

THE ACADEMIC SELF-CONCEPT: ITS RELATIONSHIP WITH  
COLLEGE PLACEMENT SCORES AND ITS DEVIATION  
FOLLOWING A QUARTER OF  
COLLEGE ATTENDANCE

BY  
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S. P. P.

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## ABSTRACT

This study was designed to determine whether the 1964 Montana State College freshman students had a realistic self-concept of their academic abilities and whether this self-concept would change during a quarter of college attendance. A questionnaire was designed to measure academic self-concept. The students were asked to rate themselves from very poor to exceptional in the following areas: social science, physical science, biological science, behavioral science, communicative ability, and reading comprehension. The questionnaire was administered during the first week of autumn quarter, 1964, and again during the last week of the quarter. The study included 263 students.

The correlation coefficient between the sum of the responses on the questionnaire and the sum of the raw scores on the placement test was .346 and was significant at the .01 level. The means on the questionnaire the first time it was administered and on the questionnaire the second time it was administered were significantly different in all areas at the .01 level. The means were lower in all cases on the second self-estimation.

It was concluded from this study that the freshman college students tested did have a realistic concept of their academic abilities in relation to the students around them. They were more accurate in estimating their abilities in the area of physical science than in other areas, and less accurate in estimating their abilities in the area of behavioral science than in the other areas. The academic self-concept of these students changed during their first quarter of college attendance. On the average, the students lowered their estimation on the questionnaire the second time it was administered to one-half of what their first estimation had been.

## CHAPTER I

### INTRODUCTION

A student's self-concept has been hypothesized as a functionally limiting and facilitating factor in academic performance.<sup>1</sup> The functional limits of a student's ability to learn are determined by his self-image, or self-conception as acquired in social interaction. This does not ignore the idea that there are organic limits, but indicates that such limits are rarely reached. Considerable support can be drawn from cases in which a person's ability to learn was modified by changes in his own self-image. The individual may also learn what he believes other significant persons expect him to be able to learn.<sup>2</sup>

Influences on the academic self-concept are in the form of expectancies, which in turn affect the student's ability to perform in the academic setting. Payne and Farquhar<sup>3</sup> state that it should be possible to develop measures of the "looking-glass-self" which discriminate between high and low motivated students.

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<sup>1</sup>Payne, D. A., and Farquhar, W. W., "The Dimensions of an Objective Measure of Academic Self-Concept," Journal of Educational Psychology, 53:187, August, 1959.

<sup>2</sup>Brookover, W. B., "A Social Psychological Conception of Classroom Learning," School and Society, 87:84, February, 1959.

<sup>3</sup>Payne and Farquhar, "The Dimensions . . . , " op. cit., p. 187.

Brim<sup>4</sup> said that the grade-level attained by a student varies directly with his own estimate of his intelligence. There is a relationship between the subject's actual grade-point average and self-estimate of intelligence.

The search for an understanding of learning has led in two directions.<sup>5</sup> One is the atomistic direction represented by the teaching machine and the other direction searches for the answers to learning problems in the learner himself--in his self-concept, or image of himself. This position aims at grasping broader laws of learning derived from an understanding of how the learner perceives himself. Landsman<sup>6</sup> expresses optimism concerning the significance of insights obtained through the understanding of how the learner perceives himself and his ability as he encounters learning tasks.

A student's academic self-concept is the product of many past learning experiences and often results from mis-evaluation. At the present, most high school graduates are somewhat aware of their academic capabilities due to discussions of varied intelligence, achievement,

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<sup>4</sup>Brim, O. G. Jr., "College Grades and Self-Estimates of Intelligence," Journal of Educational Psychology, 45:477, December, 1954.

<sup>5</sup>Landsman, Ted, "The Role of the Self-Concept in Learning Situations," The High School Journal, 45:289, April, 1962.

<sup>6</sup>Landsman, op. cit., pp. 290-291.

and aptitude tests with guidance counselors in their high schools. Thus, students who venture toward modern institutions of higher learning should have a considerable amount of self-understanding. It is difficult to say whether or not this claim is objectively measured.<sup>7</sup>

Much time has been spent studying the social aspects of the self-concept and not enough time investigating the interaction of school experiences upon the self-concept.<sup>8</sup> College experiences often have a great deal of effect upon this supposedly enduring aspect of the personality--the self-concept. College freshmen, since they come from the middle or upper portion of our high school population, have average or above average intelligence and in accordance with this, a knowledge of, and a certain amount of self respect for their academic abilities.<sup>9</sup>

A student often reacts to his first quarter of college attendance with panic. The thought occurs to him that his former belief in his good or above average academic capacity was unfounded. This fear arises when he first encounters a section of a textbook, or an argument in a lecture, which he cannot comprehend instantly. A cursory reading of a

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<sup>7</sup>Potter, W. N., "Self-Appraisal of Advanced Degree Candidates," Journal of Educational Research, 55:279, March, 1962.

