend university, 15 percent planned

to enter engineering, military college, astronautics or commerce, 19 percent planned to enter medicine, dentistry or pharmacy, 16 percent planned on getting a degree in music, journalism, education, administration or arts, and 13 percent planned to get a degree in architecture, meteorology or science.

Among the students who not often received their mothers' praise 65 percent were undecided or planning not to attend university, 21 percent planned to enter engineering, military college, astronautics or commerce, none of these students planned to enter medicine, dentistry, or pharmacy, 8 percent planned to get a degree in music, journalism, education, administration or arts, and 4 percent planned to get a degree in architecture, meteorology or science.

The students who almost never received praise from their mothers for accomplishments showed as 63 percent being undecided or planning not to attend university, none of the students in this group planned to enter engineering, military college, astronautics or commerce, 9 percent planned to study medicine, dentistry or pharmacy, 18 percent planned to get a degree in music, journalism, education, administration or arts and 9 percent planned to get a degree in architecture, meteorology or science.

It is noticeable that mothers are more inclined to give praise for accomplishments than fathers, however the effects are very similar. In general the more often the student receives praise from a parent the less apt he is to be undecided about university

plans or consider not going to university. There is a good distribution of the often praised students among each of the faculty groups which corresponds pretty much with the students very often praised by their fathers.

Among the students not receiving praise often, from their mothers, the percentages intending to enter each of the groups of faculties are much lower except in the group of engineering, military college, astronautics or commerce. Less praise from the mother means less communication and relationship between mother and student. As mentioned above the less the parents encourage and influence their offspring the less apt the students are to be making definite plans for extended education.

As for the highest percentage of the not often praised students stating a desire to enter one of engineering, military college, astronautics or commerce, there could be a repeat here of the fantasy and dreaming discussed above in regard to the failing students and technical-vocational students. Failing students and technical-vocational students are ill prepared to enter any science and math programme, yet they state an intention to enter engineering and astronautics. The same fascination probably is evident here as was with the failing and technical-vocational students.

As mentioned, in regard to the frequency of the father's praise, there would seem to be some students who are almost never praised, by their parents, and are not on a close parental

relationship, who demonstrate a determination to show success. This would seem to explain why the percentages of students, almost never receiving their mothers' praise, were greater than the percentages of those not often praised in selecting each of the grouped faculties except, engineering, military college, astronautics or commerce.

Of the students most wanting to be a self-employed businessman, 42 percent were undecided or planning not to attend university, 14 percent were planning to enter one of engineering, military college, astronautics or commerce, another 14 percent were planning on entering medicine, dentistry or pharmacy, 25 percent were planning on a degree in music, journalism, education, administration or arts and 3 percent were planning on getting a degree in architecture, meteorology or science.

Among the students most wanting to be an airline pilot, 34 percent were undecided or planning not to attend university, 26 percent were planning on entering engineering, military college, astronautics or commerce, 19 percent stated their intentions to enter either medicine, dentistry or pharmacy, 3 percent claimed to want a degree in music, journalism, education, administration or arts, and 15 percent wished to pursue a degree in architecture, meteorology or science.

From the students wanting most to be a famous athlete, 56 percent were undecided or planning not to attend university, none

of these students wished to enter engineering, military college, astronautics or commerce, 25 percent wished to enter medicine, dentistry or pharmacy, none of these students wished to pursue a degree in music, journalism, education, administration or arts, and 18 percent were planning on a degree in architecture, meteorology or science.

Eighty-one percent of the students most wanting to be an auto mechanic were undecided or planning not to attend university, 18 percent stated their intentions to enter either engineering, military college, astronautics or commerce. No students from this group, most wanting to be an auto mechanic, were intending to enter any of the other mentioned faculties at university.

Thirty-seven percent of the students most wanting to be a teacher were undecided or planning not to attend university, 6 percent were planning on entering engineering, military college, astronautics or commerce, with another 6 percent stating their intentions to enter medicine, dentistry or pharmacy, 37 percent were planning to get a degree in music, journalism, education, administration or arts, and 12 percent were planning to get a degree in architecture, meteorology or science.

As mentioned in table 3 the self-employed businessman, the airline pilot and the famous athlete are all prestige positions. To attain them requires ability, determination and hard work. These are the same requirements for success at university, therefore

it should not be surprising to see a fair representation, from each of these three groups of students, stating a desire to enter each of the grouped university faculties. The exception being with those most wishing to be a famous athlete where no students stated a desire to enter the faculties of engineering, etc., or music, journalism, etc.

To some extent these positions or occupations, as selected by the students, are dreams, but there is also determination displayed. To become a famous athlete one has more obstacles to overcome, with limiting factors, than each of the other two prestige positions, one of these limiting factors which comes to mind is extended physical development. Becoming a famous athlete would seem perhaps to be more uncertain, and, probably, that is why, of the three positions, the students wishing to be a famous athlete showed a higher percentage as being undecided or planning not to attend university.

Degrees in administration or journalism are seen as being more beneficial toward becoming a businessman. This should account for the fact that the greatest percentage of students wishing to be a businessman stated an intention to enter one of these non-science or math oriented programmes. On the other hand the airline pilot is more associated with science and math and the students wishing to be an airline pilot seem to have leaned toward the science and math based degrees.

The fact that 81 percent of the students most wishing to be an auto mechanic were undecided or planning not to attend university should not be surprising. As mentioned several times the students entering a technical programme in auto mechanics would not have the necessary academics to go to university. Also the majority of students, stating their intention to take auto mechanics, had failing grades and could not go to university in any case.

In the text of this thesis mention was made of the snobbery demonstrated by working classes against going to university. It was compared to the snobbery demonstrated by middle and upper classes against technical education. Most students entering technical programmes are of working class background. There could be a touch of this anti-university snobbery displayed here as well.

As mentioned in table 3 the students stating a desire to be a teacher seemed to be the most serious and to have given more thought to their future education. Of the percentages opting for each of the grouped faculties, the greatest percentage of those students, wishing to be a teacher, were aligning themselves with the education, arts, etc. group. This is the path a teacher usually takes. The percentages desiring to enter each of the other grouped faculties are comparatively small, however within each group there could still be the possibility of becoming a teacher.

The 37 percent of those, wishing most to be a teacher, and shown as being undecided or planning not to attend university might

appear to be high. However when we consider that there were students stating a desire to be a teacher, but not convinced they would be fully suited when the time came, this percentage is perhaps not high after all.

Of the students whose mothers' education ranged from some grade school to some high school 51 percent were undecided or planning not to attend university, 12 percent were planning on entering engineering, military colllege, astronautics or commerce, 18 percent were planning to enter medicine, dentistry or pharmacy, another 18 percent were planning on obtaining a degree in music, journalism, education, administration or arts, and no students were planning on a degree in architecture, meteorology or science.

Among the students having mothers who completed high school, 48 percent were undecided or planning not to attend university, 14 percent were planning to enter engineering, military college, astronautics or commerce, 3 percent stated their intention to enter medicine, dentistry or pharmacy, 14 percent planned to get a degree in music, journalism, education, administration or arts, and 18 percent planned to get a degree in architecture, meteorology or science.

The students whose mothers' education ranged from some university to graduate school showed only 16 percent as undecided or planning not to attend university, with 20 percent planning to enter either engineering, military college, astronautics or

commerce, 29 percent planned to enter medicine, dentistry or pharmacy, 12 percent planned to get a degree in music, journalism, education, administration or arts, and 20 percent planned to get a degree in architecture, meteorology or science.

Of the students claiming not to know the extend of their mothers' education, 68 percent were undecided or planning not to attend university, 12 percent planned to enter either engineering, military college, astronautics or commerce, none of these students planned to enter medicine, dentistry or pharmacy, while 12 percent planned to get a degree in music, journalism, education, administration or arts, and 6 percent planned to get a degree in architecture, meteorology or science.

The smallest percentage, by far, of the students who were undecided or planning not to attend university was found to be with those students whose mothers had an education level ranging from some university to graduate school. The greatest percentage of students being undecided or planning not to attend university was found to be among those students who claimed they did not know the level of their mother's education.

It seems to hold true that the more education the parents possess the more apt the students are to make a success of education. When the student does not know the level of a parent's education, that level is usually low, or education is not discussed in the home. In either case the student loses, if the parent has

a low level of education the student does not get the advantage of the parent's ability. On the other hand, if it is a matter of education not being discussed at home the student is missing the advantage of parental encouragement and advice.

We note that the students, with mothers having at least some university education, showed the highest percentages wishing to enter the various groups of university faculties which require the knowledge of math and science. As we noticed in table 3 the students, having math and science as their best liked subjects, had the highest percentages of their group planning to attend university. Students who do well in math and science seem to be, for the most part, those students who receive both encouragement and the benefit of the higher education of their parents.

In regard to the father's occupation, among the students whose fathers were in one of the professions or small business 31 percent were undecided or planning not to attend university, 22 percent planned to enter either engineering, military college, astronautics or commerce, 25 percent planned to enter medicine, dentistry or pharmacy, 8 percent were planning to get a degree in music, journalism, education, administration or arts, and 11 percent were planning to get a degree in architecture, meteorology or science.

Of the students whose fathers were in a clerical occupation, 47 percent were undecided or planning not to attend university, 5 percent planned to enter either engineering, military college,

astronautics or commerce, 11 percent planned to enter medicine, dentistry or pharmacy, 17 percent planned to get a degree in music, journalism, education, administration or arts, and another 17 percent planned to get a degree in architecture, meteorology or science.

Of the students whose fathers were in a skilled occupation, 51 percent were undecided or planning not to attend university, 12 percent planned to enter engineering, military college, astronautics or commerce, only 4 percent planned to enter medicine, dentistry or pharmacy, 22 percent planned to get a degree in music, journalism, education, administration or arts, and 9 percent planned to get a degree in architecture, meteorology or science.

The students having fathers in one of the professions, or a small business, showed the smallest percentage, of the three groups, who were undecided or planning not to attend university. These students have the advantages mentioned above of a parent, or parents, with more formal education from which the students can benefit. If the father is not in possession of a higher level of education, but is in business, he is, no doubt, quite self-educated and recognizes the value of a good education. Furthermore these students should have far less worries concerning economic means in regard to their attending university.

The greatest concentration of these students is found in the two groups of faculties engineering etc., and medicine etc., which

are those faculties which are heavy on science and math. As noted previously, in this table, and in table 3, students with better educated parents seem to do better in math and science. We notice that the greatest percentage of the students having clerical and skilled fathers was concentrated in the music, journalism, etc. group of faculties. Since this group of faculties is not considered to be as heavy, in regard to math and science, it could be the reason the greater numbers of students having clerical or skilled fathers have opted for them.

Also noticed, in table 3, was an indication that students with clerical fathers were more inclined to want to go to university than students having fathers in skilled occupations. Again, in this table, we note that a lesser percentage of students having fathers in clerical occupations were undecided or planning not to attend university than among those students with fathers in skilled occupations.

Architecture, meteorology and science are not viewed as being as technical and science oriented as the engineering etc. group of faculties. Students with a father in a clerical occupation seemed to opt more for the other faculties than the engineering etc. group. The engineering etc. group seems to suggest a technical involvement. Many of the students with fathers in skilled occupations were opting for technical-vocational programmes. It would seem that the 12 percent of these students stating an intention to enter one

of the faculties in the engineering etc. group reflects again the fascination by students with engineering and astronautics, no doubt several students, so opting, fall into the dream situation previously mentioned.

5. Most Important Goal Provided by University

Three of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Sex (.09)
2. Best liked subjects (.09)
3. Would most like to be (.09)

See table 5.

Twenty-six percent of the male students, and 7 percent of the female students thought that university should teach skills to enable a high income.

Thirty-nine percent of the male students and 50 percent of the female students thought that university should provide an understanding of science and skills related to work.

Seventeen percent of the male students and 32 percent of the female students thought that university should provide an understanding of social conditions.

Seventeen percent of the male students and 10 percent of the female students thought that the most important goal provided by university should be to develop the moral self.

Male students are much more inclined to believe that education should concentrate on those topics which can be seen as directly related to employment or earning ability. In other words boys are much more reluctant than girls to learn underlying theory which cannot be seen as a job qualification. This would appear to be the reason why 26 percent of the boys and only 7 percent of the girls thought the most important goal provided by university should be to teach skills to enable a high income.

The understanding of science and skills related to work was favored by 50 percent of the girls and 39 percent of the boys. The boys are less inclined to accept the "understanding" part than the girls. The boys were no doubt attracted to the part concerning skills related to work.

The girls were more inclined to believe that university should develop an understanding of social conditions than were the boys. Girls seem to show more interest in social conditions than boys, and, since boys are more inclined to believe that university should provide more in the line of earning power ability, this is what we would expect.

As for the most important goal provided by university being to develop the moral self 17 percent of the boys agreed with this goal while only 10 percent of the girls were in agreement.

Having taught moral and religious studies, it was my experience that most students are against these studies. Girls, I found, were

more inclined to be of the opinion that the moral self should be developed by the individual, and not via educational means. Boys, more than girls, are of the opinion that university is superfluous education, so why should university not develop the moral self?

Of the students having languages and social studies as their best liked subjects 20 percent thought the goal of university should be to teach skills which would enable a high income, 37 percent thought that the goal should be to provide an understanding of science and skills related to work, 17 percent thought the goal should be to provide an understanding of social conditions, and another 17 percent thought the goal should be to develop the moral self.

The students with math and science as their best liked subjects selected the most important goal provided by university as, teach skills to enable a high income 21 percent, provide an understanding of science and skills related to work 54 percent, provide an understanding of social conditions 18 percent, developing the moral self 5 percent.

Only 11 percent of the students with technical-vocational subjects as their best liked subjects, thought the most important goal provided by university was to teach skills to enable a high income, 22 percent thought that university should provide an understanding of science and skills related to work, another 22 percent thought university should provide an understanding of social conditions, while 44 percent thought university should

develop the moral self.

The greatest number of the language and social studies students selected, as the most important goal provided by university, an understanding of science and skills related to work. These students, I believe, attach much more to the word "understanding", which reflects their social studies perhaps more than their language learning. This would help explain the 25 percent who selected the understanding of social conditions as the most important goal provided by university, plus the linked interest between their studies and social conditions.

As for the 20 percent who thought university should teach skills to enable a high income, I would venture a guess that this represents that certain number of students, we always find, which consider going to university to be useful only as a means of increasing one's income.

