Alaska Natives have a high college dropout rate because of inadequate preparation for the learning and living requirements of college. This dissertation describes research used to develop Prelude, a 2-week advanced program for 11th grade rural Alaska students at Sheldon Jackson College (Alaska) that continues and expands the work begun by the basic Early College Incentive Program. A review of the literature examined (1) problems of culturally disadvantaged students entering college; (2) skills and courses required as adequate preparation for college; (3) the status of Alaska's rural schools in meeting standards of adequate preparation; and (4) strategies used in existing programs to help minority students make the transition to college. Questionnaires, telephone interviews, and a literature search collected data on 41 preparatory programs at 33 colleges and universities. The case study focused on the following features of the program: (1) preprogram assessment of student data; (2) diagnostic tests administered during orientation and used for course placement; (3) courses and academic, social, and recreational activities offered; (4) methods of course delivery; and (5) methods of course and program evaluation. Prelude staff and faculty analyzed the data and recommended procedures to implement their program. The report contains 67 references. It also includes appendices that provide a map of Alaska showing regions served by Prelude; the letter and questionnaire used to solicit research data; and Prelude's preprogram student assessment, recommendation, and diagnostic forms; and postprogram evaluation forms. (SV)
DEVELOPING A MODEL FOR AN ADVANCED COLLEGE PREPARATION PROGRAM FOR RURAL ALASKA STUDENTS

by

Jan Craddick, M.A.
Sheldon Jackson College

A Major Applied Research Project presented in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

May, 1988
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I would like to take this opportunity to thank the many persons who contributed to the completion of this project: the many program directors of preparatory programs at other colleges and universities, especially Barbara Young of California State University, and Jim Kowalsky and Ann Frentzen of the University of Alaska, Fairbanks; the faculty and staff of the Early College Incentive Program; and most important, Bob Heath, administrative assistant of ECIP and research assistant for this project.

The completion of this project was in large part made possible by the cooperation and support of my husband, Don.
Abstract of a Major Applied Research Project Presented to Nova University in Partial Fulfillment of the Requirements for the Degree of Doctor of Education

DEVELOPING A MODEL FOR AN ADVANCED COLLEGE PREPARATION PROGRAM FOR RURAL ALASKA STUDENTS

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May, 1988

In order to address the problems of preparation that many rural Alaskans have when they first arrive at college, Sheldon Jackson College developed a program, the Early College Incentive Program (ECIP), designed to expose 8th grade rural students to the learning and living requirements of college. In June, 1988, the next phase of the preparatory process will be initiated: an advanced college preparation program for 11th graders who successfully completed the initial program.

The case study method of research was employed to study preparatory and compensatory programs at other colleges and universities in order to develop a model that could be used by Sheldon Jackson College for students from Alaska rural schools and by other institutions of higher education for their preparatory programs. The aspects of these programs which were examined were (1) student data to be collected
before the program begins, (2) diagnostic tests to be administered during orientation and registration, (3) courses and activities to be offered, (4) methods of course delivery, and (5) methods of course and program evaluation.

In addition to data collected through a search of the literature, data about these programs were gathered in three ways: (1) letters, (2) questionnaires, and (3) telephone interviews. The data were then analyzed and evaluated by program staff and faculty.

The study, which encompassed 41 programs at 33 different institutions, determined that pre-program evaluation focused on academic data. This data was used with diagnostic tests to determine course placement. Courses fell into three categories, core or required courses, elective courses, and specialized courses, and were delivered by college professors using methods common to college classes. Activities also fell into three categories: academic, recreational, and social. Evaluation was conducted for students, for courses, and for the program. Students and faculty evaluated the courses. Faculty and staff evaluated the students. All three groups evaluated the program.

A number of procedures are being employed by Sheldon Jackson College as it implements its advanced program, Prelude, and are recommended to institutions seeking to establish preparatory programs of their own.
First, the institution should determine what students it wishes to serve and, thereby, the data to be collected before the program begins. The amount of pre-program evaluation will depend on the nature of the program.

Second, institutions planning to offer courses at both college and preparatory levels should require students to take college level entrance exams during Orientation and Registration.

Third, all programs should provide instruction in three or more of the competency areas recommended by the College Board: English, mathematics, science, social science, and computers. A study skills course should also be offered. Optional courses will depend on the requirements of the institution and the needs of the student population.

Fourth, courses should be delivered by college professors and should expose students to rapidly delivered lectures, note taking, quizzes, class discussions, homework, and research requirements.

Fifth, activities should include a mix of academic, recreational and social activities, but should be structured so that there is sufficient time for study.

Finally, institutes should plan to evaluate students, courses and faculty, and the program. There should be both on-going and post-program evaluations, employing objective questionnaires as well as subjective interviews.
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Chapter 1

INTRODUCTION

The Problem of Academic Preparation

The Problem in Alaska

Sheldon Jackson College is a small (rTE 274) liberal arts college located in Sitka, Alaska. Its educational goal as stated in the Sheldon Jackson College catalog (1987) is to provide a college education for all Alaskans, and its historic mission has been to serve Alaska Native (Indian, Aleut, and Eskimo) students. The present student body is 69% Alaskan and 44% Native Alaskan.

Sheldon Jackson, with its open door admissions policy, has had to deal head-on with many of the problems facing Native Alaskans as they venture to college. Many of these students come from small village schools with limited faculty and curriculum and limited counseling services. In 1985, 75% of the students entering Sheldon Jackson were enrolled in developmental courses in English, reading, or mathematics; 75% in pre-college English; 35% with reading levels below 9th grade in special reading classes; 43% in pre-college mathematics; 23% were in enrolled in all three courses. In 1986, 52% were enrolled in one or more developmental courses; 30% in reading; 52% in pre-college
English; and 24% in pre-college mathematics. In 1987, 23% were enrolled in pre-college math, 56% in pre-college reading, and 18% in reading. Eleven per cent of the entering freshmen were enrolled in all three developmental courses.

These students drop out of college because of inadequate preparation: preparation for college level courses, preparation for living among people of many cultures, preparation for living away from home, preparation for living in a climate quite different from their own, and preparation for the relative freedom of college life.

Kleinfeld (1978), studying similar problems at the University of Alaska, found:

1. Many Native students arrived without the academic skills needed to do well, and the academic services available through the SOS programs (college skills courses and tutoring services) were not enough.

2. Many Native students arrived without clear goals to which a college degree was relevant. They either didn't know why they had come to college or else they had come for noncareer or noneducational reasons.

3. Village students often did badly in college because they felt ill at ease on campus. They saw dormitories, college staff and the general social climate as unfriendly.

Kleinfeld and others (1985) attribute the problems facing students from small rural schools to (1) a limited number of teachers, courses and extracurricular activities; (2) a need to help students become comfortable and competent
outside the village; and (3) a need to prepare students for college.

In a study of 162 small rural high schools, they found that "most high schools offer algebra and geometry, only 28% offer trigonometry, and only 12% calculus...most offer biology, but only 56% offer chemistry, and only 12% offer physics." They also noted that many small high school teachers are teaching outside their fields.

Their study also confirmed that many rural students are unaccustomed to impersonal relationships with people, to being on their own without the support of friends and relatives. As a consequence, many rural students entering college:

Have not yet acquired basic mathematics and reading comprehension skills.

Have difficulty understanding college textbooks.

Have little experience taking notes in a lecture, writing research papers, or talking about their ideas in a classroom setting.

Find it difficult to adjust to the social and emotional pressures of college life.

Are unsure about how to handle their time and money.

Get homesick, worry about family responsibilities, and go home.
Bryant et. al. (1987) note that compensatory education for minority and other underprepared students has long been an important responsibility of colleges. Remedial studies as well as preparatory studies have been necessary since the end of World War II, when equal access and opportunity to education became realities. They suggest that "basic literacy education is required for an alarming cross section of high school leavers and graduates" and cite facts on "low test scoring, deficiencies in English, and mathematics placement." Davis and others (1975), studying the attrition rate of disadvantaged students at 122 institutions, note such major problems as language barriers, inadequate preparation, inadequate high school counseling, poor study habits, and cultural shock. Groff (1987) confirms these findings, noting that the commitment to equality of opportunity admitted to postsecondary education students with deficiencies that had to be repaired before they could do college level work. Centra (1980) notes that "pressure for equality of opportunity brought unprecedented numbers of ... disadvantaged students to the campuses" and suggests that "minority retention rates might best be increased by improving the academic skills of students before attending college ... (emphasis added)."
Developmental Programs as a Solution

Maxwell (1979) notes that the main approach used by colleges to cope with the vast numbers of underprepared students who entered colleges in the 1970's and 1980's was to establish or expand remedial and developmental programs. Bryant et. al. (1987) note that almost all two-year colleges have some form of curricular remediation, along with a degree of special counseling, tutoring, laboratory assistance, and other services for special groups. Astin (1972) addresses specific aspects of compensatory programs for minority students:

1. An open admissions policy is crucial to equality of opportunity. A student's being on campus, exposed to a college environment, constitutes an important type of interaction.

2. Counseling helps minority students become integrated into the university. It constitutes a most vital aspect of compensatory education in that it operates to reduce hostility, suspiciousness, apathy and other emotional states that may interfere with learning.

3. A curriculum appropriate to the needs of the disadvantaged must take into account the student's cultural background.

4. Effective teaching requires an accurate and first hand knowledge of the students' concerns, interests, and learning styles.

Davis and others (1975) focus on services specifically designed for the disadvantaged and most frequently used by
them. The most frequent service provided for disadvantaged students was work-study, followed by counseling on personal budgeting and financial problems. Remedial courses were activities frequently created for the disadvantaged. Tutoring was created for the disadvantaged in 20% of the instances.

Preparatory Programs as a Solution.

The federally funded "Upward Bound Program" (Public Law 89-329, as amended by Public Law 96-374--October 3, 1980; U.S. Department of Education, 1984) provides "Special Programs for Students from Disadvantaged Backgrounds" and authorizes the Secretary of Education to "carry out a program designed to generate skills and motivation necessary for success in education beyond high school" and to provide services such as:

1. instruction in reading, writing, study skills, mathematics and other subjects necessary for success beyond high school;
2. personal counseling;
3. academic advice and assistance in course selection;
4. tutorial services;
5. exposure to cultural events, academic programs and other activities not usually available to disadvantaged youth;
6. activities designed to acquaint youth participating in the program with the range of career options available to them;

7. instruction designed to prepare youth participating in the project for careers in which persons from disadvantaged backgrounds are particularly underrepresented; and

8. on-campus residential programs.

Other college preparatory programs have been established and funded by state governments, local public school districts, and colleges and universities. New York City initiated a College Bound Program (Institute for Research in the Behavioral Sciences, 1972) in the summer of 1967 to help disadvantaged students complete high school and enter and succeed in college. The objectives of the summer program were to: (1) raise the ability levels of incoming students in English, mathematics, and foreign languages, (2) provide a transition between junior and senior high school, (3) provide motivation for learning, (4) improve study skills, (5) help resolve individual and home difficulties affecting learning, and (6) add to cultural background.

John Bartram High School in Philadelphia (Blim, 1974) established a Motivation Program to equip inner-city students with academic potential for the academic challenge of a college education. Students entered the program when they reached 10th grade. For their remaining years in school
they were enrolled in five major subjects, all college preparatory courses. Each course met five days a week, 55 minutes a day. The thrust of the program was to (1) identify reachable youngsters, (2) group them homogenously, (3) set up college as their goal, and (4) get them to strive toward it.

In Alaska, several statewide programs have been developed to bring rural students to a college campus during the summer both to sharpen their academic skills and to get them used to the demands of college life. Among these is the Rural Alaska Honors Institute described by Kleinfeld and others (1985). The Institute selects academically talented juniors from rural high schools and brings them to the University of Alaska, Fairbanks, campus for a six-week college experience. Students improve their mathematics, writing and research skills, learn to handle such demands as having to stand at a podium and make a formal presentation, and learn to deal with homesickness.

The Sheldon Jackson College Solution

To address the problems of rural Alaska students, Sheldon Jackson College developed a program designed, as spelled out in the institution's Minority Education Appropriation Request, to "expose students to the learning
and living requirements of college, reduce cultural shock, and excite students about the opportunities that await them if they meet college academic standards" (Caven, 1984).

In 1985, the college instituted a two-week academic Early College Incentive Program for students from towns and villages in rural Alaska. The initial program, subtitled "Survival '85," was held from June 16th through 29th on the campus of Sheldon Jackson College and was designed to provide reinforcement for students who had expressed a desire to prepare themselves for entry into college or advanced training.

In 1985, the college selected 40 8th graders to participate in the program, 20 from rural districts in Southeastern Alaska and 20 from the Northwest Arctic, Lower Kuskokwim, Southwest, and Bering Strait School Districts in Northern Alaska (Map, Appendix A). In 1986, the program was expanded to include the Lower Yukon, Yukon/Koyukuk, and North Slope School Districts, and a total of 44 students participated in the program. In 1987, 37 students were selected for the program. The majority of the students in the program are Alaska Native (Indian, Aleut, and Eskimo).

The program has been funded for the most part by a Minority Education Grant from the Presbyterian Church. Travel funding has been provided by the districts for North Slope and Northwest Arctic School Districts.
The goals of the program are (1) to increase the number of rural students completing college preparatory courses and being admitted to college, (2) increase motivation for learning, and (3) improve study skills.

In 1988, the program will focus on 11th graders. The 37 students who successfully completed "Survival '85" will return to Sheldon Jackson for a two week advanced program, Prelude '88. The purpose of the Major Applied Research Project has been to develop a model for the 1988 advanced program that will continue and expand on the work begun by the basic ECIP program.

**Major Issues and Research Questions**

A statistical evaluation of the 1985 program (Craddick, 1986) was conducted to determine whether participation in the Early College Incentive Program had a significant effect on participants' preparation for college and their attitudes about college. The study compared the number of college preparatory courses taken, the grade point average for the college preparatory courses, and attitudes about college of participants with the same measures for two 9th grade control groups. The study found that although there was no
significant difference between the participants and the control groups in course selection or college planning, there was a significant difference in grade point average. A second study was conducted in 1987 (Craddick, 1987) of both the 1985 and 1986 groups, measuring their performance against a control group of students on the priority wait-list for the program. There were significant differences in grade point averages and a significant difference between the 1986 groups in the number of college preparatory courses taken. There was no significant difference between the groups (for either year) in the degree of planning for college. A third study was conducted in 1988 (Craddick, 1988) of all three groups. There were significant differences between the 1986 and 1987 participants and their control groups in number of college preparatory courses taken, between the 1985 and 1987 groups in grade point average, but no significant difference in the degree of college planning between participants and control groups for any year.

