## AN ABSTRACT OF THE THESIS OF


Date thesis is presented $\Rightarrow$ et,, 2$)$
Title The Development and Evaluation of Audio-Visual Techniques
to Acquaint High School Students with Opportunities Available
in the Private Colleges in Oregon
Abstract approved
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(Major profesísor)

The purpose of this study was to test a proposed procedure for providing seniors in small high schools of Oregon with information in regard to the private colleges and universities of the state. It included the development of an audio-visual technique and its trial on a sample group.

## Scope and Procedure

For this study a sample of high school seniors was drawn from thirteen secondary schools within the state of Oregon whose senior class enrollments were 75 students or fewer. These schools were selected by random sampling procedures from a total population of 131 schools.

A master tape recording providing functional and timely information characteristic of the 11 Northwest private colleges and univerities was prepared and presented to 13 class "B" and "C" secondary schools.

The study was designed to test the following hypotheses:

1. That audio-visual techniques for presenting college and university information will help the college-directed student in his selection of a school of higher education.
2. That such audio-visual techniques will not place undue expense or other burden upon the high school or the colleges or universities.

The effectiveness of the program was evaluated by the following procedure:

1. A test of general knowledge about private schools of higher education in Oregon was administered prior to the commencement of the program of audio-tape and slides.
2. The eight minute tape with slides was presented.
3. The program concluded with a second administration of the same test given in the beginning. From the comparison of the results of the pre- and post-test a determination of the influence of the master tape and slides was made.
4. When the pre-test was given the students were asked to list in rank order their list of college choices, and the basis for their selection. At the end of the post-test they were again asked to list their choice of colleges. A comparison of the two lists and the accompanying reasons yielded answers to the questions:
a. Did the program cause the student to broaden his
choice of colleges?
b. Did the program influence his choice and in what way?

The significance of the results was determined by the following:

1. the value of the Critical Ratio of the difference between the Means of the pre- and post-test for each high school.
2. the value of the Critical Ratio of the difference between the Means of the pre- and post-test for the sample taken as a whole.
3. the results of the paired ' $t$ " test for each high school.

## Findings

The statistics of the study empirically demonstrated that:

1. this type of presentation is effective as an instructional instrument capable of providing college information to high school seniors. The critical ratios in every case were significant.
2. the program did not appreciably affect college choice.
3. the program as presented was instructional to high school seniors who had taken part in a "College Day" program sponsored by the private colleges.

Further findings not indicated in the statistics were:

1. The class " $B$ " and " $C$ " secondary schools have the capability to present an audio-visual program as suggested in this thesis.
2. The cost is reasonable in comparison with what it would cost to send a college representative to these "small" high schools.

It is expected that the Northwest Association of Private Colleges and Universities will use the results and procedures of the study in their admissions programs.

# THE DEVELOPMENT AND EVALUATION OF AUDIOVISUAL TECHNIQUES TO ACQUAINT HIGH SCHOOL STUDENTS WITH OPPOR TUNITIES AVAILABLE IN THE PRIVATE COLLEGES IN OREGON <br> by <br> HOLLIS WINSLOW PLIMPTON,JR. 

A THESIS
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THE DEVELOPMENT AND EVALUATION OF AUDIOVISUAL TECHNIQUES TO ACQUAINT HIGH SCHOOL STUDENTS WITH OPPORTUNITIES AVAILABLE IN THE PRIVATE COLLEGES IN OREGON

CHAPTER I

## IN TRODUCTION

The study attempts to develop materials to improve the opportunity for high school students to select a college to fit their needs. It includes the development of an audio-visual technique to provide students with pertinent information about private colleges in the state of Oregon.

## Statement of the Problem

Because of the great diversification among colleges in such respects as programs offered, costs, social atmosphere, and religious emphasis, it is necessary that the Oregon secondary schools be provided with a means of acquainting students with information about colleges in the state so that intelligent choices of colleges may be made by the students. In the Northwest the "College Day" is for many the only opportunity to become acquainted with the characteristics of available colleges and universities. In the small class "B" and "C" secondary schools even this opportunity may not be available to students interested in the continuation of their education. Restrictions of time, personnel, and money limit the number
of high schools that can be visited by college representatives, the time that can be spent, and the type of program that can be offered. Students are concerned not only with deciding whether or not to go to college but rather to determine the purpose for going to college and then seeking an institution that comes nearest to satisfying the purpose.

Significance of the Problem

More people are striving toward a college education than ever before, and college environments are becoming vastly more complex. The audio-visual program here proposed is intended to make college selection a more meaningful experience. Specifically the program will:

1. Broaden the range of the college and university admissions programs by providing the class " $B$ " and " $C$ " high schools with the opportunity to view and hear the qualifications of these institutions.
2. Provide the high schools with a flexible tool that: (a) is easily available, (b) can be retained for long periods of time, and (c) can be easily brought up to date.
3. Provide the colleges with a tool that they themselves can use for such functions as orientation programs.

High school guidance programs have the responsibility of providing pertinent information about schools of higher education to those who are contemplating a college future. This responsibility also includes helping the young people to view their personal strengths and weaknesses in light of the personal and academic
requirements of the colleges. Each student must have full opportunity to secure basic kinds of information about colleges before having to make a definite decision. Where the college does not adequately meet the student's academic and social needs, the experience could easily end in disaster. This disaster may be suffered not only by the young person but also by the country at large. America can ill afford to waste its potential of highly trained and educated young adults.

Scope of the Study

For this study a sample was drawn from secondary schools within the state of Oregon whose senior class enrollments were 75 students or fewer. The factor of location, size, and type of present guidance program was considered.

## Investigation Procedures

This study is designed to test the following hypotheses:

1. That audio-visual techniques for presenting college and university information will help the college-directed student in his selection of a school of higher education.
2. That such audio-visual techniques will not place undue expense or other burden upon the high school or the colleges or universities.

The investigator with the assistance of the directors of admissions of the 11 private colleges in the state prepared the script for the general information audio-tape. (See Appendix page 68 )

This tape recording provided functional and timely knowledge concerning:
a. the nature and philosophy of the private colleges in Oregon
b. the role of religion in the colleges
c. the social atmosphere and student life
d. the meaning of accreditation
e. the cost of attending the se schools
f. the requirements for entering
g. the special degree programs offered The private institutions, each of which belongs to the Northwest Conference of Independent Colleges and Universities, were asked to edit the master tape to insure that the information contained in it did in fact depict in general terms their particular college. To add to the pictorial portion of the audio-visual program, these schools were asked to contribute a number of 35 mm slides selected for their ability to give a comprehensive prospectus of the college shown. At no point in either the tape or the slides were the names of the colleges mentioned.

The effectiveness of the program was evaluated by the following procedure:

1. A test of general knowledge about private schools of higher education in Oregon was administered prior to the commencement of the program of audio-tape and slides.
2. The eight minute tape with slides was then presented.
3. The program concluded with a second administration of
the same test given in the beginning. From the comparison of the results of the pre and post-test a determination of the influence of the master tape and slides was made.
4. When the pre-test was given the students were asked to list in rank order their list of college choices, and the basis for their selection. At the end of the post-test they were again asked to list their choice of colleges. A. comparison of the two lists and the accompanying reasons yielded answers to the questions:
a. Did the program cause the student to broaden his choice of colleges?
b. Did the program influence his choice and in what way?

The program here outlined was conducted with high school seniors.

## CHAPTER II

## REVIEW OF RELATED LITERATURE

A search for literature related to the study was not very
fruitful. The only article bearing on the problem of the thesis was one written for the April, 1962 Educational Screen and Audio visual

Guide. The title was "Audiovisual College Counseling". The authors of the article include the director of Guidance Associates, Mr. Jack Goodman; the Associate Director of Admissions of Rutgers University, Dr. Henry C.J. Evans; and the Vice Principal of the Shaker Heights, Ohio, Senior High School, Mr. Albert Senft.

The article relates the reasoning behind the decision of Guidance Associates Incorporated to produce an audio-visual program for college counseling. It is noted in the following excerpts that the reasoning expressed by the Director of Guidance Associates parallels the reasoning upon which this thesis is predicated:

1. "The diversity among American colleges (and students) is so great that there are a multitude of colleges which are academically appropriate for any individual student. "
2. "A trained guidance counselor in most instances can quite adequately match students and colleges on the basis of cost, College Board Scores, Extracurricular interests, rank in class and a variety of other measurable criteria. B tut how does he 'interpret' a college campus which he may never have visited?"
3. Distribution and service become severe problems for colleges, especially small ones which draw their students from literally hundreds of secondary schools, and visit many more." (4, p. 204)

It is further noted that the findings of Mr. Jack Goodman and his associates lends support to the hypotheses set forth by this writer. These findings are:

1. 'It is economical. The cost is usually between ten and 20 percent of a comparable motion picture. Duplicate prints are economical- usually between $\$ 2$ and $\$ 3$ per copy- compared with $\$ 50$ to $\$ 150$ for full color sound motion picture prints."
2. "Since the program is the property of the high school, it can readily be used in group guidance as a general introduction to college and with PTA and other parent groups. Viewing the film will often help the student decide whether he should pursue admission to college, make plans to visit it, or reject it."
3. "Colleges find that the ease with which these programs can be updated is an advantage." (4, p. 205)

Dr. Evans and Mr. Senft in their contribution to the article related the enthusiasm expressed by Eastern high schools for the Guidance Associates' program, and the use to which the program was being put. The article concludes with the contention that an audio-visual program cannot replace the personal visit to the secondary school by representatives of the college admissions office.

