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# Some Relationships Between Student Curriculum Choices and Approximation of School Goals

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SOME RELATIONSHIPS BETWEEN STUDENT CURRICULUM CHOICES  
AND APPROXIMATION OF SCHOOL GOALS

Presented to the

Graduate Faculty  
University of Nebraska  
at Omaha

In Partial Fulfillment  
of the Requirements for the Degree  
Specialist in Education

University of Nebraska at Omaha

by

William F. Coker

April 1984

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FIELD PROJECT ACCEPTANCE

Accepted for the Graduate Faculty, University of Nebraska, in partial fulfillment of the requirements for the degree Specialist in Education, University of Nebraska at Omaha.

Supervisory Committee

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April 16, 1987  
Date

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## CHAPTER ONE

### Introduction

In 1642, a Massachusetts law was passed which contained what was probably the first list of educational goals in colonial America. According to this list, the child was to learn to read, to understand and obey the laws of the country, and to understand and live by Christian principles. It is interesting to note that these goals were stated as duties of the parents, since public schools were not required by law (Johanningmeier, 1980). Since that time, many different lists of educational goals have been developed. In general, these goals have been based on tradition, politics, and religious beliefs rather than on pure reason (Dale, 1981).

Today, general statements of educational goals for secondary schools are available from a variety of sources. Perhaps the best known collection of such goals is the Seven Cardinal Principles, which was drawn up by the Commission on the Reorganization of Secondary Education in 1918. These goals included "health, command of the fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure time, and ethical character" (Kimbrough and Nunnery, 1976). That such comprehensiveness in goals is still desired is evident in recent research by Goodlad (1983) showing that parents still expect their schools to stress academic, social/civic, vocational, and personal goals.

The school meets these goals through careful selection and periodic modification of its curriculum. Doll (1982) defines curriculum as "the formal

and informal content and process by which learners gain knowledge and understanding, develop skills, and alter attitudes, appreciations, and values under the auspices of that school." One of the most popular models for curriculum planning is that developed at the University of Chicago by Ralph W. Tyler. This model begins with the selection of objectives, presumably rooted in a set of general goals, such as the Seven Cardinal Principles. These objectives are used to determine appropriate pupil activities and experiences, which are then organized into an articulated scope and sequence of courses (Doll, 1982).

The Bellevue Public School System, Bellevue, Nebraska, has four primary goals. These goals are defined by board policy under its statement of philosophy, which was adopted in 1969.

The schools should perpetuate the American heritage for positive growth and development of its young citizens. Each individual should be provided with experiences that will lead him to become a critical thinker and a contributing member of society.

The schools should assist each individual to understand his role and responsibility as a member of a family, community, and society. Experiences should be provided to assist each individual to learn to interact and live with others in a positive manner.

Each individual should acquire a command of the fundamental skills and processes as a result of his school experience.

The schools should provide experiences that foster vocational preparation and the concept of the dignity of work (Bellevue Public Schools, 1969).

With some overlapping, these goals cover the four major categories of goals Goodlad (1979) found to be characteristic of American schools: academic, vocational, social/civic, and personal. The 1979-1980 Self-Study Report by the Bellevue Public Schools indicates that the learning program established in the two senior highs to meet these goals is successful. The surveys show that students and parents are in agreement that course offerings are varied and balanced (Bellevue Public Schools, 1980).

For the individual student, however, attending school with a curriculum

designed to meet a broad variety of needs is no guarantee of success. The sex, I. Q., and socioeconomic status of the student, as well as the educational level of the parents, have been shown to be related to student performance (Heim and Perl, 1974; Ahmann, 1976). In addition, students exercise considerable control over the curriculum by their selection of courses. Some finish school after completing only the minimum requirements for graduation. Others choose a strong vocational or college preparatory program. Some select a single department, such as business or mathematics, and master as many courses as possible in that area. Others avoid advanced courses, concentrating instead on the introductory courses or minimum requirements in a number of different departments. This raises the question: Is there a relationship between student course selection patterns and student approximation of school goals?

#### Purpose of the Study

The purpose of this study was to assess the relationships between certain major course selection patterns and student approximation of school goals.

#### Hypothesis

There are no significant differences between major course selection patterns regarding student approximation of school goals.

#### Methodology

In order to determine the extent to which the four major educational goals of the Bellevue Public Schools had been met, it was necessary to establish measurable criteria for each goal. Dejnozka and Kapel (1982) have pointed out, however, that broad goals must be broken down into more specific objectives in order for meaningful evaluation to take place. It has also been

observed that criteria for goal approximation are not always clearly stated, thus hampering attempts to judge the effectiveness of schooling (Madaus, Airasian, and Kellaghan, 1980). Examination of one of Bellevue's major goals sheds light on the problem of establishing criteria.

The first goal given in the board's statement of philosophy concerns the development of students as citizens.

The schools should perpetuate the American heritage for positive growth and development of its young citizens. Each individual should be provided with experiences that will lead him to become a critical thinker and a contributing member of society (Bellevue Public Schools, 1969).

That this broad goal encompasses a number of more specific objectives can be seen by looking at the 1976 assessment of citizenship conducted by the National Assessment of Educational Progress. The purpose of this study was to determine how well students were approximating major citizenship goals. The study assessed six objectives, including

(1) concern for the well-being and dignity of others, (2) support of just law and the rights of all individuals, (3) knowledge of the main structure and function of government, (4) participation in democratic civic improvement, (5) understanding of important world, national and local civic problems, and (6) approaching civic decisions rationally (National Assessment of Educational Progress, no date).

Rather than attempting to establish detailed objectives that would cover all aspects of each goal, this project focused on one or two objectives representative of each of the four primary goals. The first step was to identify the objectives to be used. This identification was done with input from the literature, Bellevue's Assistant Superintendent for Curriculum and Instruction, and both the principal and head counselor of Bellevue West High School.

Once objectives had been selected, the second step was to identify the major course selection patterns. This step was also done with input from people at both the central office and building levels.

The records of students in the Bellevue West High School class of 1984 were searched to determine which students fell into each of the patterns. The records were also searched for data relating to the objectives that had been established. For those objectives for which data were not readily available, an instrument was developed and administered. After the data were organized and tested for significant differences, patterns, and trends, conclusions were drawn and recommendations were made.

#### Limitations

This project is limited to students attending Bellevue West High School, Bellevue, Nebraska.

Data were available only from members of the senior class of 1984.

Objectives selected for determining student approximation of goals do not encompass all aspects of the goals.

#### Assumptions

The criteria selected for determining student approximation of goals are valid.

Major course selection patterns are identified in an appropriate manner.

Student supplied data are accurate.

The analyses of variance yielded meaningful results even though groups were not randomly selected.

#### Definitions of Terms

goal: "A statement describing a broad intent, state, or condition" (Mager, 1972).

objective: A statement describing a measurable outcome related to the approximation of a goal and indicating the criteria for determining its

successful accomplishment.

major course selection pattern: A configuration of classes and/or groups of classes identified for the purpose of assessing the relationship between student class choices and student approximation of school goals.



## CHAPTER TWO

### Related Literature

Until the 1950's, most evaluations of school effectiveness considered inputs, such as, teacher characteristics, course offerings, facilities, and teacher-pupil ratio, rather than outputs, such as student achievement, vocational readiness, and social skills. In the last three decades, however, there has been an emphasis on discovering relationships among inputs and educational outcomes. In fact, more than 700 student, teacher, and school characteristics thought to be related to student achievement have been studied (Madaus, Airasian, and Kellaghan, 1980).