<sup>8</sup>Marzolf, S. S., "Fear and Low Productivity Among Superior Students," Journal of Higher Education, 33:265, May, 1962.

<sup>9</sup>Ibid., p. 265.

paragraph leaves him baffled. He has always been able to understand immediately, but now he cannot. A student coming from a small or even average size high school in Montana may have always been the first or one of the first in his class to grasp ideas and concepts. Now, where there is more competition, the student sees others comprehending what he cannot until he studies it more diligently. Because he cannot understand this phenomenon, he becomes frightened. This may change his concept of his academic abilities.<sup>10</sup>

Often, because of schools which do not have ability grouping and the brighter students are mixed with the average and slow, college freshmen will not have been challenged sufficiently in the past. Now they are no longer able to coast along without much effort and remain at the top of the class. The subject matter is now more difficult and the student begins to exert much more effort than ever before and spend many long hours studying. On the other hand, students who did not perform up to their abilities in high school, for various reasons, may acquire more drive because of challenge, scholastic surroundings and facilities, and begin to perform on a high academic level.

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<sup>10</sup>Ibid., p. 267.

There are those, however, who feel that the self-concept is highly resistant to change. Tolbert<sup>11</sup> says that self-concept is patterned in a unique way and is highly organized, stable, and resistant to change. The pattern of attitudes that makes up the academic self-concept functions in a way to improve, protect, and increase the value of the self as the individual sees it. Therefore, the things that improve or enhance the self are more readily acceptable as part of it than those which would detract from the self-concept. Tolbert<sup>12</sup> states an example, "If a student thinks he is able to do college work, he would have difficulty accepting evidence that he could not, even if it were rather conclusive evidence." Also, because the self-concept shapes new experience to conform to its already established pattern, much behavior can be understood as a person's attempt to maintain the consistency of his self-concept, a kind of homeostasis at a higher psychological level.

#### Statement of the Problem

The problem consisted mainly of two parts. First, posing the question of whether there is a relationship between students' academic

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<sup>11</sup>Tolbert, E. L., Introduction to Counseling, p. 156.

<sup>12</sup>Tolbert, op. cit., p. 156.

self-concepts and academic capabilities. Second, posing the question of whether or not the students' self-concepts are altered by a quarter of college attendance. More specifically the following two questions were posed: Is there a relationship between students' scores on a six-factor measure of academic self-concept and their scores on four tests of college placement? Is there a change between students' scores on a six-factor measure of academic self-concept given before and after their first quarter of college attendance?

### Hypotheses

General Hypothesis A. The 1964 freshman students at Montana State College<sup>13</sup> have a self-concept of their academic abilities which does not have a significant positive correlation with their placement test scores.

Hypothesis 1. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the American Council on Education Psychological Examination (ACE) Quantitative score.

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<sup>13</sup>At the time this research was done, Montana State University, Bozeman, Montana, was known as Montana State College. The name of the institution was changed July, 1965.

Hypothesis 2. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the ACE Linguistic score.

Hypothesis 3. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the ACE Total score.

Hypothesis 4. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the Minnesota Scholastic Aptitude Test (MSAT) score.

Hypothesis 5. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the Montana State College Arithmetic Placement Test score.

Hypothesis 6. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the Montana State College Algebra I Placement Test score.

Hypothesis 7. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 8. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Quantitative score.

Hypothesis 9. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Linguistic score.

Hypothesis 10. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Total score.

Hypothesis 11. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the MSAT score.

Hypothesis 12. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the Arithmetic Test score.

Hypothesis 13. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the Algebra I Test score.

Hypothesis 14. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 15. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Quantitative score.

Hypothesis 16. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Linguistic score.

Hypothesis 17. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Total score.

Hypothesis 18. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the MSAT score.

Hypothesis 19. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the Arithmetic Test score.

Hypothesis 20. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the Algebra I Test score.

Hypothesis 21. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 22. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Quantitative score.

Hypothesis 23. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Linguistic score.

Hypothesis 24. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Total score.

Hypothesis 25. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the MSAT score.

Hypothesis 26. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the Arithmetic Test score.

Hypothesis 27. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the Algebra I Test score.

Hypothesis 28. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 29. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the ACE Quantitative score.

Hypothesis 30. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the ACE Linguistic score.

Hypothesis 31. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the ACE Total score.

Hypothesis 32. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the MSAT score.

Hypothesis 33. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the Arithmetic Test score.

Hypothesis 34. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the Algebra I Test score.