Studies by the Office of Registration and Records indicate that the GPA differences may not be as meaningful as they seem. In a study of college success rates of graduates from different types of high schools, Goff (1984) found that although there was little difference in the
average GPA of entering urban and rural freshmen, there were differences between the groups in their scores on entrance exams and in their GPA at Sheldon Jackson College (Table 1).

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>HS GPA</th>
<th>ENTRANCE SCORES</th>
<th>SJC GPA</th>
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<tr>
<td></td>
<td></td>
<td>RDG.</td>
<td>ENGL.</td>
</tr>
<tr>
<td>Lower 48</td>
<td>2.60</td>
<td>12.3</td>
<td>73.7</td>
</tr>
<tr>
<td>BIA Boarding</td>
<td>2.57</td>
<td>9.4</td>
<td>63.9</td>
</tr>
<tr>
<td>Ak Urban</td>
<td>2.46</td>
<td>11.4</td>
<td>68.8</td>
</tr>
<tr>
<td>Ak Rural</td>
<td>2.50</td>
<td>8.7</td>
<td>60.3</td>
</tr>
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The average high school GPA, to date, for ECIP participants is 3.55. Although the figure is significantly higher than that for students in the Goff study, the earlier study indicates that the figure may be misleading.

There is some indication that grading in the rural districts differs from that in the urban districts. Studies by Kleinfeld and others (1985) indicate that "many observers of small rural high schools - rural college students, rural principals, Department of Education personnel - have reached the same conclusion: Academic standards are low in many small rural schools. Not until rural students leave high
school and face the demands of college...do they realize just how badly they may be prepared for adult life."

Kleinfeld offers as evidence a letter from a Department of Education Scholarship Committee Member to the Alaska Council of Administrators. The writer discusses one of the scholarship applicants:

The applicant is an 18-year-old female graduating from a rural high school. In four years of high school she received straight 'A's except for one C in skin sewing... On the ACT her percentile ranks are as follows: English 10, Math 1, Social Sciences 9, and Natural Sciences 7! Can you imagine the shock this lady is going to have in her first semester at the university? Did her teachers and administrators think they were doing her a favor when they were playing the game of "let's pretend"?

Kleinfeld notes that teaching standards aren't the whole problem. Rural principals emphasized another facet of the "low standards" issue - "student and community apathy." Many parents do not press their children to do well in school because they do not really want what academic success brings - a child's leaving the community to go to college.

The above data pointed the way for the concerns addressed by the case study:

1. Student data to be collected before admission or before the program begins.

Since grades might not be significant and since many rural schools do not administer the ACT or SAT tests, much less the PSAT exam, what information,
other than GPA, did the college need in order to determine in advance each student's level of preparation for college and for the advanced preparatory program?

2. Diagnostic tests to be administered during orientation and registration.

3. Courses and activities to be offered.
   What preparatory courses should be offered?
   How many levels should be offered?
   Should the courses be offered for college credit?
   What activities should be provided?
   Since students are housed on the college campus, what rules and regulations should they follow?

4. Methods of course delivery.

5. Methods of course and program evaluation.

Definition of Terms

As used in this study, the terms "Alaska Native" and "Native Alaskans" refer to Indians, Aleuts, and Eskimos indigenous to Alaska.

"Alaskan" refers to both Native and non-Native residents of Alaska.

"Lower 48" refers to the contiguous United States, that is, all states except Alaska and Hawaii.

"BIA Boarding" refers to boarding schools operated by the Bureau of Indian Affairs. At the time of the 1984 study by Goff these included Mt. Edgescumbe High School and Bethel
Regional High School in Alaska and Chemawa High School in the Lower 48. Of these three only Chemawa is still operated by the Bureau of Indian Affairs. Mt. Edgecumbe is now a boarding school operated by the State Department of Education for qualified rural students, Native or non-Native. Bethel High School is operated by the North Slope Regional School District.

"Alaska Urban Schools" refers to schools in communities larger than 3,500 in population.

"Alaska Rural Schools" refers to schools in communities smaller than 3,500 in population.

Although the terms "villages" and "rural" are used interchangeably in Alaska, generally the term "village" refers to small (under 2,000) Native communities.

"Small rural high school," as used by Kleinfeld (1985), refers to a school with fewer than 100 students in a community of fewer than 1,000 residents.

"Economically disadvantaged," a criterion for selection in the Upward Bound Program, refers to students from lower income families. Although participants in ECIP may meet this criterion, it is not a criterion of ECIP.

"Non-traditional students" for the purpose of this study is limited to students from minority groups who are "culturally disadvantaged; that is "culturally different" or
"culturally deprived." Cultural difference relates to languages, values and experiences which are different from the American norm; cultural deprivation relates to underdeveloped learning skills, lack of information and low quality language (Publicover, 1967).

**Limitations of Study**

Since the purpose of this project was to develop a model to be used by Sheldon Jackson College to prepare rural Alaska Native students for college, it was initially believed that the model might not be appropriate for schools serving other minority groups (Chicano, Black, Asian), particularly urban groups. However, an earlier study by Craddick (1986) noted the similarity of ECIP goals to those for Upward Bound, which does serve urban as well as rural minorities. Both programs seek to:

1. Generate academic skills and motivation that will enable the participants to complete a secondary educational program and to subsequently gain admission to postsecondary institutions; and

2. Enable the participants to attain those academic skills that are essential to postsecondary education and in which the participants are deficient.

Goals for the basic ECIP program are similar to those developed by California State University, Sacramento. CSU's specific objectives are to:
1. Increase the number of underrepresented students prepared to enroll in college preparatory courses when they enter 9th grade;

2. Develop approaches that improve students' higher learning and thinking skills.

Courses in the basic ECIP program are also similar to those in Upward Bound Programs. For example, Project Upward Bound at Southern Illinois University, Carbondale, provides summer classes daily in mathematics, science, humanities, fine arts, and oral and written communication skills; weekly in study skills, library skills, and social studies; and offers career awareness activities, personal counseling and recreational activities. All of these, except mathematics (which has been replaced by computer studies), have been part of the ECIP program.

Since the goals, objectives and courses are similar and the problems - lack of academic preparation, lack of goals, lack of ease in the college social world - are universal, it can be argued that the model can be used for other underprepared students in other settings.
Chapter 2

REVIEW OF RELATED LITERATURE

The Approach

The review of the literature focused on preparatory and compensatory programs offered by other institutions. Library research on compensatory education led to the works of Astin, Cross and Mitchell, and the several studies of Alaska Native students by Judith Kleinfeld. The Nova University Information Retrieval Service was used to locate studies or reports of programs similar to the Early College Incentive Program. A search of the ERIC file using such concepts as College Bound Students, College Preparation, Early College Incentive, Upward Bound, Positive Reinforcement, Motivation Techniques and Student Attitudes and Self-Esteem produced a total of 103 items. Of these 35 were in some way related to the Program. Twelve of the studies were reviewed in detail. A second search of the ERIC file focused on college bound rural students, using such concepts as Distance Education, Rural Schools, and Rural Environment. That search produced 78 items. Twenty-four of these were relevant to the program. Ten related to Alaska and were studied in detail. Specifically, the review focused on such questions as:
What constitutes adequate preparation for college?

What are the special needs and problems of non-traditional students?

What are Upward Bound and College Bound programs doing to help non-traditional students make the transition from high school to college?

**Major Problems Facing Minority Students**

Davis (1975) notes the "underrepresentation of disadvantaged students in American higher education institutions" and cites a number of cultural, financial, and academic barriers to higher education. These include poor preparation, inadequate financing, and poor self-concept. Some problems relate to inadequate advising and teaching, others to inadequate motivation.

**Cultural and Sociological Problems**

Carey and others (1979) note the "broad and diverse" problems facing minority students as they enter institutions of higher learning. Some problems are cultural; others are sociological and stem from racism; still others come from the differences between minority and university priorities. They argue that "the problems confronting minority students ... frequently stem from conditions outside the university - in the society at large."
One problem is self-concept. "Minority students may feel they do not belong in the mainstream of education and socio-cultural activity in higher education institutions. They enter the system with lower expectations than the typical white population."

Another is the impersonality of the institutions. Many organizations are viewed as appropriate only to the white population. Organizations dealing with minorities are perceived as overworked and understaffed.

A third problem is lack of language proficiency. Carey addresses the problems of Southeast Asian students for whom English is a second language. Students in some rural Alaska villages speak their Native language at home and English at school. More often, they speak village English both at home and at school. In either case, they require some degree of language instruction.

He notes two problems relevant to Alaska Natives - financial aid and academic problems.

Financial Aid. Financial aid problems are seen as the issue with the greatest effect on the entire process of minority student attraction, retention and graduation. Baugh (1979) notes: "Economic status always has been, and still is, a prime determinant of who will attend college." A variety of problems relate to financial aid:
Low levels of funding which are particularly inadequate for heads of families.

Loan versus gift in the administration of financial aid. Minority students hesitate to attend schools offering them large amounts of loan money.

Inadequate amount of financial aid available to upper division students.

Pressures created by work-study.

Tedious and troublesome process of obtaining aid.

Inadequate size of the financial aid staff.

Academic Problems. Academic problems are seen by Carey as coming from "several sources external and internal to the academic environment of the students." Most relevant to this study are "pre-college educational experiences of most minority students which are often inadequate for college level work."

Davis (1975) cites the findings by Crossland (1971) that "minority students are more frequently counselled into nonacademic programs, more frequently come from schools with faulty faculties and cultural resources below the national average, and usually attend segregated schools where they have no experience competing with majority students." Davis defines these "preparation factors" as environmental rather than personal in nature.
Baugh (1979) notes: "The poor academic preparation which many Blacks and other minorities have received ... in poor quality schools ... constitutes the second major problem in minority higher education." The relatively lower scores of minorities on the aptitude and achievement tests is a result of "poor schooling compounded by limited positive stimulation from the home environment."

Carey also stresses "inadequate educational preparation prior to entering university." He specifically notes "lack of adequate preparation in basic oral, graphic and computational skills."

**Inadequate Preparation**

To understand the problem of inadequate preparation, it is necessary to understand what constitutes adequate preparation for college. The problems Kleinfeld found in rural Alaska high schools are not confined to rural schools, nor are they confined to minority students.

The subject is addressed by the The National Commission on Excellence in Education in *A Nation at Risk* (1983). The Commission compared the courses taken by high school students in 1964-69 with those in 1976-81 and noted a number of differences:
Students have migrated from vocational and college preparatory programs to "general track" courses in large numbers...from 12 percent in 1964 to 42 percent in 1972.

Only 31 percent of our recent high school graduates complete intermediate algebra; only 13 percent complete first year French; only 16 percent complete geography; and only 6 percent complete calculus.

Twenty-five percent of the credits earned by general track students are in physical and health education, work experience, remedial English and mathematics, and personal service and developmental courses.

The Commission examined the level of knowledge, abilities, and skills required of high school and college graduates. They examined such elements as time, self-discipline, and motivation. They also examined the level of preparation of high school teachers. They found the following deficiencies:

Knowledge, abilities and skills:

The amount of homework for high school seniors has decreased (to less than one hour a night) and grades have risen as average student achievement has been declining.

Only eight states require high schools to offer foreign language instruction. None requires students to take the courses. Thirty-five states require only one year of mathematics, and 36 require only one year of science for a diploma.

In 13 states, 50 percent or more of the units required for graduation may be electives.

One-fifth of all four year public colleges in the United States must accept every high school graduate
within the state regardless of the program followed or grades.

Time:

In many schools the time spent learning how to cook and drive counts as much towards high school graduation as the time spent studying mathematics, English, biology, chemistry or U.S. History.

In most schools, the teaching of study skills is haphazard and unplanned. Consequently, many students complete high school and enter college without disciplined and systematic study habits.

Teaching:

The teacher preparation curriculum is weighted heavily with courses in "educational methods" at the expense of courses in subjects to be taught.

There are severe shortages of teachers in mathematics, science and foreign language, and half of the newly employed mathematics, science and English teachers are not qualified to teach those subjects.

They recommend that state and local high school graduation requirements be strengthened. At a minimum all students seeking a diploma should be required to take 4 years of English, 3 years of mathematics, 3 years of social studies, 3 years of science and one-half year of computer science. They further recommend 2 years of foreign language for the college-bound student. They recommend more rigorous and measurable standards for academic performance and student conduct. For example, grades should be indicators of academic achievement so they can be relied on as evidence of a student's readiness for further study.
Finally, they recommend that persons preparing to teach should (1) meet high educational standards, (2) demonstrate an aptitude for teaching, and (3) show competence in an academic discipline.

Alaska falls short of the Commission recommendations in math and science. Although the state requires 21 units of credit for high school graduation, only 12 of these are in required courses: 4 credits (years) of language arts, 3 of social studies, 2 of math, 2 of science, and 1 of health/physical education. It also falls short in the number of qualified teachers in science and social studies, with only 72 percent of science and 27 percent of social science teachers certified in their respective areas.

Preparatory Courses

A study by the College Board (1983) focused on the college preparatory curriculum. Competencies they found essential to success in college were: reading, writing, speaking and listening, mathematics, reasoning, studying and computer literacy.

The Board suggests that these competencies be met through a series of subjects. English, mathematics, science, social science, and foreign language.
English. Required English skills should include reading and literature, writing, speaking and listening, and language.

Many rural Alaska students entering college have not yet acquired basic reading comprehension skills; they have difficulty understanding college textbooks, taking notes, writing research papers, or talking about their ideas in a classroom setting (Kleinfeld and others, 1985).

Mathematics. Required mathematical skills should include computing, algebra, geometry and functions, and statistics. More extensive knowledge and skills, including preparation for calculus, will be needed by students who expect to major in such fields as engineering, economics, pre-medicine, computer science or the natural sciences. Although 95 percent of small high schools in Alaska offer algebra and 81 percent geometry, only 28 percent offer trigonometry and 12 percent calculus. Fifty-five percent offer classes in computer programming. Many rural students entering college have not acquired basic mathematics skills. (Kleinfeld and others, 1985).

Science. Science requirements include laboratory and field work, mathematical skills, fundamental concepts, and
detailed knowledge of at least one field of science. College students expecting to major in scientific fields will need more extensive mathematical proficiency and additional quantitatively based scientific study.

Although ninety-two percent of Alaska rural schools offer instruction in biology, a little more than half (56 percent) offer chemistry, and only 40 percent, physics (Kleinfeld and others, 1985).

A recent study by the Alaska Department of Education (Education News, May 1987) indicates that while science test scores for high school students throughout the nation are rising, scores for Alaska students are falling. Native students and students in small rural schools need the most help. In 1986, Alaska Native students' scores on the science portion of the ACT test averaged 15.4; the Alaska average was 21.1; the national average 21.4.