The language and social studies students, being more involved with discussions of social issues and relationships of individuality to social conditions, would be expected to have more than 17 percent, of them, selecting the development of the moral self as university's most important goal. The 17 percent no doubt represents those students who have taken an interest in moral development. The fact that the least number, of the language and social studies students, favoured moral development, as university's most important important goal, probably indicates the attitude many students have

toward moral instruction in their educational programme.

More than half of the math and science students thought that university should provide an understanding of science and skills related to work. To these students science and work go together, to get anywhere in science they believe one must attend university in order to acquire more knowledge of science which is, to automatically acquire more skills related to work. The same pattern of thinking should explain why 21 percent of the science and math students thought university should teach skills to enable a high income.

We notice that only 11 percent of the technical-vocational liking students thought that university should teach skills to enable high income. To these students university is not connected with what one learns in regard to skills for employment. For them one learns working skills from technical instruction, university is ~~apart~~ and not necessary.

The greatest number, or 44 percent, of the technical-vocational students thought that university should serve to develop the moral self. It has been my experience that technical-vocational students generally view university as a waste of time, yet it seems they view university students as getting involved with more complicated situations and decisions. In other words technical-vocational students view themselves as being reasonable, by keeping life simple, with no need for moral development. Anyone attending university is

placing himself in a position whereby he must face moral issues, therefore university should develop a moral self which can deal with such issues.

As for the two suggested goals, provide an understanding of science and skills related to work, and, provide an understanding of social conditions, there were 22 percent of the technical-vocational students selecting each of these.

Again these students do not see university related to one's work. I assume, that, since these students acknowledge that universities exist, these were "stab" answers for something to the effect that some justification should be made for the existence of universities.

Of the students claiming they would most like to be a self-employed businessman 30 percent thought the most important goal provided by university should be to teach skills to enable a high income, 43 percent thought university should provide an understanding of science and skills related to work, 21 percent thought university should provide an understanding of social conditions and only 4 percent thought university should develop the moral self.

Of the students wanting most to be an airline pilot, 26 percent thought university should teach skills to enable a high income, 47 percent thought university should provide an understanding of science and skills related to work, while 13 percent selected development of the moral self as the most important goal provided by university.

Of the students most wanting to be a famous athlete, 16 percent figured the most important goal provided by university should be to teach skills to enable a high income, 25 percent figured university should provide an understanding of science and skills related to work, 41 percent figured university should provide an understanding of social conditions and 16 percent figured university should serve to develop the moral self.

None of the students wishing most to be an auto mechanic thought university should teach skills to enable a high income, 16 percent thought university should provide an understanding of science and skills related to work, 33 percent thought university should provide an understanding of social conditions while 50 percent thought university should serve to develop the moral self.

Also, none of the students most wanting to be a teacher thought the most important goal provided by university should be to teach skills to enable a high income, 57 percent thought an understanding of science and skills related to work should be the most important goal provided by university, while an understanding of social conditions, and development of the moral self were each selected by 21 percent of these students.

The greatest number of students, 43 percent, wishing most to be a self-employed businessman thought university's most important goal should be to provide an understanding of science and skills

related to work. The next highest number, representing 30 percent of this group, thought university should teach skills to enable a high income.

Like the math and science students, described above, these students associated work with income. Their aims are high and no doubt they are more determined to achieve these aims. The idea of being a successful businessman must indicate the necessity of a multitude of professional skills. To these students university should provide these skills. Only 21 percent thought university should provide an understanding of social conditions, and barely 4 percent thought university should develop the moral self. Like the math and science students, this determined group views university, work and learning ability together, and are not too interested in social conditions or moral development.

The students wishing most to be an airline pilot were very similar to those wishing to be a self-employed businessman in regard to associating university, work and income. The airline pilot also represents a high income, prestige position. Talking to several of these students, I found that many of them believed that one attended university to get pilot training. On the other hand I found some students who knew the exact process by which one becomes an airline pilot. Some of this more informed group felt that going to university would provide the airline pilot with more knowledge of

affairs in general. They felt the pilot should present an impressive, but concerned image. Perhaps this is why there was a greater percentage of students looking toward moral development among the airline pilot loving students than among the self-employed businessman loving group.

The greatest number of students wishing to be a famous athlete thought that university should provide an understanding of social conditions. Another 16 percent figured moral development to be the ultimate goal provided by university. The famous athlete must, of course, excell in his particular field of sports, but many students felt that, of equal importance to the athlete, was the necessity to create a good public image, seek out worthy causes in society and promote programmes to help these causes. This could account for the more than half of the students, wishing to be a famous athlete, selecting an understanding of social conditions and development of moral self as the most important goal provided by university.

Some students were of the opinion that athletic skills were perfected at university, and by participating in university sports one made the contacts necessary to reach the top. On their minds were the various scholarships offered in the United States to athletes. As we see 31 percent of the students wishing to be a

famous athlete associated university with teaching skills for a high income, and providing an understanding of science and skills related to work.

None of the students wishing to be an auto mechanic thought university should teach skills to earn a high income. As explained for the technical-vocational students above, these students do not associate university with the skills required to earn a living. Fifty percent of the auto mechanics students thought university should serve to develop the moral self, while another 33 percent thought university should provide an understanding of social conditions. As with the technical-vocational students in general, university is something in quite another world, it is considered unnecessary by most auto mechanics students. These students cannot visualize university as contributing to one's labor skills, therefore it must serve one of the other stated goals.

Like the auto mechanics students, the students wishing to be a teacher did not think university should teach skills to enable a high income. It could be that these students have had access to the teachers salary scale, therefore they are convinced they will not have a high income. On the serious side, we notice that 57 percent of the would-be teachers figured univeristy should provide an understanding of science and skills related to work. From the

responses I was of the opinion that all students stating a desire to be a teacher had given a great deal of serious consideration to their planned occupation.

A teacher must be aware of existing social conditions and is expected to display moral character. The fact that 21 percent of these students selected each of these stated goals indicates further serious consideration on their part.

6. Intended Occupation

Twelve of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.001)
2. Sex (.02)
3. Pass standing in all subjects (.03)
4. Failure subjects (.06)
5. Best liked subjects (.0001)
6. Frequency of mother's praise for accomplishments (.006)
7. Would most like to be (.01)
8. Father's education (.01)
9. Mother's education (.01)
10. Father's occupation (.02)
11. Religious preference (.08)
12. Students get a fair deal from teachers and principals (.03)

- See table 6.

At the English academic high school only 8 percent of the students were undecided about their intended occupation, while 76 percent intended to enter one of the professions or big business, and 16 percent planned to enter a clerical or skilled occupation.

At the English comprehensive school 20 percent of the students were undecided about their intended occupation, while 28 percent intended to enter one of the professions or big business, and 52 percent intended to enter a clercial or skilled occupation.

At the French academic high school 28 percent of the students were undecided about their intended occupation, while 64 percent intended to enter one of the professions or big business, and only 8 percent intended to enter a clerical or skilled occupation.

At the French polyvalent 32 percent of the students were undecided about their intended occupation, while 36 percent intended to enter one of the professions or big business, and 32 percent intended to enter a clerical or skilled occupation.

The fact that over three-quarters of the students at the English academic high school planned to enter one of the professions or big business reflects the 75 percent passing grades in this school, and perhaps the fact that the students came from mostly upper middle class families. Only 16 percent planned to enter a clerical or skilled occupation which bears witness to the anti-technical programme attitude in academic schools. Of this 16 percent entering a technical programme one-half the students had failing grades, and

the other half did not have high marks.

At the English comprehensive school the 52 percent intending to enter a clerical or skilled occupation coincided with the 60 percent failure rate at that school, and the fact that failing students choose or are placed in one of the technical programmes. The 28 percent planning to enter one of the professions is the lowest percentage of all the schools. The higher the failure rate at a school the fewer students there will be to enter higher education programmes leading to the professions.

The 64 percent at the French academic high school planning to enter one of the professions or big business, and the mere 8 percent planning to enter a clercial or skilled occupation reflects the high academic standards maintained at this school. All students, at this school, had passing grades, and all planned to attend university at some later date. The 28 percent being undecided about their intended occupation may appear high, and seem to indicate lack of definite plans on the part of the students. However I believe the fact that all students at this school had passing grades and planned to get a university degree shows a great deal of definite planning.

The French polyvalent with 36 percent planning to enter one of the professions and 32 percent planning to enter a clerical or skilled occupation does not appear to represent definite planning as found in the academic schools. At the polyvalent 52 percent of

the students had failing grades. Both technical high schools had high failure rates. The French polyvalent students showed an anti-technical programme attitude. Yet, in view of the high number of failures, the percentage of students thinking of clerical or skilled occupations should, no doubt, be higher than 32 percent.

Twenty-three percent of the boys were undecided about their intended occupation, while 41 percent planned to enter one of the professions or big business, and 34 percent planned to enter a clerical or skilled occupation. Only 18 percent of the girls were undecided about their intended occupation, while 69 percent planned to enter one of the professions or big business, and only 12 percent planned to enter a clerical or skilled position.

Sixty-nine percent of the girls planned to enter one of the professions or big business compared to only 41 percent of the boys. Fewer failing grades were found among the girls than among the boys, and a greater percentage of the girls planned to attend university than the boys. In general the girls seemed to be more determined to be a success than the boys, consequently a greater percentage of boys were undecided than the girls.

We notice that 34 percent of the boys planned to enter a clerical or skilled occupation as compared to only 12 percent of the girls. Here again the percentage of failures among the boys was much higher than among the girls. As was noted in table 1 the percentage of failing students entering the technical-vocational programmes is

greater than the percentage of passing students.

Among the students with a pass standing in all subjects, 20 percent were undecided about their intended occupation, 60 percent planned to enter one of the professions, and only 20 percent planned to enter a clerical or skilled occupation.

Of the students not having a pass standing in all subjects, 25 percent were undecided about their intended occupation, 34 percent planned to enter one of the professions or big business, and 40 percent planned to enter a clerical or skilled occupation.

Not much can be said, except that students with a pass standing in all subjects are much more inclined to want to go to university and on into the professions and big business. On the other hand failing students usually elect, or are placed, into one of the technical-vocational programmes which should lead to a clerical or skilled position. We notice that a greater percentage of the failing students are undecided about their intended occupation than the passing students.

The passing students have no restriction, and simply must continue to pass in order to progress. The failing students are already behind, and might never catch up. Should a failing student catch up and become a passing student it could change the whole outlook. An example would be that once a student began to pass in all subjects he might no longer think about entering a clerical or skilled occupation. The path of education, for the failing student,

is never as clear as it is for the passing student.

In regard to failure subjects the figures for those students listed as "none" are the same as those for the students listed as having a pass standing in all subjects, and these were discussed above.

Thirty-three percent of the students failing languages and social studies were undecided about their intended occupation, 22 percent planned to enter one of the professions or big business, and 44 percent planned to enter a clerical or skilled occupation.

Of the students failing math and science 17 percent were undecided about their intended occupation, 47 percent planned to enter one of the professions, and 35 percent planned to enter a clerical or skilled occupation.

Failing students, as noted above, should be more in doubt about future education and employment plans. However this is not totally indicated here. As noted in table 3, students who do well in math and science are usually quite definite in their future education and employment plans. As a rule science and math students are more apt to plan to go on to university.

The 47 percent, of students, failing math and science and intending to enter one of the professions or big business appears to be more of the dreaming we have experienced in previous tables. The number of students intending to enter a clerical or skilled occupation should no doubt be much higher than the 35 percent indicated. Since the future of a failing student is more uncertain,

the percentage of undecided students should, perhaps, be greater than the 17 percent indicates.

The students failing languages and social studies seem to indicate somewhat more along the lines of expectancy. The percentage of these students being undecided, and planning to enter a clerical or skilled trade is higher than that of the students failing math and science. The students failing languages and social studies seem to be more thought giving to their future in this case.

Of the students having languages and social studies as their best liked subjects, 34 percent were undecided about their intended occupation, 25 percent planned to enter a clerical or skilled occupation.

Among the students having math and science as their best liked subjects only 12 percent were undecided about their intended occupation, while 75 percent planned to enter one of the professions or big business, and 12 percent planned to enter a clerical or skilled occupation.

Of the students with technical-vocational subjects as their best liked subjects, only 11 percent were undecided about their intended occupation, 23 percent planned to enter one of the professions or big business, and 64 percent planned to enter a clerical or skilled trade.

We notice that three-quarters of the science and math students

planned to enter one of the professions or big business, and only 12 percent were undecided about their intended occupation, whereas only 12 percent intended to enter a clerical or skilled occupation.

As noted in table 3 math and science students are more inclined to be prepared for university, and as noted in table 5 math and science students more readily align their education with future employment. Students who foresee a university education and a profession are seldom inclined to opt for a clerical or skilled occupation.

On the other hand students of languages and social studies cannot so easily align their education with their intended occupation. If we take, as an example, a student of history is usually in doubt as to what he will, or can, do in the future, whereas the physics student is more confident, in that he feels as long as he continues to be good in physics there will always be some place for him. In teaching circles it is jested, but more in truth than jest, that math and science teachers are difficult to obtain, while language and social studies teachers are available at a dime per train load.

It is natural that the technical-vocational students would have 64 percent intending to enter a clerical or skilled occupation, for this is what their programme prepares them to do. The 11 percent being undecided is quite low, as these students are enrolled in a programme which aligns them with a particular occupation. The technical-vocational students should have a small percentage of

their group intending to enter one of the professions or big business, as technical programmes do not normally extend into university, and the students are terminal cases in regard to education after high school.

Of the students very often praised by their mothers for accomplishments only 13 percent were undecided about their intended occupations, but 63 percent planned to enter one of the professions or big business, and only 22 percent planned to enter a clerical or skilled occupation.

From the students not often praised by their mothers for accomplishments, 34 percent were undecided about their intended occupation, only 26 percent planned to enter one of the professions or big business, and 39 percent planned to enter a clerical or skilled occupation.

Among the students almost never praised by their mothers for accomplishments, 45 percent were undecided about their intended occupation, 27 percent planned to enter one of the professions and 27 percent planned to enter a clerical or skilled occupation.

Students praised by their parents for accomplishments are students who have a good relationship with their mothers, and the mother takes interest in the education and future of the student. The more often the student is praised by the mother would indicate more interest, encouragement and help given by the mother. It means that students praised more often have been in closer contact with parents not only for actual help with school work, but in

regard to discussing and formulating plans for future education and occupations.

The more often the student is praised by the mother the more he is prepared for future education, and the more apt he is to be determined to go to the top. These students are more inclined to go for the professions than a clerical or skilled occupation.