Hypothesis 35. The 1964 freshman students at Montana State College have a concept of their academic capability in communicative ability which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 36. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Quantitative score.

Hypothesis 37. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Linguistic score.

Hypothesis 38. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Total score.

Hypothesis 39. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the MSAT score.

Hypothesis 40. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the Arithmetic Test score.

Hypothesis 41. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the Algebra I Test score.

Hypothesis 42. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the sum of the raw scores on the placement tests.

Hypothesis 43. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Quantitative score.

Hypothesis 44. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Linguistic score.

Hypothesis 45. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Total score.

Hypothesis 46. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the MSAT score.

Hypothesis 47. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the Arithmetic Test score.

Hypothesis 48. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the Algebra I Test score.

Hypothesis 49. The 1964 freshman students at Montana State College have a concept of their over-all academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the sum of the raw scores on the placement tests.

General Hypothesis B. The academic self-concept, as measured by a questionnaire, does not change during a quarter of college attendance.

Hypothesis 50. The academic self-concept in the area of social science does not change during a quarter of college attendance.

Hypothesis 51. The academic self-concept in the area of physical science does not change during a quarter of college attendance.

Hypothesis 52. The academic self-concept in the area of biological science does not change during a quarter of college attendance.

Hypothesis 53. The academic self-concept in the area of behavioral science does not change during a quarter of college attendance.

Hypothesis 54. The academic self-concept in the area of communicative ability does not change during a quarter of college attendance.

Hypothesis 55. The academic self-concept in the area of reading comprehension does not change during a quarter of college attendance.

Hypothesis 56. The total academic self-concept, as measured by a questionnaire, does not change during a quarter of college attendance.

### Procedures

Review of literature. A review was made of related literature to determine what had been done in the area of academic self-concept.

Construction of instrument. An instrument was designed by the investigator to measure academic self-concept and was validated in terms of content validity by members of the Education Department at Montana State College. The questionnaire included an item in which the students were asked to rate themselves in relation to the students around them in each of these major academic areas: social science, biological science, behavioral science, communicative ability, and reading comprehension. An example is, "How do you feel you compare with the rest of the freshmen in social science?" The students were asked to rate themselves on a one-to-nine basis, one being low and nine being high.

Population description. The population was described in terms of age, marital status, father's occupation, and how the student's education was being financed.

Collection of data. The questionnaire was administered to 362 freshman students in English composition classes during the first week of autumn quarter, 1964. The questionnaire was then administered to 263 of the same students during the last week of the quarter. Only the students who answered the questionnaire both times were included in the study. The scores from the placement tests of these students were obtained from the Testing and Counseling Service at Montana State College.

Statistical procedures. The responses to the individual items and the total of the responses on the questionnaire which was administered first were correlated with each of the placement test scores and the sum of the scores. A t-test analysis was computed between the responses on the questionnaire the first time it was administered and the questionnaire the second time it was administered. The analysis was computed on each item and the total of the items.

#### Limitations

This study of academic self-concept was limited by the following factors:

1. No reliability or validity analyses had been done with the questionnaire, consequently the questionnaire may not have contained enough items to make it valid.

2. A possibility exists that the sample was not random, as only students who took English composition autumn quarter, 1964, had a chance of being selected for the study.

3. No variables such as student backgrounds and student I. Q. 's were controlled.

4. The placement tests were the only indications of the students' academic abilities.

5. Students who did not answer the questionnaire the second time it was administered were not included in the study because of the following reasons: they were no longer in school, they had dropped the course in which the questionnaire was administered, or for other reasons they were absent from class on the day the questionnaire was administered.

### Definitions

Academic self-concept. Academic self-concept is the individual's idea of his intellectual ability in relation to other persons. It is a means by which the individual relates himself to his social environment. Specifically in this study, it will be the score on the academic self-concept questionnaire.

Placement tests. A battery of placement tests are administered by the Testing and Counseling Service to all students at the time of

entrance to Montana State College. They are not used as a criterion for acceptance, but rather as an aid for the student and his adviser to help the student select the curriculum and courses for which he is best qualified. The following placement tests were used in this study:

1. The American Council on Education Psychological Examination (ACE). In addition to the total score (ACE Total), the examination yields two sub-scores designed to measure quantitative (ACE Quantitative) and verbal (ACE Linguistic) abilities.

2. The Minnesota Scholastic Aptitude Test (MSAT). This is a short form of the Ohio State University Psychological Examination. It is a power test which yields a total score for scholastic aptitude.

3. The Montana State College Arithmetic Placement Test. This was designed by the Montana State College Mathematics Department for placement purposes. It indicates general aptitude in mathematics.

4. The Montana State College Algebra I Placement Test. This was designed by the Montana State College Mathematics Department for placement purposes. It indicates general aptitude in algebra.