The problem is two-fold: instruction and enrollment. The percentage of practicing Alaska science teachers formally trained or endorsed to teach science is lower than the U.S. average. No more than 72 percent of Alaskans teaching science in any science area are endorsed in some area of science. Nationally the percentage never drops below 83 percent. Fewer than 3 percent of Alaska students enroll in advanced courses such as physics, chemistry, and biology.
II. Female and minority students are proportionately underrepresented in those courses.

Social Science. Social science is vital to citizens in a democratic society. Students need knowledge about central institutions and values in their own and other societies. They need to understand the international context of contemporary life.

The Alaska Department of Education study (1987) found that Alaska students' test scores on the social studies subtest of the ACT have declined since 1982. As in science, Alaska scores declined at the same time as national scores rose. Native Alaskans scored 10.3 in social studies in 1986 as compared with 17.3 for all Alaskans and 17.6 for all U.S. students. Information from Alaska school districts indicates that only 27 percent of the teachers teaching social studies in Alaska are certified in any social studies area.

Foreign Language. The study of foreign language fosters greater awareness of cultural diversity among the peoples of the world. It also gives a better understanding of English grammar rules. College entrants need a background in another language to engage in advanced study in such fields as language, literature and history or to prepare for careers in commerce, international relations, law, science and the arts.
Only 19 percent of rural Alaska schools offer a foreign language, although 62 percent offer bilingual programs designed to maintain the Native language (Kleinfeld, and others, 1985).

Nontraditional Students

As noted earlier, the term often applied to those non-traditional students who are from minority groups is "culturally disadvantaged." Publicover (1967) divides this term into two sub-categories: culturally different and culturally deprived. Cultural difference relates to languages, values and experiences which are different from the American norm. Cultural deprivation relates to underdeveloped learning skills, lack of information and low quality language. He raises a question important to this study: "What are the specific learning deficiencies and what are the specific steps one should take to remediate those deficiencies?" He finds language deficiency the common factor.

McIntyre (1981) defines "the non-traditional student as not ready for college-level course work ... having serious deficiencies in writing and math abilities, problem solving and critical thinking skills."
No matter what the definition, most experts seem to agree that minority students, especially Native American students, have difficulty making the transition to college.

Davis (1975) notes: "Of all the minority students, the Native American in college seems the least understood." He cites findings by Salisbury (1969) of "reluctance to excel at the expense of others, strong and binding familial and group ties, experienced reinforcement for reticence, and, in the alien world of college, strange food, incomprehensible social patterns and irrelevant or confusing programs."

Lujan and Dobkins (1978), studying Native American students at the University of Oklahoma, note the high drop-out rate of Indian students and the significantly lower grade point averages of those who do remain. The percentage of Native Americans who complete college is extremely low compared to the number who enter college. One reason for the statistics is "the inadequacy of the school's many Native American students attend." Another reason is what they term a "verbal conflict avoidance ethic," demonstrated by:

1. General non-participation in classroom discussion.
2. The avoidance or refusal to answer direct questions which call for value judgments or personal opinions.
3. The failure to ask questions in class.

These kinds of behavior, they note, contrast directly
with behaviors which are most valued in the American classroom.

A related problem is the conflict between being Indian and being an assimilated students. Lujan and Dobkins (1978) suggest:

If students decide their Indianness will be compromised, they need to be made aware that non-participation and reticence will negatively affect the instructor's perception of their performance, interest and knowledge. If students choose to adopt the role and norms of successful Anglo students, they will succeed educationally ... however, they will be rejected by other Native American students on campus and their own tribal people at home.

McIntyre (1973) divides her discussion of problems into affective, cognitive and study skills. Affective problems include poor self-image, lack of motivation, lack of direction, alienation, and test anxiety. Cognitive problems relate to reading comprehension and speed, weak vocabulary, writing, spelling, grammar, listening and math. Study skills include retention, concentration, critical thinking, and content area background.

On the other hand, Gordon (1969), studying the problems of Upward Bound students as they progress to college, finds:

The problems confronting those labelled as "culturally different youth in college" are in most respects no different than those confronting any other group of students presently enrolled in college or university.
He has found that most Upward Bound students, as well as other students see themselves as "engaged in the biggest fight of their lives ... to meet and successfully defeat the challenge of the system."

Gordon's students commented on a number of problems that might be addressed by a preparatory program. One problem is scheduling. Gordon cites two students who had graduated from high school with a C average, but were enrolled in 17 credits in one case and 15 credits in the other of demanding courses. Counselors in Upward Bound encourage their students to take a balanced load of 12 credits. He suggests that institutions that recruit non-traditional students must be more concerned about what happens to them once they are on campus.

Another problem is communication. One student attending a large university was overwhelmed by large classes and doubly large numbers in his lecture sections. As a sharp, but shy and retiring student, he found it difficult to ask questions or to speak out. This problem is confirmed by Scollon (1980), who notes:

In the western world since World War II, communication between different ethnic groups has emerged as a central complicating factor of virtually all communication situations.
A third problem is fear of failure, which Gordon attributes to poor self-concept. Jones (1979) confirms this finding and recommends that the college provide experiences and activities which enhance students' self-concepts.

Other problems include class attendance and long-range goal planning. Financial needs take precedence. Many students attempt to work full-time and also attend school full-time. Gordon calls this academic suicide.

Astin (1983) supports Gordon's position, arguing that "much of the concern about racial minorities in our student bodies stems from the fact that certain minorities, considered as a group, are less well prepared academically than the typical white students." This leads to the supposition that all whites are well-prepared and all Blacks and Hispanics underprepared, which he calls, "Nonsense."

Addressing the question of academic preparation, Astin notes that "two out of every five students out of today's college freshmen say that a 'very important' reason for deciding to go to college was to 'improve reading and study skills.'" He notes the "downward trend in academic competency" and students' "reluctance to undertake courses of study in college that challenge their academic skills and in particular their verbal skills."
Astin believes that if the present trend continues, we will have "an oversupply of graduates looking for jobs in engineering and business and a serious undersupply of teachers." To combat this we should begin to "require courses that deal with such issues as the purpose of a liberal education, the relationship between education, work, and the quality of life, the effect of technology on lifestyles, the relative merits of material versus spiritual values."

**Solutions**

**Transitional Programs**

A number of programs have been developed to help non-traditional students make the transition to college. One solution (Baugh 1979) is a transitional year in which students are directed into a one-year course of study before they are admitted into the college or university. The transitional year is devoted to "developing requisite collegiate level basic skills essential to ... success in the collegiate program." Another (Carey and others, 1979) is a summer institute which provides "regular collegiate instruction and remedial assistance to students wishing to improve their academic skills prior to beginning the freshman fall quarter."
Exum and Young argue for pre-college programs and cite Centra's (1980) position that "non-traditional students' retention rates are most effectively increased by improving their academic skills prior to their attending post-secondary institutions."

A survey of transitional programs by Noel and Levitz (1982) shows the following activities: academic and remedial skills, personal skills (career life planning), accurate placement, workshops in anxiety reduction, stress management, organization and time management, values clarification, interpersonal skills, decision making, concentration, memory building, self-esteem and motivation enhancement, tutoring, and individual and group counseling.

Gordon (1969) recommends compensatory support programs, counseling, and concern. The most relevant of his suggestions for this study is the need for pre-college and Upward Bound programs to provide a positive and personal college follow-up during the student's freshman year of college.

Exum and Young (1981) support the techniques of "counseling, tutoring, curriculum alteration, and social and cultural activities."

McIntyre (1981) recommends support systems, buddy systems, career, peer and academic counseling,
individualized diagnosis and remediation, tutoring, and peer proofreading.

Berman (1967) suggests additional ways to deal with the problems facing minority students: first, acquaint them with the University environment; second, use programmed instruction. Its benefits include step-by-step organization of material, self-pacing, and immediate feedback.

Adam-Smith (1984) discusses several steps to take in facilitating the progress of non-traditional students from school to university and examines two steps relevant to a preparatory program: (1) a study skills course and (2) a preliminary foundation course intended to compensate for deficiencies in basic knowledge and to upgrade language skills.

Although her work was with Arab students in Oman, the problems she addressed were similar to those faced in Alaska. Her foundation course addressed such issues as the different concept of time. She notes that Western university level courses get off to a quick start. Non-traditional students (in Oman and in Alaska) often fail to appreciate this need to make a good beginning. They are bewildered by lecturers who penalize them when assignments are not handed in by the due date and confused by "the unfamiliar function of lectures." Students who expect clearly-marked
slow-paced dictation are easily disoriented by "a critical commentary, delivered informally and at speed on previously assigned readings."

Malmberg (1983) on the basis of his work with non-traditional students in an alternative high school recommends a number of elements which he believes will enhance such a program. Those relevant to the preparatory program include:

The development of individualized instruction.

The specification of clear rewards for individual improvement in academic competency.

A commitment to goal-oriented work and learning emphasis in the classroom.

A commitment to a small student population in the program.

A commitment to a low-student teacher ratio in the classroom.

The selection and support of caring, competent teachers.

**Evaluation**

Starts (Comptroller General, Report to Congress, 1974), reviewing the Upward Bound Program, recommends a number of criteria relevant to ECIP and other preparatory programs:

1. **Specific Objectives.** Objectives should be stated in specific, measurable terms to provide standards for measuring program effectiveness.
2. **Needs Assessment.** If a program is to be effective in equipping underachievers with skills and motivations to succeed in college, it would appear essential that the project use formal achievement and diagnostic testing programs to assess each student's needs before developing a curriculum based on his needs.

3. **Curriculum Design.** The curriculum should be designed to meet identified needs.

4. **Measure Progress.** Follow-up should include accurate and prompt data on students' college enrollment, retention, and graduation; data related to the program's effectiveness in equipping students with the skills and motivations needed to succeed in postsecondary education; data on students' academic performance in college, problems, reasons for dropping out.

Exum and Young (1981) discuss questions to ask in assessing the success of a program:

1. Is the program meeting the intended academic objectives?
2. Is the achievement development significant?
3. What are the longitudinal effects and outcomes of participation in the program?
4. Do the outcomes warrant continuation of these compensatory educational programs?

They also discuss instruments to be used in testing.

The Upward Bound students in their study were pretested and posttested using the California Achievement Tests 1977 series at level 19 for grades 9 through 12. The exam is designed to measure basic skills in the "3 R's." It can be machine or hand scored and is considered to be culturally fair.
Carey and others (1979) used both pre- and post-tests in English and mathematics to test the summer preparatory program at the University of Minnesota.

Malmberg (1983) recommends a process of program development and evaluation which has relevance for ECIP. The first step is needs assessment, during which the program's goals are determined. The second step is program planning. The third step is formative evaluation. This requires collecting and sharing information during the developmental phase of the program. The fourth stage is summative evaluation. This involves judging whether or not the program should be continued or expanded, and whether it should be recommended to other communities.

He recommends that programs "develop procedures for describing and monitoring the program process. Such procedures should include process evaluation of (1) student problem identification, (2) intervention strategies and (3) program content. All students should be pre-tested and post-tested in English and math and assessed on attitudinal and behavioral measures such as respect for authority and acceptance of responsibility. Attempts should be made to evaluate student coping and problem-solving skills."
Chapter 3

METHODS AND PROCEDURES

Introduction

The case study method was used to develop a model for an advanced program of preparatory education to be used by Sheldon Jackson College for students from Alaska rural schools and by other institutions wishing to offer such programs. Case research generally involves the observations made of a limited number of cases. Guba and Lincoln (1981) note: "The content of a case study is determined chiefly by its purpose, which typically is to reveal the properties of a class to which the instance being studied belongs." In this instance, models of 42 preparatory programs at other institutions constituted the cases. The five aspects of these programs which were examined and evaluated were (1) pre-program evaluation methods, (2) diagnostic tools, (3) curriculum and curriculum delivery, (4) activities, and (5) post-program course and evaluation methods. From this examination and evaluation, certain generalizations were made in order to formulate a model to be used by Sheldon Jackson College in developing its program.

To develop the model, data were gathered from a number of colleges, universities, and other institutions providing
preparatory programs. These programs were located through a search of the literature, from responses to questionnaires and telephone calls, and from networking. Data that were collected were analyzed and evaluated in light of:

1. competencies, as defined by the College Board, essential to college success,

2. special needs or deficiencies of minority students,

3. special needs of rural students,

4. experience with college students from those populations bases, and

5. experience with and evaluation of a basic preparatory program.

Data were analyzed using the following criteria:

1. Pre-program evaluation methods:
   a. Was the information available from rural Alaska schools?
   b. Was it culture-fair?

2. Diagnostic tests:
   a. Did the test provide significant information?
   b. Could it be administered in the time frame available?
   c. Was it culture-fair?

3. Curriculum:
   a. Would the course help students meet the competencies suggested by the College Board?
b. Would it address the curriculum deficiencies of Native Alaskan and other minority students?

c. Would it address the curriculum deficiencies found in rural Alaska students attending SJC?

d. Would it enhance students' abilities in a general college curriculum?

4. Activities:

   a. Would the activity address the social and cultural problems facing Native Alaskan and other minority students when they attend college?

   b. Would it address the problems facing rural Alaskan students attending SJC and other Alaskan colleges?

5. Post-program course and program evaluation methods:

   a. Would the evaluation be relevant to a program at the level and of the duration of ECIP2?

   b. Would it provide information useful to the institution in enhancing the program?

   c. Would it provide information useful to the student in enhancing his/her college preparation?

Sources of Data.

Included in the case study were college preparatory programs offered by other Presbyterian or minority colleges, by other Alaskan colleges, and by colleges and universities represented at the Nova Summer Institute. Added to the study as it progressed were programs discovered through a search of the literature and through networking.
Upward Bound and Specialized Programs.

Ten programs were selected from the review of the literature for in-depth analysis. Programs in this analysis included (1) Upward Bound programs operated by colleges and universities, public school districts, or consortia; and (2) programs for special populations (e.g. science majors) operated by universities.

Programs Offered by Presbyterian and Minority Colleges.

Letters were sent to a list of over 80 Presbyterian and minority colleges. Seven colleges replied to this letter. Four of these had preparatory programs for college freshmen. The remaining three offered five preparatory programs. These five programs were included in the study.

Programs Offered by Institutions Represented at the Nova Summer Institute.

Letters and questionnaires (Appendix B) were distributed to students and staff attending the 1987 Nova Summer Institute. Eight persons responded with information about programs on their campus, and follow-up letters were sent to program directors. Two of the programs were for college students, the remaining six for high school or
middle school students. Detailed information was received about two of the latter programs, and this information was included in the study.

Exemplary Programs.