The newness of this approach to college counseling provides one explanation for the paucity of writings in this area. The editors of Educational Screen and Audiovisual Guide make the comment, "When we heard of this new adaption for audio-visual materials we were intrigued'".

The tapes and other features of the program mentioned in the above article were reviewed by the writer. Guidance Associates Incorporated is a private firm which provides and constructs materials of a guidance nature for colleges and high schools. To aid high school counselors in their college guidance programs these ten records and accompanying film strips are available:

1. You and Your College Boards, a 35 minute record and film strip which sets forth the nature and function of the College Entrance Examination Board and operation of the Education Testing Service.
2. Financing a College Education, a 40 minute record providing advice on financing a college education. Participants are Mr. Rex Moon of the College Scholarship Service of the College Entrance Examination Board, Mr. Robert Hage, the Financial Aid Officer at Dartmouth College, Mr. Ronald Brown, the Financial Aid Officer at the University of Colorado, and Mr. Sidney Sulkin, the Senior Educational Editor of "Changing Times" magazine.
3. When You Visit A College, a 17 minute record and film strip combination designed to instruct students on how to evaluate a college.
4. The Goals and Purposes of a Liberal Arts Education, which is a panel discussion appraising a liberal arts education.
5. You and Your Military Obligation. This program is described as providing the answers to the "most important questions' facing male high school seniors.
6. An Education in Engineering and Applied Science. The record and pictures acquaint students with the engineering profession. It was produced in consultation with the Columbia School of Engineering and Applied Sciences and the General Electric Company. Curriculum and desired traits are mentioned.
7. Getting Into College Today, describes admission procedures, problems, practices, visitations, and other information pertinent to college admission.
8. Freshman Year At College. This record-tape presentation is described as providing information concerning the emotional and physical adjustments the student faces in the transition from high school to college.
9. The Urban University, is a record providing information on the type of student which such a school draws, the difference between the public and the private urban schools of higher education, and the opportunities open to urban university graduates.
10. The Small Liberal Arts College. The record and film examine in detail a hypothetical small liberal arts college. The listening student can gain a general understanding of the characteristics of these schools with a religious origin and religious emphasis.

Guidance Associates emphasize the use of their programs by both individuals and groups. The records and film strips as a total program provide a wealth of information. However, no one record is sufficient in and by itself. It was for this reason that none of the Guidance Associates programs were utilized as the audio-visual instrument for the purposes of the research undertaken by this investigator.

As the value of guidance services becomes more widely accepted it is possible that more research will be undertaken in this area of providing college information by audic-visual means.

Because the problem of this thesis was concerned with aiding the high school senior in making his college choice, the thesis was directly related to the Information Services of a Guidance Program.

Indeed the study presupposes the existence of a guidance program in the secondary schools. It was felt that greater understanding of the need the author hopes the study will fulfill would be accomplished more easily if a description of the role and objectives of the Informational services were provided. The sources of this information were the texts, Organization and Administration of Guidance Services, and The Information Service in Guidance: Occupational, Educational, Social. The informational service in its three areas, occupational, educational, and personal-social serves an important role in the maturing process of our children. This role was succinctly stated by Dr. Franklin Zeran and his associate writer, Anthony Riccio, in the following quotation:
"The ability to make free and wise choices is dependent in no small measure upon the experiences and information available to the individual. " (14, p. 34)

The role is one of providing the necessary information and experiences when it is needed by the individual or in this case the high school senior. To clarify the role of the educational portion of the informational services the following sentence was extracted from the second of the two books mentioned above.
> "Educational information is valid and usable data about all types of present and probable future educational or training opportunities and requirements, including curricular and co-curricular offerings, requirements for entrance, and conditions and problems of student life." (9, p. 23)

Concerning the objectives of the Informational Services Zeran feels that if the following common objectives were provided the informational services would be more comprehensive and effective. This service should:

1. "develop a broad and realistic view of life's opportunities and problems at all levels of training.
2. create an awareness of the need and an active desire for accurate and valid occupational, educational, and per-sonal-social information.
3. provide an understanding of the wide scope of educational occupational, and social activities in terms of broad categories of related activities.
4. assist in the mastery of the techniques of obtaining and interpreting information for progressive self-directiveness.
5. promote attitudes and habits which will assist in the making of choices and adjustments productive of personal satisfaction and effectiveness.
6. provide assistance in narrowing choices progressively to specific activities which are appropriate to aptitudes, abilities, and interests manifested and to the proximity of definite decisions." (9, p. 24)

In his closing remarks Zeran says that if we are to prepare young people to live in the world of tomorrow we must organize our resources for maximum efficiency. Not only must the guidance staff be well trained but also the information they provide must be presented at an appropriate time in the young person's development. (9, p. 26)

A second group of publications referred to were the 'how to" or guide books written both for the high school counselor and
counselee. These books were invaluable in reaching a decision as to what kinds of information should be provided in the master tape utilized in the research by this investigator. The two books so used were How To Get Into College and Stay There and American College Counselor and Guide.

The above mentioned book by Fine was of value in another way, it pointed out some of the factors in college selection. First, college selection is a family affair if for no other reason than because of the financial problems. Fine feels that even the most discerning student cannot possibly be aware of all the complicated factors involved in the choice of a proper college. (3, p. 2) Certainly the most likely person for a child to turn to for help is his mother or father. A second factor in college selection is that of having a clear understanding of one's self.
"The selection of a college should be guided by the specific vocational and personal needs of the individual student." (3, p. 2)

Further more:
> "The student who has adequate insight into his own behavior, who understands both his strong and his weak points, is going to make a much happier choice than one who makes no effort to size himself up and floats along with the tide." (3, p. 2)

The final factor is an understanding on the part of the student of why he wants to go to college. The following were suggested questions
the young man or woman could ask himself or herself.
"l. Is it because you love to learn and want to keep on learning all there is to know?
2. Are you going merely to please the wishes of a strong willed parent? Or because older sisters or brothers are at college and you have to carry on the family tradition?
3. Is it the easy way out for you now that you are graduating from high school and have absolutely no idea of what you want to do?
4. Do you look forward to college merely as a pleasant succession of campus frolics?
5. Do you have an absorbing interest in a particular study? And can you see making this study your life work?
6. Have you decided on a particular career?
7. Have you a long-abiding ambition to enter a profession?" (3, p. 3)

How well organized this search for college becomes depends, according to the author of this book, upon how well the student together with his parents and those to whom he turns for guidance can clarify the following:

1. his vocational aims
2. his special talents
3. his study habits
4. his emotional tempo
5. his personal disposition
6. his financial resources. (3, p. 3)

Giving support to Fine's statement that college selection is a family affair was an article based on a study by Herman Roemmich and John L, Schmidt. The purpose of the study was to determine to what exterthigh school counselors actually provide college selection and college planning assistance as perceived by students. The sample corsisted oi 2719 high school seniors from all of the Sar Diego City High Schools and two San Diego County High Schools. The conclusions reached were based upon the below listed answers to the question, from whom did you receive assistance in making your college plans?
"l. One out of 20 students received help from teachers in selecting a specific school and in making college plans.
2. One out of 10 students received help from counselors in making college plans. About one out of 20 received help from counselors in selecting a college.
3. One out of 10 received help from friends in selecting a specific school and in making college plans.
4. One out of three made the selection on his own without help.
5. One out of two received help from parents in selecting a specific school and in making his college plans." 10, p. 158)

The conclusion Roemmich and Schmidt reached was that high school seniors do seek the advice of their parents in making their college choice.

> "Although school people feel that they are involved in the process of student educational planning, from this study
parents, not school people appear to be the significant group who assist students." (10, p. 158)

The conclusion reached in the aforementioned article is not unique. One sentence in the introduction of the book, Complete Planning For College, is an example of how some authors feel about the involvement of parents in the selection of schools of higher education for their children.
"It (the book) is written mainly for high school youngsters, but with the assumption that parents also will be reading it, right over the youngster's shoulder." (ll, Introduction)

This sentence implies that parents are and possibly should be involved. These books and articles suggest that perhaps not only should the seniors hear the tape and slides about private colleges but that the parents should also.

Complete Planning For College is basically a guide book for high school students considering college and consequently did not provide much in the way of insight into the factors of selection or valuable means of disseminating information. The fourth sub topic in the third chapter, What a Guidance Program Should Accomplish, was, however, of interest because it attempted to point out to students the value of counselors in selecting the right college or university.

The paucity of publications and formal studies on the adaptation of audiovisual techniques for high school guidance programs is one
indication of the newness of this approach to college counseling in the secondary schools.

## CHAPTER III

## DESIGN AND PROCEDURES USED IN THE INVESTIGATION

The major procedures used for the investigation and evaluation include (1) selection of the participating class " B " and " C " secondary schools, (2) testing, (3) collection of the statistical data, and (4) analysis of the data.