The introduction and discussion of this study leads to a discussion of related studies, which is presented in the following chapter.

## Summary

Chapter 1 presented a discussion of academic self-concept which is a factor of considerable importance in academic performance. High school graduates are considered to be aware of their academic capabilities. College experiences often have a great deal of effect on the academic self-concept. Tolbert feels, however, that the academic self-concept is resistant to change.

The problem, which consisted mainly of two parts, was stated. First, posing the question of whether there is a relationship between students' academic self-concept and academic capabilities. Second, posing the question of whether or not the students' self-concepts are altered by a quarter of college attendance.

General hypothesis A stated that the 1964 Montana State College freshman students have a concept of their academic abilities which does not have a significant positive correlation with their placement test scores. General hypothesis B stated that the academic self-concept does not change during a quarter of college attendance.

The procedures described were: review of literature, construction of instrument, description of population, collection of data, and statistical analysis. Factors limiting the study were presented. Academic self-concept was defined and the placement tests used in the study were described.

## CHAPTER II

### REVIEW OF LITERATURE

Numerous studies have been made on the self-concepts of the personality. These studies consider various character traits and how the subjects see the traits in themselves. Relatively few studies have been made on the academic self-concept as such, however. Chapter 2 deals with the more significant of these.

Potter<sup>1</sup> described an investigation which was based on the assumption that the students who venture toward graduate work have a considerable amount of self-understanding. This self-understanding was not claimed to be objectively measurable. Potter believes that the student's self-concepts can be indicators of his probable achievement in graduate school.

The problem was to discover to what extent candidates for graduate degrees considered that they possessed certain characteristics, abilities, and attitudes thought to be valuable to the scholar and the research worker. Potter used the Seashore Score Card for Fitness for Graduate Study. The following traits, attitudes, and abilities were scored:

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<sup>1</sup>Potter, W. N., "Self-Appraisal of Advanced Degree Candidates," Journal of Educational Research, 55:279-281, March 1962.

reasoning power, originality, memory, alertness, accuracy, application, cooperation, moral attitude, health, and zeal for investigation.

The 402 students were asked to appraise traits, attitudes, and abilities in comparison with those of other prospective graduate candidates whom they knew, and with reference also to their understanding of the importance and values of the items listed. They were urged to provide a "true" self-evaluation as far as possible, without using the judgments of any other individuals.

According to the results of Potter's study, the students thought themselves to be comparatively well fitted for graduate study and research as far as their ethical and physical qualifications were concerned. However, they seemed to feel considerable less security in relation to important intellectual traits and abilities. Potter said that graduate degree candidates often have strong misgivings about certain of their qualifications, particularly the intellectual. If they can learn to understand themselves clearly, a more effective approach can be made to strengthening them, and in some cases saving them, as effective workers in graduate education, according to Potter.<sup>2</sup>

A study to assess how education majors view themselves academically and how their adjustment profiles and need structures compare

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<sup>2</sup>Potter, op. cit., p. 281.

when examined by sex and by major, was made by Hamachek and Takako.<sup>3</sup> The Edwards Personal Preference Schedule, part of the California Test of Personality and an Academic Self-Concept Questionnaire were used.

The Academic Self-Concept Questionnaire, administered to see how the education majors saw themselves academically, consisted of seven multiple choice items of five possible responses each. An example would be, "How do you rate yourself in academic ability compared with other students at Michigan State University? a) I am among the best. b) I am above average. c) I am average. d) I am below average. e) I am among the poorest."

This questionnaire was developed from a ten-item questionnaire administered to a pilot group of 102 education majors. The mean and standard deviation were calculated for all scales. Mean comparisons were made by major (elementary and secondary) and by sex for all three questionnaires.

The results of the Academic Self-Concept Questionnaire showed that female elementary majors reflect a lower academic self-concept than either male or female secondary majors.<sup>4</sup>

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<sup>3</sup>Hamachek, D. E., and Takako, Mori, "Need Structure, Personal Adjustment, and Academic Self-Concept of Beginning Education Students," Journal of Educational Research, 58:158-162, December, 1964.

<sup>4</sup>Ibid., p. 162.

Robertson<sup>5</sup> designed a study to compare test scores and self-estimates of a group of freshmen planning to major in business administration and a group planning to major in engineering. The engineering group differed significantly from the business group in having higher test scores, in giving no over-estimates, and in giving higher estimates on some tests and first semester grades after counseling.

A study was reported by Brim<sup>6</sup> concerning the relationship between individual self-estimates of intellectual rank and college academic performance as measured by individual grade-point average. Each of 103 students was asked to assume that he was among 100 students taken at random from his class and given a series of intelligence tests and ranked from one (high) to 100 (low) on general intelligence on the basis of the test results. The student was then asked to estimate what his position or rank would be among these 100 students.