#### School Versus Student Characteristics

One of the more controversial recent studies is the Equality of Educational Opportunity Report (also known as the Coleman Report), which grew out of the Civil Rights Act of 1964 and was released in 1966 (Mosteller and Moynihan, 1972). This study of 1,170 high schools and 3,223 elementary schools contains three major findings. First, school resources have little effect on student achievement. Second, the socioeconomic background of the student has a highly significant effect on the student's achievement. Finally, the educational backgrounds and aspirations of the student's peers have a highly significant effect on achievement (Huffman and Harris, 1981).

A reanalysis of the data from the Coleman Report by Jencks (1972) also shows no consistent relationship between school resources, policies, or characteristics and student achievement. His findings agree with the Coleman

Report that student characteristics are the single most important input affecting school output. A longitudinal study in the state of Wisconsin finds that most of the variability in student achievement occurs within, rather than between, schools (Hauser, Sewell, and Alwin, 1976). After reviewing six studies, Huffman and Harris (1981) conclude that school resources are seldom related to student outcomes and that none is consistently related. They also observe that student background factors, such as, socioeconomic status of the family and community, are consistently related.

The Coleman Report and subsequent studies that seem to confirm its findings are not without detractors, however. Bowles and Levin (1968) feel that the Coleman Report's conclusion that per-pupil expenditures and school facilities are less a factor than the effect of peers is not supported by the study, citing poor measurement of resources, inadequate control for socioeconomic background, and inappropriate statistical techniques. Bidwell and Kasarda (1980) find a major inconsistency with most school-effects studies. By measuring school inputs as aggregate attributes of schools or school districts, they argue, the researchers are ignoring variations that occur among instructional units. By disregarding the extent to which school attributes impact on the individual student, these studies find only weak school effects. According to Bidwell and Kasarda, in the few school-effects studies where school input variables have been measured at the individual level, these inputs have been good predictors of achievement. Alexander and McDill (1976) agree with this analysis, pointing out that most school-effects studies do not consider stratification patterns and access to resources within schools and, thus, understate the effects of these resources.

Due to the controversy surrounding the relative importance of school

effects, most current studies have gone in one of the following three directions. Some, while no longer expecting to see a dramatic impact from school effects, continue with the traditional approach in order to see how these effects, though moderate, impact student outcomes. Others have shifted from a focus on physical properties of schools to looking at organization and instructional activities. Finally, some are focusing on student access and use of resources within schools, as opposed to between schools (Alexander and McDill, 1976).

### Curriculum Placement

Most researchers seem to agree that both academic ability and socioeconomic background affect a student's curriculum placement; however, there is not a consensus as to which of these factors is more important.

A national longitudinal study by Alexander and Eckland (1975) shows substantial status origin effects upon curriculum placement. Another study shows that student ability, achievement in junior high, ninth grade curriculum placement, and student educational goals together account for less than 40% of the variance in sophomore curriculum placement. The study also finds that students from higher socioeconomic backgrounds have a better chance of obtaining placement in college preparatory tracks (Alexander, Cook, and McDill, 1978). These studies agree with those of Hauser, Sewall, and Alwin (1976), who find that completion of a college preparatory curriculum is more dependent on socioeconomic background than on mental ability.

Heyns (1974), on the other hand, studied forty-eight urban public high schools and finds that verbal achievement mediates the relationship between socioeconomic status and curriculum placement. Although she sees little evidence of overt class bias, she does note that curriculum assignments are

largely determined by counselors. Even though students do have some options, she finds that many make their decisions based solely on input from a counselor.

Most studies examining the effects of curriculum placement consider only two cases, lumping all non-college preparatory tracks together. Hauser, Sewell, and Alwin (1976) claim that high school grades have a greater effect on aspirations and later schooling than does curriculum choice. This contradicts a study by Parson (1959) which shows that curriculum differentiation sorts students into groups that have great impact on their ultimate roles as adults (Alexander and McDill, 1976). In a two year study conducted in a homogeneous, white, working class community, Rosenbaum (1975) finds that students enrolled in the college track show average I. Q. gains of two to four points, while those in non-college preparatory tracks show I. Q. losses of the same magnitude. This finding is consistent with that of Alexander, Cook, and McDill (1978), who find that enrollment in a college preparatory program increases the student's absolute achievement (SCAT/STEP and PSAT scores), although it has virtually no effect on class rank. They also find this enrollment to strongly affect encouragement from significant others, the student's educational goals, and his self-conceptions of academic competence. Heyns (1974) discovered that entry into a college preparatory track has great effect on college plans and on access to and encouragement from counselors.

### Educational Goals

Research by Goodlad (1979) suggests that educational goals of American schools generally fall into one of four categories: academic, vocational, social/civic, and personal. A review of the literature gives some indication of how these goals are measured and viewed by educators and other interested

persons.

### Academic Goals

Most academic goals are measured in terms of grades or scores on achievement tests. Merante (1983) states that the three predictors of college success most commonly used by colleges and universities are GPA, SAT/ACT or achievement test scores, and class rank. Shaw (1982), in interviews with 204 students from seven secondary schools, finds that 41% of them feel their greatest sense of accomplishment in school comes from achieving academic goals. Of these, approximately half find a sense of accomplishment in learning new things, while the other half are more concerned with the grades themselves.

Goodlad (1979) believes that grades and achievement tests are inadequate criteria of school success and that, in fact, the extensive use of these criteria actually corrupts the process of education. He claims that we do not even know what grades mean, pointing out that they do not predict personal, vocational, or social success. This view is supported in part by Hoyt (1965) in his review of forty-six studies on the relationship between college grades and adult achievement in vocational, academic, and non-vocational accomplishments, in which he finds college grades to have little or no relationship to any measure of adult accomplishment. Hoyt points out, however, that grades ostensibly measure what a person knows, not how successful he will be in later life.

The 1983 report by the National Commission on Excellence in Education, known as the Nation at Risk Report, expresses grave concerns regarding the extent to which American students attain academic goals. According to this report, the proportion of secondary students taking general track courses rose

from 12 percent to 42 percent in the fifteen years prior to 1979. The writers of this report express concern that students seem to be opting for courses in physical and health education, remedial English and mathematics, and adult living, rather than more academically challenging courses, such as foreign language classes and advanced mathematics. To correct the problems they see, the commission recommends minimum graduation requirements in the Five New Basics. These suggested requirements include four years of English, three years of mathematics, three years of science, three years of social studies, and one-half year of computer science. Students intending to attend college are strongly urged to complete two years of a foreign language as additional preparation (National Commission on Excellence in Education, 1983).

A few months after the Nation at Risk Report was released, Nebraska Governor Kerrey received a report from his Governor's Task Force on Excellence in Education (1983). This report is in general agreement with the national report, although its suggested graduation requirements show some variation. It would reduce the number of years of science from three to two, add one and one-half years of personal health/fitness and two years of fine/performing arts. There would be no specific requirement for computer science, and there would be an option of two years foreign language or career/vocational education. The suggestions made by this Task Force are currently being considered by the State Department of Education, as they work to revise their Chapter 15 regulations as authorized by recent amendments to Chapter 79 of the Statutes of Nebraska (Nebraska Department of Education, 1984; Nebraska, 1984).