## Selection of the Participating Schools

The high school seniors who participated in the study were selected from the public secondary schools of Oregon.

The selection of the class " B " and " C " high schools was based on random sampling procedures. ${ }^{1}$ The class "A" secondary schools were excluded because they are annually included in the visitation itinerary of the private colleges. The population of schools from which the sample was taken depended upon two major factors. The first factor was a willingness on the part of the high schools to take part in the study and the second factor was the size of the senior class. In Oregon the State Department of Education classifies all schools in terms of total student census. This system does not give an indication of the size of the senior class and was therefore abandoned in favor of the system devised by Dr. Francis 1

The names of the 131 secondary schools were placed in a race and rotated five times to insure mixing. After each school was selected the name was returned and the race was rotated five turns. This procedure was repeated until the 13 schools had been selected.

Nickerson (see Appendix p. 80) whose system is based upon a senior class census. Using the designating symbols "A", "B", and "C", a secondary school having over 75 seniors would be classified as class "A", a school having from 35 to 75 seniors would be a class " B " school, and finally a school having up to 35 seniors would be designated as class " C ". This system is presently used by the colleges and universities in Oregon in classifying the secondary schools for admission policies, recruitment plans, and in the evaluation of the academic record of prospective students. Using the number of young men and women in the senior class as the criterion, the total number of high schools in the class "B" and "C" categories in 1962 to 1963 was 131. The number of schools in any one classification can fluctuate from year to year as the number of students in the senior class varies.

The characteristics listed below were found to be common to each of the 13 schools visited in the course of the study.

1. They are located in rural settings, in communities where the major industry is agriculture and forestry.
2. During the school year 1962 to 1963 the mean number of seniors who contemplated attending college was 13.846. (Table I)
3. Each school was operating a guidance program that included college counseling, vocational counseling, and personalcounseling.
4. Each indicated that the greatest number of its students who attended college went to the state universities of Oregon.
5. The 13 schools had an average of 5.00 students who were
contemplating attending a private college. (Table I) The average number of boys and girls planning to go to the state universities is 8.769. (Table I)

On the basis that the schools in the study are in the Northeast, Southwest, middle, and coastal regions of the state it is felt by the author that the sample is in fact representative of the total population of class "B" and "C" secondary schools.

Testing and Collection of Statistical Data

Thirteen high schools were selected by random sampling procedures and were visited over a four week period. To insure that all of the young people in the sample were uniformly tested and instructed, the researcher made the presentation of the audio-visual program. Permission and time schedules were requested in advance and were maintained. The following discussion relates to the procedures used in introducing the program, in testing, and in the presentation of the college information tape and slides.

In testing it has been found that when members of the sample are aware of the fact that the purpose behind the test is for research they are motivated to do better than they would otherwise have done. This phenomenon is commonly referred to as the Hawthorne Effect. ( $8, \mathrm{p} .68-86$ ) To counteract the Hawthorne effect the author presented the same introduction to each of the schools making no mention of the research project. The introduction told the students that
the tape and the slides were designed to help them gain a better understanding and become more fully acquainted with the private colleges and universities of the state of Oregon. The questionnaire would help them judge for themselves what they knew of these schools of higher education. At the time of the initial contact with the high schools the principals were asked to avoid divulging the research aspect of the presentation. It was evident from the conversations with the students that in no school were the students prompted in advance of the program. Upon the completion of the post-test the boys and girls were told that the program that they had participated in was not only for their benefit but also for the benefit of a research project. One young lady made the comment that if she had known this she would have tried to do a much better job.

One variable that could not be controlled was the matter of cheating on the pre-test and post-test. The reasons for the lack of control are:

1. The size of the room and the size of the group prevented adequate spacing of the students. In the standard classroom, crowding prevented separation of the students and in the auditoriums close seating was necessary if the students were to see and hear the tape and slides. In only four instances was the re room sufficient to enable the students to be adequately spaced for testing purposes. This condition existed in the Alsea, Condon, Detroit, and Mosier
high schools.
2. While the teachers were asked to provide assistance in controlling cheating, the assistance did not deter the students from copying the responses of their neighbors. Some teachers looked on with amusement.
3. Thirdly, the investigator had no official control over the students and therefore could only request that they make their own responses.

To prevent a set of pre-tests and post-tests of a particular school from being invalidated by cheating, the writer marked each paper of every boy or girl who was seen compromising his or her work. These questionnaires so marked were not included in the statistical computations. The results of one high school were excluded for the above reasons. Three and a half percent of the questionnaires were discarded.

The informational portion of the program proceeded smoothly. Before each presentation, caution was taken to insure that the equipment was in working condition and adequate for the size of the group participating. At the time of the pilot study it was ascertained that small battery-operated portable equipment could not clearly reproduce the speaker's voice in the situation when large groups were assembled in gyms and auditoriums. Consequently, a large and small tape recorder were carried. As a rule when the size of the sample was 25 students or more, the greater volume necessitated
the larger machine. The audio-tape and the accompanying slides were designed to take no more than eight minutes. The short length of time permits the use of a discussion and a question and answer period after the information is presented.

Analysis of the Data

The type of analysis with which this study was involved was the analysis of group characteristics. John W. Best defines statistics as a mathematical technique or process dealing with mass rather than with individual cases. (1, p. 202) Thus the analysis of the data gathered from the secondary schools involved in the study was statistical.

The first of the statistical concepts dealt with the following characteristics of the sample:

1. the number of students planning to continue their formal education
2. the number of seniors going to private colleges and universities
3. the number of seniors going to the state universities of Oregon

The second group of statistics were concerned with the average difference between the raw scores of the pre-test and the raw scores of the post-test. The two groups of students involved were those who had the benefit of a "College Day" program and
those who did not.
The final analytical process was the determination of the significance of the results of the study both in respect to individual high schools and the sample taken as a whole. The critical ratio of the difference between the means of the pre- and post-test was computed and then located on the statistical table of " $t$ ". To provide a more rigorous test of the significance of the results the paired " t " test was run for each school, in which the individual was compared with himself. (7, p. 96) The table of " $t$ " indicates for the critical ratio of each of the 12 high schools the level of confidence for the rejection of the null hypothesis. This hypothesis states that the difference obtained is no greater than that which could be expected by chance. In order to reject the null hypothesis the significance of the difference must exceed the five (5) percent level of confidence. If the difference was great enough to exceed the one (1) percent level of confidence this would mean the difference could be attributed to chance factors once in a hundred times.

## CHAPTER IV

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

## Findings

The statistics of the study revealed the following findings bearing upon the presentation of private college information by audio-visual means. Three hundred and thirty-eight students took part in the research project. However, the questionnaires that were compromised were eliminated from the sampling. This reduced the usable sample to 282. Analysis of the statistics disclosed these facts:

1. An average of 48.20 percent of the sample indicated that they were planning on some form of post high school education. This education could involve either a trade or an academic course of study. The remaining 51.80 percent indicated no future plans beyond that of returning to their parent's farms, ranches, or business establishments.
2. The average percentage of seniors planning to go to college for the 13 high schools in the sample was 41.76 percent. (Table II) Of this 41.76 percent an average of 37.94 percent had decided on private colleges and universities and an average of 62.06 percent had made plans to attend the state universities. The students that make up the smaller percentage apply to one of the following private institutions:
a. Cascade College in Portland, Oregon
b. George Fox College in Newberg, Oregon
c. Lewis and Clark College in Portland, Oregon
d. Linfield College in McMinnville, Oregon
e. Marylhurst College in Marylhurst, Oregon
f. Mt. Angel College in Mt. Angel, Oregon
g. Multnomah College in Portland, Oregon
h. Pacific University in Forest Grove, Oregon
i. Reed College in Portland, Oregon
j. University of Portland in Portland, Oregon
k. Willamette University in Salem, Oregon
3. In four high schools, Can-ronville, Dayton, Pilot Rock, and Rogue River, the students were aible to take part in a "College Day" program sponsored by the private colleges. The average gain on the post-test over the pre-test for these students who had the benefit of a "College Day" was 2.356 points. This represents an average gain of . 212 points over the average difference between the pre-test and post-test raw score means for the total sample. Comments to the effect that the slide-tape presentation helped to answer questions about the private colleges and universities not answered by the college representatives could account for the differences obtained. Collage Day programs very often can be very confusing especially when students are shuffled from one speaker to the next. In this situation a disjointed and sometimes
contradictory accumulation of knowledge is gained. One young lady, a senior at Dayton High School, thought that the tape helped relieve the confusion. "We have had much of this information before", she wrote on the questionnaire, 'but when you could hear it on a record it was plainer than listening to a bunch of speakers".
4. In only 2.79 percent of the cases was a change in college choice made. Those eight students who indicated a change admitted that they were reluctant to make a final decision until they had visited the schools of their choice. One boy from the Rogue River High School said, "The tape sure convinced me not to go to a private college".
5. The critical ratio of the difference of the two means was for each high school significant at either the five or the one percent level of confidence. (Table III) Consequently, it is the contention of the writer that a program such as was used in the study could be used to bring to high school students information about private colleges and universities.
6. In order that greater confidence could be placed on the results for any of the 12 high schools of the sample, the paired " t " test was applied. The values found when located on the statistical table of " $t$ " indicated a level of confidence that rejects the null hypothesis (7, p. 520). The results of this test in each of the 12 instances were significant at both the one percent or five percent levels. (Table V) The difference between the individual scores on
the pre-test and the post-test was significant. A further demonstration of this significance was found when the total sample was put to the critical ratio test. The numerical value of 2.030 (Table IV) indicated that the five (5) percent level of confidence had been achieved when the sample was taken as a whole.