The cumulative grade-point average and a measure of intelligence was acquired from the University of Wisconsin files. The intelligence measure was the American Council Psychological Examination. The correlation between the test scores and the self-estimate was .43.

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<sup>5</sup>Robertson, M. H., "Test Scores and Self-Estimates of Two Curricular Groups," Personnel and Guidance Journal, 38:746-750, May, 1960.

<sup>6</sup>Brim, O. G. Jr., "College Grades and Self-Estimates of Intelligence," Journal of Educational Psychology, 45:477, December, 1954.

The subjects in general overestimated their intellectual rank.<sup>7</sup>

An attempt to obtain a picture of how the underachiever perceives himself as compared with the achiever's perception of himself was made by Shaw, Edson, and Bell.<sup>8</sup> They found that differences in self-concept do exist between achievers and underachievers. Male underachievers seem to have more negative feelings about themselves than do male achievers. Female achievers tend to be ambivalent with regard to their feelings toward themselves. The data did not indicate whether differences in self-concept are the causes of, or the result of, underachievement. They said that further intensive study of the differences in self-concept between achievers and underachievers may lead to increased understanding of the problem of academic motivation.<sup>9</sup>

Shaw and Alves<sup>10</sup> conducted another study which tended to confirm the previous one and tended to point strongly to a direct association

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<sup>7</sup>Ibid., p. 484.

<sup>8</sup>Shaw, M. C., Edson, K., and Bell, H. M., "The Self-Concept of Bright Underachieving High School Students as Revealed by an Adjective Check List," Personnel and Guidance Journal, 39:193-196, November, 1960.

<sup>9</sup>Ibid., p. 195.

<sup>10</sup>Shaw, M. C., and Alves, G. J., "The Self-Concept of Bright Academic Underachievers: Continued," Personnel and Guidance Journal, 42:401-403, December, 1963.

between negative self-attitudes and academic achievement, when ability levels were equal.

Field, Kehas, and Tideman<sup>11</sup> discussed assessment of the vocational self-concept in adolescence. In the discussion they say that a student can reflect upon his experience and frame judgments about that experience. These judgments are usually in the semantic form, "I am . . ." For instance, "I am bright enough to go to college" is a conception of self which teachers and counselors want to promote among students when the conception is warranted. The self-concept ordinarily serves as a partial basis for choosing or planning behavior.<sup>12</sup>

They present the issue, "Is the self-report equivalent to the self-concept?" The relationship of these two constructs lies at the basis of an old and unsolved problem, "What is the place of introspection in scientific investigation." They only point to the issue and suggest further scrutiny.<sup>13</sup>

A study by Roth<sup>14</sup> attempted to test the proposition that there would be significant differences in the self-perceptions of those who

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<sup>11</sup>Field, F. L., Kehas, C. D., and Tideman, D. V., "The Self-Concept in Career Development: A Construct in Transition," Personnel and Guidance Journal, 41:767-771, May, 1963.

<sup>12</sup>Ibid., p. 768.

<sup>13</sup>Ibid., p. 769.

<sup>14</sup>Roth, R. M., "The Role of Self-Concept in Achievement," Journal of Experimental Education, 27:281, June, 1959.

improved, did not improve, and dropped out in a college reading improvement program. The data supported this proposition. Changes in self-concept and grade-point average indicated support for the theory that those who achieve as well as those who do not, do so as a result of the needs of their own self-system.

Judgments of scholastic promise of college freshmen were shown to be reasonably accurate in a study by Young.<sup>15</sup> A coefficient of correlation of .71 was found between self-predictions of scholastic achievement and actual achievement. A coefficient of correlation of .61 between self-estimates of scholastic ability and test measures of that ability was found. Young states that a study of the accuracy of self-judgments regarding scholastic promise in relation to other factors such as scholastic ability and socio-economic status would be a promising avenue for further study.

Freehill<sup>16</sup> asked college freshmen to judge their probable college grade-point by course areas and in general. For a random sample of 100 college freshmen, he found a coefficient of correlation of .33 between expected and earned grade-point average.

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<sup>15</sup>Young, C. F., "College Freshmen Judge Their Own Scholastic Promise," Personnel and Guidance Journal, 32:402, March, 1954.

<sup>16</sup>Freehill, M. F., "Student Self-Estimates as Guidance in Selecting Courses," College and University, 27:242, March, 1952.

Holt<sup>17</sup> compared self-ratings of ten college students with comparable ratings by a group of clinicians and on a number of factors concluded that the most intelligent knew themselves best.

Pennington<sup>18</sup> studied students estimates of grades in a psychology class and found that of 111 students who guessed their final grades in the class at the beginning of the term, only 25 per cent actually earned grades as high or higher than anticipated.