Of the students most wanting to be a self-employed businessman 17 percent were undecided about their intended occupation, 57 percent intended to enter one of the professions or big business, and 25 percent intended to enter a clerical or skilled occupation.

The students most wanting to be an airline pilot showed as, 19 percent being undecided about their intended occupation, 61 percent intending to enter one of the professions or big business, and only 19 percent intending to enter a clerical or skilled occupation.

Among the students most wanting to be a famous athlete, 18 percent were undecided about thier intended occupation, 43 percent intended to enter one of the professions or big business, and 37 percent intended to enter one of the professions or big business, and 37 percent planned to enter a clerical or skilled occupation.

Seventy-two percent of the students most wanting to be an auto mechanic planned to enter a clerical or skilled occupation, only 9 percent planned to enter one of the professions or big business, and 18 percent were undecided about their intended occupation.

Of the students most wanting to be a teacher 37 percent were undecided about their intended occupation, but 56 percent planned to enter one of the professions or big business, and a mere 6 percent planned to enter a clerical or skilled occupation.

The fact that only 17 percent of the students wishing to be a self-employed businessman were undecided about their intended occupation, and 57 percent planned to enter one of the professions or big business, indicates considerable planning, and I would imagine the most of this group of students were doing well in school at present. The 25 percent intending to enter a clerical or skilled occupation could be those most wanting to be a self-employed businessman as opposed to the greater percentage who were determined to be a self-employed businessman. Clerical, or skilled, occupations are usually more difficult, from which to mount the mobility ladder, than from one of the professions.

The same would appear to be true of the students most wanting to be an airline pilot. The greatest percentage of this group planned to enter one of the professions or big business. Although one does not need to attend university to become an airline pilot, it requires much the same ability in learning and perhaps greater determination to become an airline pilot than to obtain a university degree. Again the 19 percent planning to enter a clerical or skilled occupation are perhaps the part of this group most wanting to be an airline pilot, but without the determination. I can well

see that a skilled mechanic, for example, would have the extra advantages as background to becoming a pilot, however I saw no indications of this intent during the survey.

Although many students associate becoming an athlete with going to university, there are, on the other hand, students who would like to become a famous athlete as a means of reaching position and high salary without the drudgery of going to university. This I believe shows up in the 37 percent stating an intention to enter a clerical or skilled occupation. Students wishing to be either a self-employed businessman or airline pilot did not show as high a percentage of their respective groups intending to enter a clerical or skilled occupation.

Seventy-two percent of the students wishing most to be an auto mechanic intended to enter a clerical or skilled occupation, and only 9 percent planned to enter one of the professions or big business. These students would be enrolling in a technical-vocational programme which, as noted above, does not provide entrance to university. As mentioned in the main body of this thesis, most students found in technical programmes come from working class homes where there is often a anti-university attitude as well.

Even though many of us are now doubtful, teaching is still considered to be one of the professions, therefore the 56 percent of the students wishing most to be a teacher, stated their intentions to be a teacher, and are shown as entering a profession. Only 6 percent of the students wishing most to be a teacher stated an

intention to enter a clerical or skilled occupation. Most of the students entering a technical-vocational programme are ill prepared or unable to go to university, therefore it would be difficult to become a teacher. Experience in clerical or skilled occupations is necessary before one can teach in the technical-vocational area. It is rare to find a student opting for a technical-vocational programme that wishes to become a teacher.

The 37 percent wishing most to be a teacher, but still undecided does appear somewhat high. However I found the students, considering the field of teaching to be a serious lot. Several wished to be a teacher, but were not convinced, as yet, as to the subjects they would like to teach. Also, several of these students pointed out the declining demand for teachers. This, I believe, accounts for the indecision,

Of the students whose fathers had an education ranging from some grade school to some high school 25 percent were undecided about their intended occupation, 42 percent planned to enter one of the professions or big business, and 32 percent planned to enter a clerical or skilled occupation.

Of the students having fathers who finished high school, 30 percent were undecided about their intended occupations, 35 percent planned to enter one of the professions or big business, and 35 percent planned to enter a clerical or skilled occupation.

When the father had an education ranging from some university

to graduate school the students showed as, only 12 percent being undecided about their intended occupations, a large 74 percent planning to enter one of the professions or big business, and only 12 percent planning to enter a clerical or skilled occupation.

Of the students claiming they did not know the extent of their father's education, 30 percent were undecided about their intended occupation, 23 percent planned to enter one of the professions or big business, and 46 percent planned to enter a clerical or skilled occupation.

By this time we are becoming accustomed to the effects of higher parental education on future educational and occupational plans of students. We notice that 74 percent of the students whose fathers had at least some university education planned to enter one of the professions or big business. This is by far the highest percentage of any of the groups intending to go to university, and the top, so to speak. We also notice that only 12 percent of this group were undecided about occupational plans, and only 12 percent planned to enter a clerical or skilled occupation.

When the father has a higher education the students are usually helped, and encouraged, so that they do better in high school, and lay more definite plans for success. As a result of more definite planning we find only a small percentage of these students as being undecided about their intended occupation. When students have their university plans made they seldom consider a clerical or skilled

occupation.

We note that the lowest percentage, of any of these groups, intending to enter one of the professions was found among the students who did not know the extend of their fathers' education, this group also had the highest percentage intending to enter a clerical or skilled occupation. Most often when the student does not know the extent of his father's education the father does not have much formal education. In any case it is obvious that education is not discussed to any extent in the home. These students do not get help as a result of the father's academic ability, and they do not get the encouragement and guidance which is required by the parents if the student is to do well in school. Consequently a greater percentage of these students opt for technical programmes which lead to clerical or skilled occupations. (See table 2). As we have seen a great percentage of the students opting for technical programmes are failing students.

We notice that, of the students whose fathers finished high school, the percentage intending to enter one of the professions was lower than that of the students whose fathers did not finish high school. When the father finished high school the percentage of students who were undecided about their intended occupation was higher than when the father did not finish high school. Also the percentage of students, intending to enter a clerical or skilled occupation, was higher among students with high school graduate

fathers than among the students whose fathers did not finish high school.

In the case of the students with fathers not completing high school it is obvious education is discussed in the home. In many cases, where the father did not finish high school, there will be an attempt by the father to ensure that his children get a better education, therefore some students get added help and encouragement to acquire more education. I found this was particularly true in my research carried out in a Polish and Hungarian community.

Of the students whose mothers had an education ranging from some grade school to some high school, 27 percent were undecided about their intended occupation, 36 percent planned to enter one of the professions or big business, and 36 percent planned to enter a clerical or skilled occupation.

The students having mothers who finished high school showed as, 18 percent being undecided about their intended occupation, 51 percent planned to enter one of the professions or big business, and 29 percent planned to enter a clerical or skilled occupation.

Among the students with mothers having an education ranging from some university to graduate school, only 18 percent were undecided about their intended occupation, a larger 83 percent planned to enter one of the professions or big business and a mere 4 percent planned to enter a clerical or skilled occupation.

Of the students who did not know the extent of their mother's

education, 31 percent were undecided about their intended occupation, 31 percent planned to enter one of the professions or big business, and 37 percent planned to enter a clerical or skilled occupation.

The amount of education possessed by the mothers had very much the same effect upon the students' intended occupation as did the fathers' education. However we notice that a greater percentage of the students, having mothers with at least some university education, intended to enter one of the professions than those students having fathers with the same education range. Also a greater percentage of the students, having mothers who completed high school, intended to enter one of the professions than those students having fathers who completed high school.

We also notice that a mere 4 percent of the students with university educated mothers intended to enter a clerical or skilled occupation. When the mother had completed high school we find a smaller percentage of the students intending to enter a clerical or skilled occupation.

One thing which has been well noticed, in this survey, is that the greatest factor in determining the education planned by a student is parental support and encouragement. When the parents have at least some university the students are far more inclined to be aligned for university. It seems that mothers take more interest, and give more help, than fathers, and when the mother has some university education the student is more apt to have higher

aspirations for education than when the father has some university education.

This seems to be true, as well, in regard to the situation when mothers have completed high school as compared to the situation when fathers have completed high school. In any case the more education the mother has the more apt the student is to be prepared for a higher education and higher positioned occupation. Once students get their sights set on university they steer away from the technical programmes which are seen as only leading to a clerical or skilled occupation.

Among the students who had fathers in one of the professions or small business, only 8 percent were undecided about their intended occupation, but 74 percent planned to enter one of the professions or big business, and 17 percent planned to enter a clerical or skilled occupation.

Of the students whose fathers were in a clerical occupation, 23 percent were undecided about their intended occupation, 41 percent planned to enter one of the professions or big business, and 35 percent planned to enter a clerical or skilled occupation.

Of the students whose fathers were in a skilled occupation, 29 percent were undecided about their intended occupations, 39 percent planned to enter one of the professions or big business, and 36 percent planned to enter a clerical or skilled occupation.

As noted in table 4 when the father is in one of the professions

or small business the student is far more apt to be planning to attend university. There is more background, or respect for education and most often the economic means, so that most of these students have the opportunity to plan for university and a profession. The fact that these students can set quite definite plans for future education and employment shows in only 8 percent being undecided about an occupation. Of course when there are university plans, we find few students opting for a clerical or skilled occupation.

As noted in table 3 there was more of a tendency for students, with fathers in a clerical occupation, to wish to attend university than when the father is in a skilled occupation. Somehow clerical people relate more to a university as being an advantage in the work world than their skilled counterparts. Here we see a slightly higher percentage, of the offspring of clerical working fathers, intending to enter one of the professions than the offspring of the skilled worker fathers.

Just as there is a tendency for the students of professional fathers to get into the same social circle as their fathers, so to speak, there is a noticeable tendency for the students of clerical and skilled fathers to also get into, or remain, in the same social circle. In some cases this could be due to economic means, and in other cases it could be considered as tradition.

Of the protestant students 15 percent were undecided about their

intended occupation, 47 percent planned to enter one of the professions or big business, and 36 percent planned to enter a clerical or skilled occupation.

Among the catholic students, 27 percent were undecided about their intended occupation, 56 percent planned to enter one of the professions or big business, and only 16 percent planned to enter a clerical or skilled occupation.

As noted in table 3, a greater percentage of the catholic students intended to go to university than the percentage of protestants intending to go to university. Since there were only three catholics found in the English schools, ninety-three percent of the catholics were found in the French schools. We also noted the anti-technical programme attitude shown by the French students in this study. At least in the English schools most of the failing students had either decided, or been advised, to opt for one of the technical programmes and forget university. When we consider the 52 percent failure rate at the French polyvalent we cannot but suppose that there should be a smaller percentage of catholic students intending to enter one of the professions. Perhaps there should be a higher percent of catholic students opting for clerical or skilled occupations. The fact that a higher percentage of catholics were undecided about their intended occupations is probably due to the uncertainty caused by failing grades.

Fourteen percent, of the students who thought they got a fair

deal from teachers and principals, were undecided about their intended occupations, 61 percent planned to enter one of the professions or big business, and 24 percent planned to enter a clerical or skilled occupation.

Thirty-two percent, of the students who figured they did not get a fair deal from teachers and principals, were undecided about their intended occupations, 37 percent planned to enter one of the professions or big business, and 30 percent planned to enter a clerical or skilled occupation.

Usually, when a student has passing grades and is doing well at school, he has no great problems, and will consider he is being treated rather fairly. Such a student is apt to have a clearer outlook on his future education and plans for an occupation.

This seems to be what has shown up in this survey. We notice that the students who figured they did get a fair deal from teachers and principals were more prepared for future education and occupations than the students who figured they did not get a fair deal. Actually the students who figured they did not get a fair deal could be considered as the complainers. Perhaps too much time spent complaining reduces the time which should be spent in grasping with the roots of problems and how to get ahead.

7. Combining Technical and Academic Programmes Gives a Better Overall, or General, Education

Four of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.004)
2. Frequency of father's praise for accomplishments (.10)
3. Religious preference (.06)
4. Students get a fair deal from teachers and principals (.03)

See table 7.

Eighty-four percent of the students at the English academic school thought that combining a technical and regular high school programme would give a better overall, or general, education. Sixty-five percent of the English comprehensive students agreed with the idea of a better education through combining the two programmes, but only 36 percent of the French academic students were in agreement, while 69 percent of the French polyvalent students were in agreement with the benefits of the combined programme.

The idea of combining a technical and academic programme was entirely new to all the students surveyed. Only two of the 100 students had previously heard of the possibility of combining the two programmes. The response is encouraging. The 36 percent, in agreement at the French academic school, is by far the lowest percentage of all the schools. This school is a private school with a very academic, university oriented atmosphere. These students are

more disassociated with technical programmes than any of the students in the other schools.

At the English academic school the 84 percent of the students agreeing with the benefits of the combined programmes was surprising. However these students were excited about the idea, having never been told about the possibility before, they accepted a very positive attitude toward the combined programme.

Sixty-five percent of the English comprehensive students agreed with benefits of the combined programmes, the remaining 35 percent of these students did not agree with the benefits of combining the two programmes. The majority of these students were opting for technical programmes, and I believe that the students not agreeing with the benefits of the combined programmes were demonstrating an anti-academic attitude, and did not give the question a fair analysis.

At the French polyvalent the 69 percent of the students who agreed with the benefits of combining the two programmes represented a wide majority of the students. The possibility of combining the programmes was previously unknown to these students. The students who did not agree with the benefits of the combined programmes are no doubt indicative of the somewhat anti-technical attitude sensed within the group surveyed at the polyvalent.

Of the students receiving praise from their fathers, very often, 66 percent agreed with the idea of a better education available

by combining the technical and academic programmes, only 45 percent of the students who did not often receive praise from their fathers agreed with the combined programmes idea, but 75 percent of the students who almost never received the father's praise agreed with the benefits of combining a technical and academic programme.

As for the 66 percent who very often received praise from their fathers this figure would be expected, for these students must be praised for doing well, and would have a better relationship with their fathers. Such relationships contribute toward reasoning, and I believe the habit of reasoning was behind the 66 percent of this group.

The drop to 45 percent in agreement among the students who did not receive praise often from their fathers would appear to be a reflection of the uncertainty in reasoning which would result from a somewhat uncertain relationship between the fathers and students.

The figure of 75 percent, of the students who almost never received praise from their fathers, being in agreement with the benefits of the combined programmes is, perhaps, what would not be expected. This group would be the most isolated from communication with the father, and no doubt they have definite ideas about making their own decisions. There could also be, here, somewhat of an opinion that was either contrary to that of the father, or contrary to what the student believed would be the father's opinion.