A number of programs that may have been too new to be included in the literature were located through networking. The term "exemplary" has been applied to these programs since in most instances newspaper articles about the programs accompanied the recommendations. One of the Nova respondents directed me to the program offered by Morehead College and Spelman College. A note from a colleague led to telephone contact with Barbara Young, initial director of the Futures program initiated by California State University (CSU), Sacramento, and present director of a new CSU program, the College Readiness Program. Dr. Young directed me to an article in the Wall Street Journal (McCarthy, 1987), which discussed the compensatory programs of a number of colleges and universities. Networking produced data about fifteen programs used in the case study.

Alaska Programs.

Three Alaska programs were studied in detail: the Rural Alaska Honors Institute conducted by the University of Alaska,
Fairbanks; the Institute of Language and Thought at Kuskokwim Community College; and the Educational Enrichment Program at the University of Alaska, Juneau.

Data Collection Process.

In addition to the data collected through a search of the literature, data about these programs were gathered in three ways: (1) letters, (2) questionnaires, and (3) telephone interviews. Data gathered during the interviews were supplemented, where possible, by printed materials.

Letters and Questionnaires.

The letters gave background about Sheldon Jackson College, its students, and its program and asked respondents the following questions about their programs:

1. Where was the program conducted?
2. What were the criteria for admission?
3. What agencies were involved in delivering the program?
4. What courses were offered?
5. Could students receive college credit for those courses?
6. What non-academic activities were offered in conjunction with the program?
7. What rules were they required to follow?
A questionnaire with a cover letter explaining the nature of the case study was developed for distribution to students and faculty attending the 1987 Nova Summer Institute. This material was reviewed and approved with minor revisions by the Nova Office of Higher Education. The questionnaire and letter were distributed by Nova cluster directors to persons whose institutions offered preparatory programs. The questionnaire asked for the name, title and address of the program director(s) and asked a number of questions about the program for respondents to complete as they could. Program directors were contacted by telephone or by letter. The questionnaires sought the following information: location and time (summer or school year) of the program, length of the program, age group served, criteria used for admission, agencies involved in delivering the program, and courses and non-academic activities offered.

**Telephone Interviews.**

Interviews provided the most information about the individual programs. Specific aspects of the study were discussed in detail. Interviews were supplemented by program material.
Criteria for Analysis.

Data were collected and initially reviewed by ECIP administrative staff (program director and administrative assistant). Data to be considered for the model, hence program use, were summarized for review by ECIP faculty and residence hall staff. Review sessions covered the five parts of the model to be developed: (1) student data to be collected before the program begins, (2) diagnostic tests to be administered during orientation and registration, (3) courses to be offered and methods of delivery, (4) activities to be offered, and (5) methods of course and program evaluation.

Data suggested by other institutions were analyzed and evaluated in terms of the following criteria: Would it help students meet the academic competencies suggested as essential by the college board? Would it serve the goals of the program? Would it meet the special needs or address the deficiencies of minority students, rural students, or students similar to those already attending Sheldon Jackson College? Finally, for the SJC program, data were analyzed and evaluated in terms of practicability for the Sheldon Jackson College program.
**Academic Competencies.**

Competencies found by the College Board (1983) to be essential to college success include: reading, writing, speaking and listening, mathematics, reasoning, studying, and computer literacy.

**Program goals and objectives.**

Goals of the Sheldon Jackson College program are (1) to increase the number of students completing college preparatory courses and being admitted to college, (2) to increase their motivation for learning, and (3) to improve their study skills.

**Needs of Minority Students.**

Study of the literature about nontraditional students pointed out a number of serious deficiencies to be addressed by a preparatory program. McIntyre's summary (1973) was used in analyzing and evaluating the programs. She identified as cognitive problems: writing, math, problem solving, and critical thinking skills; reading comprehension and speed; weak vocabulary; and study skills. Affective problems included: poor self-image, lack of motivation, lack of direction, and test anxiety.
Needs of Rural Students.

The study by Kleinfeld and others (1985) of Alaska's rural high schools provided the criteria needed to analyze and evaluate the relevance of programs to rural students. Rural students need to improve both academic and social skills. Academic deficiencies include basic mathematics and reading comprehension skills, note-taking skills, research skills, and oral communication skills. Many rural students cannot adjust to the social pressures of college. They are uncomfortable surrounded by people they do not know, unsure of how to manage their time and money, and homesick.

Problems found in SJC Freshmen.

In 1987, 56% of the freshmen entering Sheldon Jackson were enrolled in one or more developmental programs. Studies by the Office of the Registrar indicate that many of these students need to be better prepared:

1. For college level courses.
2. For life on a college campus.
3. To live among people of many cultures.
4. To live in a climate quite different from their own.
5. For the relative freedom of college life.
Some practical considerations for the SJC program.

The final step in analysis and evaluation related to the Sheldon Jackson College program, but not necessarily to the model. Questions were raised as to practicability, relevance to participants, relevance to future SJC students, and applicability to a two-week program.

Data Analysis.

The methods of data analysis were, by virtue of the case study approach, qualitative rather than quantitative. Data were analyzed on the basis of relevancy to the model to be designed, hence relevancy to the the students to be served. Analysis and evaluation was a two step process with initial screening conducted by administrative staff and final evaluation and selection conducted by (1) program faculty for pre-program evaluation, diagnostic methods, and curriculum, (2) residence hall staff for activities, and (3) both groups for post-program evaluation.

Summary.

The qualitative nature of this particular case study necessitated an evaluative process that was subjective rather than objective and a reasoning process that was inductive rather than deductive. Hence, the data that seemed
most relevant to the program have been presented in the following chapter in a descriptive fashion.
Chapter 4

PRESENTATION OF RESULTS

Introduction

The purpose of the case study was to develop a model for an advanced program of preparatory education that would address the needs of rural Alaska high school students and, at the same time, be used by other institutions wishing to provide such programs. The study addressed the following concerns: (1) student data to be collected before the program begins, (2) diagnostic tests to be administered during orientation and registration, (3) courses and activities to be offered, (4) methods of course delivery, and (5) methods of course and program evaluation.

The study encompassed 41 programs at 33 different institutions. Twenty-five programs were summer programs, ranging in length from one to eight weeks. Ten programs were school year programs, and six programs were conducted both in the summer and during the school year. The programs ranged from day programs in neighborhood locations for local students to campus-based programs for students from a widespread area. Some programs were funded by the institutions, others by foundations, and still others by the students themselves. Curricular and extracurricular
activities varied from program to program, but in almost all programs there was a core curriculum of reading, writing, mathematics and study skills.

Before reporting on the five concerns mentioned above, it should be noted that since individual programs were based on a determination of the needs of the students to be served, it was important to examine data about these students and their needs, including, where relevant, data about funding, faculty, and facilities.

Students served

**Alaska Programs.** All of the Alaska programs included in the case study were designed to serve rural Alaskan students, Native and non-Native. Sheldon Jackson College determined when it established the basic Early College Incentive Program (ECIP) that its program would serve students from rural Alaska. These students were primarily Native Alaskan and frequently arrived at college lacking the academic and social skills required to succeed.

The Rural Alaska Honors Institute (RAHI) at the University of Alaska, Fairbanks, also served high school students from rural Alaska and was designed to help them learn to live on campus, to research and use information for
college level courses, and to handle college level course work.

At the Alaska institutions studied, the number and nature of students to be served determined the time and, with funding considerations, the duration of the program. Both ECIP and RAHI were summer programs for students attending high school as was the Educational Enrichment Program, a program for Tlingit students provided by the University of Alaska, Juneau. All three programs brought students to the college campus to experience college life.

The Institute on Language and Thought at Kuskokwim Community College, on the other hand, served students from the Kuskokwim area in the three weeks before their formal college education began. Students lived on campus or in town during the program and progressed directly from the program to their first semester of college.

Other Minority Programs. The study included two programs outside of Alaska specifically designed to serve Native American students. The TRIBES program (Tribal Resource Institute, 1987) at the University of Colorado, Boulder, was a six-week summer program for high ability American Indian students who were planning careers in business, science, resource management, and related fields.
The program was designed to give students a "head start in the college skills and work study habits needed for majors in business, engineering and science." They attended the program in the summer between their high school graduation and their first semester at college.

Arizona State University (Gill, 1969) provided two Upward Bound programs, a seven week Summer Residential Program and a Bridge Program, for Arizona Indian high school students in order to: develop self-improvement and civic improvement, elevate school status and curriculum grades, build problem-solving attitude and skills, increase participation in cultural and recreational programs, acquaint or reacquaint students with the culture of the American Indian, and strengthen their philosophy of education.

Other programs for minority students included:

1. The Early College Summer Program conducted by Morehead College and Spelman College (Drake, 1987), designed for Black high school graduates or rising seniors;

2. Love of Learning at Davidson College (Tapia, 1987), designed for Black/Afro-American high school juniors to encourage them "to pursue their Ph. D. and to choose teaching careers in science, mathematics, or the humanities;"

3. Career Preparation at Southern Illinois University at Carbondale (SIUC) (Guyon, 1987), designed for minority middle school students from the Southern
Illinois region to (a) increase students' motivation; (b) provide enrichment in their academic work, and (c) encourage their career exploration and their continued enrollment in school;

4. Introduction to Engineering, two one week intensive courses offered by SIUC, one for women, the other for minority students;

4. A Saturday program at Reed College (Squier, 1987), designed for minority students in the 9th grade in order to "increase the percentage of black, Hispanic, or Native American pupils who attend some four year college;"

5. Futures at California State University, Sacramento (Young, 1987), aimed at 8th grade underrepresented students in order to (a) expand student career and educational options, (b) improve student educational preparation and planning, (c) provide a vehicle between high schools, middle schools, and members of the CSU faculty and staff, and (d) increase parental support and involvement;

6. College Readiness, offered by the California State University system (Young, 1987) and designed to increase the number of under-represented minority students enrolling in college preparatory courses and thereby increase the number of minority students who meet CSU admission requirements when they graduate from college.

**Upward Bound Programs.** Several Upward Bound programs were included in the study. Students in these programs had to meet criteria established by the federal program. In addition to the programs at Arizona State, the study examined the following programs:

1. The Upward Bound and Summer Bridge programs offered by SIUC (Guyon, 1987). The first was for high school students from the region, the second for Upward Bound students who had graduated from high school.
2. College Discovery (Brody, 1969), developed by City University of New York and the New York City Board of Education and designed to identify and serve "economically impoverished 9th grade students" who were not achieving well enough for normal progress into college but who had the potential to do satisfactory academic work.

Open Admission Programs. A number of institutions offered programs designed for any student needing or desiring preparatory study. Programs in this category included:

1. Middle College, a six week summer program offered by Pacific Lutheran University to "ease the transition from high school to college." The program was open to recent high school graduates, high school juniors, and college freshmen.

2. A Brighter Chance, a one-week summer experience offered by Lees-McRae College (Smith, 1987), patterned on a week of college life and designed to "teach, enhance and expand the skills needed for academic and life achievement." The program was open to any college bound student who wished to enroll.

3. Summer Scholars, a five week program offered by Lees-McRae, for rising seniors who were in the top 20% of their high school class.

4. Education Assistance Limited, offered by Waynesburg College (Williams, 1987), to 9th graders who had the potential to do well in college, but whose family had never been to college.

5. Accelerated College Entry Program (ACEP), a one-month summer program proposed by SIUC (Guymon, 1987) for two groups: an advanced group comprised of 20 college bound high school graduates and an intermediate group made up of 20 students of junior or senior standing in high school. Participants were to be selected on the basis of their college potential.
Funding Sources.

Funding for the various programs fell into three categories: government, private, and student. Upward Bound programs were funded by the federal government through the U.S. Department of Education. Other government support came from state or local government funds. The University of Alaska provided full scholarships to students selected for the Rural Alaska Honors Institute. The University was, in turn, funded by the State of Alaska. Two of the programs at Southern Illinois, Carbondale, were funded or proposed to be funded by the state: the Engineering Program for Minority Students and the Accelerated College Entry Program. The California State University programs began on a volunteer basis and were later funded by the state.

Local school districts also operated and funded the programs. The most notable program in this category was the Motivation Program at John Bertram High School (Elim, 1974), funded by the Philadelphia School District.

The Women's Introduction to Engineering program at SIUC was funded by industries which provided scholarships for program participants. The TRIBES program at Colorado was funded by CERT, the Council of Energy Resource Tribes, composed of 43 American Indian tribes.
A number of programs required partial or full funding from the students themselves. This was especially true of the open admissions programs. Students attending Pacific Lutheran's Middle College paid their own tuition, fees, room, and board. However, financial aid based on need was available. Lees-McRae's Brighter Chance program was funded by the students or their parents. However, scholarships were available to students selected for their Summer Scholars program.

**Faculty and Facilities.**

Faculty and staff for most programs came from the institution sponsoring the program. If the sponsoring agency was not an educational institution, it contracted with a college or university to provide the instruction.

Most programs in the study and all summer programs were held on the campus of the institution providing the program. The most-notable off-campus program was that provided by the California State University system. Faculty and staff from colleges within the system provided tutoring services and instruction at the middle schools attended by the program participants.
Pre-program Evaluation

The first concern addressed by the study and required for the model was student data to be collected either before admission or during orientation and registration. For a number of programs admissions criteria included being a member of a minority or living in a particular region. For most programs a particular level of schooling was designated. The major concern of the case study was with ways to assess each student's readiness for the program.

Academic Data.

Programs which required students to meet academic or other criteria also required means for assessing those criteria. Data which helped the institution as... as a student's level of preparation for college and for an advanced preparatory program included:

1. Grade point average. The University of Alaska, Fairbanks (UAF), required a 3.0 GPA for admission to its program. Morehouse-Spelman required a 2.0 GPA. Southern Illinois (SIUC) selected students for the Summer Bridge Program on the basis of GPA and prior participation in the Upward Bound Program. Arizona State asked for academic and guidance information. Davidson College suggested a 3.0 GPA, but stressed flexible criteria (Tapia, 1987). If a student had a 3.0 GPA in his/her core courses, but did poorly in non-academic subjects, s/he still was eligible for the program.
2. SAT, PSAT, and ACT scores. These scores were asked for by Morehea-Spelman for the Early College Summer Program, and by the University of Colorado, Boulder, for the TRIBES program. UAF asked for students' standardized test scores.

3. Other test scores. Students admitted to UAF's RAHI program were required to score at least at the 8th grade level on the Nelson-Denny Reading Test. Applicants to Davidson's Love of Learning program were required to have a reading, math, language or total battery score at the 85th percentile or above.

4. Class standing. Lees-McRae required students in its Summer Scholars Program to be in the top 20 percent of their high school class. Students ranking first or second in their class received a full scholarship (tuition, fees, room and board). Morehouse-Spelman asked applicants to submit their class standing.