### Vocational Goals

One listing of vocational goals is that compiled by the National

Assessment of Educational Progress, based on input from Pittsburgh's American Institutes of Research, Science Research Associates of Chicago, and experts from education, industry, and labor. Completed in 1970, this list gives five major goals for career and occupational development: to prepare the student for making career decisions, to improve the student's vocational capabilities, to teach skills that are generally useful in the world of work, to encourage the practice of effective work habits, and to instill positive attitudes toward work (Goodwin and Norris, 1971).

In 1980, the University of North Dakota conducted the National Co-Curricular Transcript Survey, in which 350 employers indicated the factors they consider to be important when considering a prospective employee's records. The four areas of greatest interest are GPA, specific coursework, previous work experience, and extracurricular activities. In fact, they ranked extracurricular participation about the same as interviewing ability, as far as importance in hiring (Bryan, et al., 1981).

### Social/Civic Goals

The 1976 assessment of citizenship by the National Assessment of Educational Progress identifies six major goals. These include

concern for the well-being and dignity of others, support of just law and the rights of all individuals, knowledge of the main structure and function of government, participation in democratic civic improvement, understanding of important world, national and local civic problems, and approaching civic decisions rationally (National Assessment of Educational Progress, no date).

Dale (1981) points out that not all educational goals are best achieved through the formal curriculum. He believes that democratic values are better taught through form, rather than content. Grady (1981) agrees with this point of view and states that organized student activities are a good way to prepare

students for involvement in a democratic form of government.

### Personal Goals

The American College Testing Survey of 1977 determined that involvement in student activities is the single characteristic most commonly found among successful people (Grady, 1981). A national study by the NASSP finds that over half of the students surveyed feel that extracurricular participation is the best way to increase status and acceptance among peers (Gholson and Buser, 1981). This is consistent with the findings of Shaw's study (1982), cited earlier, in which students indicated the things associated with school that give them the greatest sense of accomplishment. Extracurricular activities are cited one-fifth of the time, equal to learning new information and getting good grades.



## CHAPTER THREE

### Methodology

The methodology used to accomplish this study can be divided into four phases: (1) definition of objectives, (2) definition of course selection patterns, (3) collection of data, and (4) analysis of data.

#### Definition of Objectives

Determination of the specific objectives to be considered in this study was a difficult task. The starting point was a careful examination of the four primary goals of the Bellevue Public Schools, which are defined by board policy under its statement of philosophy.

1. The schools should perpetuate the American heritage for positive growth and development of its young citizens. Each individual should be provided with experiences that will lead him to become a critical thinker and a contributing member of society.

2. The schools should assist each individual to understand his role and responsibility as a member of a family, community, and society. Experiences should be provided to assist each individual to learn to interact and live with others in a positive manner.

3. Each individual should acquire a command of the fundamental skills and processes as a result of his school experience.

4. The schools should provide experiences that foster vocational preparation and the concept of the dignity of work (Bellevue Public Schools, 1969).

To aid educators in helping students approximate these goals, Bellevue's Personnel Policies Handbook outlines no less than fifty-four instructional objectives; however, specific criteria for these objectives are not included (Bellevue Public Schools, 1984). In a document released by the Bellevue Public School System's Office of the Superintendent which discusses the meaning of the high school diploma, the point is made that the diploma does not by itself

certify that the person receiving it is an educated citizen. It is suggested that, in order to get a clearer idea of the individual's likelihood of success in future activities, a prospective employer or postsecondary school should also consider the courses the student completed, attendance data, class rank, grade point average, and the results of a minimum competency exam. In addition, personal recommendations of certified staff should be used to assess the individual's social behavior (Bellevue Public Schools, 1983).

After careful consideration of these points and a review of related literature, and with input from both the central office and building levels, six objectives related to student approximation of these four goals were developed.

1. The student will demonstrate a knowledge of reading, language, math, social studies and science by earning a composite score no lower than one standard deviation below the national mean on the SRA Assessment Survey.

2. The student will demonstrate knowledge of fundamental facts and processes by achieving a cumulative grade point average of at least 2.5 on a five-point scale for the five semesters beginning with the sophomore year.

3. The student will demonstrate an understanding of our American heritage by achieving a grade point average of at least 2.5 on a five-point scale for American History.

4. The student will demonstrate his or her dependability and commitment to schooling by having an average of no more than five absences per semester for grades nine through twelve.

5. The student will demonstrate an ability to follow rules and to relate appropriately to both peers and those in authority by receiving no more than one discipline referral to the office each year for grades ten through twelve.

6. The student will demonstrate a sense of responsibility toward the school and personal growth by involvement in an average of at least one extracurricular activity each year for grades ten through twelve.

For purposes of discussion, these objectives can be divided into two groups, the first three being essentially academic objectives, and the last three measuring different types of commitment to the schooling process. A brief rationale for each of these objectives and an explanation of how each is related to one or more of the school goals follow.

### Academic Objectives

The first academic objective measures an entrance characteristic of the student, since it pertains to the score attained on a test given during the first semester of the sophomore year. This objective is related to the third school goal, which deals with the student's acquiring a command of fundamental skills and processes. The criterion of scoring no lower than one standard deviation below the national mean is the same as the criterion used for successful completion of the exam used as the basis for awarding the Graduation Equivalency Diploma (GED).

The second academic objective, for which the GPA is used as the criterion, is also related to the student's command of fundamental skills and processes, since the GPA gives some measure of the success of a student with a wide variety of courses. Passing grades at Bellevue West are given on a scale of one to four, with the respective grade points ranging from five to two. A grade of five receives no grade points. Students enrolled in certain advanced classes and those enrolled in classes labeled special vocational needs (SVN) are awarded an extra grade point and one grade point less, respectively, for each passing grade. Thus, the criterion of 2.5 represents a grade point half way between the grades of three and four in an average class. Since this objective is based on courses taken through the fall semester of 1983, it is measuring an exit characteristic of the student.

The last academic objective comes under the first school goal, which is concerned with the perpetuation of the American heritage. Admittedly, this objective, similar to the second in using a 2.5 grade point average as its criterion, measures only the extent to which the student has mastered the material presented in the American History classroom and does not indicate the

probability of his or her becoming a contributing member of society.

### Commitment Objectives

While the academic objectives are related to the first and third school goals, the commitment objectives are related to the second and fourth school goals, those concerned with responsible interaction with others and vocational preparation.

The first commitment objective requires the student to demonstrate dependability and responsibility by having a satisfactory attendance record. Current school policy requires students who have more than twelve absences in a semester to lose credit for those courses unless there are extenuating circumstances. The absence rate for secondary students enrolled in Bellevue Public Schools for the fall semester of 1984 was four percent, which gives an average of about 3.5 absences per semester. In order to establish a criterion related to vocational expectations, however, a criterion of no more than five absences per semester was decided upon. This is the number of absences allowed for teachers in the Bellevue Public Schools.

One of the kinds of information suggested as an adjunct to the diploma to give information regarding student behavior is a recommendation by a certified staff member. One of the records consulted by counselors when writing a recommendation for a student is the student's discipline referrals card. Since minor infractions, such as, forgetting to sign in during study hall, can result in a discipline referral, it was felt that a criterion of one referral per year would be reasonable. The number of discipline referrals received by a student gives some indication regarding his ability to behave responsibly in a social setting, which is related to both the second and the fourth school goals.

The third commitment objective deals with student involvement in

extracurricular activities. As was discussed in the review of related literature, extracurricular involvement is seen by employers as an important factor in potential employees. It was also pointed out that many view organized student activities as a good way to prepare students for participation in a democratic society. Thus, this objective is related to both the second and fourth school goals.