The foregoing findings have empirically demonstrated the effectiveness of this type of presentation as an instructional instrument capable of providing college information to high school seniors. The critical ratio for each of the 12 high schools and the critical ratio for the sample taken as a whole supported the hypothesis and rejected the possibility that the difference was likely to be due to chance.

Further findings of the study not shown in the statistics were as follows:

1. The class " $B$ " and " $C$ " secondary schools have the capability to present an audio-visual program as suggested in this thesis. The author on his visits found that each high school possessed a slide projector, tape recorder, and viewing screen.
2. The cost of the program was reasonable in comparison with what it would cost to send a college representative to these "small" high schools. The present cost for producing the tape recording, the slides, and making duplicates for each of the 131 class "B" and "C" secondary schools in Oregon was found to be $\$ 847.25$. (An itemized account of this can be found in the

Appendix.) Because of the wide variation in trip allowances provided by the private colleges it is not possible to arrive at an accurate figure to compare with the cost of the audio-visual program presented in the thesis. However from the experiences of the author and those of the Director of Admissions of Willamette University, Mr. Charles Paeth Jr., a good conjecture of the cost to visit each high school for a single representative would be $\$ 15.00$. The cost to have an admissions officer visit the schools, providing enough days could be added to the calendar, would be in the area of $\$ 1965.00$. This would mean that in comparison with the present "College Day" program the audio-visual program proposed by the thesis would be considerably less expensive.
3. Finally, the investigator and the program were welcomed into every high school visited as evidenced by the fact that the audiovisual program on private colleges and universities was permitted to be presented so late in the school year and on such short notice. In general, the attitude of the majority of the schools was one of appreciation for the service rendered to their students and of willingness to cooperate.

## Conclusions

Certain general conclusions concerning the presentation of information about private colleges were inferred from the findings of this thesis. First, the audio-visual presentation of private college information is an effective instructional aid for high school counseling programs.

Second, the study demonstrated that there is a need for such a program as was presented. As shown in previous sections of this thesis there are seniors in the class " $\mathrm{B}^{\prime}$ " and "C" high schools who want information about the private colleges before making their college selections.

Third, while the audio-visual program of the researcher had instructional value, it did not conclusively prove that it could influence college choices. It is possible that had the program been given at an earlier date in the school year or earlier in high school than the senior year more students might have reviewed their decisions more thoroughly and exhausted every source of information.

Fourth, it was inferred from the reception given the author that these "small" high schools want a program as was given to support their present guidance program.

Fifth, the study did not show conclusively that the environment influences the interest of young people in private colleges. One reason for this was that the high schools selected by random sampling procedures were alike in one important way, they were located
in rural communities. It would only be conjecture to say that the students of the more socially and financially prominent families had a greater concern about college selection than those of the less well-to-do.

Finally, the cost of providing each of the high schools within the concern of this thesis with the outlined audio-visual program would be less than to send a team of 11 representatives or just one representative to the often remote and highly scattered "small" secondary schools.

## Recommendations

The recommendations resulting from the findings are as follows:

1. It is recommended that the private colleges place greater emphasis in their admissions programs on the untapped potential of the class " B " and " C " high schools.
2. The private colleges should take on more responsibility in the guidance programs of these small high schools. This responsibility should include not only literature but also an audiovisual program as outlined in this study. While the tape used in this research served a useful purpose in the schools' guidance programs there is no reason why similarly well thought out tapes would not be equally successful. It is understood that this thesis was not designed to test a particular audio-tape but rather the
procedure. A series of tapes distributed commercially such as that of Guidance Associates may have excellent teaching qualities, but if the audio-tape is to tell the story of the private independent college in the Northwest then the tape recording should be constructed around the characteristics of these schools.
3. It is further recommended that the schools of the Northwest Association of Private and Independent Colleges should evaluate the instrument and procedures used in this study in relation to the results achieved, the purpose of this evaluation being to determine whether the technique could fulfill the responsibility of the private independent colleges in the class " $B$ " and " $C$ " secondary schools.
4. It is suggested that research be undertaken to study the criteria which high school seniors use in selecting a college. Such studies would be of great value to secondary school counselors, and college admission officers. At the present time there are few studies related to this matter.
5. Finally, it is suggested that a research project similar to the one undertaken by this investigator be presented earlier in the school year, the purpose for this research being to see if greater change in college choice would take place when the audio-visual program was presented at an earlier date.

## BIBLIOGRAPHY

1. Best, John W. Research in education. Englewood Cliffs, N. J., Prentice-Hall, 1961. 320p.
2. Diekhoff, John S. How to visit a college. The PTA Magazine 57:20-22. March, 1963.
3. Fine, Benjamin. American college counselor and guide. 19581959 ed. New York, Prentice-Hall, 1959. 240p.
4. Goodman, Jack L., Henry C. J. Evans and Albert Senft. Audiovisual college counseling. Educational Screen and Audiovisual Guide 41:204-206. April 1962.
5. Holland, J. L. Determination of college choice. College and University 35:11-28. Fall 1959.
6. How to get into college and stay there. Chicago, Science Research Associates, 1958. 121 p .
7. Li, Jerome C. R. Introduction to statistical inference. Ann Arbor, Edwards Brothers, 1957. 533p.
8. Mayo, Elton. The social problems of an industrial civilization. Boston, Harvard University, 1945. 150p. (Division of Research, Graduate School of Business Administration)
9. Norris, Willa, Franklin R. Zeran and Raymond N. Hatch. The information service in guidance. Chicago, Rand McNally, 1961. 598p.
10. Roemmich, Herman and John L. Schmidt. Student perceptions of assistance provided by counselors in college planning. Personnel and Guidance Journal 41:157-158. October, 1962.
11. Sulkin, Sidney. Complete planning for college. New York, McGraw-Hill, 1962.
12. Strohl, C. Orville. The task of the church college. In: Counselor's guide to Methodist schools, colleges and universities. Nashville, Board of Education, Methodist Church. p. 9-12.
13. Turngren, Annette. Choosing the right college. New York, Harper, 1952. 149p.
14. Zeran, Franklin R. and Anthony C. Ricco. Organization and administration of guidance services. Chicago, Rand McNally, 1962. 302p.

APPENDIX

TABLE I
PERCENTAGE OF SENIOR CLASS CONTEMPLATING ATTENDING COLLEGE

| Name of High School | Number of Seniors |  | Number going to College |  | Percentage |  | Public Institutions |  | Private Institutions |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| and County | 1961-6 | 1962-63 | 1961-62, | 1962-63 | 61-62, | 62-63 | 196 | 1962-63 | 1961-62, | 1962-63 |
| BENTON COUNTY |  |  |  |  |  |  |  |  |  |  |
| Alsea | 10 | 16 | 1 | 6 | 10.10\% | 37.50\% | 1 | 3 | 0 | 3 |
| DOUGLAS COUNTY |  |  |  |  |  |  |  |  |  |  |
| Canyonville | 8 | 21 | 2 | 8 | 25.00\% | 38.09\% | 2 | 7 | 0 | 1 |
| GILLIAN COUNTY |  |  |  |  |  |  |  |  |  |  |
| Condon | 35 | 23 | 22 | 10 | 62.86\% | 43. $43 \%$ | 17 | 3 | 5 | 7 |
| Y AMHILL COUNTY |  |  |  |  |  |  |  |  |  |  |
| Dayton | 40 | 44 | 11 | 15 | 27. $50 \%$ | 34.09\% | 7 | 8 | 3 | 7 |
| MARION COUNTY |  |  |  |  |  |  |  |  |  |  |
| Detroit | 10 | 12 | 3 | 4 | 33.33\% | 33.33\% | 2 | 2 | 1 | 2 |
| JACKSON COUNTY |  |  |  |  |  |  |  |  |  |  |
| Eagle Point | 58 | 73 | 18 | 22 | 31.03\% | 30.14\% | 15 | 15 | 3 | 7 |
| WALLOWA COUNTY |  |  |  |  |  |  |  |  |  |  |
| Enterprise | 48 | 38 | 17 | 13 | 35.42\% | 34.21\% | 11 | 10 | 6 | 3 |

TABIE I Continued
PERCENTAGE OF SENIOR CLASS
CONTEMPLATING ATTENDING COLIEGE

| Name of High School | Number of Seniors |  |  | Number going to College |  | Percentage |  | Public Institutions |  | Private Institutions |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| and County | 1961-6 | -62, | 1962-63 | 1961-62 | 1962-63 | 61-62, | 62-63 | 1961-62, | 1962-63 | 1961-62, | 1962-63 |
| GRANT COUNTY (John Day) |  |  |  |  |  |  |  |  |  |  |  |
| Grant Union |  | 45 | 46 | 22 | 28 | 48. 89\% | 60.83\% | 20 | 24 | 2 | 4 |
| SHERMAN COUNTY, Moro |  |  |  |  |  |  |  |  |  |  |  |
| Sherman Union |  | 36 | 41 | 24 | 25 | 66.66\% | 60.97\% | 16 | 12 | 8 | 13 |
| WASCO COUNTY |  |  |  |  |  |  |  |  |  |  |  |
| Mosier |  | 5 | 18 | 2 | 9 | 40.00\% | 52.94\% | 1 | 7 | 1 | 2 |
| UMATILLA COUNTY |  |  |  |  |  |  |  |  |  |  |  |
| Pilot Rock |  | 37 | 39 | 14 | 17 | 37.84\% | 43.58\% | 11 | 11 | 3 | 6 |
| JACKSON COUNTY |  |  |  |  |  |  |  |  |  |  |  |
| Rogue River |  | 39 | $43^{*}$ | 9 | 12 | 23.01\% | 27.81\% | 5 | 8 | 4 | 3 |
| WALLOWA COUNTY |  |  |  |  |  |  |  |  |  |  |  |
| Wallowa |  | 22 | 24 | 14 | 11 | 63.64\% | 45. $83 \%$ | 8 | 4 | 6 | 7 |

* The preliminary Report for Secondary Schools for the School Year 1962-1963" was incomplete for the Rogue River High School.