5. Essays. Applicants to the RAHI and TRIBES program were required to submit essays.

6. Recommendations. Students applying to SIUC's Project Upward Bound were required to submit recommendations from teachers. Students applying to the TRIBES program at the University of Colorado at Boulder had to ask two teachers or counselors to submit confidential references assessing the student's:

   a. Attitude toward education,
   b. Intellectual ability,
   c. Mathematical aptitude,
   d. Aptitude for written and oral communication,
   e. Leadership abilities,
   f. Ability to work well in groups,
   g. Career goals, and
   h. Chances of completing college.
Diagnostic Tests.

The most comprehensive data about pre-program testing was provided by the University of Alaska, Fairbanks. Students applying for RAHI were required to submit their ACT and SAT scores. During orientation, participants were required to take five tests: the Nelson-Denny Reading Test, a Math Computation Test, a Writing Test, a Problem Solving Inventory, and a Swimming Test. The results on these tests were used to place students in college or pre-college classes. The same tests were given at the end of program, thus providing effective measures of the program's impact on the students.

Morehouse-Spelman also had students complete placement exams in math and English during program orientation.

Curriculum and Activities.

Curriculum.

The curriculum offered by each of the programs was examined in light of preparatory curriculum recommended by the College Board, curriculum deficiencies found in rural students attending Sheldon Jackson College, and relevancy of the offering to the general college curriculum. Courses fell into three categories: core or required courses, elective courses, and specialized courses.
Core Courses. Most of the institutions in the study required that students take two or more of the following courses:

1. College Learning Skills. Included in this category were Study Skills, Reading, Library Skills, and Critical Thinking Skills.


3. Leadership Skills.

4. Communication Skills. Including were Writing for College, Basic Writing, Creative Writing, Oral Communication and Public Speaking.

5. Literature/Black Literature.


7. Computer Studies. Included were Word Processing and Programming.

Elective Courses. The electives were a reflection of students served. Courses in this category included:

1. Engineering offered by the University of Alaska, Fairbanks, the University of Colorado, Boulder, and Southern Illinois University, Carbondale.

2. Resource Management offered by both the University of Alaska, Fairbanks, and the University of Colorado, Boulder.

4. Science. Included in this category were Geology and Biological Sciences.

5. Social Sciences. Included in this category were History, Psychology, and Education.

6. Humanities and Fine Arts. Included were Religion, Philosophy, studio art courses, and dance.

7. Physical Education (required by some institutions, offered as an elective by others). Included were swimming, judo/karate, ice-skating, basketball, and volleyball.

Specialized Courses. Specialized courses were a reflection of the students served, the region, and the purpose of the program. Among the specialized offerings were:

1. Minority Studies. A course entitled Alaska Native Issues was required by the University of Alaska, Fairbanks; an African-American Lecture Series was offered by Morehouse-Spelman; and Indian Studies was required by UCB's TRIBES program.

2. Special engineering courses. Engineering problems, engineering experiments, and engineering research were required of students in SIUC's Introduction to Engineering programs.

4. SAT Preparation. These courses were offered by several college and required by two.

5. Simulated flight training was required by Embry-Riddle Aeronautical University.

Activities

The number of extra-curricular activities offered by the various programs depended on such factors as the age of
the participants, the length and intensity of the program, and the objectives of the program. The activities fell into three categories: academic, recreational, and social.

**Academic.** Included in this category were study halls, counseling sessions, special lectures, orientation programs, and academically related special activities.

1. Required study halls or study periods, many of these with tutors.
2. Counseling sessions, group and individual tutoring sessions.
3. Visits from industrial and tribal leaders.
4. Special orientation programs including admissions and financial aid counseling.
5. Special lectures by faculty or, in the engineering programs, by practicing engineers.
7. Environmental scavenger hunt.

**Recreational Programs.** Lees-McRae held two hour physical activity sessions in such activities as jogging, boating, swimming, aerobics and tennis. Other institutions set aside times in the evening for team and individual sports activities.
Social Programs. Included in this category were field trips, tours, cultural events, special events, and interest or activity groups.

1. Field Trips and Tours to the Carter Presidential Library, Stone Mountain Park, and the Martin Luther King Historic District were offered by Morehouse-Spelman.

2. Cultural events included attendance at theatre, opera, ballet, symphony concerts, and special film series, and visits to art galleries and museums.

3. Special events included dances, feasts and awards banquets, and talent shows.

4. Activity groups were established at one institution in science, dramatics, chess and art.

Course Delivery.

Most programs indicated that their courses were delivered by college professors. Only a few used public school teachers or specialists in combination with their professors. The clearest statement of course delivery was made about two Alaska programs (Kleinfeld and others, 1985). In one college preparation program offered by a rural Alaska high school, teachers showed students how to listen to a lecture and take notes. Then "they deliberately taught in the ways common to large, impersonal high college classes." The RAHI program deliberately created stressful experiences to simulate the pressures of college life. Students were
required to stand at a podium and make a formal speech in front of an audience. They were required to take a midterm on the same day they had a paper due.

At the same time most, if not all, programs required students to enroll in study skills courses, recognizing that they needed to be taught how to study for college. Several colleges also required students to attend study halls and provided tutoring services in the various subject areas.

**Post-Program Evaluation.**

**Course Evaluation.**

Detailed data relating to course evaluation was received from the University of Alaska, Fairbanks. Both faculty and students evaluated classes. Both groups were asked to list courses that should be kept in the program and courses that should be added to the program. Students were asked to list their most favorite and least favorite courses and to comment on class scheduling.

**Student Evaluation.**

Students in the various programs were evaluated in a number of ways:

1. **Achievement Tests.** Tanner and Lascia (1967) described the sort of tests used in evaluating the
College Discovery program. Academic achievement was measured by the English, Numerical Competency, and Reading portions of the Stanford Achievement Test (High School Battery); the Differential Aptitude Test (Form L); the Test of Problem Solving (High School Edition, Form A); and the Test of Critical Thinking (Form G).

2. Observations. On-going evaluation of students attending RAHT included course work, behavioral observations, and faculty records.

3. Questionnaires. Steel and Schubert (1983) discussed the kind of evaluative questions to ask:

   a. How do participants and similar non-participants compare in terms of their academic achievement during high school?

   b. How do they compare in terms of their attitudes and motivation regarding school?

   c. How do they compare in terms of their levels of self-esteem and other values?

   d. How do they compare in terms of their education plans and aspirations, their activities planned following high school?

4. Surveys. Southern Illinois assessed students in its Women's Introduction to Engineering program through surveys. Its pre-program survey revealed the following profile of women before their participation in the program:

   a. All had decided to attend college.

   b. Only one-third had selected a major field of study.

   c. Only 30 percent had chosen a career.

   d. Fewer than 30 percent had adequate information about career opportunities in engineering.

   e. Slightly over 25 percent had discussed engineering with an engineer.
A survey of participants conducted after the program produced the following data:

a. Sixty percent of the women had studied or planned to study engineering.

b. Ten percent planned to study in a related field (mathematics, the sciences, or architecture).

c. Six percent were undecided.

Results for the remaining 24 percent were not listed.

Program Evaluation.

The most detailed information about program evaluation came from the University of Alaska, Fairbanks. On-going evaluation of the program was conducted through interviews with selected students, informal discussions with faculty, formal interviews with staff. Post-program evaluation was conducted by having students complete a general RAHI evaluation questionnaire and participate in exit interviews. Faculty completed a written evaluation of the program and participated in a final faculty meeting. Staff completed a written evaluation of the program.

Long-Term Evaluation.

Although there were a number of articles in the literature evaluating the long-term effectiveness of the Upward Bound program and college orientation programs, there was less formal information available about long-range
results of preparatory programs. Kleinfeld and others (1985) studied the RAHI program and found that of "the thirteen RAHI students who entered as Freshmen at the University of Alaska, Fairbanks, campus in 1984, all thirteen completed the semester and twelve returned for the spring semester."

Southern Illinois University, Carbondale, and the Tribal Resources Institute indicated that they kept track of their students through college and included data on student success in their brochures. As noted above, SIUC conducted a follow-up study of participants in its Women's Introduction to Engineering Program and found that 70 percent of the young women had studied or planned to study engineering or a related field.

**Summary**

The case study was concerned with student data to be collected before a program begins, diagnostic tests to be administered, courses and activities to be offered, methods of course delivery and methods of course and program evaluation. Results of the study are summarized below.

**Admissions criteria.**

Aside from criteria that related to race, sex, or region, most institutes required a particular level of
schooling. Those institutions which required students to meet academic criteria did so to assess their readiness for the program. Assessment data included grade point average, SAT, PSAT, or ACT scores, reading tests, and writing samples. Student essays, recommendation questionnaires, and letters or reference were used to assess motivation. On the basis of relevance and practicability, grade point average, reading scores, writing samples, and teacher or counselor recommendations were found most suitable for the model.

**Diagnostic Tests.**

Placement exams were given during the orientation period of several programs. For the longer programs, the same tests were administered at the end of the program thus providing effective measures of the program's impact on students. Pre-test/post-test comparison was not used or recommended for the one and two week programs. Diagnostic tests in reading, writing and mathematics were found to be most relevant for the model. They provided significant information and could be administered during a one-day orientation period. Pre-test/post-test comparisons were found to be unsuitable for a two week program.
Curriculum.

A few programs focused on particular studies in such areas as computers, engineering, or business. Most offered a combination of required and elective courses. Core courses were those courses deemed important for college success and included College Learning Skills, Career Decision Making, Leadership Skills, Literature, Mathematics, and Computer Studies. These courses were evaluated in light of the competencies deemed essential by the College Board, the special needs of rural students and minority students, and our experience with these students. The courses found to be most relevant for the model were English, Mathematics, Computer Studies, Science, and Social Science. Also valuable were courses in Reading, Speech, and Study Skills.

Activities.

Activities fell into three areas: academic, recreational, and social. Academic activities included study halls, counseling and tutoring sessions, and special orientation programs about admissions and financial aid. Recreational programs consisted of individual and team sports. Social programs included field trips and tours, cultural events, and special events, such as dances, talent shows, and banquets. The activities round most important for
rural minority students were those which introduced them to the requirements and services of college life and those which provided academic and social support. Among these activities were orientation to program and staff, registration, advising sessions, financial aid sessions, individual and group counseling sessions, and tutoring.

Course Delivery.

Most programs indicated that their courses were delivered by college professors using methods employed in regular college classes. The focus was on simulating the pressures of college life. At the same time students were encouraged to enroll in study skills courses, required to attend study halls, and provided tutoring services in the various subject areas. The procedure found most suitable for rural minority students was one in which instructors employed the procedures and demands of college level courses in the context of a small group setting.

Evaluation.

Several methods were used to evaluate programs, courses, and student progress. Program evaluation was conducted through questionnaires and interviews completed by students, faculty and staff. Questionnaires completed by
students and interviews with students and faculty were two of the methods used to evaluate courses. Achievement tests and observations were used to evaluate student progress. Questionnaires and surveys were used for post-program evaluation. The various methods were assessed in terms of relevance to the program, to the college and to the student. The methods of student evaluation most appropriate for the model were pre-program achievement and diagnostic tests, faculty observations, and follow-up questionnaires. Questionnaires were found to be the most practical and objective way to evaluate the courses and the program.

Specific recommendations about each of the concerns addressed above are discussed in Chapter 5.
Chapter 5

IMPLICATIONS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction.

The purpose of the major applied research project was to develop a model for a college preparatory program to be used by Sheldon Jackson College in designing the advanced level of its Early College Incentive Program. The model was to be applicable on a national basis. The case study method was employed to determine how other preparatory programs dealt with such subjects as:

1. Student data to collect before admission or before the program begins.
2. Diagnostic or placements tests to administer during registration.
3. Required and elective courses to offer and methods of course delivery to employ.
4. Activities to offer.
5. Types of course, student, and program evaluation to use.

Data were gathered about programs at other institutions through a search of the literature and from replies to letters, questionnaires, and telephone interviews. Data were analyzed and evaluated in terms of the following criteria:
1. Would it help students meet the academic competencies suggested as essential by the College Board?

2. Would it serve the goals of the program?

3. Would it serve the special needs or meet the deficiencies of minority students or rural students?

4. Would it be practicable for the Sheldon Jackson College Program?

By means of this process of study, analysis, and evaluation, the staff and faculty of the Early College Program were able to design a program model which would (1) serve the needs of the rural Alaska students who will participate in the program, (2) meet the program goals and objectives established by Sheldon Jackson College, and (3) serve as a model for other institutions interested in providing preparatory education for the non-traditional students they serve.

Discussion.

Student data.

It is recommended that colleges and universities wishing to use or adapt the model presented here consider first what students they wish to serve. Institutions developing a program may want to limit the program to a particular population - minority students, women, rural
students, economically deprived students. If so, they need to set those parameters in their brochure. They will, in all likelihood, limit the program to a particular age group - middle school students, rising seniors, high school graduates. This also must be spelled out in their brochure. They may want to open the program to any student within that age category or limit the enrollment to students who have achieved a certain academic standing and who have shown a degree of motivation toward college. In the latter case, they will need transcripts showing GPA, ACT, SAT or other achievement scores, and recommendations from teachers and counselors. If they desire to motivate a student population that is not headed toward college, data on scholarship may be less relevant than teacher assessments of the student's potential for college. This model has been designed for students who are interested in college and doing well in high school, but who, because of their culture or the small size of their community and their high school, may still be unprepared or underprepared for college.

Pre-program data.

Institutions seeking to establish preparatory programs should first determine the data to be collected before the
program begins. The amount of pre-program evaluation will depend on the nature of the program. Sheldon Jackson College has determined that participants in ECIP2, which has been subtitled Prelude, will be selected on the basis of academic potential and motivation.

A student's potential for college can be assessed by grade point average, SAT, ACT or other achievement scores, instructor evaluation, and a student essay (Table 2). SJC has developed two evaluation forms (Appendix C). The first, a Student Recommendation form, asks for data about academic and social performance. The second, a Competency Questionnaire, adapted from Academic Preparation for College, asks instructors in several subject areas to evaluate students' competencies in these areas.

Table 2
Methods of Assessing Academic Potential

<table>
<thead>
<tr>
<th>INFO. REQUIRED</th>
<th>METHOD FOR COLLECTION</th>
<th>OBJECTIVE/SUBJECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>High School Transcript</td>
<td>Objective</td>
</tr>
<tr>
<td>Achieve. Tests</td>
<td>High School Transcript</td>
<td>Objective</td>
</tr>
<tr>
<td>Instructor evaluation</td>
<td>Letter of recommendation</td>
<td>Subjective</td>
</tr>
<tr>
<td></td>
<td>Recommendation form</td>
<td>Subjective</td>
</tr>
<tr>
<td></td>
<td>Competency questionnaire</td>
<td>Objective</td>
</tr>
<tr>
<td>Writing skills</td>
<td>High School Transcript</td>
<td>Objective</td>
</tr>
<tr>
<td></td>
<td>Student essay</td>
<td>Subjective</td>
</tr>
</tbody>
</table>
Motivation can be assessed by a student's application essay, his or her school activities, and instructor evaluation (Table 3). If the essay is to be used to assess motivation, it should include discussion of career plans.