### Definition of Course Selection Patterns

Three kinds of course selection patterns are considered in this study. The first set of patterns are defined in terms of the extent of the student's concentration of coursework within certain departments, the second set of patterns by the number of credits earned, and the third set by the extent to which the guidelines established in the Nation at Risk Report were met.

### Concentration of Coursework

The patterns in this category are defined based on credits earned in the following departments: industrial arts, business, mathematics, social studies, and science. Any student having earned ten credits in one of these departments is said to have a concentration in that department. Students with concentrations in mathematics, social studies, or science were considered together as the group with a concentration in an academic area. The industrial arts and business groups were kept as separate entities.

In addition to the three groups formed by looking at departmental concentrations, a fourth group was defined. This group consists of those students who not only have no concentration in a single department, but who, in fact, have earned credit in no advanced classes other than ones required for graduation. Those classes considered to be advanced are (1) any course

identified by "Advanced" in the course title, (2) any course identified as a second year course, (3) any math or science course with a prerequisite of Algebra I, (4) woods construction and architectural drawing, and (5) any course designated as advanced placement.

The students not falling into one of the categories described were considered to have a normal concentration of coursework and were considered as a separate group.

All credits earned from the ninth through the twelfth grades were considered, regardless of whether they were earned in the Bellevue Public Schools. Credits currently being attempted were included along with those already earned.

#### Credits Earned

The second major grouping of course selection patterns considers the number of credits earned from the tenth grade through the first semester of the twelfth grade, regardless of the concentration of coursework in the various departments. The students were divided as closely as possible into four quarters, which were labeled Low, Low Average, High Average, and High, based on the number of credits earned.

#### Nation at Risk Guidelines

The guidelines established by the Nation at Risk Report for students graduating from high school include eight credits in English, six credits in mathematics, six credits in social studies, six credits in science, and one credit in computers. Students meeting these guidelines were contrasted with those who lacked more than one credit meeting the guidelines. Courses currently being attempted were counted, as well as those in which credit had already

been earned.

### Collection of Data

Data were collected for 282 members of the 1984 graduating class of Bellevue West High School, Bellevue, Nebraska. Two exchange students and one recent transfer student from outside the country were excluded from the study, however, reducing the number of subjects to 279. Only 200 of these had taken the SRA Assessment Survey during their sophomore year. Data for the remaining objectives were available for each of the 279 students.

The bulk of the necessary data was contained in the students' cumulative folders. A procedure was developed so that this data could be efficiently transferred onto a formatted card designed for this study. (See Appendices A and B.) Data collected for each student included the student identification number, sex, number of semesters enrolled in Bellevue Public Schools, number of credits earned, GPA, number of absences, number of credits in science, mathematics, social studies, business, and industrial arts, American history grades, whether the student had four years of English and one year of computers, whether the student had no credits in advanced classes, the student's composite percentile on the SRA Assessment Survey, and the number of extracurricular activities in which the student had been involved. This search was done by the school registrar and the counseling secretary.

The number of discipline referrals while enrolled at Bellevue West High School was transferred to the cards by the secretary responsible for maintaining the discipline referrals file.

Due to the fact that extracurricular activity participation had not been posted for the current year, and since there seemed to be some discrepancies as to how these were recorded in the past, a survey was developed and

administered to the students. (See Appendix C.) This survey included officially recognized activities for which the school district provides a paid faculty sponsor. In addition to the activities listed in the survey, credit was also given for participation in the Chess Club, the Flag Corps and soccer. Each student was given a credit for each year of participation in an authorized activity. These numbers were then transferred to the students' cards.

Once these data were collected for each student, the cards were coded to indicate the groups of the three major course selection pattern categories to which the student belonged. Data regarding absences and discipline referrals were then adjusted to indicate the number per semester. This allowed the inclusion of data from students who entered Bellevue Public Schools after the beginning of the ninth grade.

The last step of the data collection was to store the information in a file on a TRS-80 microcomputer, from which it was transferred to the VAX computer at the University of Nebraska at Omaha.

#### Analysis of Data

Most of the analysis of the data was accomplished using the Statistical Package for the Social Sciences (SPSS) on the University of Nebraska at Omaha's VAX 11-780 computer. The proportion of students in each course selection pattern group meeting each of the six objectives was determined by a program using the SPSS routine CROSSTABS. Descriptive statistics for each of the groups with each objective were calculated using the routines FREQUENCIES and CONDESCRIPTIVE, depending on whether the data were discrete or continuous. To determine if differences within groups and between pairs of patterns within groups were significant, analyses of variance were performed, using the routine ONEWAY with a posteriori contrasts based on



Scheffe's test with an alpha of .01.

Kurz and Mayo (1979) give four assumptions that are made in using analysis of variance.

1. The distribution of the variable is normal.
2. All groups have the same variance.
3. The important factors are additive.
4. Subjects are assigned at random to the groups.

It has been shown empirically that the first two assumptions are not absolutely essential, as the analysis is still reasonably accurate even if the distribution does not approximate a normal distribution and the standard deviation is off by a factor of two or three. The third assumption holds sufficiently well if the measurements give continuous scores, which is the case with the data used in this study. The final assumption cannot be made for the groups under study here. Since the groups were not formed by random assignment, it is probable that factors other than student curriculum choices are, at least in part, responsible for any significant differences that occur (Kurtz and Mayo, 1979).

An a posteriori contrast is a systematic procedure for comparing all possible pairs of group means for significant differences. Of the seven a posteriori contrasts available with SPSS, Scheffe's test is the strictest and is exact, even for unequal group sizes (Nie, 1975). The latter characteristic is especially important in this study, due to the great variation in group sizes.

In order to better understand the significance of the proportion of students in each group meeting each objective, a calculation was performed using all 279 students to determine the standard error of a proportion with a .99 confidence interval. This gives a good estimate of the range within which

the actual proportion of students of a larger population--those graduating from Bellevue West in recent years, for instance--would be expected to meet these objectives. These calculations were made using a technique described by Kurtz and Mayo (1979). If  $p$  stands for the proportion of subjects meeting the given condition for a sample of size  $N$ , then the limits for the .99 confidence interval are

$$p \pm 2.58\sqrt{p(1 - p)/N}.$$

For a given group, once the proportion of students achieving the objective had been determined, it was still necessary to determine whether this proportion was acceptable. A criterion of .80 was selected as the desirable proportion of students meeting the objective.

## CHAPTER FOUR

### Findings

Before looking at the results for the three categories of curriculum choice patterns, an overview of the six dependent variables used in the study seems to be in order. The first three variables will be referred to as academic variables. The last three will be referred to as commitment variables.

1. Composite score on the SRA Assessment Survey taken during the first semester of the sophomore year.

2. Cumulative grade point average from the first semester of the sophomore year through the first semester of the senior year, based on a five-point scale and adjusted for classes labeled advanced or special vocational needs.

3. American history grade point average, based on a five-point scale and adjusted for classes labeled advanced or special vocational needs.

4. Average number of absences per semester during semesters enrolled in Bellevue Public Schools from ninth grade through first semester of twelfth grade.

5. Average number of discipline referrals per semester during semesters enrolled at Bellevue West High School from tenth grade through first semester of twelfth grade.

6. Total number of extracurricular activities in which student has participated each year from tenth grade through twelfth grade, regardless of schools attended.