The class size was procured by the Oregon State Department of Education.
The data for the number of Seniors in the school year 1961-62 was taken from the "keport Summary of Standard Terminal High
Schools for the Year of 1961-1962.
The data for the number of seniors for the school year 1962-63 was taken from the "Preliminary Report for Secondary Schools for
the School Year of 1962-1963."

TABLE II

## PERCENTAGE OF SENIORS GOING TO PRIVATE AND STATE UNIVERSITIES <br> 1962-1963



[^0]TABLE III
QUESTIONNAIRE TEST DATA

| Name of School | Number | Mean (X) | Mean (Y) | $(\bar{X}-\bar{Y})$ | $\mathrm{s}_{\mathrm{x}}^{2}$ | $\mathrm{s}_{\mathrm{x}}^{2 / n}$ | $\mathrm{s}_{\mathrm{y}}^{2}$ | $\mathrm{s}_{\mathrm{y}}^{2 / \mathrm{n}}$ | St. Error of Diff. | Critical Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ALSEA | 9 | 7. 333 | 9. 444 | 2.111 | 4.000 | 444 | 3.028 | . 336 | . 883 | 2. 391 |
| CANNYONVILIE | 18 | 7.000 | 9.333 | 2.333 | 5. 412 | . 301 | 2.823 | . 157 | 677 | 3. 446 |
| CONDON | 11 | 6.091 | 8.818 | 2.727 | 3. 891 | . 354 | 3.378 | . 307 | . 813 | 3. 354 |
| DAYTON | 44 | 6.545 | 8. 886 | 2.341 | 2. 300 | . 052 | 2.568 | . 058 | . 332 | 7. 051 |
| DETROIT | 12 | 7.500 | 9. 166 | 1.666 | 2.636 | . 220 | 3. 426 | . 311 | . 729 | 2. 285 |
| EAGIE POINT | 56 | 5.732 | 8.250 | 2.518 | 6.999 | . 125 | 4. 191 | . 075 | . 448 | 5. 621 |
| ENTERPRISE | 28 | 6.214 | 8. 178 | 1.964 | 3. 804 | . 136 | 3. 208 | . 115 | . 501 | 3.920 |
| MOSIER | 7 | 7.286 | 9.285 | 1.999 | 1.905 | . 272 | 3. 048 | . 435 | . 841 | 2. 377 |
| PILOT ROCK | 24 | 6. 541 | 8.958 | 2. 417 | 4.520 | . 188 | 2. 303 | . 096 | . 533 | 4. 535 |
| ROGUE RIVER | 24 | 5.625 | 7.958 | 2.333 | 3. 462 | . 144 | 2.872 | . 120 | . 514 | 4. 538 |
| SHERMAN | 39 | 7. 462 | 9.282 | 1. 820 | 4.678 | . 120 | 4. 471 | . 115 | . 485 | 3.753 |
| WALLOWA | 10 | 6.200 | 7.700 | 1. 500 | 2. 844 | . 284 | 2.011 | . 201 | . 696 | 2. 155 |

TABIE IV

QUESTIONNAIRE TEST DATA

ALL SCHOOLS

| Number (n) | Mean (X) | Mean (Y) | $(\bar{X}-\bar{Y})$ | $s^{2} x$ | $s_{y}^{2}$ | $S^{2} x / n$ | $\underline{S^{2} y / n}$ | St. Error of Diff. | Critical Ratio |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 282 | 6.482 | 8. 780 | 2.298 | 10.872 | 10.615 | . 906 | . 885 | 1. 338 | 2. 030 |

## FORMULAE

$M_{1}=$ The Mean of the "pretest" raw scores.
$\mathrm{M}_{2}=$ The Mean of the "post-test" raw scores.
$S^{2}=$ Variance $\quad S^{2}=\frac{\sum(X-\bar{X})^{2}}{n-1}$
$S_{x}=$ The Standard Deviation of the "pretest" raw scores.
$S_{y}=$ The Standard Deviation of the "post-test" raw scores.

$$
\begin{aligned}
& S_{x}=\sqrt{\frac{\sum(X-\bar{X})^{2}}{n-1}} \\
& S_{y}=\sqrt{\frac{\sum(Y-\bar{Y})^{2}}{n-1}}
\end{aligned}
$$

$S_{e}=$ The Standard Error of the Mean.

$$
S_{e}=\frac{S_{x}}{\sqrt{\mathrm{n}}}
$$

$S_{d}=$ The Standard Error of a Difference (between Means).

$$
S_{\mathrm{d}}=\sqrt{\left(\mathrm{S}_{\mathrm{xe}}\right)^{2}+\left(\mathrm{S}_{\mathrm{ye}}\right)^{2}}
$$

$D=$ The actual difference between the Means of the "pretest" and "post-test".

$$
\begin{aligned}
\frac{D}{S}_{d}=\text { The Critical Ratio } \quad \text { C. R. } & =\sqrt{\frac{\left(S_{x}\right)}{\sqrt{n}}+\frac{S_{y}}{\sqrt{n}}} \\
& =\sqrt{\frac{S_{x}^{2}}{n}+\frac{S_{y}^{2}}{n}}
\end{aligned}
$$

The Paired ' $t$ " test
$\mathrm{t}=$ The critical ratio by the Raw Score formula.

$$
\begin{gathered}
t=\frac{\bar{d}}{s_{d}} \\
s_{d}=\sqrt{\frac{s^{2}}{n}} \text { or } \sqrt{\frac{\sum d^{2}-\sum d^{2}}{n(n-1)}}
\end{gathered}
$$

## TABLE V

## QUESTIONNAIRE TEST DATA

## The Paired " t " Test

| Name of School |  | The significance of " t " at |  |
| :--- | ---: | :---: | :---: |
|  | t | $\underline{5} \%$ | $\underline{1 \%}$ |
| ALSEA | 5.43 | 2.306 | 3.355 |
| CANNYONVILLE | 8.94 | 2.110 | 2.898 |
| CONDON | 7.60 | 2.228 | 3.169 |
| DAYTON | 11.54 | 2.021 | 2.704 |
| DETROIT | 5.86 | 2.201 | 3.106 |
| EAGLE POINT | 9.10 | 2.011 | 2.682 |
| ENTERPRISE | 8.88 | 2.052 | 2.771 |
| MOSIER | 4.10 | 2.447 | 3.707 |
| PILOT ROCK | 7.11 | 2.069 | 2.807 |
| ROGUE RIVER | 6.49 | 2.069 | 2.807 |
| SHERMAN | 9.06 | 2.025 | 2.713 |
| WALLOWA | 4.39 | 2.262 | 3.250 |
| ALL SCHOOLS | 4.42 | 1.960 | 2.576 |

All significant at $5 \%$ and $1 \%$ levels

TABLE VI
QUESTIONNAIRE TEST DATA

Pre-Test

| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X-M})^{2}$ |
| :---: | :---: | :---: | :---: |
| ALSEA HIGH SCHOOL |  |  |  |
| Carolyn | 10 | 2.667 | 7.113 |
| Dianne | 10 | 2.667 | 7.113 |
| Gilbert | 9 | 1.667 | 2. 779 |
| Carol | 7 | -. 333 | . 111 |
| Jim | 7 | -. 333 | . 111 |
| Raymond | 7 | -. 333 | . 111 |
| Kathryn | 6 | -1.333 | 1.777 |
| John | 6 | -1.333 | 1.777 |
| Sparky | 4 | -3.333 | 11.109 |
|  | 66 |  | 32.001 |

Post-Test
Raw Score $\quad(\mathrm{Y}-\mathrm{M}) \quad(\mathrm{Y}-\mathrm{M})^{2}$

| 12 | 2.556 | 6.533 |
| ---: | ---: | ---: |
| 12 | 2.556 | 6.533 |
| 10 | .556 | .309 |
| 7 | 2.444 | 5.973 |
| 10 | .556 | .309 |
| 9 | -.444 | .197 |
| 8 | -1.444 | 2.085 |
| 9 | -.444 | .197 |
| $\frac{8}{85}$ | -1.444 | 2.085 |