Table 3
Methods of Assessing Student Motivation for College

<table>
<thead>
<tr>
<th>INFO/REQUIRED</th>
<th>METHOD OF COLLECTION</th>
<th>OBJECTIVE/SUBJECTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of planning</td>
<td>Student essay</td>
<td>Subjective</td>
</tr>
<tr>
<td></td>
<td>Letter of recommendation</td>
<td>Subjective</td>
</tr>
<tr>
<td></td>
<td>Recommendation form</td>
<td>Subjective</td>
</tr>
<tr>
<td>Attitude</td>
<td>Student essay</td>
<td>Subjective</td>
</tr>
<tr>
<td></td>
<td>Student activities</td>
<td>Objective</td>
</tr>
<tr>
<td></td>
<td>Letter of recommendation</td>
<td>Subjective</td>
</tr>
</tbody>
</table>

SJC will open the advanced program, Prelude, to three categories of students: participants from the basic program, Survival; students wait-listed for Survival; and new applicants. On the basis of this study, we recommend the following process for applying the above data. The thirty positions in Prelude '88 will be open, first, to all students who completed Survival '85, and second, to students who were on the priority wait-list for the program. In the future new applicants may qualify for the program.

Students who completed Survival will automatically be accepted into Prelude. They must submit three forms that
1. High school transcript.
2. PSAT, SAT, ACT or other achievement test scores.
3. Competency evaluations, completed by instructors in the various subject areas.

Students who did not participate in the basic program will be required to meet the following criteria:

1. A GPA of 2.75 or higher. A minimum grade point average is appropriate for all but the open admissions programs. We recommend a minimum GPA for students in the advanced program of 2.75. However, since studies by Kleinfeld and others (1985) and Goff (1984) question the reliability of those grades for students from rural schools, other measures of performance are also important.

2. Achievement scores at the 50th percentile or higher. ACT, PSAT and SAT scores are reliable measures of performance. However, since many rural schools do not administer these tests, we will use these scores for information only.

3. Competency Scores averaging 3 or above. The Competency Questionnaire asks Instructors to evaluate student competencies in reading, writing, speaking and listening, reasoning, math and science, social science, and study skill. Competencies are measured on a 1 to 5 scale with 1 indicating low ability and 5 indicating high ability. Students should have average scores of 3 or above.

4. Student Essays. New applicants to the advanced program will be asked to submit a 400 word essay, typed or computer printed, discussing (1) what they are doing in their current life, their extra-curricular activities, interests, work, (2) why they want to go to college, and (3) why they want to be a part of the program. The essays will be scored for content and
mechanics. Students must score 75% or higher. The essays will also be used to assess student motivation for the program.

5. Recommendation. New applicants will be asked to submit the name of a teacher or counselor who will recommend them for the program. This person will be asked to complete the Recommendation Form which will be used to assess such items as attitude toward education, leadership abilities, ability to work with groups, career goals, and chances of completing college.

Diagnostic Tests.

Institutions planning to offer courses at both the college and preparatory level should require students to take college level entrance exams during Orientation and Registration. If possible, these should be the same exams given to entering freshmen. This will serve two functions: first, it will introduce students to the exam process; second, it should, with the pre-program data, lead to accurate placement in classes. Students in Prelude will take three placement tests during Orientation.

1. A 250 word essay written during an hour and a half time frame.

   ... The Nelson-Denny Reading Test.

3. A Math placement test developed by the department (Appendix D).

   Students will be assigned to college level or preparatory English and math on the basis of the writing and mathematics tests and to Study Skills or Speed Reading on the basis of the Nelson-Denny Test.
A swimming proficiency test will also be given during orientation. The test is related to an institutional requirement in swimming, which is, in turn, related to the importance of swimming for survival in the Alaska environment.

Courses to be offered.

Programs should provide instruction in three or more of the competency areas recommended by the College Board. Courses in written and oral communication should address writing, speaking, listening and language skills. They should include note taking and research skills. Reading courses should be designed to increase students' comprehension level and speed. Mathematics courses should introduce students to the computational and functional skills required in college mathematics, computer, and science courses. Science courses should introduce students to scientific method, to laboratory and field work, and to scientific concepts. The following courses are recommended as required courses for all students:

1. Introduction to College English or Preparatory English

2. Introduction to College Math or Preparatory Math
3. Computer Programming (intermediate or advanced) or Computer Literacy (beginning)

4. Introduction to College Science

5. Introduction to College Social Science or Introduction to College Psychology

Optional courses, which will depend on the requirements of the institution and the needs of the student population, may include:

1. Developmental reading, which should be required of all students scoring below 9th grade on the Nelson-Denny Reading test.

2. Public Speaking or Speech Communication, which may be included in the English class.

3. Study skills, which may be integrated into the regular classes.

4. Critical thinking, which may be integrated into a Public Speaking class if it is taught separately.

5. Beginning Swimming, which would not be necessary where swimming is required for high school graduation.

As indicated above, the courses may be offered at the pre-college and college level. Entry examinations will determine placement. Colleges proposing to offer college credit for such courses should make sure they are designed to meet contact-hour requirements for credit and that they comply with the approval process required of regular college courses.
Methods of Course Delivery.

Students should be exposed to instructional methods used at the institution they are attending. Senior high preparatory programs, particularly those for rising seniors, should be taught by college faculty. Since SJC is a small school which emphasizes its low student/teacher ratio, that method will be maintained in the preparatory program. However, students should be exposed to the following methods common to college classes:

1. Rapidly delivered lectures,
2. Note taking,
3. Frequent quizzes, announced and unannounced,
4. Class discussions,
5. Daily and weekend homework assignments,
6. Research requirements for papers, speeches, and the like.

Activities.

Activities fall into three categories: non-classroom academic, recreational, and social. It is important that students in resident programs be allowed time for all three. Academic activities should include:

1. Orientation and Registration. It is important to introduce preparatory students, just as we introduce
college students, to the requirements and services of college life. During this period, students should be involved in the following activities:

a. Introduction to the program and to faculty and staff. Students should first meet with Residence Hall staff where they will be assigned to rooms, meet their roommates, and discuss Residence Hall requirements. Then they should meet with faculty and remaining staff for program and course orientation.

b. Diagnostic testing.

c. Registration following procedures similar to those used for college registration:

(1) Course Selection: At SJC this will involve meeting with advisors to enroll in courses as determined by scores on entry exams, and then having course enrollment approved by the Registrar.

(2) Payment of Tuition and Fees: Since students in Early College Programs receive funding, this procedure will introduce them to the financial aid process. They will "pay" for their tuition and room and board with a paper indicating the amount of their ECIP scholarship award, and they will pay for their books and materials with chits.

d. Individual and small group counseling sessions with advisors and Residence Life staff.

e. Additional orientation meetings with college admissions and financial aid staff.

f. Cross-cultural games and simulations.

g. Guest lectures.

Recreational programs may include regularly scheduled individual or team sports. Included in this category would be such activities as free swim, jogging, aerobics, volleyball, soccer, fishing and hiking.
Included in social programs would be field trips, dances, talent shows, movie nights, pizza parties, scavenger hunts, and a graduation ceremony. Also in this category would be arts events: trips to museums and art galleries, attendance at theatre, music and dance performances. Institutions will need to take advantage of the arts programs available in their communities.

A major concern in structuring activities for participants in resident programs is that sufficient time is allowed for study. A second concern is security. Junior and senior high school students require more supervision than college students. This problem can be addressed by requiring, as does the RAHI program, a mandatory study hall Sunday through Thursday evenings and group activities on weekends. The study hall performs two functions: it gives the students time to complete their homework and it keeps them away from potential problems that might occur should they venture unescorted into the city. Special activities should be scheduled on weekends.

**Course and Program Evaluation.**

Institutions should establish evaluation procedures for students, courses, and program.
Student Evaluation. Students may be evaluated in a number of ways, some of which depend on the length of the program:

1. Pre- and post-program achievement tests. These tests are best used with longer programs (4 to 6 weeks). Such tests may also be used to assess the success of the program. Tests should include:
   a. Nelson-Denny Reading Test
   b. Mathematics Test
   c. Writing Test
   d. Diagnostic tests followed by Mastery Tests for individual courses.

2. Observations. Students may be evaluated through faculty observation and records of course work and staff observations of behavior.

3. Follow-up Questionnaires. Student progress after the program can be assessed by follow-up questionnaires (Appendix E) which can be used to compare the academic achievement of participants with that of similar non-participants. Questionnaires can also be used to compare the two groups' attitude and motivation regarding school, their educational planning, and even their values.

Course Evaluations. Courses should be evaluated by both students and faculty. Institutions may have students evaluate each class using a standard instrument which can be machine scored or they may wish to design their own instrument. In either case, students should be asked to
evaluate instruction, content, value, materials, and tests. Space should be allowed for individual comments. Faculty should be asked to use the same measures to evaluate their courses, paying special attention to changes they might make in their courses. Evaluation should take place immediately after the program is over.

Program Evaluation. Program evaluation falls into two categories: on-going and post-program. On-going evaluation is important in the longer programs since it allows students, faculty and staff to comment on program activities while they are fresh. Methods of on-going evaluation may include interviews with students and discussions with faculty and staff.

Post-program evaluations should be required of all three groups. Students should be asked to complete an evaluation questionnaire; faculty and staff should submit a descriptive evaluation.

Implications

A major implication of this study that has been researched in depth by the National Commission on Excellence in Education is the failure of the public schools to
adequately prepare students for college. That failure was not the direct concern of this study. Our concern was with the results of that failure - poorly prepared students - and with what to do to address their needs.

A related implication, addressed by Kleinfeld and by the Alaska Department of Education, is that rural Alaska students - Native and non-Native - are more poorly prepared than urban Alaska students. This was of direct concern to Sheldon Jackson College since it draws the majority of its Alaska students from the rural regions. It was also the concern of the University of Alaska because of the high drop out rate of these students.

A third implication, supported by a number of studies (Adam-Smith, Ascher, Baugh, Carey, Harcleroad, Passow), is that there is a core of courses, activities, and services that will benefit underprepared students, no matter who they are. Early in this study there was some thought that a model developed for use with rural Alaska Native students might not be appropriate for institutions serving other minorities, particularly urban groups. Results indicate just the opposite. Students who are poorly prepared for college are poorly prepared for college, whether they are Caucasian, Chicano, Black or Native American. Some students served by preparatory programs will have better grades than others.
Some will be more highly motivated than others. Some will be more confident than others. But they will all benefit from exposure to college courses, college requirements, college instructional methods, and college life.

A fourth implication, supported by the variety of institutions included in this study, is that institutions of higher education will continue to be involved in preparatory programs for the foreseeable future. Public schools would do well to do a better job of preparing college preparatory students, but the fact of the matter is that they must also serve vocational students and special education students, and deal with a variety of problems not faced by most colleges. The task, thus, is turned over to the colleges. Institutions which have open admissions policies must deal with underprepared students. They can either do this with special services when students enroll in college or with preparatory programs before they enroll. They would do well to do both. If they serve minority or economically deprived populations, they should try to offer the programs at little or no cost, or provide scholarships for students needing funding.

A fifth implication, supported by the study, is the desirability of (1) a sequence of programs and (2) longer programs. Several institutions in the study offered programs
at two or more levels. Students who successfully completed a basic program could progress to an advanced program. A number of schools, especially those serving rising seniors, had programs that were from 4 to 6 weeks in length. While this duration may prohibit students who work during the summer from participating in the program, it does allow students to take college level classes and receive credit for them. Further it increases the probability of major improvements in subject mastery.

Recommendations for Future Research.

A Program Guide.

A number of minor issues arose in the development of SJC’s advanced program, but were not included within the parameters of this study. They need to be dealt with by program administrators and should be addressed in future studies and covered in a program handbook. These include:

1. Scheduling.
2. Facilities needed.
3. Sources and amount of funding.
4. Faculty and staff training.
5. Rules and regulations for students.
6. Health forms and releases.
7. Travel arrangements.

8. Insurance.

9. Publications - program brochures, staff, faculty and handbooks and student publications.

These issues need to be dealt with by faculty and staff developing programs. College Survival offers workshops for faculty administering college Developmental Programs and Learning Centers. Similar workshops could be provided to faculty and staff of preparatory programs.

Long-Term Evaluation.

The more important issue is long-term evaluation. There have been a number of articles evaluating the effectiveness of Upward Bound and a number of studies of developmental programs provided to college students. There has been less attention paid to the long-term results of preparatory programs. This is especially true in Alaska. Several institutions in the study (University of Alaska, Fairbanks; Southern Illinois University, Carbondale; Tribal Resources Institute) indicated that they had kept track of their program participants through college, but few had published the results of their post-program surveys. If these programs are successful, and they appear to be, their successes need to be shared.
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APPENDIX A

MAP OF ALASKA WITI REGIONS SERVED
School Districts Served by ECIP

1 - North Slope Borough
2 - Northwest Arctic REAA
3 - Bering Strait REAA
4 - Yukon-Koyukuk REAA
7 - Lower Yukon REAA
8 - Lower Kuskokwim REAA
9 - Southwest REAA
17 - Skagway, Yakutat, Chatham Strait, Hoonah, Pelican
18 - Haines School District
21 - Wrangell, Petersburg, Kake Schools
22 - Craig, Klawock, Thorne Bay, Hydaburg Schools, Southeast Island School District

Figure 1.3
The census areas in Alaska (After U.S. Bureau of Census, 1982.)
APPENDIX B

LETTER AND QUESTIONNAIRE SOLICITING DATA
July 26, 1987

Students and Staff
Nova University, Summer Institute
Programs for Higher Education

Dear Colleague,

Sheldon Jackson College has for the past three years offered a two week summer Early College Incentive Program to students from rural Alaska. The program was initiated to address the problems facing many of these students, who are primarily Alaska Native (Indian, Aleut, and Eskimo), as they venture to college.

Participants in the program are 8th graders selected for the program on basis of their academic potential and an expressed interest in attending college. "Rural" is defined by the college as towns or villages with populations under 2000.

Next year we will begin the second phase of that program by bringing students back to campus between their junior and senior years.

As we develop the curriculum for that program, we are interested in what other colleges have been doing to meet the needs of their underprepared minority students.

If your institution has special programs, especially summer programs, to serve those students, would you please complete the attached form and turn it into the Nova office.

Thank you for your assistance.