The findings will be presented by categories of course selection patterns. Within each category the academic and commitment variables will be examined separately. First, the results of the analyses of variance will be presented and any significant differences between pairs of groups within the category will be noted. These analyses of variance were performed using the SPSS routine ONEWAY with Scheffe's test ( $\alpha = .01$ ) as an a posteriori contrast.

Second, the proportion of each group meeting each objective will be given. These proportions were calculated by the SPSS routine CROSSTABS. Those groups with proportions outside the .99 confidence interval for the standard error of a proportion for the population, considered as a sample from a larger population, will be noted. The .99 confidence interval was calculated using the formula described by Kurz and Mayo (1979).

#### Concentration of Coursework

This category contains five course selection patterns.

1. Academic Concentration: Students with at least ten credits in one of the following departments: mathematics, social studies, science. There were 53 students (19%) in this group.

2. Business Concentration: Students with at least ten credits in business. There were 19 students (6.8%) in this group.

3. Industrial Arts Concentration: Students with at least ten credits in industrial arts. There were 15 students (5.4%) in this group.

4. No Advanced Courses: Students with no credits in electives that are considered advanced. There were 19 students (6.8%) in this group.

5. Normal Concentration: Students not included in one of the first four groups. There were 173 students (62.0%) in this group.

The analyses of variance results and data regarding achievement of

objectives for the Concentration of Coursework Category are displayed in Table I and Table II, respectively.

Table I  
Analyses of Variance for Concentration of Coursework  
Category and Six Objectives

Variable	Source	df	Sum of Squares	Mean Squares	F Ratio
SRA %-ile	Between	4	19380.4889	4845.12	7.644 <sup>c</sup>
	Within	195	123594.1396	633.861	
GPA	Between	4	61.8920	15.2230	23.201 <sup>c</sup>
	Within	274	179.7818	0.6561	
Am. Hist.	Between	4	54.7301	13.6825	15.501 <sup>c</sup>
	Within	274	241.8522	0.8827	
Absences	Between	4	138.1658	34.5414	4.347 <sup>b</sup>
	Within	274	2177.3709	7.9466	
Disc. Ref.	Between	4	15.6846	3.9212	3.049 <sup>a</sup>
	Within	274	352.3531	1.2860	
Activities	Between	4	252.0938	63.0235	2.939 <sup>a</sup>
	Within	274	5876.3223	21.4464	

<sup>a</sup>Significant at the .05 level.  
<sup>b</sup>Significant at the .01 level.  
<sup>c</sup>Significant at the .001 level.

Table II  
 Proportion of Students Meeting Objectives for  
 Concentration of Coursework Category

Group	N	SRA Percentile	GPA	American History	Absences/ Semester,	Referrals/ Semester,	Activities
Academic	53	1.000 <sup>a</sup>	.981 <sup>a</sup>	.981 <sup>a</sup>	.868 <sup>a</sup>	.660 <sup>a</sup>	.868 <sup>a</sup>
Business	19	.875 <sup>b</sup>	.737 <sup>b</sup>	.789	.842 <sup>a</sup>	.632 <sup>a</sup>	.684
Industrial Arts	15	.769 <sup>b</sup>	.533 <sup>b</sup>	.400 <sup>b</sup>	.867 <sup>a</sup>	.267 <sup>b</sup>	.600 <sup>b</sup>
No Advanced	19	.875 <sup>b</sup>	.684 <sup>b</sup>	.632 <sup>b</sup>	.526 <sup>b</sup>	.421 <sup>b</sup>	.368 <sup>b</sup>
Normal	173	.945	.850	.815	.757	.526	.728

<sup>a</sup>Proportion is above the .99 confidence interval.

<sup>b</sup>Proportion is below the .99 confidence interval.

## Academic Variables

Analyses of Variance. The analyses of variance showed significant differences within the Concentration of Coursework Category for each of the three academic variables. The following pairs of groups were found to differ significantly at the .01 level.

The Academic Concentration Group differed from both the No Advanced Courses Group and the Industrial Arts Concentration Group for each of the three academic variables. Although not significantly different from the Normal Concentration and the Business Concentration Groups for the entrance variable (SRA Assessment Survey percentile), the Academic Concentration Group was significantly different from both of these groups in both GPA and American history grade point. Thus, students with an academic concentration were significantly different from each of the other groups regarding GPA and American history grade point.

The Normal Concentration Group had a significantly higher GPA than the No Advanced Courses Group and a significantly higher American history grade point than the Industrial Arts Group.

There were no other differences between pairs of groups that were significant at the .01 level.

Achievement of Objectives. Both the No Advanced Courses Group and the Industrial Arts Concentration Group fell below the .99 confidence interval for all three academic objectives. The Business Concentration Group was below the interval for GPA and SRA Assessment Survey percentile.

The Academic Concentration Group was above the .99 confidence interval for each of the academic objectives.

The Normal Concentration Group was within the .99 confidence interval for each of the academic objectives.

### Commitment Variables

Analyses of Variance. No two groups were significantly different at the .01 level for either number of extracurricular activities or number of discipline referrals per semester.

The only significant difference regarding absences occurred between the academic concentration group and the group with no advanced courses.

Achievement of Objectives. The No Advanced Courses Group was below the .99 confidence interval for each of the commitment objectives. The Industrial Arts Concentration Group was below the interval for both extracurricular activities and discipline referrals per semester.

The Academic Concentration Group was above the .99 confidence interval for each of the commitment objectives. The Business Concentration Group was above the interval for both absences per semester and discipline referrals per semester. The Industrial Arts Concentration Group was above the interval for absences per semester.

The Normal Concentration Group fell within the .99 confidence interval for each of the three objectives.

### Credits Earned

This category contains four course selection patterns, based on the number of credits earned from the tenth grade through the first semester of the twelfth grade year. The number of credits earned ranged from 19 to 32, and the groups were chosen so as to divide the students into four groups of approximately equal size. The number of credits earned, number of students



and the percent of the population are given for each group.

Group	Credits Earned	Number of Students	Percent of Total
Low	19 to 24	64	22.9
Low Average	25 or 26	82	29.4
High Average	27 or 28	68	24.4
High	29 to 32	65	23.3

The analyses of variance results and data regarding the achievement of the objectives are displayed in Table III and Table IV.

### Academic Variables

Analyses of Variance. The analyses of variance showed significant differences within the Credits Earned Category for each of the academic variables.

The High Group had significantly higher GPA's than both the Low and Low Average Groups for each of the three academic variables. The High Average Group was also consistently different from the Low Group and, for GPA, was significantly better than even the Low Average Group. The Low Average Group was significantly better than the Low Group for both GPA and American history grade point, but not for SRA Assessment Survey percentile.

Table III  
Analyses of Variance for Credits Earned  
Category and Six Objectives

Variable	Source	df	Sum of Squares	Mean Squares	F Ratio
SRA %-ile	Between	3	22931.0095	7643.6699	12.480 <sup>C</sup>
	Within	196	120043.6152	612.4674	
GPA	Between	3	90.0051	30.0017	54.759 <sup>C</sup>
	Within	275	150.6689	0.5479	
Am. Hist.	Between	3	77.5782	25.8594	32.471 <sup>C</sup>
	Within	275	219.0042	0.7964	
Absences	Between	3	200.9162	66.9721	8.710 <sup>C</sup>
	Within	275	2114.6205	7.6895	
Disc. Ref.	Between	3	51.3033	17.1011	14.848 <sup>C</sup>
	Within	275	316.7344	1.1518	
Activities	Between	3	503.4849	167.8283	8.205 <sup>C</sup>
	Within	275	5624.9307	20.4543	

<sup>C</sup>Significant at the .001 level.