Of the Protestant students 74 percent were in agreement with the

benefits of combining the technical and academic programmes while the catholic students showed only 53 percent as agreeing with the better education obtained through combining a technical and academic programme.

These figures do not represent the, protestant versus catholic, situation in total regard to opinions concerning the combination of a technical and academic programme. It does reflect that, of the students surveyed, the catholic students at the two French high schools displayed a noticeable anti-technical attitude as well as a rather disbelieving attitude that technical education could be freed from its low image and fitted into general education.

Seventy-three percent of the students who claimed they got a fair deal from teachers and principals agreed that a better general education would result from combining the technical and academic programmes. Only 50 percent of the students who claimed they did not get a fair deal from teachers and principals agreed with the combined programme idea.

Again it appears that the student who finds conditions in school to be acceptable will be more inclined to give an honest evaluation to a problem or situation which concerns the school. On the other hand the student who believes he isn't getting a fair deal, from teachers and principals, would no doubt view the idea of combining the two programmes as a scheme by teachers and principals. Therefore there would be more of a tendency for this student to

take a negative outlook toward the idea of combining the technical and academic programmes.

8. Combining Technical and Academic Programmes Better Prepares Students for Engineering and Science

Three of the eighteen independent variables were related significantly to this outcome variable as follows:

1. Type of school (.0001)
2. Father's brithplace (.06)
3. Religious preference (.0001)

See table 8.

At the English academic high school 88 percent of the students agreed that combining technical and academic programmes better prepared students for engineering and science, 70 percent of the students at the English comprehensive school were in agreement, only 45 percent of the students at the French polyvalent were in agreement, and the French academic had the lowest number of students in agreement with but 29 percent.

The English academic students, with 88 percent, were almost all convinced that the combined technical and academic programmes would make a better preparation for engineering and science. These students thought this previously unheard of idea was ideal. Thirty-six percent claimed they would have opted for combined programmes if they had known before selecting their all academic programmes.

However a great many students spoke of this combination as being great, but not for themselves.

The 70 percent at the English comprehensive school who agreed with the idea of combined programmes were the same students who were entering technical or business programmes. All but 2 of these students had not been told of this possibility before, and 59 percent claimed that, had they known, they would have selected the combined programmes. With the high failure rate in this group it is doubtful that too many would be a success in a combined programme effort. We can assume there is a considerable amount of wishful thinking among this group.

Only 29 percent of the French academic students agreed with the better preparation for engineering and science via the combined programmes. All 29 percent claimed they would have opted for combined programmes if they had known. However the remaining 70 percent who did not agree bore up the general trend of thinking, at that school, that technical programmes and university preparation did not go together. Many students stated that combined programmes would be better if the student were going to work after high school, but would not aid in university preparation.

At the French polyvalent 45 percent of the students agreed that the combined programmes would better prepare students for engineering or science, but not one student stated that they would have chosen combined programmes if they had known. Again the surveyed students

at the French polyvalent seemed to be quite anti-technical in regard to school programmes. Many were inflicted by the great myth that technical programmes suited only to teach a trade.

In regard to the father's birthplace, or immigrant status, 50 percent of the students with fathers born in Quebec agreed with the advantages of combined programmes for engineering or science. Seventy-three percent of the students with fathers born in Canadian provinces, other than Quebec agreed with the combined programmes, and 75 percent of the students with fathers born outside Canada were in favour of the idea that combining technical and academic programmes better prepared students for engineering and science.

Technical education does not receive as low a status in other countries as it does in Canada in general. Parental influence still has great influence on the student's views toward education. Therefore, the views of those fathers, born outside Canada, would no doubt be more inclined to see the advantages of technical education in general, and it reflects in the students.

Technical education is relatively new to Quebec, but has been in use in the other provinces for years. In most other provinces there has been some success in combining technical and academic programmes. As a result some of the tarnish has been removed from the image of technical programmes. In Quebec, students and adults are still very doubtful when it comes to giving technical

education a fair shake in regard to its full potential.

Eighty-one percent of the protestants agreed that the combined programmes would better prepare students for engineering and science, as compared to only 37 percent of the catholics.

Again, as noted, the two French schools showed much more of an anti-technical attitude than the English schools. All but three of the 48 Catholic students were in the French schools. The French schools showed a far greater tendency toward the idea of keeping the technical separate from the academic in high schools.

CONCLUSIONS

The problem facing technical education in Quebec might appear to be rather complex. We have seen that the problem involves, basically, three groups, and those groups are, the students, administrators and guidance, and the parents.

If we first consider the students, we see by the survey that they are not being properly informed of the benefits technical education has to offer. The students surveyed, who are taking courses in typing, could readily see the economic value and future usefullness of being able to type. Efforts must be made to enlighten students of the not so obvious, but equally valuable gains to be had from technical education courses and programmes other than typing.

Of the one hundred students surveyed, more than half agreed that a combination of a technical programme and a regular academic programme would either give a better, overall, general education, or better prepare students for university.

We note that almost all the students surveyed had never been told by administrators, or guidance counsellors, that it was possible to combine both a technical and academic programme while in high school. We also noted that a considerable number of the students claimed they would have selected their programmes differently

had they known of the possibility of combining the technical with the regular academic.

It seems that once our students are properly informed of the usefullness and benefits of technical education they will be more inclined to think positively toward it, and seek the available advantages.

The administration and guidance personnel, as indicated by the survey, are not telling the full story to the students. It would seem that administration and guidance personnel are happy to fill technical programmes with failing students. This does not reduce student population, ensuring more school funds, and aids in maintaining the desired success image of the true academic.

The survey would seem to indicate that school administrators, and guidance counsellors, do not make an effort to encourage students to obtain a more complete education through the use of technical education.

The survey also indicated that students are very much inclined to avoid administrators and guidance counsellors when they make plans for future education. From the remarks given, there was an indication that students mistrust administrators and guidance counsellors. Administrators and guidance counsellors seem to be either unaware of, or afraid to suggest that technical education offers great advantages for extended learning.

Of the three groups we mentioned, which were involved with the

problem facing technical education, it would seem logical that the parents, once enlightened, would be most effective in solving this problem.

The survey showed that parents were far more influencial than teachers, administrators or guidance counsellors in encouraging students to go after higher education. In fact it was quite evident by the survey that the more education, possessed by the parents, the more apt the student would be inclined to want to seek education at higher levels than high school.

Technical education suffers from two stigmas, the first is the low status accorded it as a result of its being associated with tradesmen or those who work with their hands. The second stigma comes from the false impressions that, once one begins a technical course or programme, he is learning a trade and will become a tradesman.

First of all, parents must be convinced that technical education is simply an addition to the overall or general education. If a student intends to study science at university, and takes the auto mechanics programme in high school his knowledge and experience in science will be increased as a result of the auto machanics programme. The idea that only those wishing to become an auto mechanic should study auto mechanics is as absurd as saying that only those wishing to become historians should study history. If this important point can be put across to parents a great stride

will have been made toward lessening the problem which technical education faces.

Parents go along with the idea that technical education is of low status, because it is designed for those who are unable to cope with the regular academic programme. We have seen that most often students who fail in the academic programme also fail when placed in one of the technical programmes. The student who is able to combine both a technical and an academic programme must be a more competent student, for he carries a greater course load and is subjected to a broader scope of learning. The students who combine both the technical and academic programmes are more ambitious, more capable, and should represent the elite in high schools.

If parents can be made to realize the truth of the matter, as just described, and ignore the stigmas attached to technical education, positive results would be forthcoming. From what we have seen there is no doubt that parental influence, and encouragement, would direct students toward technical education. Once parents began encouraging students to take technical courses and programmes the administrators and guidance counsellors would be off the hook. Their fear of risking a quarrel with parents, for suggesting technical education, would be gone. In fact administrators, and guidance counsellors, would be prodded by parents, and would be forced to get acquainted with the various technical programmes and how they can best help in preparation for higher education.

Technical education came later to Quebec than to the other provinces. Quebec has encountered the same problems, as did other provinces earlier, in regard to technical education. In spite of industrial and political motives, technical education is so designed that it can give our students a richer, fuller education in our high schools. It would seem that the best way to get this fuller education into motion, for students, is to first educate the parents.

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APPENDICES

APPENDIX I - TABLES

TABLE 1

Significant Relationships Between the Outcome Variables
"Type of Programme Selected for Next School Year"
and some Antecedent, or Independent Variables.
(Frequencies) and Percentages.

Outcome variable: Type of programme planned for next school year

Independent Variables	Technical or Business	General	College Prep	Significance
1. School				
1. English academic	8.0(2)	60.0(15)	32.0(8)	
2. English comprehensive	68.0(17)	24.0(6)	8.0(2)	.0001
3. French academic	.0(0)	68.0(17)	32.0(8)	
4. French Polyvalent	8.0(2)	32.0(8)	60.0(15)	
2. Sex				
1. Male	25.4(17)	52.2(35)	22.4(15)	.005
2. Female	12.1(4)	33.3(11)	54.5(18)	
3. Pass standing in all subjects				
1. Yes	12.3(8)	50.8(33)	36.9(24)	.014
2. No	37.1(13)	37.1(13)	25.7(9)	
4. Failure subjects				
1. None	12.3(8)	50.8(33)	36.9(24)	
2. Languages & Social Studies	44.4(8)	33.3(6)	22.2(4)	.046
3. Math & Science	29.4(5)	41.2(2)	29.4(5)	
5. Best liked subejcts				
1. Languages & Social Studies	14.0(6)	46.5(20)	39.5(17)	
2. Math & Science	5.0(2)	60.0(24)	35.0(14)	.0001
3. Technical-Vocational	76.5(13)	11.8(2)	11.8(2)	
6. Would most like to be (Position or Occupation)				
1. Self-employed Businessman	17.9(5)	42.9(12)	39.3(11)	
2. Airline Pilot	19.2(5)	53.8(14)	26.9(7)	
3. Famous athlete	18.8(3)	50.0(8)	31.3(5)	.001
4. Auto Mechanic	72.7(8)	27.3(3)	0.0(0)	
5. Teacher	0.0(0)	43.8(7)	56.3(9)	
7. Religious Preference				
1. Protestant	38.6(17)	36.4(16)	25.0(11)	.0002
2. Catholic	4.2(2)	52.1(25)	43.8(21)	
8. Students get a fair deal from teachers and principals				
1. Yes	19.3(11)	38.6(22)	42.1(24)	.07
2. No	23.3(10)	55.8(24)	20.9(9)	

TABLE 2

Significant Relationships Between the Outcome Variables
"Planning to Take any Technical-Vocational Courses"
and some Antecedent, or Independent Variables.
(Frequencies) and Percentages.

Outcome variables: Planning to take any technical-vocational courses

Independent variables	Yes	No	Significance
1. School			
1. English academic	32.0(8)	68.0(17)	
2. English comprehensive	76.0(19)	24.0(6)	.0001
3. French academic	4.0(1)	96.0(24)	
4. French polyvalent	4.0(1)	96.0(24)	
2. Failure subjects			
1. None	21.5(14)	78.5(51)	
2. Language & Social Studies	50.0(9)	(50.0(9)	.05
3. Math & Science	35.3(6)	64.7(11)	
4. Would most like to be (Position or Occupation)			
1. Self-employed Businessman	17.9(5)	82.1(23)	
2. Airline pilot	34.6(9)	65.4(17)	
3. Famous athlete	12.5(2)	87.5(14)	.008
4. Auto Mechanice	80.0(8)	18.2(2)	
5. Teacher	25.0(4)	75.0(12)	
5. Father's Birthplace			
1. Quebec province	20.6(13)	79.4(50)	
2. Other Canadian Province	40.0(8)	60.0(12)	.04
3. Outside Canada	47.1(8)	52.9(9)	
6. Father's Education			
1. Some grade school to some high school	21.4(6)	78.6(22)	
2. Finished high school	40.0(8)	60.0(12)	.06
3. Some university to Graduate School	20.5(8)	79.5(31)	
4. Don't know	53.8(7)	46.2(6)	
7. Religious Preference			
1. Protestant	54.5(24)	45.5(20)	.0001
2. Catholic	6.3(3)	93.8(45)	

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TABLE 3

Significant Relationships Between the Outcome Variable "Planning to Attend University", and Some Antecedent, or Independent Variables. (Frequencies) and Percentages.

Outcome variable: Planning to attend university

Independent Variables	Not Right After High School	Full or Part Time Right After High School	Never or Undecided	Significance
1. School				
1. English academic	24.0(6)	60.4(16)	12.0(3)	
2. English comprehensive	12.0(3)	28.0(7)	60.0(15)	.0001
3. French academic	20.0(4)	80.0(16)	0.0(0)	
4. French polyvalent	29.4(5)	29.4(5)	41.2(7)	
2. Pass standing in all subjects				
1. Yes	22.8(13)	57.9(33)	19.3(11)	.02
2. No	16.7(5)	36.7(11)	46.7(14)	
3. Failure subjects				
1. None	22.8(13)	57.9(33)	19.3(11)	
2. Languages & Social Studies	11.8(2)	41.2(7)	47.1(8)	.09
3. Math & Science	23.1(3)	30.8(4)	46.2(6)	
4. Best liked subjects				
1. Languages & Social Studies	17.6(6)	50.0(17)	32.4(11)	
2. Math & Science	25.0(9)	63.9(23)	11.1(4)	.008
3. Technical-Vocational	17.6(3)	23.5(4)	58.8(10)	
5. Frequency of father's praise for accomplishments				
1. Very often	15.4(8)	61.5(32)	23.1(12)	
2. Not often	33.3(6)	44.4(8)	22.2(4)	.03
3. Almost never	23.5(4)	23.5(4)	52.9(9)	
6. Frequency of mother's praise for accomplishments				
1. Very often	22.4(13)	58.6(34)	19.0(11)	
2. Not often	20.0(4)	30.0(6)	50.0(10)	.06
3. Almost never	11.1(1)	44.4(4)	44.4(4)	

7. Would most like to be (Position or Occupation)				
1. Self-employed businessman	23.1(6)	42.3(11)	34.6(9)	
2. Airline pilot	20.8(5)	50.0(12)	29.2(7)	
3. Famous athlete	7.1(1)	64.3(9)	28.6(4)	.03
4. Auto mechanic	45.5(5)	9.1(1)	45.5(5)	
5. Teacher	10.0(1)	90.0(9)	0.0(0)	
8. Father's education				
1. Some grade school to some high school	26.1(6)	31.1(9)	34.8(8)	
2. Finished high school	12.5(2)	43.8(7)	43.8(7)	.04
3. Some university to graduate school	21.6(8)	67.6(25)	10.8(4)	
4. Don't know	18.2(2)	27.3(3)	54.5(6)	
9. Mother's education				
1. Some grade school to some high school	23.1(6)	43.3(11)	34.6(9)	
2. Finished high school	24.0(6)	44.0(11)	32.0(8)	.008
3. Some university to graduate school	18.2(4)	81.8(18)	0.0(0)	
4. Don't know	14.3(2)	28.6(4)	57.1(8)	
10. Father's occupation				
1. Professional of small business	21.9(7)	68.8(22)	9.4(3)	
2. Clerical	13.3(2)	60.0(9)	26.7(4)	.01
3. Skilled	17.6(6)	35.3(12)	47.1(16)	
11. Religious preference				
1. Protestant	18.6(18)	39.5(17)	49.9(18)	.03
2. Catholic	18.9(7)	64.9(24)	16.2(6)	
12. Students get a fair deal from teachers and principals				
1. Yes	30.6(15)	46.9(23)	22.4(11)	.02
2. No	7.9(3)	55.3(21)	36.8(14)	

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TABLE 4

Significant Relationships Between the Outcome Variable "Planned Programme of Studies at University", and Some Antecedent or Independent Variables. (Frequencies) and Percentage.