Mean $_{2}=85 / 9=9.444$

TABLE VII

## QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X}-\mathrm{M})^{2}$ | Raw Score | (Y-M) | $(\underline{Y-M})^{2}$ |
| CANYONVILLE HIGH SCHOOL |  |  |  |  |  |  |
| Beth | 10 | 3.000 | 9.000 | 12 | 2.667 | 7. 113 |
| Pat | 10 | 3.000 | 9.000 | 11 | 1.667 | 2.779 |
| Bud | 9 | 2.000 | 4.000 | 9 | . 333 | . 110 |
| Tony | 9 | 2.000 | 4.000 | 10 | . 667 | . 445 |
| Ginger | 9 | 2.000 | 4.000 | 11 | 1.667 | 2. 779 |
| Pete | 9 | 2.000 | 4.000 | 9 | . 333 | . 110 |
| Ronald | 8 | 1.000 | 1.000 | 12 | 2.667 | 7.113 |
| Fred | 8 | 1.000 | 1.000 | 10 | . 667 | . 445 |
| Craig | 8 | 1.000 | 1.000 | 10 | . 667 | . 445 |
| Bill | 7 | 0.000 | 0.000 | 9 | . 333 | . 110 |
| Rita | 7 | 0.000 | 0.000 | 8 | 1.333 | 1.777 |
| Andrea | 6 | -1.000 | 1.000 | 11 | 1.667 | 2.779 |

TABLE VII Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | $\underline{\text { Raw Score }}$ | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X}-\mathrm{M})^{2}$ | Raw Score | (Y-M) | $\left(\underline{Y-M}^{(1)}\right.$ |
| Loren | 6 | -1.000 | 1.000 | 8 | 1. 333 | 1.777 |
| Linda | 6 | -1.000 | 1. 000 | 9 | . 333 | . 110 |
| Tim | 4 | -3.000 | 9.000 | 8 | 1. 333 | 1.777 |
| Steve | 4 | -3.000 | 9.000 | 8 | 1.333 | 1.777 |
| James | 4 | -3.000 | 9.000 | 6 | 3.333 | 11.109 |
| Harold | 2 | -5.000 | 25.000 | 7 | 2.333 | 5.445 |
|  | $1 \overline{26}$ |  | $\overline{92.000}$ | $1 \overline{68}$ |  | $\overline{47.996}$ |

Mean $_{1}=126 / 18=7.000$
Mean $_{2}=168 / 18=9.333$

TABLE VIII

## QUESTIONNAIRE TEST DATA

## Pre-Test Post-Test

| Name of Student | Raw Score | (X-M) | $(\underline{X-M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $\left(\underline{\mathrm{Y}-\mathrm{M})^{2}}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CONDON HIGH SCHOOL |  |  |  |  |  |  |
| Curtis | 9 | 2.909 | 8.462 | 10 | 1.192 | 1.421 |
| Sharon | 9 | 2. 909 | 8.462 | 12 | 3.192 | 10.189 |
| Vera | 7 | . 909 | . 826 | 10 | 1.192 | 1.421 |
| Karen | 7 | . 909 | . 826 | 9 | . 192 | . 037 |
| Bob | 7 | . 909 | . 826 | 10 | 1.192 | 1.421 |
| Pat | 6 | . 091 | . 008 | 9 | . 192 | . 037 |
| Imec | 6 | . 091 | . 008 | 7 | 1.818 | 3.305 |
| Jim | 5 | -1.091 | 1. 190 | 8 | . 818 | . 669 |
| Joe | 4 | -2.091 | 4.372 | 8 | . 818 | . 669 |
| Charles | 4 | -2.091 | 4.372 | 9 | . 192 | . 037 |
| Bob | 3 | -3.091 | 9.554 | 5 | 3.818 | 14.557 |
|  | 67 |  | 38.906 | 97 |  | 33.783 |
| Mean $_{1}=67 / 11=6.091$ |  |  |  | Mean $_{2}=97 / 11=8.818$ |  |  |

TABLE IX

## QUESTIONNAIRE TEST DATA

Pre-Test
Name of Student Raw Score (X-M) (X-M) ${ }^{2}$
DAYTON HIGH SCHOOL

| John | 10 | 3.455 | 11.937 |
| :--- | :---: | :---: | :---: |
| Ellen | 9 | 2.455 | 6.027 |
| Pat | 9 | 2.455 | 6.027 |
| Royce | 9 | 2.455 | 6.027 |
| Luanne | 8 | 1.455 | 2.117 |
| Tom | 8 | 1.455 | 2.117 |
| Duane | 8 | 1.455 | 2.117 |
| Charles | 8 | 1.455 | 2.117 |
| Wayne | 8 | 1.455 | 2.117 |
| Mary | 8 | 1.455 | 2.117 |
| Susan | 8 | 1.455 | 2.117 |
| Steve |  | 1.455 | 2.117 |

Post-Test
Raw Score $\quad(\underline{Y}-M) \quad(Y-M)^{2}$

| 11 | 2.114 | 4.469 |
| ---: | ---: | ---: |
| 10 | 1.114 | 1.241 |
| 10 | 1.114 | 1.241 |
| 11 | 2.114 | 4.469 |
| 11 | 2.114 | 4.469 |
| 9 | .114 | .013 |
| 10 | 1.114 | 1.241 |
| 11 | 2.114 | 4.469 |
| 11 | 2.114 | 4.469 |
| 8 | .886 | .785 |
| 11 | 2.114 | 4.469 |
| 10 | 1.114 | 1.241 |

TABLE IX Continued
QUESTIONNAIRE TEST DATA.

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | (X-M) | $(\mathrm{X}-\mathrm{M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\underline{Y}-\mathrm{M})^{2}$ |
| Joyce | 8 | 1.455 | 2.117 | 11 | 2.114 | 4.469 |
| Sid | 7 | . 455 | . 207 | 9 | . 114 | . 013 |
| Frank | 7 | . 455 | . 207 | 11 | 2. 114 | 4.469 |
| Dick | 7 | . 455 | . 207 | 8 | . 886 | . 785 |
| Dixie | 7 | . 455 | . 207 | 10 | 1. 114 | 1.241 |
| Craig | 7 | . 455 | . 207 | 10 | 1.114 | 1.241 |
| Mary Anne | 7 | . 455 | . 207 | 7 | 1. 886 | 3.557 |
| Susanne | 7 | . 455 | . 207 | 9 | . 114 | . 013 |
| Barbara | 7 | . 455 | . 207 | 9 | . 114 | . 013 |
| David | 7 | . 455 | . 207 | 11 | 2. 114 | 4.469 |
| Louise | 6 | -. 545 | . 297 | 7 | 1.886 | 3.557 |
| Irene | 6 | -. 545 | . 297 | 9 | . 114 | . 013 |
| Louise S. | 6 | -. 545 | . 297 | 8 | . 886 | . 785 |

TABLE IX Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X-M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\underline{Y}-\mathrm{M})^{2}$ |
| Marcy | 6 | -. 545 | . 297 | 9 | . 114 | . 013 |
| Don | 6 | -. 545 | . 297 | 6 | 2.886 | 8.329 |
| Peggy | 6 | -. 545 | . 297 | 9 | . 114 | . 013 |
| Jeanette | 6 | -. 545 | . 297 | 8 | . 886 | . 785 |
| Kim | 6 | -. 545 | . 297 | 8 | . 886 | . 785 |
| Royce | 6 | -. 545 | . 297 | 10 | 1.114 | 1.241 |
| Betty | 5 | -1.545 | 2.387 | 6 | 2.886 | 8.329 |
| Clara | 5 | -1. 545 | 2.387 | 6 | 2.886 | 8.329 |
| Sharon | 5 | -1.545 | 2.387 | 10 | 1.114 | 1.241 |
| Steve | 5 | -1.545 | 2.387 | 10 | 1.114 | 1.241 |
| David | 5 | -1.545 | 2.387 | 7 | 1.886 | 3.557 |
| Stan | 5 | -1.545 | 2.387 | 7 | 1.886 | 3.557 |
| Janice | 5 | -1.545 | 2.387 | 8 | . 886 | . 785 |

TABLE IX Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\mathrm{X}-\mathrm{M})^{2}$ | Raw Score | (Y-M) | $\left(\underline{\mathrm{Y}-\mathrm{M})^{2}}\right.$ |
| Ted | 5 | -1.545 | 2.387 | 7 | 1.886 | 3.557 |
| Harlie | 5 | -1.545 | 2.387 | 10 | 1.114 | 1.241 |
| Mary | 5 | -1.545 | 2.387 | 7 | 1.886 | 3.557 |
| Benton | 5 | -1. 545 | 2.387 | 6 | 2.886 | 8.329 |
| Steve | 4 | -2.545 | 6.477 | 8 | . 886 | . 785 |
| Carolyn | 3 | -3.545 | 12.567 | 8 | . 886 | . 785 |
|  | 288 |  | 98.908 | 391 |  | 110.432 |
| Mean $1=288 / 44=6.545$ |  |  |  | Mean $_{2}=391 / 44=8.886$ |  |  |