Table IV  
 Proportion of Students Meeting Objectives for  
 Credits Earned Category

Group	N	SRA Percentile	GPA	American History	Absences/ Semester	Referrals/ Semester	Activities
Low	64	.884 <sup>b</sup>	.500 <sup>b</sup>	.547 <sup>b</sup>	.594 <sup>b</sup>	.344 <sup>b</sup>	.531 <sup>b</sup>
Low Average	82	.932	.878	.780	.768	.451 <sup>b</sup>	.732
High Average	68	.939	.956 <sup>a</sup>	.926 <sup>a</sup>	.853 <sup>a</sup>	.588	.706
High	65	.980 <sup>a</sup>	1.000 <sup>a</sup>	.985 <sup>a</sup>	.877 <sup>a</sup>	.785 <sup>a</sup>	.908 <sup>a</sup>

<sup>a</sup>Proportion is above the .99 confidence interval.  
<sup>b</sup>Proportion is below the .99 confidence interval.

To summarize, the students with an above-average number of credits did significantly better academically than those with a below-average number of credits. The Low Average and Low Groups were not significantly different for the entrance variable (SRA percentile), but they were significantly different for American history grade point and the exit variable (GPA).

Achievement of Objectives. The Low Group was below the .99 confidence interval for each of the academic objectives.

The High group was above the .99 confidence interval for each of the academic objectives. The High Average Group was above the interval except in the case of the entrance objective (SRA Assessment Survey percentile).

The Low Average Group fell within the .99 confidence interval for each of the academic objectives.

### Commitment Variables

Analyses of Variance. There were differences significant at the .01 level for each of the commitment variables.

The Low Group had significantly more discipline referrals per semester than each of the three other groups. The High Group was involved in significantly more extracurricular activities than either of the two below average groups. The only significant difference regarding the number of absences was between the High and Low Groups.

Achievement of Objectives. Again, the Low Group was below the .99 confidence interval for each of the objectives. The Low Average group was below the interval for discipline referrals per semester.

The High Group was above the interval for absences, while the High

Group was above the interval for all three objectives.

### Nation at Risk Guidelines

For this category of course selection patterns, the students were divided into three groups.

1. Guidelines Met: Students who met the Nation at Risk guidelines when credits currently being attempted were added to their total credits earned. The guidelines require eight credits in English, six credits each in mathematics, social studies, and science, and one credit in computers. There were 14 students (5%) in this group.

2. One Credit Short: Students who lacked one credit meeting the Nation at Risk guidelines. There were 25 students (9%) in this group.

3. Guidelines Not Met: Students who lacked more than one credit meeting the guidelines. There were 240 students (86%) in this group.

Of the 25 students who were one credit short, 21 of these lacked a credit in social studies. This seems to be due to the fact that current graduation requirements include only five semester of social studies, which is one credit short of the Nation at Risk guidelines.

The analyses of variance results and data regarding the achievement of the objectives for the Nation at Risk Guidelines Category are displayed in Table V and Table VI, respectively.

Table V  
Analyses of Variance for the Nation at Risk Guidelines  
Category and Six Objectives

Variable	Source	df	Sum of Squares	Mean Squares	F Ratio
SRA %-ile	Between	2	14106.5970	7053.2983	10.782 <sup>c</sup>
	Within	197	128868.0837	654.1527	
GPA	Between	2	38.8261	19.4131	26.545 <sup>c</sup>
	Within	276	201.8477	0.7313	
Am. Hist.	Between	2	36.0662	18.0331	19.105 <sup>c</sup>
	Within	276	260.5162	0.9439	
Absences	Between	2	22.9221	11.4611	1.380 <sup>d</sup>
	Within	276	2292.6149	8.3066	
Disc. Ref.	Between	2	5.1835	2.5918	1.971 <sup>d</sup>
	Within	276	362.8541	1.3147	
Activities	Between	2	201.6055	100.8028	4.694 <sup>b</sup>
	Within	276	5926.8096	21.4739	

<sup>b</sup>Significant at the .01 level.

<sup>c</sup>Significant at the .001 level.

<sup>d</sup>Not significant at the .05 level.

Table VI  
 Proportion of Students Meeting Objectives for  
 the Nation at Risk Guidelines Category

Group	N	SRA Percentile	GPA	American History	Absences/ Semester	Referrals/ Semester	Activities
Guidelines Met	14	1.000 <sup>a</sup>	1.000 <sup>a</sup>	1.000 <sup>a</sup>	.857 <sup>a</sup>	.857 <sup>a</sup>	.786
One Credit Short	25	1.000 <sup>a</sup>	.960 <sup>a</sup>	.960 <sup>a</sup>	.800	.400 <sup>b</sup>	.960 <sup>a</sup>
Guidelines Not Met	240	.924	.871	.783	.767	.533	.692

<sup>a</sup>Proportion is above the .99 confidence interval.

<sup>b</sup>Proportion is below the .99 confidence interval.

### Academic Variables

Analyses of Variance. The analyses of variance showed significant differences within the Nation at Risk Guidelines Category for each of the three academic variables.

Although there were no significant differences between the Guidelines Met Group and the One Credit Short Group, each of these groups was significantly different from the Guidelines Not Met Group at the .01 level for each of the academic variables.

Achievement of Objectives. The Guidelines Met Group and the One Credit Short Group were both above the .99 confidence interval for each of the academic objectives.

The Guidelines Not Met Group was within the interval for all three objectives.

### Commitment Variables

Analyses of Variance. There were no significant differences between any pair of the groups regarding any of the commitment variables.

Achievement of Objectives. The Guidelines Met Group was above the .99 confidence interval for the objectives concerning absences and discipline referrals.

The One Credit Short Group was above the interval for the objectives concerning extracurricular activities and discipline referrals.

The Guidelines Not Met Group fell within the interval for each of the commitment objectives.



## CHAPTER FIVE

### Conclusions and Recommendations

The conclusions will be presented by discussing each of the objectives in turn. For each objective, major findings regarding each of the three course selection pattern categories will be discussed before moving to the next objective. The only exception will be the first two objectives, regarding SRA percentiles and GPA's, which will be discussed together. Eight major conclusions regarding course selection patterns and their relationships to approximation of school goals will be presented. Finally, based on the results of this study, five recommendations will be made.

It should be remembered that there are several measures involved with each of the objectives and their associated variables. The analyses of variance with Scheffe's test as an a posteriori contrast were used to determine if significant differences occurred within course selection pattern categories, but these do not indicate the extent to which objectives were met. The .99 confidence interval for the standard error of a proportion indicates whether a given group is above or below the expected proportion for some larger population, say, all graduating classes at Bellevue West High School since 1980. However, it does not determine whether this proportion is acceptable for meeting school goals. A criterion of 80% will be used for the desirable percent of students achieving a given objective.

#### SRA Percentile and GPA

The first two objectives deal with the students' command of fundamental

processes as measured by the SRA Assessment Survey, an achievement test administered to 200 of the 279 subjects during the first semester of their sophomore year, and by cumulative GPA, calculated through the first semester of the senior year. Because of the chronology, the SRA percentile may be considered an entrance characteristic of the student, while the GPA may be considered an exit characteristic.