Sincerely,

Jan Craddick,
Student, Anchorage Cluster,
Director,
Early College Incentive Program
Data for Jan Craddick
Re: College Preparatory Programs

Name: ___________________________ Phone Number: _____________

Institution: _____________________________

Address:
Mailing Address City State Zip

Name of Program: _____________________________

Director of Program: _____________________________

When is the program conducted? summer ( ) school year ( )

For how long? _____________________________

What age group(s) does it serve? _____________________________

Where is the program conducted? (check all that apply)
on our campus ( ) public school campus ( )
other ( )

What are the criteria for admission to the program? (check all that apply)
minority student ( ) rural student ( )
derprepared ( ) academically gifted ( )
other _____________________________

Do you work with other agencies in delivering the program (e.g. school
districts, social services offices)?
yes ( ) no ( ) If yes, describe _____________________________

What courses do you offer to these students? _____________________________

What non-academic activities do you offer in connection with the program?
____________________________________

If you are available to discuss program details; how can you be contacted
this week?

PLEASE RETURN COMPLETED FORM TO NOVA OFFICE
APPENDIX C

RECOMMENDATION FORM
SURVIVAL '85

STUDENT RECOMMENDATION

Student's Name ________________________________

School ________________________________

To the teacher/counselor/principal: The above student has chosen you to evaluate his/her performance. Please evaluate this student in the areas below as they apply within the classroom or school. This information is confidential and will help us better meet the needs of the students during Survival '85.

Survival '85 which will be held from June 16 to 29 on the campus of SJCC, is a two week summer program for students who will be entering 9th grade in Fall '85, designed to introduce students to college life and to give them some idea of what it is like to live and study on a small college campus. Subjects to be covered include natural science, literature, writing, art, music, drama, mythology and legends, swimming, first aid, intro to CPR, computers, and wellness. We will recommend that students receive endorsement for 1/2 unit of Carnegie credit upon successful completion of the curriculum.

To what extent does this student:

- Follow directions?
- Follow through on rules/guidelines?
- Cooperate with adults?
- Display acceptable conduct?
- Require additional supervision/guidance? (If so, please explain).

Excellent Good Fair Poor

Academic Performance: Please indicate below your assessment/recommendation of this student's level of academic ability. Consider his/her work habits, group participation, college potential.

What are this student's particular academic or social strengths or weaknesses that we should be aware of as we try to help him or her have a positive experience in Survival '85?
Health: Does the student have any health limitations that would interfere with his/her participation in the program?

Additional comments or concerns:

(Signature) __________________________ (Job Title) __________________________ (Date)

THANK YOU FOR YOUR ASSISTANCE!

Return to: Jan Craddick, Director
Survival '85
P. O. Box 479
Sitka, Alaska 99835

Recommendations need to be returned no later than March 30th.
APPENDIX D

PRE-PROGRAM ASSESSMENT AND DIAGNOSTIC FORMS
December 1, 1987

Dear Colleagues,

The student giving you the attached form was a participant in Sheldon Jackson College Early College Incentive Program (Survival '85). Students who successfully completed that program have been invited back to campus next summer to take part in the advanced program, ECIP2.

In order to place them in the appropriate prep or college classes, we are asking their high school instructors to assess their level of competency in several areas.

Would you please take the time to complete the following evaluation sheets and give them to the student to return to me with his/her other forms.

If you have any questions, please contact me at 747-5243.

Thank you for your assistance.

Sincerely,

Jan Craddick, Director
Early College Incentive Program
JCCM26/P
INSTRUCTIONS: Please circle the student's level of ability. 1 indicates low ability, 5 indicates high ability.

READING

- The ability to identify and comprehend the main and subordinate ideas in a written work and to summarize the ideas in one's own words.
  
  1  2  3  4  5

- The ability to recognize different purposes and methods of writing, to identify a writer's point of view and tone, and to interpret a writer's meaning inferentially as well as literally.
  
  1  2  3  4  5

- The ability to separate one's personal opinions and assumptions from a writer's.
  
  1  2  3  4  5

- The ability to vary one's reading speed and method (survey, skim, review, question, and master) according to the type of material and one's purpose for reading.
  
  1  2  3  4  5

- The ability to use the features of books and other reference materials, such as table of contents, preface, introduction, titles and subtitles, index, glossary, appendix, bibliography.
  
  1  2  3  4  5

- The ability to define unfamiliar words by decoding, using contextual clues, or by using a dictionary.
  
  1  2  4  5

WRITING

- The ability to conceive ideas about a topic for the purpose of writing.
  
  1  2  3  4  5

- The ability to organize, select, and relate ideas and to outline and develop them in coherent paragraphs.
  
  1  2  3  4  5

- The ability to write Standard English sentences with correct:
  - sentence structure;
  - verb forms;
  - punctuation, capitalization, possessives, plural forms, and other matters of mechanics;
  - word choice and spelling.
  
  1  2  3  4  5
The ability to vary one's writing style, including vocabulary and sentence structure, for different readers and purposes. The ability to improve one's own writing by self-editing.

1 2 3 4 5

The ability to gather information from primary and secondary sources; to write a report using this research; to quote, paraphrase, and summarize accurately; and to cite sources properly.

1 2 3 4 5

**SPEAKING AND LISTENING**

The ability to engage critically and constructively in the exchange of ideas, particularly during class discussions and conferences with instructors.

1 2 3 4 5

The ability to answer and ask questions coherently and concisely, and to follow spoken instructions.

1 2 3 4 5

The ability to identify and comprehend the main and subordinate ideas in lectures and discussions, and to report accurately what others have said.

1 2 3 4 5

The ability to speak in front of a group.

1 2 3 4 5

The ability to conceive and develop ideas about a topic for the purpose of speaking to a group; to choose and organize related ideas; to present them clearly in Standard English before a group or audience; and to evaluate similar presentations by others.

1 2 3 4 5

The ability to vary one's use of spoken language to suit different situations, including public speaking.

1 2 3 4 5
REASONING

- The ability to identify and formulate problems, as well as the ability to propose and evaluate ways to solve them.
  
- The ability to recognize and use inductive and deductive reasoning, and to recognize fallacies in reasoning.
  
- The ability to draw reasonable conclusions from information found in various sources, whether written, spoken, or displayed in tables and graphs, and to defend one's conclusions rationally.

- The ability to comprehend, develop, and use concepts and generalizations.

- The ability to distinguish between fact and opinion.
INSTRUCTIONS: Please circle the student's level of ability. 1 indicates low ability, 5 indicates high ability.

**MATHEMATICS**

- The ability to perform, with reasonable accuracy, the computations of addition, subtraction, multiplication, and division using natural numbers, fractions, decimals, and integers.
  
  1 2 3 4 5

- The ability to make and use measurements in both traditional and metric units.
  
  1 2 3 4 5

- The ability to use effectively the mathematics of:
  - integers, fractions, and decimals;
  - ratios, proportions, and percentages;
  - roots and powers;
  - algebra;
  - geometry.
  
  1 2 3 4 5

- The ability to make estimates and approximations, and to judge the reasonableness of a result.
  
  1 2 3 4 5

- The ability to formulate and solve a problem in mathematical terms.
  
  1 2 3 4 5

- The ability to select and use appropriate approaches and tools in solving problems (mental computation, trial and error, paper-and-pencil techniques, calculator, and computer).
  
  1 2 3 4 5

- A basic knowledge of how computers work, the proper use and handling of computers and of common computer terminology.
  
  1 2 3 4 5

- Some ability to use the computer and appropriate software for:
  - self-instruction;
  - collection and retrieval of information;
  - word processing (including the development of keyboard (touch-typing) composition, and editing skills);
  - problem-solving—both through the use of existing programs and through experience with developing one's own programs.
  
  1 2 3 4 5

- An awareness of when and how computers may be used in the academic disciplines and various fields of work, as well as in daily life.
  
  1 2 3 4 5

- Some understanding of the problems and issues confronting individuals—and society generally—in the use of computers, including the social and economic effects of computers and the ethics involved in their use.
  
  1 2 3 4 5
INSTRUCTIONS: Please circle the student’s level of ability. 1 indicates low ability, 5 indicates high ability.

SOCIAL SCIENCE

College entrants will need the following basic knowledge and skills in the social sciences:

- The ability to understand basic information developed by the social sciences.
  
  1  2  3  4  5

- Familiarity with the basic method of the social sciences, that is, with the framing and empirical testing of hypotheses.
  
  1  2  3  4  5

- A basic understanding of at least one of the social sciences and of how its practitioners define and solve problems.
  
  1  2  3  4  5

- Familiarity with how to explore a social problem or social institution by means of ideas drawn from several social sciences.
  
  1  2  3  4  5

STUDYING

This set of abilities is different in kind from those that precede it. They are set forth here because they constitute the key abilities in learning how to learn. Successful study skills are necessary for acquiring the other five competencies as well as for achieving the desired outcomes in the Basic Academic Subjects. Students are unlikely to be efficient in any part of their work without these study skills.

- The ability to set study goals and priorities consistent with stated course objectives and one's own progress, to establish surroundings and habits conducive to learning independently or with others, and to follow a schedule that accounts for both short and long-term projects.
  
  1  2  3  4  5

- The ability to locate and use resources external to the classroom (for example, libraries, computers, interviews, and direct observation), and to incorporate knowledge from such sources into the learning process.
  
  1  2  3  4  5

- The ability to develop and use general and specialized vocabularies, and to use them for reading, writing, speaking, listening, computing, and studying.
  
  1  2  3  4  5

- The ability to understand and to follow customary instructions for academic work in order to recall, comprehend, analyze, summarize, and report the main ideas from reading, lectures, and other academic experiences; and to synthesize knowledge and apply it to new situations.
  
  1  2  3  4  5
* The ability to prepare for various types of examinations and to devise strategies for pacing, attempting or omitting questions, thinking, writing, and editing according to the type of examination; to satisfy other assessments of learning in meeting course objectives such as laboratory performance, class participation, simulation, and students' evaluations.

1 2 3 4 5

* The ability to accept constructive criticism and learn from it.

1 2 3 4 5

* The ability to recognize when you are falling behind and to find a solution (self-evaluation).

1 2 3 4 5
ECIP Prelude Mathematics Placement Test

Name ___________________________ Date ______________

1. Subtract 4.9 - 0.06

2. What is the missing number?
   \[
   \frac{10}{24} = \frac{33}{7}
   \]

3. 425 seconds = _________ minutes Use a mixed fraction (such as $3\frac{1}{2}$)

4. Find the simple interest on $400 for 3 yrs at 5% per yr.

5. Find $\frac{11}{15} + \frac{7}{12}$

6. Multiply 413 by 5.1

7. Divide 214.5 by 0.011

8. 18 is 40% of what number?
9. Write \( \frac{7}{17} \) as an exact decimal

10. Find \( 12 \times 2\frac{3}{5} \)

11. The volume of a right circular cone is \( V = \frac{1}{3} \pi r^2 h \). Find the volume of a cone whose radius is 13 cm and whose height is 7 cm.

12. If a map is drawn to a scale of three inches to 140 miles, what is the actual distance between two cities which are 8\( \frac{1}{4} \) inches apart on the map?

13. Average 16 27 14 28

14. Divide 3\( \frac{2}{7} \) by 1\( \frac{1}{5} \)

15. Add -3 and -7
16. Divide 63 by 7

17. Multiply $m^2 \cdot m^8$

18. Evaluate $(-3)^3$

19. Evaluate $5^0$

20. Multiply $5k(k + 7)$

21. Multiply $(3g - 5)^2$

22. Simplify $(3a + 2b - 8) - (a - 6b - 3)$

23. Find $\sqrt[15]{15}$ divided by $\sqrt[3]{3}$

24. Divide $x^2 - x - 20$ by $x + 4$

25. Add $3w^2 - w + 7$ and $4w^2 + 5w - 10$
in each equation, solve for the variable named with a letter

26 3 + A = 12

27 2 - 3B = 7

28 (C + 2)(C - 5) = 0

29 20^2 + 5D = 4

30 \frac{5E + 3}{2E} - 3E = 7

31 -5F + 2G = 26, 3F + 2G = -6

32 List all the subsets of \{0, 2, 4\}

33 Rewrite log_4 64 = 3 in exponential form

34 Graph the equation 3x - y = 1
APPENDIX E

PROGRAM EVALUATION FORMS
1. If students could learn only 3 things while in your course(s), what 3 things would you like these to be? (if you're doing more than one course, you can use the back for others)

Course content:
1. 
2. 
3. 

Skills:
1. 
2. 
3. 

I feel that learning (circle one)
content is the most important
content and skills are equally important
skills are the most important

2. What purposes for the program come most immediately to your mind?

General:

Specific:

3. What strengths do you expect the students to bring to this summer's program?

4. In what areas do you expect to see the need for the most student improvement?
5. Roughly speaking, Prelude involves two components: the academic, of which you are a part, and residence life/recreation. In what ways do you think the residence life/recreation component can support your academic program?

6. In what ways do you think you can support the residence life/recreation component?

7. Do you feel you've had adequate time to prepare for your course(s)?
   _____ Yes   _____ No   _____ Not sure

8. Do you understand what your responsibilities as a Prelude faculty member involve?
   _____ Yes   _____ No
   If no, what are you unclear about?

9. Use this space for any other comments you have about orientation or the program in general:
1. If students could learn only 3 things from you this summer, what 3 things would you like them to be?

1. 

2. 

3. 

2. What purposes for the Prelude program come most immediately to your mind?

   General: 
   
   Specific: 
   
3. What strengths do you expect the students to bring to this summer's program?

4. In what areas do you expect to see the need for the most student improvements?

5. Roughly speaking, Prelude involves two components: residence life, of which you are a part, and academic. In what ways do you think the academic component can support the residence life program?
6. In what ways do you think you can support the academic component?

7. Do you feel you've had adequate time to prepare for the students' arrival?
   Yes  No  Not sure

8. Do you understand what your responsibilities are as a Residence Life Member?
   Yes  No

If no, what are you unclear about?

9. Is there anything you would have changed about your orientation activities and meetings?

10. Use this space for any other comments you have about orientation or the program in general:
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Initial Student In-put

We're asking you to complete this form for several reasons. First, you've already gone through the application and selection process. Information which you can give us about application and selection as well as about your travel can help us to improve these processes next year. Second, you have probably come to Sitka with certain expectations and ideas about both the program and college in general. It will be very helpful to us to know what these ideas and expectations are.

Admission, Selection & Scheduling

1. Did you have to choose between coming to Prelude and doing something else?

_____ Yes  _____ No

If yes, what was the other activity?

The choice between Prelude and something else was (circle one)
very hard  somewhat hard  OK  somewhat easy  very easy

2. When did your high school term end in the spring?

___

When does your fall 1988 semester begin?

___

Travel Arrangements

3. Did we notify you early enough about your travel arrangements?

_____ Yes  _____ No

If no, what was the problem and how much earlier would you have liked to have heard?