Outcome variable: Planned programme of studies at university

Independent Variables	Undecided or Planning not to Attend	Engineering, Military College, Astronautics or Commerce	Medicine, Dentistry, Pharmacy	Music, Journalism, Education, Administration or Arts	Architecture, Meteorology, or Science	Significance
1. School						
1. English academic	28.0(7)	28.0(7)	24.0(6)	12.0(3)	8.0(2)	
2. English comprehensive	72.0(18)	12.0(3)	0.0(0)	4.0(1)	12.0(3)	.001
3. French academic	24.6(6)	12.0(3)	24.0(6)	16.0(4)	24.0(6)	
4. French polyvalent	56.0(14)	8.0(2)	8.0(2)	28.0(7)	0.0(0)	
2. Pass standing in all subjects						
1. Yes	33.8(22)	13.8(9)	18.5(12)	18.5(12)	15.4(10)	.01
2. No	65.7(23)	17.1(6)	5.7(2)	8.6(3)	2.9(1)	
3. Failure subjects						
1. None	33.8(22)	13.8(9)	18.5(12)	18.5(12)	15.4(10)	
2. Languages & Social Studies	72.2(13)	16.7(3)	0.0(0)	11.1(2)	0.0(0)	.07
3. Math & Science	58.8(10)	17.6(3)	11.8(2)	5.9(1)	5.9(1)	
4. Best liked subjects						
1. Languages & Social Studies	53.5(23)	7.0(3)	14.0(6)	16.3(7)	9.3(4)	
2. Math & Science	22.5(9)	22.5(9)	20.0(8)	17.5(7)	17.5(7)	.008
3. Technical-Vocational	76.5(13)	17.6(3)	0.0(0)	5.9(1)	0.0(0)	
5. Frequency of father's praise for accomplishments						
1. Very often	31.6(18)	19.3(11)	19.3(11)	14.0(8)	15.8(9)	
2. Not often	60.9(14)	13.0(3)	4.3(1)	17.4(4)	4.3(1)	.10
3. Almost never	65.0(13)	5.0(1)	10.0(2)	15.0(3)	5.0(1)	

6. Frequency of mother's praise for accomplishments						
1. Very often	34.8(23)	15.2(10)	19.7(13)	16.7(11)	13.6(9)	
2. Not often	65.2(15)	21.7(5)	0.0(0)	8.7(2)	4.3(1)	.08
3. Almost never	63.6(7)	0.0(0)	9.1(1)	18.2(2)	9.1(1)	
7. Would most like to be (occupation or position)						
1. Self-employed businessman	42.9(12)	14.3(4)	14.3(4)	25.0(7)	3.6(1)	
2. Airline pilot	34.6(9)	26.9(7)	19.2(5)	3.8(1)	15.4(4)	
3. Famous athlete	56.3(9)	0.0(0)	25.0(4)	0.0(0)	18.8(3)	.008
4. Auto mechanic	81.8(9)	18.2(2)	0.0(0)	0.0(0)	0.0(0)	
5. Teacher	37.5(6)	6.3(1)	6.3(1)	37.5(6)	12.5(2)	
8. Mother's education						
1. Some grade school to some high school	51.5(17)	12.1(4)	18.2(6)	18.2(6)	0.0(0)	
2. finished high school	48.1(17)	14.8(4)	3.7(1)	14.8(4)	18.5(5)	.02
3. Some university to graduate school	16.7(4)	20.8(5)	29.2(7)	12.5(3)	20.8(3)	
4. Don't know	68.8(11)	12.5(2)	0.0(0)	12.5(2)	6.7(1)	
9. Father's occupation						
1. Professional or small business	31.4(11)	22.9(8)	25.7(9)	8.6(3)	11.4(4)	
2. Clerical	47.1(8)	5.9(1)	11.8(2)	17.6(3)	17.6(3)	.10
3. Skilled	51.2(21)	12.2(5)	4.9(2)	22.0(9)	9.8(4)	

TABLE 5

Significant Relationships between the Outcome Variable "Most Important Goal Provided by University" and Some Antecedent, or Independent Variables. (Frequencies) and Percentages.

Independent Variables	Skills to Enable High Income	Understanding of Science and Skills Related to Work.	Understanding of Social Conditions	Develop Moral Self	Significance
1. Sex					
1. Male	26.4(14)	39.6(21)	17.0(9)	17.0(9)	.09
2. Female	7.1(2)	50.0(14)	32.1(9)	10.7(3)	
2. Best liked subjects					
1. Languages & Social Studies	20.0(7)	37.1(13)	25.7(9)	17.1(6)	
2. Math & Science	21.6(8)	54.1(20)	18.9(7)	5.4(2)	.09
3. Technical-vocational	11.1(1)	22.2(2)	22.2(2)	44.4(4)	
3. Would most like to be (Position or Occupation)					
1. Self-employed businessman	30.4(7)	43.5(10)	21.7(5)	4.3(1)	
2. Air pilot	26.1(6)	47.8(11)	13.0(3)	13.0(3)	
3. Famous athlete	16.7(2)	25.0(3)	41.7(5)	16.7(2)	.09
4. Auto mechanic	0.0(0)	16.7(1)	33.3(2)	50.0(3)	
5. Teacher	0.0(0)	57.1(8)	21.4(3)	21.4(3)	

TABLE 6

Significant Relationships Between the Outcome Variable
"Intended Occupation"
and Some Antecedent or Independent Variables
(Frequencies) and Percentages

Independent Variables	Undecided	Professional or Big Business	Clerical or Skilled	Significance
1. School				
1. English academic	8.0(2)	76.0(19)	16.0(4)	
2. English comprehensive	20.0(5)	28.0(7)	52.0(13)	.001
3. French academic	28.0(7)	64.0(16)	8.0(2)	
4. French polyvalent	32.0(8)	36.0(9)	32.0(8)	
2. Sex				
1. Male	23.9(16)	41.8(28)	34.3(23)	.02
2. Female	18.2(6)	69.7(23)	12.1(4)	
3. Pass standing in all subjects				
1. Yes	20.0(13)	60.0(39)	20.0(13)	.03
2. No	25.7(9)	34.3(12)	40.0(14)	
4. Failure subjects				
1. None	20.0(13)	60.0(39)	20.0(13)	
2. Languages & Social Studies	33.3(6)	22.2(4)	44.4(8)	.06
3. Math & Science	17.6(3)	47.1(8)	35.3(6)	
5. Best liked subjects				
1. Languages & Social Studies	34.9(15)	39.5(17)	25.6(11)	
2. Math & Science	12.5(5)	75.0(30)	12.5(5)	.0001
3. Technical-vocational	11.8(2)	23.5(4)	64.7(11)	
6. Frequency of mother's praise for accomplishments				
1. Very often	13.6(9)	63.6(42)	22.7(15)	
2. Not often	34.8(8)	26.1(6)	39.1(9)	.006
3. Almost never	45.5(5)	27.3(3)	27.3(3)	
7. Would most like to be (Position or Occupation)				
1. Self-employed businessman	17.9(5)	57.1(16)	25.0(7)	
2. Airline pilot	19.2(5)	61.5(16)	19.2(5)	
3. Famous athlete	18.8(3)	43.8(7)	37.5(6)	.01
4. Auto mechanic	18.2(2)	9.1(1)	72.7(8)	
5. Teacher	37.5(3)	56.3(9)	6.3(1)	
8. Father's education				
1. Some grade school to some high school	25.0(7)	42.9(12)	32.1(9)	
2. Finished high school	30.0(6)	35.0(7)	35.0(7)	
3. Some university to graduate school	12.8(5)	74.4(29)	12.8(5)	.01
4. Don't know	30.8(4)	23.1(3)	46.2(6)	
9. Mother's education				
1. Some grade school to some high school	27.3(9)	36.4(12)	36.4(12)	
2. Finished high school	18.5(5)	51.9(14)	29.6(8)	.01
3. Some university to graduate school	12.5(3)	83.3(20	4.2(1)	
4. Don't know	31.3(5)	31.3(5)	37.5(6)	
10. Father's occupation				
1. Professional or small business	8.6(3)	74.3(26)	17.1(6)	
2. Clerical	23.5(4)	41.2(7)	35.3(6)	.02
3. Skilled	29.3(12)	39.0(16)	36.7(18)	
11. Religious preference				
1. Protestant	15.9(7)	47.7(21)	36.4(16)	.08
2. Catholic	27.1(13)	56.3(27)	16.7(8)	
12. Students get a fair deal from teachers and principals				
1. Yes	14.0(8)	61.4(35)	24.5(14)	.03
2. No	32.6(14)	37.2(16)	30.2(13)	

TABLE 7

Significant Relationships Between the Outcome Variable "Combining Technical and Academic Programmes Gives a better Overall or General Education", and Some of the Independent Variables. (Frequencies) and Percentages.

Outcome Variable: Combining technical and academic programmes gives a better overall or general education.

Independent Variables	Yes	No	Significance
1. School			
1. English academic	84.0(21)	16.1(4)	.004
2. English comprehensive	65.2(15)	34.8(8)	
3. French academic	36.0(9)	64.0(16)	
4. French polyvalent	69.6(16)	30.4(7)	
2. Frequency of father's praise for accomplishments			
1. Very often	66.7(36)	33.3(18)	.10
2. Not often	45.5(10)	54.5(12)	
3. Almost never	75.0(15)	25.0(5)	
3. Religious preference			
1. Protestant	74.4(32)	25.6(11)	.06
2. Catholic	53.2(25)	46.8(22)	
4. Student's get a fair deal from teacher and principals			
1. Yes	73.2(41)	26.8(15)	.03
2. No	50.0(20)	50.0(20)	

TABLE 8

Significant Relationships Between the Outcome Variable "Combining Technical and Academic Programmes Better Prepares Students for Engineering and Science", and Some of the Independent Variables. (Frequencies) and Percentages

Outcome Variable: Combining technical and academic programmes better prepares students for engineering and science.

Independent variables	Yes	No	Significance
1. School			
1. English academic	88.0(22)	12.0(3)	.0001
2. English comprehensive	70.8(17)	29.2(7)	
3. French academic	29.2(7)	70.8(17)	
4. French polyvalent	45.5(10)	54.5(12)	
2. Father's birthplace			
1. Quebec province	50.0(30)	50.0(30)	.06
2. Other Canadian Province	73.7(14)	26.3(5)	
3. Outside Canada	75.0(12)	25.0(4)	
3. Religious preference			
1. Protestant	81.8(36)	18.2(8)	.0001
2. Catholic	37.8(17)	62.2(28)	

APPENDIX II - QUESTIONNAIRE

JOSEPH MUGRIDGE
DEPARTMENT OF EDUCATION
CONCORDIA UNIVERSITY
MONTREAL

STUDY OF STUDENTS' EDUCATIONAL AND OCCUPATIONAL PLANS

This questionnaire is part of a study being carried out in schools as part of my M.A. Thesis requirements in Educational Studies at Concordia University. The main purpose of the questionnaire is to learn about the interests and attitudes of high school students in various kinds of school situations.

I think you will find the questions interesting to answer. Try to go through the questionnaire quickly, without spending too much time on any single question. Answer the questions in order, without skipping.

Feel free to answer exactly the way you feel, for no one in this school will ever see the answers. This is a CONFIDENTIAL questionnaire.

REMEMBER: This is a questionnaire and not a test. There are no right or wrong answers. Please answer exactly the way you feel.