Almost 94% of all students taking the SRA Assessment Survey met the criterion established, and almost 84% of all students met the criterion for the GPA. Thus, using the 80% criterion, these two objectives were achieved by the class, as a whole. In fact, the SRA objective was achieved by every group except the Industrial Arts Group. The GPA objective was achieved by every group except the Business, No Advanced Courses, Industrial Arts, and Low Credit Groups.

The students who performed best for these two objectives were those in the Academic Concentration Group, those with an above-average number of credits, and those meeting (or missing by one credit) the Nation at Risk guidelines. This is not surprising, since the objectives are academic in nature, and these groups are ones one would expect to be academically oriented.

Within the Credits Earned Category, however, some interesting variations between the two objectives occurred. Students in the middle half of that category, the High Average and Low Average Groups, were not significantly different in their SRA percentiles, which were determined in the tenth grade, but, by the middle of their senior year, they were significantly different in GPA. The same kind of splitting occurs with students taking a below-average number of credits. These two groups, Low and Low Average, were not significantly different for SRA percentile, but they were for GPA.

It is possible that this splitting indicates differing levels of motivation. The High Average Group may take the extra credits due to a high level of motivation, and, for the same reason, make significantly higher grades than the Low Average Group, even though beginning high school with similar abilities, as measured by the SRA Assessment Survey. At the other end of the spectrum, the Low Group may contain many students with a low level of motivation, who take as few classes as possible and expend as little effort as possible, thus, losing credits and reducing their GPA.

The No Advanced Courses Group was not significantly different from the Normal Concentration Group regarding SRA percentile, but it was for GPA. As with the splits within the Credits Earned Category just described, this could be related to a lack of motivation, which would explain the lack of advanced courses and the low GPA.

Although not significantly different from the Normal Concentration Group, the Industrial Arts and Business Groups were below the .99 confidence interval for the proportion of students meeting each of these two objectives. It would seem that the decision to choose one of these two concentrations may be related to an aversion to traditional academic subjects, which may, in turn, be related to poorer achievement with these subjects, many of which are required for all students.

#### American History Grade Point Average

The third objective, also an academic objective, deals with the student's understanding of the American heritage, as measured by his or her American history grade point average. Eighty-one percent of the class met the criterion for this objective, slightly better than the 80% desired. Of the groups studied,

half of them met the 80% requirement. These included those who met (or almost met) the Nation at Risk guidelines, the Academic Concentration Group, and the two groups whose members earned more than the average number of credits. These are the same groups that did exceptionally well with the two previous academic objectives.

Three groups were below the .99 confidence interval for the population proportion. These groups--the Industrial Arts, No Advanced Courses, and Low Credits Groups--were also below the interval for the other two academic variables. Again, the students in the bottom quarter regarding credits earned were significantly lower than even the students in the second quarter. The Industrial Arts Group was significantly lower than the Normal Concentration Group. As with the first two objectives, these variations can probably be explained, at least in part, in terms of motivation.

#### Attendance

The criterion for the fourth objective was to have an average of no more than five absences per semester. About 77% of all students met this criterion, a few percentage points shy of the 80% desired. Seven of the groups met the 80% criterion, three came within five percentage points, and only two, the Low Credits and the No Advanced Courses Groups, did not come close.

Each of the three groups with a departmental concentration were above the .99 confidence interval for the proportion of students meeting this objective. This would seem to indicate that those students who are interested enough to specialize in a department are also motivated toward good attendance. This is especially interesting in the case of the Industrial Arts Group, as this was the only objective for which it was not below the .99

confidence interval.

Also above the .99 confidence interval, were the groups with an above-average number of credits and those students meeting the Nation at Risk guidelines. In these cases, the commitment to quantity and/or quality in coursework would seem to go hand in hand with the commitment to attendance. In addition, students with more courses or courses at a higher level can ill afford to be absent.

That the No Advanced Courses and Low Credits Groups were below the .99 confidence interval is not surprising, if one considers that the two primary reasons for membership in these groups is probably lack of motivation or lack of success in school. These two characteristics can feed each other, and either one could result in loss of credits attempted or failure to enroll in more courses or courses that might be more challenging. Since the study did not address credits attempted, it is impossible to determine which of these characteristics, if either, apply.

#### Discipline Referrals

Of all those studied, the objective that was least often achieved was the one requiring no more than one discipline referral per year. Only those students meeting the Nation at Risk guidelines met the desired proportion of students achieving the objective, and only 54% of the population were successful. In fact, for ten of the twelve groups, the group mean did not meet the criterion of 0.5 referrals per semester. More than for any other objective, half of the twelve groups fell below the .99 confidence interval for the population proportion.

One interesting feature occurred in the Credits Earned Category. The Low Credits Group had significantly more discipline referrals than each of the

other three groups. Again, as with GPA and American history grade point, this group was in a class by itself.

The high failure rate for this objective by almost all groups in all categories may be explained by the large number of discipline referrals initiated by the administration, many of which are related to attendance procedures. Students are required to sign in during study halls, and failure to sign in a second time results in detentions and a notation on the student's discipline card. Other relatively minor violations, such as, excessive tardies or failure to serve a detention for a teacher, often result in discipline referrals. In short, teachers who so desire find it relatively easy to allow the office take care of discipline problems. A closer look at the reasons behind the seemingly excessive number of office referrals, with only the more serious offenses being considered, might give a better perspective to the problem of student discipline; however, one has to question whether having nearly one half of the students referred to the office for disciplinary purposes at least once a year helps to promote a positive learning environment.

#### Extracurricular Activities

Only 72% of the 279 students studied were involved in an average of at least one extracurricular activity each year. In fact, only three groups met the 80% criterion. These groups included the students with a concentration in an academic department, the students in the upper quarter regarding number of credits earned, and the students who were one credit short of meeting the Nation at Risk guidelines. The three groups falling below the .99 confidence interval for the proportion of the population were the Industrial Arts, No Advanced Courses, and Low Credits Groups. Although these groups were at the extremes, there were only two pairs of groups that showed a significant

difference regarding extracurricular activity involvement: the students in the High Credits Group compared to the two groups with a below-average number of credits.

The relative homogeneity of the groups concerning this objective would seem to indicate that, at least compared to the other objectives studied, this objective is least likely to be related to student curriculum selection patterns.

### Major Conclusions

1. As a whole, the students in this study more nearly approximated academic goals relating to fundamental processes and knowledge of our American heritage than commitment goals relating to personal and societal interactions and positive vocational characteristics.

2. The groups were relatively homogeneous with respect to the commitment objectives: attendance, extracurricular involvement, and discipline referrals.

3. Students with a concentration in academics and students meeting or nearly meeting the Nation at Risk guidelines performed better than average on nearly all objectives. An exception occurred with the average performance of the group meeting the Nation at Risk guidelines on the extracurricular activities objective.

4. Students with an above-average number of credits performed better than average on nearly all objectives, although the High Average Credits Group was only average regarding the extracurricular activities and discipline referrals objectives.

5. Students with a concentration of coursework in a single department--industrial arts, business, social studies, science, or mathematics--had better than average attendance rates.

6. Students taking no advanced courses and those with an emphasis in industrial arts were below average with respect to all six objectives and, thus, with respect to approximation of all goals, with one notable exception. The industrial arts students were above average regarding attendance.

7. Students in the bottom quarter of the class with respect to credits earned not only were below average regarding all six objectives and, thus, all goals, but also were significantly lower than even the students in the second quarter regarding GPA, American history grade point, and discipline referrals objectives.