A study was made by Arsenian<sup>19</sup> concerning the accuracy with which college freshmen judge their performance on a number of psychological tests and concluded that a freshman's estimates of his abilities, knowledges and interests do not correspond highly with his actual possession of these attributes as measured by objective tests.

Payne<sup>20</sup> investigated the efficiency of an objective theory-based measure of academic self-concept in predicting an achievement criterion.

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<sup>17</sup>Holt, R. R., "The Accuracy of Self-Evaluations: Its Measurement and Some of Its Personological Correlates," Journal of Consulting Psychology, 15:95-101, May, 1951.

<sup>18</sup>Pennington, L. A., "Shifts in Aspiration Level After Success and Failure in the College Classroom," Journal of General Psychology, 23:305-313, December, 1940.

<sup>19</sup>Arsenian, S., "Informing College Freshmen of Their Test Scores," Journal of Educational Psychology, 33:291-302, May, 1942.

<sup>20</sup>Payne, D. A., "The Concurrent and Predictive Validity of an Objective Measure of Academic Self-Concept," Educational and Psychological Measurement, 22:773-780, Winter, 1962.

The measure consisted of a 48-item rating scale, the Word Rating List. Items were in the form of one, two, or three words or concepts which the student was to rate on a four-point scale as he thought his teachers would in describing him as a student. The data indicated a high degree of validity, both concurrent and predictive, for an objective, reliable, and theory-based measure of academic self-concept.

A "Self-Evaluation Scale" was devised in 1956 by Matteson<sup>21</sup> as a means of analyzing student self-concepts, and used with a group of 419 college freshmen. The scale provided for self-rated expressions of the conceived self, the projected self, and the reflected self; with respect to academic aptitude, interests, and personality factors.

Significant association was found between predicted and earned grades for the first college term. Matteson says that it is quite possible that the summer counseling experience of these students had provided them with a considerable measure of self-understanding, especially in those areas pertinent to academic achievement.<sup>22</sup> He also recommends that the utilization, in both colleges and high schools, of some type of simple self-rating scale at the beginning of the school year, which would be of considerable value to students, teachers, and counselors.

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<sup>21</sup>Matteson, R. W., "Self-Estimates of College Freshmen," Personnel and Guidance Journal, 34:280-284, January, 1956.

<sup>22</sup>Ibid., p. 283.

The following chapter deals with the research findings of the academic self-concept questionnaire administered to 263 Montana State College freshmen, autumn quarter, 1964.

### Summary

The studies presented in Chapter 2 concern investigation of the academic self-concept. The majority of the studies are concerned with finding the relationship between the academic self-concept and such measures of actual ability as test scores and grade-point average. Instruments for measuring the academic self-concept were discussed.

### CHAPTER III

#### PRESENTATION OF DATA

Chapter 3 presents a description of the population, a statistical analysis of the self-concept questionnaire, and judgment of the hypotheses based upon the statistical findings. The findings in this chapter were considered to be significant if they were found to be significant at the .01 level.

Population description. Of the 263 students included in the study, 250 were in the seventeen-to-nineteen year age bracket, seven were in the twenty-to-twenty-two bracket, and three were in the twenty-three-to-twenty-five bracket. The others were older. Of the group, 255 were single and eight were married.

The students stated that their father's occupations were as follows: professional, technical, and managerial work - 92; clerical and sales work - 29; service work - 71; skilled and mechanical work - 42; unskilled or manual work - 28.

Eighty-nine students stated that their parents or other persons were financing 100 per cent of their college education. Sixty-five stated that their parents or others were paying 75 per cent and the students themselves were paying 25 per cent. Thirty-nine stated that their parents or others were paying 50 per cent and they themselves, 50

per cent. Thirty students stated that their parents or others were paying 25 per cent and the students were paying 75 per cent. Thirty-eight students stated that they were financing their entire college education themselves.

When asked if they had taken any aptitude or intelligence tests before coming to college, nineteen of the students replied that they had not. One third of the students stated that they had never discussed any test results with a teacher or guidance counselor. One half of the students had not discussed any part of their placement tests with their adviser.

#### Data Analysis

The most significant correlations between the self-concept questionnaire items and placement test scores were found in the area of physical science. A coefficient of correlation of .559 was found between the Arithmetic Test scores and the self-ratings in the area of physical science. A coefficient of correlation of .643 between the Algebra I Test scores and the self-ratings in the area of physical science was found. The sum of the raw scores on the placement tests had a correlation coefficient of .486 with the self-ratings in physical science.

The lowest correlation coefficients were found to be between the placement test scores and the self-ratings in the area of behavioral science. Negative coefficients of correlation appeared between the behavioral science self-ratings and the Arithmetic and Algebra Test scores.