4. Did you have any difficulties as you traveled to Sitka?
 Orientation

5. How did you find the Orientation and Registration sessions? (circle one)

   very worthwhile  worthwhile  OK  only somewhat worthwhile  not worthwhile

6. Which orientation activities did you find most useful and why?

Prelude, High School and College

7. What is your most important reason for participating in Prelude this summer?

8. List 3 ways you expect college academic life to be different from high school:

   1.

   2.

   3.

9. List 3 ways you expect college social/personal life to be different from high school:

   1.
10. What part(s) of the Prelude program do you expect will be most difficult for you?

11. What part(s) of the program do you expect you will enjoy the most?

12. List 3 specific things you would like to improve at or learn with Prelude this summer:
   1.
   2.
   3.

13. You will have another year of high school to help prepare you for college. What things do you plan to work on/practice/learn as part of that preparation?

14. Have any members of your immediate family (parents, brothers, sisters) attended college?
   _____ No   _____ Yes
   If yes, how long did they attend?
   Did they graduate from college?
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Course Evaluation

Course:

Name of Instructor:

Please read each statement carefully, then select one of these five choices by circling the proper symbol:

SA - Strongly agree
A - Agree
U - Undecided
D - Disagree
SD - Strongly disagree

* * * * *

SA A U D SD 1. This instructor presented material clearly and effectively.
SA A U D SD 2. This instructor encouraged questions and tried to respond in a helpful way.
SA A U D SD 3. This instructor helped me to think in new ways about this course topic.
SA A U D SD 4. This instructor explained difficult material well.
SA A U D SD 5. This instructor was helpful to students who had difficulty understanding the material.
SA A U D SD 6. This instructor was available outside of class for extra help.
SA A U D SD 7. This course helped me to learn what college courses will be like.
SA A U D SD 8. I had to work harder in this course than I usually do in high school.
SA A U D SD 9. I have done some of my best academic work ever in this course.
SA A U D SD 10. My scores and comments from this instructor have been an accurate measure of my performance.
SA A U D SD 11. Overall, this course was excellent.
SA A U D SD 12. Overall, this instructor was excellent.

Make any other comments or suggestions about this class on the back of the page:

xxxiv
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Academic Evaluation

1. What are the most important things you've learned during your time here with Prelude?

2. What do you think are the most important things the faculty and staff can do to make the program worthwhile to students?

What can students do to make it worthwhile for themselves?

3. What are the most important ways in which faculty and staff have given you academic support?

Suggestions for improvements?
4. Do you feel that faculty and staff care about the students?

5. Have you noticed differences in Prelude classes, e.g. teaching styles, way classes are structured, now things are graded? What kinds of differences. Have you spotted styles which seem to work best for you?

6. How would you describe the seriousness of the Prelude students?

7. What are the hurdles for you now in terms of high school graduation, e.g. what do you have to get through to graduate?

Do you have a plan for how you're going to get over those hurdles?

8. What would you like to see the program do in terms of follow-up next year and when you enter college?
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Program Evaluation

At the beginning of the program, we asked you to fill out one questionnaire form and, now that we're reaching the end, we're asking you to do one more. It's your chance to have an effect on the direction of this program. Please go through the questions carefully and thoughtfully. This is your chance to make a difference.

1. The program this summer has been 2 weeks in length. Do you think 2 weeks is:
   
   too long   OK   too short   suggested length __________

   If you circled "too long", what would you cut out or tighten up?

   If you circled "too short", what would you add?

2. Do you have any suggestions for classes that Prelude should add to the program?

   Which of the classes this summer was your favorite and why?

   Which of the classes this summer was your least favorite and why?

3. How did you feel about the scheduling of your classes?

   too much free time   OK   not enough free time

   If you could have changed the scheduling of your classes in any way, what changes would you have made?

4. When you needed tutoring or help with your academic work, do you
feel it was available?
always usually sometimes rarely never

Was the tutoring you received helpful to you?
always usually sometimes rarely never helpful helpful helpful helpful helpful

Were there members of the faculty or staff that you found especially helpful to you as academic tutors?

_____ Yes _____ No
If yes, please list their names:

Were there other students who gave you special help in understanding your academic work or that were important in helping you to successfully complete the program?

_____ Yes _____ No
If yes, please list their names:

5. If Prelude had not had a required study hall, do you think you would have studied for 2 or more hours each night?

yes probably maybe probably not no

Do you think Prelude should continue having a required study hall?

_____ Yes _____ No

Do you have any suggestions for changes or improvements in the study hall?

6. On weeknights students were required to be in the dorm at 10:30. Do you think this was:
On weeknights students had to be in their rooms at 11:00. Do you think this was:

- too early
- OK
- too late

On weekends students were required to be in the dorm at 11:00. Do you think this was:

- too early
- OK
- too late

On weekends students were required to be in their rooms at 12:00. Do you think this was:

- too early
- OK
- too late

7. Should students continue to have the responsibility for waking themselves up in the morning?

- Yes
- No

8. Use the space below to make any suggestions for changes or improvements in the residence hall rules or living situation.

9. How did you find staff in terms of helping students with academic problems?

- always helpful
- usually helpful
- OK
- somewhat helpful
- not helpful

How did you find dorm staff in terms of helping students with personal problems?

- always helpful
- usually helpful
- OK
- somewhat helpful
- not helpful
10. Please use the space below to give us feedback concerning the residence hall staff - for example, people you found especially helpful, people you felt good about talking to, suggestions for changes and improvements, etc.

11. What recreation activities did you like the most?

What recreation activities did you like the least?

12. Do you have any suggestions for additional recreation activities we should include next year?

13. Were the recreational activities well-planned and organized?

   always     usually     sometimes     rarely     never

14. Do you think the students had enough input into the choice and organization of recreation activities?

   _____ Yes   _____ No

   If no, how could this be accomplished?

15. Was the balance between required and voluntary recreation activities a good one?

   _____ Yes   _____ No
If no, how should the balance be changed?

16. What did you like best about the program as a whole?

What did you like least?

17. If a student at your school asked "Why should I go to Prelude?"
What would you tell them?

18. List the 3 most important things that you have learned at Prelude this summer.

1.

2.

3.

19. Have your experiences this summer influenced class choices you will make your senior year?

_____ Yes _____ No

If yes, how have choices been influenced?

Have your experiences influenced academic areas you will work extra hard in next year?

_____ Yes _____ No
If yes, what areas?

20. At this point, do you plan to attend college?
   _____ Yes   _____ Maybe   _____ No
   If yes or maybe, what colleges are you considering?

   Have your plans changed at all because of your Prelude experience?
   _____ Yes   _____ No
   If yes, please explain:

21. Are there any incoming juniors in your high school now that you
    think would benefit from and contribute to next year's program?
   _____ Yes   _____ Maybe   _____ No

22. Because of your Prelude experience, do you think you can be of help
    to others in your high school who are thinking about attending
    college?
   _____ Yes   _____ Maybe   _____ No
   If yes or maybe, how?

23. What high school will you be attending your senior year? (Please
    give name and place)

    Please list the name of the person at your school (principal,
    teacher or counselor) that you would like us to use as our
    contact person.

24. Use the space below and the back if necessary to make any other
    suggestions or comments about the program.
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Faculty Evaluation

We are asking for a written evaluation of the program for two reasons: one, as a permanent record of your reactions to the program and second, as a reference for revision of next year's program.

1. How would you rank overall the administrative support given to you?

excellent  good  adequate  poor  inadequate

completely

2. Do you have any suggestions for improving the administrative support of faculty?

3. How did you find the amount of time required of you in working for the program - e.g. class preparation, teaching, meetings, etc.

_____ Expected amount  _____ Unexpected amount

Do you feel the amount of time required was appropriate given the nature and goals of the program?

_____ Yes  _____ Not sure  _____ No

Do you have any comments or suggestions about the time the program required?

4. Do you have any suggestions to make about the weekly faculty meetings that were held?

5. Did you find yourself having to adjust your expectations of student performance once the group arrived and classes began?

_____ Yes  _____ No
If yes, was the adjustment up or down?

6. Which of the following positive student behaviors did you observe for most students in your classes. (circle whichever applies)
   a. being on time for class
   b. being ready to work when class began
   c. asking questions in class
   d. participating in class discussion
   e. sitting toward the front of the classroom
   f. establishing eye contact with you
   g. being alert and awake in class
   h. other:

Are there particularly important student behaviors that you feel a number of your students did not exhibit during their time at Prelude (you don't have to confine yourself to the list above)?

7. Were there particular academic skills, study skills or student behaviors that you tried to teach or reinforce in addition to the content of your course?

8. How much reading were students required to do in your course? (Be as specific as possible)

9. What do you think should be the maximum number of students in a
course like the one you taught this summer?

What about the minimum number?

10. Given the short, intensive nature of the program, do you feel you had an adequate amount of class time for instruction?

_____ Yes _____ No

Do you think, given all their other responsibilities, that your students were able to give adequate attention to your course and its requirements?

_____ Yes _____ No

Do you have schedule changes to suggest in terms of your class, e.g. contact hours, time of day, time of week, etc.

11. Based upon what you know about the Prelude curriculum:

a. Is there something important that you think has been neglected? If so, what?

b. Is there anything you think could be eliminated from our current busy schedule? If yes, what?

12. Has your experience in Prelude provided you with teaching/learning ideas, techniques, insights etc. which you think will prove useful to you in the future?

_____ Yes _____ Maybe _____ No

If yes or maybe, what are they?
13. What do you feel is the greatest strength of Prelude?

14. What do you feel needs the most improvement?

15. Based upon your experiences this summer, would you recommend participation as Prelude faculty to other college faculty or high school teachers?

   ____ Yes       ____ Maybe       ____ No

16. Overall, how would you rate the Prelude program?

   excellent   very good   satisfactory   satisfactory   satisfactory

   somewhat    not

17. Use the space below to make additional comments/suggestions and/or to jot down any particular points you would like to make in the discussion which will follow:
EARLY COLLEGE INCENTIVE PROGRAM

PRELUDE

Final Residence Life Questionnaire

1. Your work with us began with the orientation/preparation days. Do you think the period of time for orientation was: (circle one)

   too long 1 2 3 4 5 too short

   Are there things you think should be added to future staff orientation?

   Are there things you think should be dropped from future staff orientation?

2. The students orientation to the program began the Saturday night they arrived and went through Sunday. Do you think this period of time was: (circle one)

   too long 1 2 3 4 5 too short

   Are there things you think should be added to the students' orientation?

   Are there things you think should be dropped from the students' orientation?
3. Listed below are some of the duties you've performed during the two weeks. Please write a number in the space before each:

Enjoyed very much 1 2 3 4 5 Didn’t enjoy at all

- driving
- helping/tutoring students with academic work
- staying abreast of students’ academic progress
- interacting with other staff
- helping students with homesickness, personal problems, etc.
- organizing social/recreational activities
- participating with students in social/recreational activities
- disciplining and rule enforcement
- sharing your own experiences as a college student
- attending student dorm meetings
- attending meetings with faculty
- attending meetings with residence life staff
- running errands for/with students
- (include other duties not listed)

Again, choose a number for each task:

very stressful 1 2 3 4 5 not at all stressful

- driving
- helping/tutoring students with academic work
- staying abreast of students’ academic progress
- interacting with other staff
- helping students with homesickness, personal problems, etc.
- organizing social/recreational activities
- participating with students in social/recreational activities
- disciplining and rule enforcement
- sharing your own experiences as a college student
- attending student dorm meetings
- attending meetings with faculty
- attending meetings with residence life staff
- running errands for/with students
-
And for the last time, choose a number for each:

For me, very much 1 2 3 4 5 For me, no personal growth and learning

driving
helping/tutoring students with academic work
staying abreast of students' academic progress
interacting with other staff
helping students with homesickness, personal problems, etc.
organizing social/recreational activities
participating with students in social/recreational activities
disciplining and rule enforcement
sharing your own experiences as a college student
attending student dorm meetings
attending meetings with faculty
attending meetings with residence life staff
running errands for/with students

(include other duties not listed)

4. What is your feeling about the academic workload that the Prelude students were asked to carry?
   too heavy: 1 2 3 4 5 too light

5. What recreation activities do you think that students enjoyed the most?

6. What recreation activities do you think that students enjoyed the least?
7. Given the current budgetary situation, do you have any suggestions for inexpensive recreation activities the program might include next year?

8. Since we're always looking for ways to strengthen the program and make things as smooth as possible for staff, could you turn your thoughts to the organization of the non-academic component of Prelude. Do you have any comments or suggestions about that structure that would be useful in planning for next summer?

9. Imagine that a friend of yours is thinking next spring about applying to be a staff member. They come to you - a veteran - to get your reaction to the job. What would you tell them?

10. Please use the space below and/or on the back to make any other comments you'd like to about the program and your experience this summer.
December 1987

Name________________________ Address_____________________________________

School_____________________ Year in School__________________________

I. In which of the following courses are you enrolled? Check yes or no and give a brief description of the course if necessary.

   English (Check one) American or English Literature  Yes ( ) No ( )
           Inter. or Advanced Composition  Yes ( ) No ( )
           Algebra II  Yes ( ) No ( )
           Chemistry or Physics  Yes ( ) No ( )

           Describe ________________________________

           U. S. History  Yes ( ) No ( )
           Foreign Language (2nd year or higher)  Yes ( ) No ( )

           Please specify language and year ______________________________

           Computer Application or Programming  Yes ( ) No ( )

           Describe what level: ______________________________________

For any of the above courses to which you answered "no", check why you are not enrolled:

<table>
<thead>
<tr>
<th>Course</th>
<th>Taking higher level</th>
<th>Taking lower level</th>
<th>Course not available</th>
<th>Not interested</th>
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<tr>
<td>English</td>
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<td>Computer Science</td>
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Are you enrolled in a study hall?  yes ( ) no ( )

Is it required?  (yes) no ( )
Are you taking any Senior level or college courses? Check those that you are taking:

- Trigonometry ( )
- Calculus ( )
- Pre-College Writing ( )
- S.A.T. Preparation ( )

College Classes - List course # and title

II. Please list all the courses you are taking this year and your grades from the most recent report card.

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<thead>
<tr>
<th>Course</th>
<th>Grade</th>
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III. Please tell us about your college planning.

- Are you planning to go to college? Yes ( ) No ( )
- If yes, have you decided on a particular college or type of college? Yes ( ) No ( )
- If yes, explain

- Have you made any career plans or decided on your college major? Yes ( ) No ( )
- If yes, explain

This information will help us in the ongoing evaluation and development of the Early College Incentive Program. Please return this form to me no later than December 31st. A return envelope is enclosed.

Thanks for your help.

Jan Credick, Director
Early College Incentive Program

JCBH04/P