8. The objective most often not achieved by the groups was the one concerning discipline referrals. Almost half (46%) of all students did not meet this objective, and only two of the twelve groups even had means that met the criteria. This is probably related to the building discipline policies and the number of discipline referrals related to attendance accounting procedures.

### Recommendations

1. It is recommended that the Board of Education for the Bellevue Public School System review the educational goals defined in the 1969 board policy to determine if they accurately reflect the attitudes and concerns of the patrons of the district.

2. It is recommended that the Bellevue Public School System increase its use of computers in the handling of student records. At the present time only data regarding the current semester are kept in the computer files. Placing cumulative records on the computer would allow studies by the district to be conducted more efficiently and accurately.

3. Due to the importance placed on extracurricular activities by prospective employers and colleges, it is recommended that the administration



of Bellevue West High School develop a procedure for ensuring the accurate recording of students' extracurricular activities in their cumulative folders.

4. Due to the large proportion of students not meeting the objective regarding discipline referrals, it is recommended that the administration of Bellevue West High School review the building policies regarding discipline referrals to determine if these policies promote a positive learning environment. It is recommended that this review include input from the Teachers' Advisory Council, the Counseling Department, the deans, and the Bellevue West Student Council.

5. It is recommended that the Counseling Department develop written procedures to ensure that students in the bottom quarter of each class with respect to credits earned receive special counseling in order to increase the likelihood of their achievement of school goals. It is further recommended that efforts be taken to ensure that students understand that the school policy regarding the ten-credit limit per department does not limit course selection for credits beyond the minimum of 36 credits required for graduation.

## CHAPTER SIX

### Summary

Schools are developed to meet educational goals. The extent to which students are able to approximate these goals is related to student characteristics, peer group characteristics, and school characteristics. Although many schools have been judged by professionals and patrons to provide quality teachers and programs, students still exercise considerable control over the curriculum by their selection of courses.

The hypothesis for this study was that student course selection patterns do not affect student approximation of school goals.

The Bellevue Public School System, Bellevue, Nebraska, has four primary educational goals. Since criteria were not included with these goals, six objectives were developed, with each objective relating to at least one of the four goals. The criteria for meeting these objectives were based on the following measures: (1) SRA Assessment Survey percentile, (2) cumulative GPA through the first semester of the senior year, (3) American history grade point average, (4) number of absences per semester, (5) number of discipline referrals per semester, and (6) number of extracurricular activities.

Three categories of course selection patterns were considered. The first category included selection patterns based on concentration of coursework within a single department. The second category divided the students into quarters, based on number of credits earned through the first semester of the senior year. The last category included patterns defined by the guidelines set

forth in the Nation at Risk Report.

The subjects were the 279 members of the 1984 graduating class of Bellevue West High School for whom records were available.

Data analysis was accomplished using the Statistical Package for the Social Sciences to perform analyses of variance with Scheffe's test ( $\alpha = .01$ ) as an a posteriori contrast. In addition, for each objective the standard error of a proportion with a .99 confidence interval was calculated, using the proportion of students achieving the objective. A criterion of .80 was used as the desirable proportion of students from each group that should achieve the objective.

The hypothesis was rejected in part, with the following relationships discovered.

1. As a whole, students more nearly approximated academic goals relating to fundamental processes and knowledge of the American heritage than commitment goals relating to personal and societal interactions and positive vocational characteristics.

2. The groups were relatively homogeneous with respect to the commitment objectives: attendance, extracurricular involvement, and discipline referrals.

3. Students with a concentration in academics, students meeting or nearly meeting the Nation at Risk guidelines, and students with an above-average number of credits performed better than average on nearly all objectives.

4. Students with a concentration of coursework in a single department had better than average attendance rates.

5. Students taking no advanced courses, students with an emphasis in industrial arts, and students in the bottom quarter of the class with respect to

credits earned were below average with respect to almost all objectives.

6. The objective most often not achieved by the groups was the one concerning discipline referrals.

It was recommended that the school district review its educational goals to determine if they accurately reflect current attitudes and concerns. It was also suggested that the district make greater use of computers in handling student records. At the building level, it was recommended that policies and procedures be reviewed in each of the following areas: (1) recording of student involvement in extracurricular activities, (2) discipline referrals, (3) counseling of students most likely to have difficulty approximating school goals.

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## APPENDIX A. Records Search Procedures

### PROCEDURES FOR CURRICULUM PROJECT

NOTE: Include credits currently being attempted along with credits earned.

Boxes marked "major," "AH avg," "Risk," "min credits," and "referrals" should be left blank.

1. Enter ID number.
2. Enter sex (M/F).
3. Enter number of semesters enrolled in BPS in grades 9-12.
4. Enter cumulative GPA.
5. Total the number of absences from 9th grade through the fall semester of 1983 and enter.
6. Enter American History grades.
7. Enter credits earned for each department (9-12).
  - a. science
  - b. math
  - c. social studies
  - d. business
  - e. industrial arts
8. Check box if student has 1 credit in computers AND 2 credits in English 12.
9. Check box if NO credit has been received in advanced courses. Advanced courses include
  - a. those identified by "Advanced" in course title,
  - b. those identified as second year courses (II),
  - c. geometry,
  - d. woods construction,
  - e. architectural drawing,
  - f. all AP courses.
10. Enter SRA composite percentile.
11. Enter number of activities (10-12). Count 1 activity for each year of participation in an organization, club or sport.



## Appendix B. Data Collection Card

## CURRICULUM PROJECT

ID		sex	sem enrolled	GPA	absences
sci	math	soc sci	bus	ind arts	major
Am hist	AH avg	comp/Eng 12		Risk	No Advanced
ITED Comp		activities	min credits	referrals	

## Appendix C. Extracurricular Activities Survey

Extracurricular Activities Survey  
Class of 1984

Name \_\_\_\_\_  
(Please print, using last name first.)

This survey is being conducted as part of a study of the relationship between extracurricular activities and accomplishment of school goals. Your name will not be used in the study, and the data you provide will only be used as part of group totals.

For each of the activities listed below, indicate with a check mark the years in which you participated, whether at Bellevue West or at some other school.

	SOPH	JR	SR		SOPH	JR	SR
1. Band	—	—	—	21. Quill & Scroll	—	—	—
2. Baseball	—	—	—	22. ROTC Drill Tm.	—	—	—
3. Basketball	—	—	—	23. Sr. Class Sen.	—	—	—
4. Cheerleader	—	—	—	24. Spring Play	—	—	—
5. Chorus	—	—	—	25. Student Council	—	—	—
6. Cross Country	—	—	—	26. Swimming	—	—	—
7. DECA	—	—	—	27. Tennis	—	—	—
8. Debate	—	—	—	28. Thunderettes	—	—	—
9. FBLA	—	—	—	29. Track	—	—	—
10. Football	—	—	—	30. Triple Trio	—	—	—
11. Forgn Lang Cl	—	—	—	31. VICA	—	—	—
12. Forensics	—	—	—	32. Volleyball	—	—	—
13. Golf	—	—	—	33. West Wind	—	—	—
14. Gymnastics	—	—	—	34. West Connectn	—	—	—
15. InnerVisions	—	—	—	35. Wrestling	—	—	—
16. Jr Class Sen	—	—	—	36. Yearbook	—	—	—
17. Key Club	—	—	—	Others (Please list activities.)			
18. Latin Club	—	—	—	37. _____	—	—	—
19. Fall Musical	—	—	—	38. _____	—	—	—
20. Natl Honor Soc	—	—	—	39. _____	—	—	—