TABLE X

## QUESTIONNAIRE TEST DATA

Pre-Test

| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\mathrm{X}-\mathrm{M})^{2}$ |
| :---: | :---: | :---: | :---: |
| DE TROIT HIGH SCHOOL |  |  |  |
| Frank | 10 | 2.500 | 6.250 |
| Janee | 9 | 1. 500 | 2.250 |
| Kaye | 9 | 1. 500 | 2.250 |
| Serena | 9 | 1.500 | 2.250 |
| Mike | 8 | . 500 | . 250 |
| Chiquita | 8 | . 500 | . 250 |
| Linda | 7 | -. 500 | . 250 |
| Jerilyn | 7 | -. 500 | . 250 |
| Helen | 7 | -. 500 | . 250 |
| Winifred | 6 | -1.500 | 2.250 |
| Maryanne | 5 | -2.500 | 6.250 |
| Stephen | 5 | -2.250 | 6.250 |
|  | 90 |  | 29.000 |

Post-Test
Raw Score $\quad(Y-M) \quad(Y-M)^{2}$

| 11 | 1.834 | 3.362 |
| ---: | ---: | ---: |
| 12 | 2.834 | 8.031 |
| 11 | 1.834 | 3.362 |
| 10 | .834 | .694 |
| 8 | -1.166 | 1.360 |
| 10 | .834 | .694 |
| 9 | -.166 | .028 |
| 9 | -.166 | .028 |
| 9 | -.166 | .028 |
| 8 | -1.166 | 1.360 |
| 8 | -1.166 | 1.360 |
| 5 | -4.166 | 17.360 |
| 110 | - | 37.667 |

Mean $_{1}=90 / 12=7.500$
Mean $_{2}=110 / 12=9.166$

TABLE XI
QUESTIONNAIRE TEST DATA

Pre-Test
Name of Student Raw Score (X-M) (X-M) ${ }^{2}$
EAGLE POIN T HIGH SCHOOL

| Helen | 11 | 5.268 | 27.752 | 12 | 3.750 | 14.063 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Ed | 11 | 5.268 | 27.752 | 11 | 2.750 | 7.563 |
| Gary | 10 | 4.268 | 18.216 | 10 | 1.750 | 3.063 |
| Marcia | 10 | 4.268 | 18.216 | 10 | 1.750 | 3.063 |
| Charles | 10 | 4.268 | 18.216 | 10 | 1.750 | 3.063 |
| Sandra | 9 | 3.268 | 10.680 | 11 | 2.750 | 7.563 |
| Bruce | 8 | 2.268 | 5.144 | 11 | 2.750 | 7.563 |
| Connie | 8 | 2.268 | 5.144 | 9 | .750 | .562 |
| Larry | 8 | 2.268 | 5.144 | 9 | .750 | .562 |
| Clara | 8 | 2.268 | 5.144 | 10 | 1.750 | 3.063 |
| Steve | 8 | 2.268 | 5.144 | 11 | 2.750 | 7.563 |

## TABLE XI Continued <br> QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | $\underline{\text { Raw Score }}$ | (X-M) | $(\underline{X-M})^{2}$ | Raw Score | ( $\mathrm{Y}-\mathrm{M}$ ) | $(\mathrm{Y}-\mathrm{M})^{2}$ |
| Maryette | 8 | 2.268 | 5.144 | 11 | 2.750 | 7.563 |
| Kathe | 8 | 2.268 | 5.144 | 9 | . 750 | . 562 |
| Case | 7 | 1.268 | 1.608 | 8 | -. 250 | . 062 |
| Joan | 7 | 1. 268 | 1.608 | 9 | . 750 | . 563 |
| Bill | 7 | 1.268 | 1.608 | 8 | - . 250 | . 062 |
| Linda | 7 | 1.268 | 1.608 | 8 | - . 250 | . 062 |
| Karyl | 7 | 1.268 | 1.608 | 10 | 1. 750 | 3.063 |
| Wilber | 7 | 1.268 | 1.608 | 10 | 1.750 | 3.063 |
| Kay | 7 | 1.268 | 1.608 | 8 | -. 250 | . 062 |
| Kathy | 7 | 1.268 | 1.608 | 8 | -. 250 | . 062 |
| Robert | 7 | 1.268 | 1.608 | 12 | 3. 750 | 14.063 |
| Christine | 7 | 1.268 | 1.608 | 7 | -1.250 | 1.563 |
| Linda | 7 | 1.268 | 1.608 | 8 | -. 250 | . 062 |
| Daniel | 6 | . 268 | . 072 | 9 | . 750 | . 563 |

TABLE XI Continued
QUESTIONNAIRE TEST DATA

| Name of Student | Pre-Test |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X-M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\mathrm{Y}-\mathrm{M})^{2}$ |
| Janet | 6 | . 268 | . 072 | 8 | - . 250 | . 062 |
| Jack | 6 | . 268 | . 072 | 9 | . 750 | . 563 |
| Dan | 6 | . 268 | . 072 | 7 | -1.250 | 1. 563 |
| Kathleen | 6 | . 268 | . 072 | 9 | . 750 | . 563 |
| Evelyn | 6 | . 268 | . 072 | 9 | . 750 | . 563 |
| Susan | 6 | . 268 | . 072 | 7 | -1.250 | 1.563 |
| Doug | 5 | - . 732 | . 536 | 8 | -. 250 | . 062 |
| Darrell | 5 | -. 732 | . 536 | 7 | -1.250 | 1. 563 |
| Wayne | 5 | -. 732 | . 536 | 5 | -3.250 | 10.563 |
| Shannon | 5 | -. 732 | . 536 | 8 | -. 250 | . 062 |
| Teresa | 5 | - . 732 | . 536 | 6 | -2.250 | 5.063 |
| Carl | 5 | -. 732 | . 536 | 7 | -1.250 | 1. 563 |
| Tom | 4 | -1.732 | 3.000 | 8 | -. 250 | . 062 |
| Martha | 4 | -1.732 | 3.000 | 8 | -. 250 | . 062 |

TABLE XI Continued
QUESTIONNAIRE TEST DATA.

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\mathrm{X}-\mathrm{M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\mathrm{Y}-\mathrm{M})^{2}$ |
| Susan | 4 | -1.732 | 3.000 | 5 | -3.250 | 10.563 |
| Donna | 4 | -1.732 | 3.000 | 10 | 1. 750 | 3.063 |
| Billy | 4 | -1.732 | 3.000 | 7 | -1. 250 | 1. 563 |
| Judy | 3 | -2.732 | 7.464 | 5 | -3.250 | 10.563 |
| Karole | 3 | -2.732 | 7.464 | 5 | -3.250 | 10.563 |
| Paul | 3 | -2.732 | 7.464 | 7 | -1.250 | 1.563 |
| Sam | 3 | -2.732 | 7.464 | 9 | . 750 | . 563 |
| John | 3 | -2.732 | 7.464 | 4 | -4.250 | 18.063 |
| Jim | 3 | -2.732 | 7.464 | 6 | -2.250 | 5.063 |
| Richard | 2 | -3.732 | 13.928 | 5 | -3.250 | 10.563 |
| Ken | 2 | -3.732 | 13.928 | 10 | 1.750 | 3.063 |
| Bob | 2 | -3.732 | 13.928 | 7 | -1.250 | 1.563 |
| Ray | 1 | -4.732 | 22.392 | 8 | -. 250 | . 062 |

## TABLE XI Continued <br> QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X-M})^{2}$ | Raw Score | ( $\mathrm{Y}-\mathrm{M}$ ) | $(\underline{Y-M})^{2}$ |
| Charles | 1 | -4.732 | 22.392 | 6 | -2.250 | 5.063 |
| Steve | 1 | $-4.732$ | 22.392 | 11 | 2. 750 | 7.563 |
| Linda | 0 | -5.732 | 32.856 | 3 | -5.250 | 27.563 |
|  | 321 |  | $3 \overline{84.992}$ | $4 \overline{62}$ |  | $2 \overline{30.515}$ |
| Mean ${ }_{1}=321 / 56=5.732$ |  |  |  | Mean $_{2}=462 / 56=8.250$ |  |  |

TABLE XII

## QUESTIONNAIRE TEST DATA

Pre-Test
Name of Student Raw Score $\quad \underline{(X-M) \quad(X-M)^{2}}$
EN TERPRISE HIGH SCHOOL

| Linda | 9 | 2.786 | 7.762 |
| :--- | :--- | :--- | :--- |
| Gilbert | 9 | 2.786 | 7.762 |
| Dennis | 9 | 2.786 | 7.762 |
| Ron | 8 | 1.786 | 3.190 |
| Howard | 8 | 1.786 | 3.190 |
| Roland | 8 | 1.786 | 3.190 |
| Judy | 8 | 1.786 | 3.190 |
| Nancy | 7 | .786 | .618 |
| Dexter | 7 | .786 | .618 |
| Gale | 7 | .786 | .618 |
| Bill | 7 | .786 | .618 |
| Barney | 7 | .786 | .618 |