THANK YOU FOR YOUR HELP

		Frequency	Percentage
1. Sex	1. Male	67	67.0
	2. Female	33	33.0
2. Type of school	1. English academic	25	25.0
	2. English comprehensive	25	25.0
	3. French academic	25	25.0
	4. French polyvalent	25	25.0
3. Age of last birthday	1. 15	25	25.0
	2. 15-16	69	69.0
	3. 17	5	5.0
	4. 18	1	1.0
4. Name of school			
5. Name of teacher			
6. What program are you taking in school this year? (Check one)	1. Vocational Technical	0	0
	2. Commercial or business	0	0
	3. General	82	82.0
	4. College preparatory	18	18.0
	5. Other (What?_____)	0	0
7. What program are you planning to take next year?	1. Vocational Technical	17	17.0
	2. Commercial or business	4	4.0
	3. General	44	44.0
	4. College preparatory	33	33.0
	5. Other (What?_____)	2	2.0

		Frequency	Percentage
8. Do you have a pass in all subjects to date this year?			
	1. Yes	65	65.0
	2. No	35	35.0
9. What are the subjects that you have a fail grade in?			
	1. None	65	65.0
	2. Languages	14	14.0
	3. Social Studies	3	3.0
	4. Math & Science	17	17.0
	5. Other	1	1.0
10. Next year do you plan to take any of the Technical Vocational courses offered?			
	1. Yes	29	29.0
	2. No	71	71.0
11. If yes to question 10, which course would that be?			
	1. None	69	69.0
	2. Typing	11	11.0
	3. Auto mechanics	12	12.0
	4. Wood working	1	1.0
	5. Electricity & Electronics	5	5.0
12. Which subject do you like best in school? (List only one subject)			
	1. Not answered	1	1.0
	2. Languages	15	15.0
	3. Social Studies	14	14.0
	4. Math & Sciences	40	40.0
	5. Music	3	3.0
	6. Gymnasium	8	8.0
	7. Technical drawing	2	2.0
	8. Technical Vocational	17	17.0

13. Since you have been in high school, which of the following sports, if any, have you gone out for? (Check as many as apply)

		Frequency	Percentage
1.	None	17	17.0
2.	Basketball	52	52.0
3.	Football	4	4.0
4.	Track	1	1.0
5.	Cross-country	4	4.0
6.	Golf	0	0.0
7.	Baseball	3	3.0
8.	Wrestling	0	0.0
9	Swimming	2	2.0
10.	Badminton	4	4.0
11.	Gymnastics	3	3.0
12.	Tennis	0	0.0
13.	Other	10	10.0

14. How much time, on the average do you spend doing homework outside school? (Check one)

1.	None or almost none	16	16.0
2.	Less than half hour a day	11	11.0
3.	About half hour a day	27	27.0
4.	About one and a half hours a day	12	12.0
5.	About two hours a day	12	12.0
6.	Three or more hours a day	1	1.0
7.	Other	10	10.0

		Frequency	Percentage
15. Suppose you had an extra hour in school and could either take some course of your choice, use the hour for athletics or some other activity, or use it for study hall, how would you use it? (Check one answer only)			
	1. Take a course of my own choosing	29	29.0
	2. Athletics	21	21.0
	3. Club or activity	16	16.0
	4. Study hall, to study	9	9.0
	5. Study hall to do something else	12	12.0
	6. Other	13	13.0
16. About how many evenings a week do you spend at home?			
	1. None	4	4.0
	2. One	6	6.0
	3. Two	13	13.0
	4. Three	12	12.0
	5. Four	20	20.0
	6. Five	29	29.0
	7. Six	13	13.0
	8. Seven	3	3.0
17. List the clubs or activities in which you are presently a member or participant here at school			
	1. None	51	51.0
	2. One	30	31.0
	3. Two	13	13.0
	4. Three	4	4.0
	5. Four	1	1.0
	6. Five	0	0.0
	7. Six	1	1.0

		Frequency	Percentage
18. In how many of the organizations or activities mentioned in question 17 are you an officer or monitor?			
	1. None	82	82.0
	2. One	11	11.0
	3. Two	4	4.0
	4. Three	2	2.0
	5. Four	1	1.0
19. How often do you go to the movies?			
	1. Never, or almost never	23	23.0
	2. About once a month or less	47	47.0
	3. About once every two or three weeks	24	24.0
	4. About once a week	5	5.0
	5. About twice a week	0	0.0
	6. More than twice a week	1	1.0
20. With whom do you go most often?			
	1. By myself	7	7.0
	2. With a friend	31	31.0
	3. With a date	12	12.0
	4. With other boys	10	10.0
	5. With other girls	5	5.0
	6. With other boys and girls	29	29.0
	7. With members of my family	6	6.0
	8. Other	0	0.0

		Frequency	Percentage
21. About how much time, on the average, do you watch T.V. during the school week?			
	1. None or almost none	14	14.0
	2. About half hour a day	4	4.0
	3. About one hour a day	27	27.0
	4. About one and a half hours a day	9	9.0
	5. About two hours a day	23	23.0
	6. About three hours a day	16	16.0
	7. About four or more hours a day	7	7.0
22. About how much time, on the average do you spend on the telephone talking to friends, during the school week?			
	1. None or almost none	52	52.0
	2. About half hour a day	27	27.0
	3. About one hour a day	17	17.0
	4. About one and a half hours a day	3	3.0
	5. About two hours a day	1	1.0
	6. About three hours a day	0	0.0
	7. About four or more hours a day	0	0.0

23. Here are some things that you have probably thought about. Just how important is each of these? (Rank them from 1 through 4. 1 for the highest in importance to you, 2 for the second highest, 3 for the third highest, and 4 for the lowest.)

Pleasing my parents	1. 1	34	34.0
	2. 2	46	46.0
	3. 3	16	16.0
	4. 4	4	4.0

		Frequency	Percentage
23. Cont'd			
Learning as much as possible in school	1. 1	20	20.0
	2. 2	30	30.0
	3. 3	39	39.0
	4. 4	11	11.0
Living up to my religious ideals	1. 1	3	3.0
	2. 2	7	7.0
	3. 3	12	12.0
	4. 4	78	78.0
Being accepted and like by other students	1. 1	43	43.0
	2. 2	17	17.0
	3. 3	33	33.0
	4. 4	7	7.0
24. Describe you favourite way of spending your leisure or spare time. (First choice)	1, None	15	15.0
	2. Reading	20	20.0
	3. Watching T.V.	4	4.0
	4. Indoor activity	22	22.0
	5. Outdoor activity	11	11.0
	6. Sport participation	28	28.0
(Second choice)	1. None	51	51.0
	2. Reading	1	1.0
	3. Watching T.V.	4	4.0
	4. Indoor activity	25	25.0
	5. Outdoor activity	16	16.0
	6. Sport participation	3	3.0

			Frequency	Percentage
25.	Do you have a hobby?	1. Unanswered	1	1.0
		2. No	25	25.0
		3. Yes	74	74.0
	What is your hobby?	1. None	25	25.0
		2. Reading	8	8.0
		3. Watching T.V.	1	1.0
		4. Indoor activity	41	41.0
		5. Outdoor activity	11	11.0
		6. Sports participation	13	13.0
		7. Unanswered	1	1.0
26.	Do you do much reading other than what you do for your courses?	1. Yes, a great deal	23	23.0
		2. Yes, much	22	22.0
		3. Yes, some	35	35.0
		4. Little or none	20	20.0
27.	How much influence would you say you have in family decisions affecting yourself?	1. A lot of influence	30	30.0
		2. Some influence	49	49.0
		3. None at all	21	21.0
28.	If a decision is made at home that you don't like, do you feel free to complain, do you feel a little uneasy about complaining or is it better not to complain?	1. Feel free	69	69.0
		2. Feel a little uneasy	19	19.0
		3. It is better not to complain	11	11.0
		4. Unanswered	1	1.0

		Frequency	Percentage
29. In general, how are decisions made in your family?			
	1. In general, father makes the decisions	6	6.0
	2. In general, mother makes the decisions	16	16.0
	3. Both parents decide together	70	70.0
	4. Each parent acts individually	7	7.0
	5. Unanswered	1	1.0
30. How much would you say your father knows about your work in school?			
	1. A great deal	18	18.0
	2. A fair amount	47	47.0
	3. Very little	28	28.0
	4. Father deceased	1	1.0
	5. Unanswered	6	6.0
31. How often would you say your father praises you for your accomplishments?			
	1. Very often	15	15.0
	2. Quite often	42	42.0
	3. Not too often	23	23.0
	4. Almost never	19	19.0
	5. Unanswered	1	1.0
32. How much would you say your mother knows about your work in school?			
	1. A great deal	41	41.0
	2. A fair amount	39	39.0
	3. Very little	18	18.0
	4. Unanswered	2	2.0

		Frequency	Percentage
33. How often would you say your mother praises you for your accomplishments?			
	1. Very often	20	20.0
	2. Quite often	46	46.0
	3. Not too often	23	23.0
	4. Almost never	11	11.0
34. What do your parents consider to be satisfactory grades or marks for you?			
	1. A passing grade or mark	7	7.0
	2. An average grade or mark	23	23.0
	3. An above average grade or mark	48	48.0
	4. One of the highest grades or marks in the class	21	21.0
	5. They don't really care much	1	1.0
35. If you could be any of the things below which one would you most want to be? (Check only one choice)			
	1. Self-employed businessman	28	28.0
	2. Airline pilot	26	26.0
	3. Mayor of a city	0	0.0
	4. Nationally famous athlete	16	16.0
	5. Automobile mechanic	11	11.0
	6. High school teacher	8	8.0
	7. Elementary school teacher	8	8.0
	8. Unanswered	3	3.0
36. Do you have a car of your own?			
	1. No	47	47.0
	2. Yes	53	53.0

		Frequency	Percentage
37. Can you use your parent's car?	1. Anytime I want it	6	6.0
	2. Often	1	1.0
	3. Sometimes	14	14.0
	4. Never	71	71.0
	5. My parents have no car	8	8.0
38. How good on the average are your school grades?	1. In the top quarter of my class	31	31.0
	2. In the second quarter of my class	43	43.0
	3. In the third quarter of my class	20	20.0
	4. In the lowest quarter of my class	6	6.0
39. Are you	1. An only child	0	0.0
	2. The oldest child in your family	40	40.0
	3. The youngest child in your family	24	24.0
	4. Between the youngest and oldest	36	36.0
40. Where were you born?	1. In this city	66	66.0
	2. Outside this city but in Quebec	16	16.0
	3. Outside this province but in Canada	10	10.0
	4. Outside of Canada (Where? _____)	8	8.0
41. If you were born in another country, indicate the number of years you have lived in Canada	1. Less than 1 year	0	0.0
	2. 1 or 2 years	2	2.0
	3. 3 or 4 years	1	1.0
	4. 5 or 6 years	0	0.0
	5. 7 or more years	5	5.0
	6. I was born in Canada	90	90.0
	7. Unanswered	2	2.0

		Frequency	Percentage
42. List the languages you speak well			
	1. One language	41	41.0
	2. Two languages	52	52.0
	3. Three or more	7	7.0
43. Where was your father born?			
	1. In this city	36	36.0
	2. Outside this city but in Quebec	27	27.0
	3. Outside this province but in Canada	20	20.0
	4. Outside of Canada (Where?_____)	17	17.0
44. Where was your mother born?			
	1. In this city	41	41.0
	2. Outside this city but in Quebec	32	32.0
	3. Outside this province but in Canada	11	11.0
	4. Outside of Canada (Where?_____)	16	16.0
45. How much formal education did your father have?			
	1. Some grade school	6	6.0
	2. Finished grade school	5	5.0
	3. Some high school	17	17.0
	4. Finished high school	20	20.0
	5. Some college	6	6.0
	6. Finished college	10	10.0
	7. Attended graduate school or professional school or college	23	23.0
	8. Don't know	13	13.0

		Frequency	Percentage
46. How much formal education did your mother have?			
	1. Some grade school	5	5.0
	2. Finished grade school	12	12.0
	3. Some high school	16	16.0
	4. Finished high school	27	27.0
	5. Some college	4	4.0
	6. Finished college	10	10.0
	7. Attended graduate school or professional school or college	10	10.0
	8. Don't know	16	16.0
47. What is your father's occupation?			
	1. Unanswered	5	5.0
	2. Big Business	0	0.0
	3. Professional	28	28.0
	4. Small business	5	5.0
	5. Clerical	17	17.0
	6. Skilled	41	41.0
	7. Unskilled	1	1.0
	8. Teacher of clergy	2	2.0
	9. Unemployed	1	1.0
48. What is your mother's occupation?			
	1. Professional	3	3.0
	2. Clerical	9	9.0
	3. Skilled	8	8.0
	4. Unskilled	3	3.0
	5. Teacher	5	5.0
	6. Housewife	72	72.0

			Frequency	Percentage
49.	Are your parents living?	1. Both living	93	93.0
		2. Only mother living	5	5.0
		3. Only father living	1	1.0
		4. Neither living	1	1.0
50.	Does your mother have a job outside the home?	1. No	59	59.0
		2. Yes, full time	24	24.0
		3. Yes, part time	17	17.0
51.	Are your parents divorced or separated?	1. No	82	82.0
		2. Yes	18	18.0
52.	Do you live with...	1. Mother and father	75	75.0
		2. Mother and stepfather	7	7.0
		3. Father and stepmother	1	1.0
		4. Mother only	14	14.0
		5. Father only	1	1.0
		6. Other (Write in: _____)	2	2.0
53.	What is your religious preference?	1. Protestant	44	44.0
		2. Roman Catholic	48	48.0
		3. Jewish	0	0.0
		4. Other	6	6.0
		5. Unanswered	2	2.0
54.	How often do you attend religious services?	1. Every week	25	25.0
		2. One to three times a month	20	20.0
		3. Less than once a month	14	14.0
		4. Never	40	40.0
		5. Unanswered	1	1.0

		Frequency	Percentage
55. How many brothers and sisters do you have			
	1. None	0	0.0
	2. One	25	25.0
	3. Two	32	32.0
	4. Three	22	22.0
	5. Four	9	9.0
	6. Five	6	6.0
	7. Six	0	0.0
	8. Seven	0	0.0
	9. Eight	2	2.0
	10. Nine	4	4.0
56. Do you have any brothers or sisters going to university or other post secondary school?			
	1. Yes, older brothers	13	13.0
	2. Yes, both older brothers and sisters	13	13.0
	3. No	65	65.0
	4. No, I have no older brothers and sisters	8	8.0
	5. Unanswered	1	1.0
57. During this school year, how much do you work each week outside the home?			
	1. Not at all	41	41.0
	2. Less than 5 hours	25	25.0
	3. 5 to 9 hours	17	17.0
	4. 10 to 19 hours	5	5.0
	5. 20 or more hours	12.	12.0

		Frequency	Percentage
58. My family's total yearly income in approximately:			
	1. Under $2,500	1	1.0
	2. $2,500 - $5,000	2	2.0
	3. $5,001 - $10,000	4	4.0
	4. $10,001 - $15,000	5	5.0
	5. $15,001 plus	32	32.0
	6. I don't know	55	55.0
	7. Unanswered	1	1.0
59. If you could be remembered here at school for one of the three things below, which one would you want it to be?			
	1. Brilliant student	33	33.0
	2. Athletic star	22	22.0
	3. Most popular student	42	42.0
	4. Unanswered	3	3.0
60. My time in the school has been (Check only one answer)			
	1. Filled with fun and excitement	21	21.0
	2. Interesting and filled with hard work	31	31.0
	3. Fairly pleasant	31	31.0
	4. Somewhat dull	17	17.0
	5. Unhappy	0	0.0
61. Check the category which comes closest to your feeling about yourself.			
	1. I don't like myself the way I am; I'd like to change	7	7.0
	2. There are many things I'd like to change, but not completely	26	26.0
	3. I would like to stay very much the same; there is very little I would change	65	65.0
	4. Unanswered	2	2.0