The coefficients of correlation between the sum of the questionnaire responses and each of the placement test scores except the ACE Quantitative, were significant at the .01 level. The coefficient of correlation between the sum of the questionnaire responses and the ACE Quantitative score was not significant.

The correlation coefficient between the sum of the responses on the questionnaire and the sum of the raw scores on the placement tests was .346 and was significant at the .01 level.

Table 1 presents a matrix of the correlations of questionnaire responses with the placement test scores. Of the 49 coefficients of correlation which are presented in Table 1, 28 are significant at the .01 level.

TABLE 1. CORRELATION OF QUESTIONNAIRE ITEMS WITH PLACEMENT TEST SCORES

| Placement tests                      | Social science | Physical science | Biological science | Behavioral science | Communicative ability | Reading comprehension | Sum of responses |
|--------------------------------------|----------------|------------------|--------------------|--------------------|-----------------------|-----------------------|------------------|
| ACE Q                                | .151           | <u>.413*</u>     | .067               | .007               | .138                  | .208*                 | -.011            |
| ACE L                                | .192*          | .255*            | .141               | .035               | .244*                 | <u>.387*</u>          | .297*            |
| ACE T                                | .187*          | .344*            | .118               | .025               | .214*                 | .335*                 | .294*            |
| MSAT                                 | .178           | .369*            | .191*              | .004               | .282*                 | <u>.385*</u>          | .345*            |
| Arith.                               | .152           | <u>.559*</u>     | .147               | -.016              | .121                  | .159                  | .288*            |
| Algebra I                            | .203*          | <u>.643*</u>     | .175               | -.009              | .129                  | .224*                 | .353*            |
| Sum of raw scores on placement tests | .188*          | <u>.486*</u>     | .159               | .000               | .210*                 | .316*                 | <u>.364*</u>     |

\* Significant at .01 level

— Denotes most significant correlation coefficients

As shown by Table 2, the means on the questionnaire the first time it was administered and on the questionnaire the second time it was administered were significantly different in all areas at the .01 level. The means were lower in all cases on the questionnaire when it was administered the second time.

TABLE 2. SIGNIFICANT DIFFERENCE BETWEEN MEANS ON THE QUESTIONNAIRE THE FIRST TIME IT WAS ADMINISTERED AND THE QUESTIONNAIRE THE SECOND TIME IT WAS ADMINISTERED

| Self-concept<br>area      | Questionnaire 1 |        | t     | Questionnaire 2 |        |
|---------------------------|-----------------|--------|-------|-----------------|--------|
|                           | Mean            | Number |       | Mean            | Number |
| Social<br>science         | 5.29            | 263    | 16.74 | 2.63            | 263    |
| Physical<br>science       | 4.95            | 263    | 16.50 | 2.21            | 263    |
| Biological<br>science     | 4.87            | 263    | 11.79 | 2.98            | 263    |
| Behavioral<br>science     | 4.79            | 263    | 12.43 | 2.76            | 263    |
| Communicative<br>ability  | 4.98            | 263    | 14.44 | 2.62            | 263    |
| Reading<br>comprehension  | 5.16            | 263    | 17.19 | 2.34            | 263    |
| Total of the<br>responses | 30.05           | 263    | 24.66 | 15.56           | 263    |

### Judgment of Hypotheses

Hypothesis 1. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 2. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 3. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 4. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the MSAT score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 5. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 6. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 7. The 1964 freshman students at Montana State College have a concept of their academic ability in social science which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 8. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 9. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 10. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 11. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the MSAT score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 12. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 13. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 14. The 1964 freshman students at Montana State College have a concept of their academic ability in physical science which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 15. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 16. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 17. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 18. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the MSAT score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 19. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 20. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 21. The 1964 freshman students at Montana State College have a concept of their academic ability in biological science which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 22. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 23. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 24. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 25. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the MSAT score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 26. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the Arithmetic Test Score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 27. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 28. The 1964 freshman students at Montana State College have a concept of their academic ability in behavioral science which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 29. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 30. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 31. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 32. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the MSAT score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 33. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 34. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 35. The 1964 freshman students at Montana State College have a concept of their academic ability in communicative ability which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 36. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 37. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 38. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 39. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the MSAT score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 40. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 41. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 42. The 1964 freshman students at Montana State College have a concept of their academic ability in reading comprehension which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 43. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Quantitative score. The correlation coefficient of these variables was not significant at the .01 level, therefore, this hypothesis was accepted.