		Frequency	Percentage
62. When you have to decide between yourself and the group			
	1. I always go along with the group	5	5.0
	2. I usually go along with the group	26	26.0
	3. I usually decide for myself	56	56.0
	4. I always decide for myself	13	13.0
63. In general, do you think the students in this school get a square deal from the teachers and principal?			
	1. Yes	57	57.0
	2. No	43	43.0
64. How important is it to you personally, and how important is it to other students in this school, to get good grades?			
To you personally			
	1. Extremely important	54	54.0
	2. Important	42	42.0
	3. Not important	4	4.0
To other students			
	1. Extremely important	22	22.0
	2. Important	62	62.0
	3. Not important	16	16.0
65. How satisfying is it to you personally, and how satisfying is it to other students in this school, to work hard on studies?			
To you personally			
	1. Extremely important	42	42.0
	2. Satisfying	48	48.0
	3. Not satisfying	4	4.0
	4. Unpleasant	6	6.0

		Frequency	Percentage
65. (Cont'd) To other students			
	1. Extremely important	21	21.0
	2. Satisfying	57	57.0
	3. Not satisfying	13	13.0
	4. Unpleasant	9	9.0
66. How much do you personally admire students who are very bright in school, and how much do other students in this school admire students who are very bright?			
To you personally			
	1. Admire brightness very much	40	40.0
	2. Admire brightness a little	50	50.0
	3. Don't admire it at all	10	10.0
To other students			
	1. Admire brightness very much	20	20.0
	2. Admire brightness a little	57	57.0
	3. Don't admire it at all	23	23.0
67. Which of the items below fit most of the teachers in this school?			
	1. Friendly	48	48.0
	2. Too strict	12	12.0
	3. Too easy with school work	5	5.0
	4. Understand problems of students	11	11.0
	5. Not interested in students	11	11.0
	6. Bored with their job	1	1.0
	7. Willing to help out in activities	3	3.0
	8. Other - What?_____	9	9.0

		Frequency	Percentage
68. Which one honor or achievement would you most like to win in high school?			
	1. Nothing	33	33.0
	2. Academic	49	49.0
	3. Athletic	10	10.0
	4. Social	6	6.0
	5. Friendship	2	2.0
69. The best teachers in this school are:			
	1. English teachers	7	7.0
	2. Foreign language teachers	2	2.0
	3. Social studies teachers	10	10.0
	4. Math and science teachers	31	31.0
	5. Art and music teachers	0	0.0
	6. The teachers are about the same in all subjects	27	27.0
	7. Other _____	21	21.0
	8. Unanswered	2	2.0
70. Do you agree or disagree that:			
I am often not able to keep up with the rest			
	1. Agree	15	15.0
	2. Disagree	85	85.0
There are a few students who control things in this school, and the rest of us are out in the cold			
	1. Agree	51	51.0
	2. Disagree	49	49.0

		Frequency	Percentage
70. (Cont'd) I am not doing so well at school	1. Agree	22	22.0
	2. Disagree	78	78.0
If students want to be part be the leading crowd around here, they sometimes have go to against their principles	1. Agree	69	69.0
	2. Disagree	30	30.0
	3. Unanswered	1	1.0
If I could trade, I would be someone different from myself	1. Agree	14	14.0
	2. Disagree	86	86.0
71. Of the teachers of this school whom you know, how do you think most of them would rate you as a student?	1. A bright student	23	23.0
	2. An average student	60	60.0
	3. A poor student	1	1.0
	4. A student who works hard	7	7.0
	5. A student who doesn't work hard	2	2.0
	6. Other - How?_____	7	7.0
72. Are you planning to finish high school?	1. Yes	94	94.0
	2. No	5	5.0
	3. Undecided	1	1.0

		Frequency	Percentage
73. Are you planning to go to college?			
	1. No, never	15	15.0
	2. Yes, but not right after high school	18	18.0
	3. Yes, as a full-time student right after high school	40	40.0
	4. Yes, as a part-time student right after high school	4	4.0
	5. Undecided	10	10.0
	6. Unanswered	13	13.0
74. How does each of your parents feel about your decision with respect to college?			
Father	1. Strongly encouraged me to go	57	57.0
	2. Wants me to go but has not strongly encouraged me	24	24.0
	3. Does not care one way or the other	14	14.0
	4. Parent is not living	5	5.0
Mother	1. Strongly encouraged me to go	59	59.0
	2. Wants me to go but has not strongly encouraged me	26	26.0
	3. Does not care one way or the other	15	15.0
	4. Parent is not living	0	0.0

		Frequency	Percentage
75. To what extent have you discussed going to college with the teachers or guidance counselors in this school?			
With teachers	1. Not at all	75	75.0
	2. Some	20	20.0
	3. Quite a lot	5	5.0
With guidance counselors	1. Not at all	73	73.0
	2. Some	21	21.0
	3. Quite a lot	6	6.0
76. Now, suppose that a student in this school who had planned to go in college suddenly decided not to go. What do you think would be the reaction of most teachers in this school to the student's change of plans?			
	1. They would be very disappointed and would strongly encourage the students to go to college	76	76.0
	2. They would probably be disappointed but would not say anything to the student	31	31.0
	3. They would not care whether or not the student attended college	33	33.0

77. Of the people your own age with whom you spend most of your free time, how many plan to go to college or are already going to college?

		Frequency	Percentage
1.	None	16	16.0
2.	Few	19	19.0
3.	Some	27	27.0
4.	Most	28	28.0
5.	All	10	10.0

78. IF YOU ARE GOING TO COLLEGE OR ARE "UNDECIDED" CONTINUE TO ANSWER THIS QUESTION. IF YOU ARE NOT GOING TO COLLEGE SKIP TO QUESTION 87.

Check the highest level of education you expect to complete

1.	Plan to attend a two year college	4	4.0
2.	Plan to get a B.A. degree (4 years)	12	12.0
3.	Plan to do one year of graduate study	5	5.0
4.	Plan to obtain a professional degree (Medecine, Dentistry, Law)	16	16.0
5.	Plan to obtain a Ph.D.	6	6.0
6.	I have not made up my mind about my college plans	42	42.0
7.	Unanswered	15	15.0

		Frequency	Percentage
79. What are you planning to study in college?			
	1. No answer or undecided	45	45.0
	2. Engineering	11	11.0
	3. Medicine, Dentistry or Vetrinary medicine	13	13.0
	4. Military college	1	1.0
	5. Astronautics	2	2.0
	6. Music	1	1.0
	7. Journalism	1	1.0
	8. Architecture	3	3.0
	9. Science	7	7.0
	10. Education	4	4.0
	11. Meteorology	1	1.0
	12. Administration	6	6.0
	13. Commerce	1	1.0
	14. Nursing	1	1.0
	15. Arts	2	2.0
	16. Pharmacy	1	1.0
80. When did you make a decision on how much college training you expect to complete?			
	1. Before I entered high school	8	8.0
	2. Since I entered high school	42	42.0
	3. I have not yet decided how much college to complete	32	32.0
	4. Unanswered	18	18.0

81. In thinking about how much college training you expect to complete which of the categories of persons listed below have you talked to about it?

		Frequency	Percentage
1.	Parents	63	63.0
2.	Brother or sister	2	2.0
3.	Friends here in school	4	4.0
4.	Friends or acquaintances attending college	0	0.0
5.	Social Studies teacher	1	1.0
6.	Foreign language teacher	1	1.0
7.	Mathematics or science teacher	1	1.0
8.	English teacher	1	1.0
9.	Other	1	1.0
10.	No one, or unanswered	20	20.0

82. Which one of the above persons encouraged you most to go on to college?

1.	No one or unanswered	29	29.0
2.	Parents	60	60.0
3.	Brother or sister	3	3.0
4.	Foreign language teacher	1	1.0
5.	Math or Science teacher	1	1.0
6.	English teacher	1	1.0
7.	Other	5	5.0

		Frequency	Percentage
83. Now considering all the colleges in the country, if you could completely have your choice, what would your ideal college be?			
	1. None or unanswered	52	52.0
	2. Nevada	1	1.0
	3. RMC	2	2.0
	4. Ryerson	2	2.0
	5. McGill	12	12.0
	6. Queens	1	1.0
	7. Concordia	2	2.0
	8. UBC	1	1.0
	9. University of Manitoba	1	1.0
	10. Université de Montréal	18	18.0
	11. Laval	3	3.0
	12. UCLA	2	2.0
	13. Any in Ontario	1	1.0
	14. Université du Québec	1	1.0
	15. Harvard	1	1.0
84. Approximately what percentages of your college education do you expect that your family or relatives will pay for?			
	1. None	21	21.0
	2. 25%	8	8.0
	3. 50%	23	23.0
	4. 75%	18	18.0
	5. 100%	15	15.0
	6. Unanswered or unknown	15	15.0

		Frequency	Percentage
85. Students going to college have different ideas about the main purposes of a college education. Some ideas on this topic are listed below. Rate them according to their importance to you by checking one of the three possible answers in each case:			
Provide vocational training that is develop skills which are directly applicable to your work			
	1. High importance	64	64.0
	2. Medium importance	17	17.0
	3. Low importance	2	2.0
	4. Unanswered	17	17.0
Help develop your abilities to get along with different kinds of people			
	1. High importance	35	35.0
	2. Medium importance	39	39.0
	3. Low importance	10	10.0
	4. Unanswered	16	16.0
Help develop your knowledge and interest in community, national and world problems			
	1. High importance	27	27.0
	2. Medium importance	44	44.0
	3. Low importance	12	12.0
	4. Unanswered	17	17.0
Help develop your morals and values			
	1. High importance	38	38.0
	2. Medium importance	30	30.0
	3. Low importance	15	15.0
	4. Unanswered	17	17.0

		Frequency	Percentage
85. (Cont'd)			
Prepare you for a happy marriage and family life	1. High importance	29	29.0
	2. Medium importance	26	26.0
	3. Low importance	28	28.0
	4. Unanswered	17	17.0
Develop skills which will enable you to earn a high income	1. High importance	54	54.0
	2. Medium importance	24	24.0
	3. Low importance	5	5.0
	4. Unanswered	17	17.0
Develop your understanding of the principles of science	1. High importance	33	33.0
	2. Medium importance	35	35.0
	3. Low importance	15	15.0
	4. Unanswered	17	17.0
Develop your understanding of principles underlying human behavior	1. High importance	30	30.0
	2. Medium importance	30	30.0
	3. Low importance	23	23.0
	4. Unanswered	17	17.0
Develop your understanding of such subjects as philosophy, art, literature and music	1. High importance	13	13.0
	2. Medium importance	34	34.0
	3. Low importance	36	36.0
	4. Unanswered	17	17.0

		Frequency	Percentage
85. (Cont'd) Provide social and athletic activities			
	1. High importance	25	25.0
	2. Medium importance	33	33.0
	3. Low importance	25	25.0
	4. Unanswered	17	17.0
86. Which of the above mentioned goals is of the most importance to you?			
	1. Unanswered	19	19.0
	2. #1	26	26.0
	3. #2	5	5.0
	4. #3	4	4.0
	5. #4	2	2.0
	6. #5	8	8.0
	7. #6	16	16.0
	8. #7	9	9.0
	9. #8	3	3.0
	10. #9	2	2.0
	11. #10	6	6.0
87. What is the most important reason for your decision not to go to college?			
	1. Unanswered	82	82.0
	2. Not necessary	11	11.0
	3. Want a skilled position	1	1.0
	4. No money	1	1.0
	5. Wish to earn my own money as soon as possible	2	2.0
	6. Not interested	3	3.0

		Frequency	Percentage
88. What occupation do you intend to follow?			
	1. Undecided	22	22.0
	2. Big business	1	1.0
	3. Professional	46	46.0
	4. Clerical	1	1.0
	5. Skilled	26	26.0
	6. Teacher or clergy	4	4.0
89. Do you think that a combination of Technical Vocational education and Regular Academic education will give a student a better overall general education?			
	1. Yes	61	61.0
	2. No	35	35.0
	3. Unanswered	5	5.0
91. Have you ever been counselled by an administrator, or the Guidance Department in choosing your courses for next year?			
	1. Yes	33	33.0
	2. No	63	63.0
	3. Unanswered	4	4.0
92. Have you ever been told by an administrator, teacher or guidance counsellor that it was possible to take Technical Vocational education and at the same time complete the Regular Academic Programme?			
	1. Yes	2	2.0
	2. No	95	95.0
	3. Unanswered	3	3.0

		Frequency	Percentage
3. Have you ever been counselled by an administrator, or the Guidance Department, and told that Technical Education could be useful for, (a) continuing education after high school, (b) useful in most ways of life?			
(a)	1. Yes	4	4.0
	2. No	93	93.0
	3. Unanswered	3	3.0
(b)	1. Yes	2	2.0
	2. No	95	95.0
	3. Unanswered	3	3.0
4. If you had received this counselling from an administrator, or the Guidance Department, would it have made a difference in your course selections?			
	1. Yes	21	21.0
	2. No	71	71.0
	3. Unanswered	8	8.0
5. How do you feel the following occupation should be ranked in order of importance?			
Welder	1. Unanswered	9	9.0
	2. Position #1	0	0.0
	3. Position #2	3	3.0
	4. Position #3	2	2.0

95. (Cont'd)

		Frequency	Percentage
Auto mechanic	1. Unanswered	8	8.0
	2. Position #1	7	7.0
	3. Position #2	5	5.0
	4. Position #3	6	6.0
	5. Position #4	10	10.0
	6. Position #5	16	16.0
	7. Position #6	26	26.0
	8. Position #7	15	15.0
	9. Position #8	7	7.0
Teacher	1. Unanswered	9	9.0
	2. Position #1	10	10.0
	3. Position #2	12	12.0
	4. Position #3	18	18.0
	5. Position #4	17	17.0
	6. Position #5	15	15.0
	7. Position #6	7	7.0
	8. Position #7	3	3.0
	9. Position #8	9	9.0
Doctor	1. Unanswered	9	9.0
	2. Position #1	53	53.0
	3. Position #2	17	17.0
	4. Position #3	11	11.0
	5. Position #4	2	2.0
	6. Position #5	1	1.0
	7. Position #6	2	2.0
	8. Position #7	2	2.0
	9. Position #8	3	3.0

			Frequency	Percentage
95. (Cont'd) Lawyer	1.	Unanswered	9	9.0
	2.	Position #1	11	11.0
	3.	Position #2	34	34.0
	4.	Position #3	19	19.0
	5.	Position #4	12	12.0
	6.	Position #5	5	5.0
	7.	Position #6	3	3.0
	8.	Position #7	4	4.0
	9.	Position #8	3	3.0
Office clerk	1.	Unanswered	9	9.0
	2.	Position #1	2	2.0
	3.	Position #2	3	3.0
	4.	Position #3	11	11.0
	5.	Position #4	12	12.0
	6.	Position #5	21	21.0
	7.	Position #6	11	11.0
	8.	Position #7	12	12.0
	9.	Position #8	19	19.0
Aircraft pilot	1.	Unanswered	9	9.0
	2.	Position #1	8	8.0
	3.	Position #2	17	17.0
	4.	Position #3	17	17.0
	5.	Position #4	19	19.0
	6.	Position #5	10	10.0
	7.	Position #6	9	9.0
	8.	Position #7	10	10.0
	9.	Position #8	1	1.0