Hypothesis 44. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Linguistic score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 45. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the ACE Total score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 46. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the MSAT score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 47. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the Arithmetic Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 48. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the Algebra I Test score. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 49. The 1964 freshman students at Montana State College have a concept of their academic ability, as measured by a sum of the responses on the questionnaire, which does not correlate positively with the sum of the raw scores on the placement tests. The correlation coefficient of these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 50. The academic self-concept in the area of social science does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 51. The academic self-concept in the area of physical science does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 52. The academic self-concept in the area of biological science does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 53. The academic self-concept in the area of behavioral science does not change during a quarter of college attendance.

The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 54. The academic self-concept in the area of communicative ability does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 55. The academic self-concept in the area of reading comprehension does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

Hypothesis 56. The total academic self-concept, as measured by a questionnaire, does not change during a quarter of college attendance. The t-value computed using these variables was significant at the .01 level, therefore, this hypothesis was rejected.

### Summary

Chapter 3 described the population of 263 students in terms of age, marital status, father's occupation, and how the student's education was being financed. A statistical analysis of the findings of the academic self-concept questionnaire were presented. Tables showed the correlation coefficients of the questionnaire items with placement scores and the

significant differences between means of the questionnaire the first time it was administered and the second time it was administered. The hypotheses were judged on the basis of the statistical findings.

## CHAPTER IV

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## Summary

Chapter 1 presented a discussion of the academic self-concept, which is a factor of considerable importance in academic performance. High school graduates are considered to be aware of their academic capabilities. College experiences often have a great deal of effect on the academic self-concept. Tolbert feels, however, that the academic self-concept is resistant to change.

The problem, which consisted mainly of two parts, was stated. First, posing the question of whether there is a relationship between students' academic self-concept and academic capabilities. Second, posing the question of whether or not the students' self-concepts are altered by a quarter of college attendance.

General hypothesis A stated that the 1964 Montana State College freshman students have a concept of their academic abilities which does not have a significant positive correlation with their placement test scores. General hypothesis B stated that the academic self-concept does not change during a quarter of college attendance.

The procedures described were: review of literature, construction of instrument, description of population, collection of data, and statistical analysis. Factors limiting the study were presented. Academic self-concept was defined and the placement tests used in the study were described.

A review of literature is presented in Chapter 2. The studies discussed concern investigation of the academic self-concept. The majority of the studies are concerned with finding the relationship between the academic self-concept and such measures of actual ability as test scores and grade-point average. Instruments for measuring the academic self-concept were discussed.

Chapter 3 presented the data. The population was described in terms of age, marital status, father's occupation and how the student's education was being financed. A statistical analysis of the findings of the academic self-concept questionnaire were presented. Tables showed the correlation coefficients of the questionnaire items with placement scores and the significant differences between the means of the questionnaire the first time it was administered and the second time it was administered. The hypotheses were judged on the basis of the statistical findings.

### Conclusions

It can be concluded from this study that the freshman college students questioned in this study had a realistic concept of their academic abilities in relation to the students around them. The students were more accurate in estimating their ability in the area of physical science than in the other areas. They were less accurate in estimating their ability in the area of behavioral science than in the other areas.

The academic self-concepts of the students used in this study changed during the students' first quarter of college attendance. On the average, the students lowered their second estimation of their academic abilities to one half of what their first estimation had been.

### Recommendations

The following recommendations were made for further study on the academic self-concept:

1. A longer, more comprehensive questionnaire should be used such as Payne's Word Rating List which is discussed on page 28 of this study. It is an objective, reliable, and theory-based measure of academic self-concept.

2. The question of whether the students became more accurate or less accurate in estimating their academic self-concept after a quarter of college attendance should be investigated.

3. A study should be made concerning the question of whether the students overestimated or underestimated their academic abilities.

4. A study of this type should be done investigating the relation of socio-economic level to academic self-concept. Other factors such as age, I.Q., marital status, and financial independence could be considered.

## LITERATURE CONSULTED

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## APPENDIX

## APPENDIX

## Self-Concept Questionnaire Items

1. How do you feel you compare with the rest of the freshmen in social sciences? (This area includes history, government, economics, philosophy.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional
2. How do you compare with the rest of the freshmen in physical sciences? (This area includes mathematics, chemistry, physics.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional
3. How do you compare with the rest of the freshmen in biological sciences? (This includes zoology, botany, human anatomy.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional
4. How do you compare with the rest of the freshmen in behavioral sciences? (This includes psychology, sociology.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional
5. How do you compare with the rest of the freshmen in communicative ability? (This includes ability to express yourself in writing, correct spelling and grammar usage.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional
6. How do you compare with the rest of the freshmen in reading comprehension? (This includes ability to read at a reasonably rapid rate and understanding and remembering what you read.)  
(1) very poor (2) poor (3) weak (4) fair (5) average (6) good  
(7) very good (8) excellent (9) exceptional