96. How do you feel these occupations would be ranked by your parents?		Frequency	Percentage
Welder	1. Unanswered	33	33.0
	2. Position #1	0	0.0
	3. Position #2	0	0.0
	4. Position #3	0	0.0
	5. Position #4	2	2.0
	6. Position #5	7	7.0
	7. Position #6	9	9.0
	8. Position #7	20	20.0
	9. Position #8	29.	29.0
Teacher	1. Unanswered	34	34.0
	2. Position #1	8	8.0
	3. Position #2	8	8.0
	4. Position #3	21	21.0
	5. Position #4	14	14.0
	6. Position #5	6	6.0
	7. Position #6	1	1.0
	8. Position #7	1	1.0
	9. Position #8	7	7.0
Auto mechanic	1. Unanswered	33	33.0
	2. Position #1	1	1.0
	3. Position #2	2	2.0
	4. Position #3	3	3.0
	5. Position #4	9	9.0
	6. Position #5	15	15.0
	7. Position #6	21	21.0
	8. Position #7	12	12.0
	9. Position #8	4	4.0

96. (Cont'd)

		Frequency	Percentage
Doctor	1. Unanswered	34	34.0
	2. Position #1	44	44.0
	3. Position #2	19	19.0
	4. Position #3	2	2.0
	5. Position #4	1	1.0
	6. Position #5	0	0.0
	7. Position #6	0	0.0
	8. Position #7	0	0.0
	9. Position #8	0	0.0
Lawyer	1. Unanswered	34	34.0
	2. Position #1	11	11.0
	3. Position #2	28	28.0
	4. Position #3	17	17.0
	5. Position #4	3	3.0
	6. Position #5	1	1.0
	7. Position #6	3	3.0
	8. Position #7	2	2.0
	9. Position #8	1	1.0
Office clerk	1. Unanswered	34	34.0
	2. Position #1	0	0.0
	3. Position #2	0	0.0
	4. Position #3	9	9.0
	5. Position #4	14	14.0
	6. Position #5	16	16.0
	7. Position #6	11	11.0
	8. Position #7	7	7.0
	9. Position #8	9	9.0

			Frequency	Percentage
96. (Cont'd)				
Aircraft Pilot	1.	Unanswered	34	34.0
	2.	Position #1	2	2.0
	3.	Position #2	9	9.0
	4.	Position #3	12	12.0
	5.	Position #4	16	16.0
	6.	Position #5	14	14.0
	7.	Position #6	5	5.0
	8.	Position #7	5	5.0
	9.	Position #8	3	3.0
Carpenter	1.	Unanswered	34	34.0
	2.	Position #1	1	1.0
	3.	Position #2	0	0.0
	4.	Position #3	2	2.0
	5.	Position #4	7	7.0
	6.	Position #5	7	7.0
	7.	Position #6	16	16.0
	8.	Position #7	21	21.0
	9.	Position #8	12	12.0
How do you feel these occupations would be ranked by your friends?				
Welder	1.	Unanswered	37	37.0
	2.	Position #1	1	1.0
	3.	Position #2	1	1.0
	4.	Position #3	1	1.0
	5.	Position #4	4	4.0
	6.	Position #5	9	9.0
	7.	Position #6	11	11.0
	8.	Position #7	15	15.0
	9.	Position #8	21	21.0

		Frequency	Percentage
96. (Cont'd)			
Auto mechanic			
	1. Unanswered	37	37.0
	2. Position #1	4	4.0
	3. Position #2	8	8.0
	4. Position #3	16	16.0
	5. Position #4	12	12.0
	6. Position #5	4	4.0
	7. Position #6	3	3.0
	8. Position #7	2	2.0
	9. Position #8	14	14.0
Teacher			
	1. Unanswered	37	37.0
	2. Position #1	4	4.0
	3. Position #2	8	8.0
	4. Position #3	16	16.0
	5. Position #4	12	12.0
	6. Position #5	4	4.0
	7. Position #6	3	3.0
	8. Position #7	2	2.0
	9. Position #8	14	14.0
Doctor			
	1. Unanswered	36	36.0
	2. Position #1	35	35.0
	3. Position #2	11	11.0
	4. Position #3	11	11.0
	5. Position #4	2	2.0
	6. Position #5	2	2.0
	7. Position #6	2	2.0
	8. Position #7	1	1.0
	9. Position #8	0	0.0

96. (Cont'd)

		Frequency	Percentage
Lawyer	1. Unanswered	37	37.0
	2. Position #1	10	10.0
	3. Position #2	25	25.0
	4. Position #3	10	10.0
	5. Position #4	5	5.0
	6. Position #5	4	4.0
	7. Position #6	5	5.0
	8. Position #7	3	3.0
	9. Position #8	1	1.0
Office clerk	1. Unanswered	37	37.0
	2. Position #1	2	2.0
	3. Position #2	1	1.0
	4. Position #3	2	2.0
	5. Position #4	10	10.0
	6. Position #5	15	15.0
	7. Position #6	10	10.0
	8. Position #7	9	9.0
	9. Position #8	14	14.0
Aircraft pilot	1. Unanswered	37	37.0
	2. Position #1	7	7.0
	3. Position #2	9	9.0
	4. Position #3	17	17.0
	5. Position #4	13	13.0
	6. Position #5	7	7.0
	7. Position #6	0	0.0
	8. Position #7	10	10.0
	9. Position #8	0	0.0

		Frequency	Percentage
96. (Cont'd) Carpenter			
	1. Unanswered	37	37.0
	2. Position #1	0	0.0
	3. Position #2	3	3.0
	4. Position #3	3	3.0
	5. Position #4	8	8.0
	6. Position #5	8	8.0
	7. Position #6	17	17.0
	8. Position #7	11	11.0
	9. Position #8	13	13.0

97. Below is a list of TRUE-FALSE statements about schools; the characteristics of teachers and courses, activities fo students, etc. The statements may or may not be characteristic of your school because schools differ from one another in many ways. You are to decide which statements are characteristic of your school and which are not, and your answers should tell us how things Really are here. Circle T when the statement is generally or mostly True of your school, and circle F when it is generally or mostly False. Give only one response to each item:

The student newspaper or magazine often carries short stories and poems by students.			
	1. True	47	47.0
	2. False	50	50.0
	3. Unanswered	3	3.0
Many teachers here stress the practical uses of their subjects in helping students to get a good job.			
	1. True	68	68.0
	2. False	30	30.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) Students seldom get together on their own time to talk about things they have learned in class.	1. True	57	57.0
	2. False	41	41.0
	3. Unanswered	2	2.0
If a student thinks out a report carefully teachers will give him a good grade, even if they don't agree with him.	1. True	56	56.0
	2. False	42	42.0
	3. Unanswered	2	2.0
It takes more than memorizing what's in the textbook to get an "A" in courses here.	1. True	80	80.0
	2. False	18	18.0
	3. Unanswered	2	2.0
Many classes here are boring.	1. True	68	68.0
	2. False	30	30.0
	3. Unanswered	2	2.0
Students here value individualism, that is, being different from others.	1. True	48	48.0
	2. False	50	50.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) It is difficult to take clear and usable notes in most classes here.			
	1. True	47	47.0
	2. False	51	51.0
	3. Unanswered	2	2.0
Clear and careful thinking are most important in getting a good grade on reports, papers, discussions and tests.			
	1. True	85	85.0
	2. False	13	13.0
	3. Unanswered	2	2.0
Personality, pull, and bluff get students through some courses here.			
	1. True	50	50.0
	2. False	47	47.0
	3. Unanswered	3	3.0
Students having trouble with their courses find it difficult to get help from teachers.			
	1. True	43	43.0
	2. False	55	55.0
	3. Unanswered	2	2.0

97. (Cont'd)

		Frequency	Percentage
This school doesn't offer many opportunities for students to get to know important works of art, music and drama			
	1. True	56	56.0
	2. False	41	41.0
	3. Unanswered	3	3.0
Classes in history, literature, and art are among the best liked here.			
	1. True	32	32.0
	2. False	66	66.0
	3. Unanswered	2	2.0
Many teachers here are more interested in practical applications of what they are teaching than in the underlying theory.			
	1. True	48	48.0
	2. False	50	50.0
	3. Unanswered	2	2.0
There is a lot of interest here in learning for its own sake rather than just for grades or for graduation credits.			
	1. True	39	39.0
	2. False	59	59.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) Teachers require that students work at home on problems which they cannot solve in class.			
	1. True	55	55.0
	2. False	43	43.0
	3. Unanswered	2	2.0
Science labs here have poor equipment.			
	1. True	48	48.0
	2. False	50	50.0
	3. Unanswered	2	2.0
Teachers here often encourage students to consider careers in areas related to the subjects they are teaching.			
	1. True	49	49.0
	2. False	49	49.0
	3. Unanswered	2	2.0
Few students try hard to get on the honor roll.			
	1. True	57	57.0
	2. False	41	41.0
	3. Unanswered	2	2.0
Teachers clearly explain what students can get out of their classes and why it is important.			
	1. True	64	64.0
	2. False	34	34.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) Teachers do nothing more than repeat what's in the text-book in many classes here.	1. True	42	42.0
	2. False	56	56.0
	3. Unanswered	2	2.0
Many students here want to take more courses in science than are required.	1. True	52	52.0
	2. False	45	45.0
	3. Unanswered	3	3.0
Teachers here often make cutting or sarcastic remarks to students in class.	1. True	55	55.0
	2. False	43	43.0
	3. Unanswered	2	2.0
Students here are not encouraged to take courses in such areas as art, music, or dramatics.	1. True	69	69.0
	2. False	29	29.0
	3. Unanswered	2	2.0
Very few students here listen to classical music.	1. True	86	86.0
	2. False	12	12.0
	3. Unanswered	2	2.0
Most students here don't do much reading.	1. True	64	64.0
	2. False	34	34.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd)			
At this school students are seldom encouraged to undertake independent projects			
	1. True	52	52.0
	2. False	46	46.0
	3. Unanswered	2	2.0
Science teachers here expect and get more work out of students than do other teachers.			
	1. True	54	54.0
	2. False	44	44.0
	3. Unanswered	2	2.0
There is not much emphasis by teachers here on preparing for college.			
	1. True	53	53.0
	2. False	45	45.0
	3. Unanswered	2	2.0
Many students here are planning a career in science.			
	1. True	58	58.0
	2. False	40	40.0
	3. Unanswered	2	2.0
Outside of class most teachers find time to chat with students.			
	1. True	57	57.0
	2. False	41	41.0
	3. Unanswered	2	2.0

			Frequency	Percentage
97. (Cont'd)				
Teachers here go out of their way to try and liberate the student from his prejudices and biases.	1.	True	46	46.0
	2.	False	53	53.0
	3.	Unanswered	2	2.0
A student who is interested in art or music is likely to be regarded as a little odd by other students.	1.	True	45	45.0
	2.	False	53	53.0
	3.	Unanswered	2	2.0
Many of the students here don't do much except go to classes and study.	1.	True	34	34.0
	2.	False	64	64.0
	3.	Unanswered	2	2.0
Some of the teachers treat questions in class as if the students were criticizing them personnaly.	1.	True	57	57.0
	2.	False	41	41.0
	3.	Unanswered	2	2.0
The guidance counsellors here most often recommend majoring in science at college.	1.	True	47	47.0
	2.	False	50	50.0
	3.	Unanswered	3	3.0

		Frequency	Percentage
97. (Cont'd) Teachers here encourage students to value knowledge for its own sake, rather than just for grades.			
	1. True	71	71.0
	2. False	27	27.0
	3. Unanswered	2	2.0
There is not much interest in science clubs among students here.			
	1. True	58	58.0
	2. False	40	40.0
	3. Unanswered	2	2.0
The teachers here really talk with the students, not just at them.			
	1. True	55	55.0
	2. False	42	42.0
	3. Unanswered	3	3.0
Student discussions on national and international news are encouraged in class.			
	1. True	34	34.0
	2. False	64	64.0
	3. Unanswered	2	2.0
Very few students here would be interested in a field trip to an art museum.			
	1. True	60	60.0
	2. False	38	38.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) There is a lot of competition for grades here.			
	1. True	57	57.0
	2. False	41	41.0
	3. Unanswered	2	2.0
In this school teachers do not adjust assignments and projects to the individual student's interests.			
	1. True	66	66.0
	2. False	31	31.0
	3. Unanswered	3	3.0
The teachers here encourage the students to take as many science courses as possible.			
	1. True	40	40.0
	2. False	58	58.0
	3. Unanswered	2	2.0
Teachers here are really skillful at getting students to work to the limit of their ability.			
	1. True	41	41.0
	2. False	57	57.0
	3. Unanswered	2	2.0
Students here tend to like science courses more than other courses.			
	1. True	48	48.0
	2. False	50	50.0
	3. Unanswered	2	2.0

		Frequency	Percentage
97. (Cont'd) It doesn't matter who you are, at this school you are expected to be mature enough to handle your own problems.			
	1. True	77	77.0
	2. False	21	21.0
	3. Unanswered	2	2.0
Teachers frequently urge students to consider the influence of history on current events.			
	1. True	54	54.0
	2. False	44	44.0
	3. Unanswered	2	2.0
Students here are very much aware of the competition to get into college.			
	1. True	61	61.0
	2. False	27	27.0
	3. Unanswered	2	2.0
Most students here dress and act pretty much alike.			
	1. True	70	70.0
	2. False	28	28.0
	3. Unanswered	2	2.0
When students get together they seldom talk about scientific topics.			
	1. True	82	82.0
	2. False	15	15.0
	3. Unanswered	3	3.0

		Frequency	Percentage
(Cont'd) Teachers here often present more material than the students can handle.			
	1. True	35	35.0
	2. False	63	63.0
	3. Unanswered	2	2.0
A lot of students here are content to get by.			
	1. True	78	78.0
	2. False	20	20.0
	3. Unanswered	2	2.0
The school library has a poor collection of science books and magazines.			
	1. True	48	48.0
	2. False	50	50.0
	3. Unanswered	2	2.0