Barney
2.786
7.762
. 762
. 762
.190
. 190
3.190
3.190
.618
.618
618

618

Post-Test

## Raw Score (Y-M) $(\underline{Y-M})^{2}$

| 12 | 3.822 | 14.608 |
| ---: | ---: | ---: |
| 9 | .822 | .676 |
| 10 | 1.822 | 3.320 |
| 9 | .822 | .676 |
| 9 | -.822 | .676 |
| 11 | 1.822 | 3.320 |
| 8 | -.178 | .032 |
| 10 | .822 | .676 |
| 8 | -.178 | .032 |
| 9 | .032 |  |
| 8 | .822 | .676 |

TABLE XII Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{X}-\mathrm{M})^{2}$ | $\underline{\text { Raw Score }}$ | ( $\mathrm{Y}-\mathrm{M}$ ) | $\left(\underline{Y-M)}{ }^{2}\right.$ |
| Richard | 7 | . 786 | . 618 | 8 | - . 178 | . 032 |
| Valerie | 7 | . 786 | . 618 | 10 | 1.822 | 3.320 |
| Diane | 6 | - . 214 | . 046 | 7 | -1.178 | 1. 388 |
| Jay | 6 | -. 214 | . 046 | 8 | -. 178 | . 032 |
| Jeff | 6 | -. 214 | . 046 | 9 | . 822 | . 676 |
| Dennis V. | 6 | -. 214 | . 046 | 9 | . 822 | . 676 |
| Chuck | 6 | -. 214 | . 046 | 8 | -. 178 | . 032 |
| Lois | 6 | -. 214 | . 046 | 8 | -. 178 | . 032 |
| Fred | 5 | -1.214 | 1.474 | 6 | -2.178 | 4. 744 |
| Nancy Ann | 5 | -1.214 | 1.474 | 8 | -. 178 | . 032 |
| Don | 5 | -1.214 | 1.474 | 9 | . 822 | . 676 |
| Gary | 4 | -2.214 | 4.902 | 6 | -2.178 | 4. 744 |
| Doug | 4 | -2.214 | 4.902 | 6 | -2.178 | 4. 744 |

TABLE XII Continued QUESTIONNATRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\mathrm{X}-\mathrm{M})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\underline{Y}-\mathrm{M})^{2}$ |
| Frank | 3 | -3.214 | 10.330 | 5 | -3.178 | 10.100 |
| Janice | 3 | -3.214 | 10.330 | 4 | -4.178 | 17.456 |
| Terry | 1 | -5.214 | 27.186 | 6 | -2.178 | 4.744 |
|  | 174 |  | 102.720 | 229 |  | 86.626 |
| Mean $_{1}=174 / 28=6.214$ |  |  |  | Mean $2=229 / 28=8.178$ |  |  |

TABLE XIII
QUESTIONNAIRE TEST DATA


TABLE XIV
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $\underline{(X-M)}^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\underline{Y-M})^{2}$ |
| PILOT ROCK HIGH SCHOOL |  |  |  |  |  |  |
| Meridith | 10 | 3.459 | 11.965 | 12 | 3.042 | 9.254 |
| Don | 10 | 3.459 | 11.965 | 12 | 3.042 | 9.254 |
| Wynette | 9 | 2.459 | 6.047 | 10 | 1.042 | 1.086 |
| Charles | 9 | 2.459 | 6.047 | 11 | 2.042 | 4.170 |
| Lynn | 9 | 2.459 | 6.047 | 10 | 1.042 | 1.086 |
| Carol | 8 | 1.459 | 2.129 | 10 | 1.042 | 1.086 |
| Linda | 8 | 1.459 | 2.129 | 9 | . 042 | . 002 |
| Gary | 8 | 1.459 | 2.129 | 10 | 1. 042 | 1.086 |
| Arleta | 8 | 1.459 | 2.129 | 8 | -. 958 | . 918 |
| Lydia | 7 | . 459 | . 211 | 9 | . 042 | . 002 |
| Frederick | 7 | . 459 | . 211 | 8 | -. 958 | . 918 |
| Nancy | 7 | . 459 | . 211 | 8 | -. 958 | . 918 |

TABLE XIV Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | (X-M) | $\left(\underline{X-M)}{ }^{2}\right.$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $\left(\underline{\mathrm{Y}-\mathrm{M})^{2}}\right.$ |
| Beverly | 6 | -. 541 | . 293 | 10 | 1.042 | 1.086 |
| Gary | 6 | - . 541 | . 293 | 8 | - . 958 | . 918 |
| Janet | 6 | - . 541 | . 293 | 9 | . 042 | . 002 |
| Albert | 5 | -1.541 | 2.375 | 6 | -2.958 | 8. 750 |
| Sandra | 5 | -1. 541 | 2.375 | 7 | -1.958 | 3.834 |
| David | 5 | -1. 541 | 2.375 | 7 | -1.958 | 3.834 |
| Joe | 5 | -1.541 | 2.375 | 8 | - . 958 | . 918 |
| Norman | 5 | -1.541 | 2.375 | 8 | -. 958 | . 918 |
| Margaret | 5 | -1.541 | 2.375 | 8 | -. 958 | . 918 |
| Saundra | 3 | -3.541 | 12.539 | 9 | . 042 | . 002 |
| Catherine | 3 | -3.541 | 12.539 | 8 | -. 958 | . 918 |
| William | 3 | -3.541 | 12.539 | 10 | 1.042 | 1.086 |
|  | 157 |  | 103.966 | 215 |  | 52.964 |

TABLE XV
QUESTIONNAIRE TEST DATA

Pre-Test

| Name of Student | $\underline{\text { Raw Score }}$ | ( $\mathrm{X}-\mathrm{M}$ ) | $\left(\underline{(X-M)}{ }^{2}\right.$ |
| :---: | :---: | :---: | :---: |
| ROGUE RIVER HIGH SCHOOL |  |  |  |
| Ray | 8 | 2.375 | 5.641 |
| David | 8 | 2.375 | 5.641 |
| Terry | 8 | 2.375 | 5.641 |
| Cynthia | 8 | 2.375 | 5.641 |
| Martha | 7 | 1.375 | 1.891 |
| Judy | 7 | 1.375 | 1.891 |
| Bob | 7 | 1.375 | 1.891 |
| Mareith | 7 | 1.375 | 1.891 |
| Delbert | 7 | 1.375 | 1.891 |
| W anda | 7 | 1.375 | 1.891 |
| Peggy | 6 | . 375 | . 141 |
| Carmen | 6 | . 375 | . 141 |

Post-Test
Raw Score $\quad(Y-M) \quad(Y-M)^{2}$

| 10 | 2.042 | 4.170 |
| ---: | ---: | ---: |
| 9 | 1.042 | 1.086 |
| 8 | .042 | .002 |
| 11 | 3.042 | 9.254 |
| 10 | 2.042 | 4.170 |
| 9 | 1.042 | 1.086 |
| 8 | .042 | .002 |
| 8 | .042 | .002 |
| 7 | .958 | .918 |
| 8 | .042 | .002 |
| 9 | 1.042 | 1.086 |
| 9 | 1.042 | 1.086 |

## TABLE XV Continued <br> QUESTIONNATRE TEST DA.TA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\mathrm{X}-\mathrm{M})^{2}$ | Raw Score | $(\underline{Y}-\mathrm{M})$ | $(\mathrm{Y}-\mathrm{M})^{2}$ |
| Yvonne | 6 | . 375 | . 141 | 8 | . 042 | . 002 |
| Marilyn | 5 | -. 625 | . 391 | 7 | . 958 | . 918 |
| Dan | 5 | -. 625 | . 391 | 5 | 2.958 | 8.750 |
| Jayne | 5 | -. 625 | . 391 | 10 | 2.042 | 4.170 |
| Gus | 5 | -. 625 | . 391 | 6 | 1.958 | 4.170 |
| Elwig | 5 | -. 625 | . 391 | 8 | . 042 | . 002 |
| Linda | 4 | -1.625 | 2.625 | 9 | 1.042 | 1.086 |
| Marge | 3 | -2.625 | 6.891 | 8 | . 042 | . 002 |
| Bruce | 3 | -2.625 | 6.891 | 6 | 1.958 | 3.834 |
| Albert | 3 | -2.625 | 6.891 | 3 | 3.958 | 15.666 |
| Arden | 3 | $-2.625$ | 6.891 | 9 | 1.042 | 1.086 |
| Wayne | 2 | -3.625 | 13.141 | 6 | 1.958 | 3.834 |
|  | $1 \overline{35}$ |  | $\overline{79.634}$ | $1 \overline{91}$ |  | $6 \overline{6.048}$ |
| Mean $_{1}=135 / 24=5.625$ |  |  |  | Mean $_{2}=191 / 24=7.958$ |  |  |

TABLE XVI

## QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | (X-M) | $\left(\underline{\mathrm{X}-\mathrm{M})^{2}}\right.$ | $\underline{\text { Raw Score }}$ | $(\underline{Y}-\mathrm{M})$ | $\left(\underline{\mathrm{Y}-\mathrm{M})^{2}}\right.$ |
| SHERMAN HIGH SCHOOL |  |  |  |  |  |  |
| Ginger | 11 | 3.538 | 12.521 | 12 | 2.718 | 7.388 |
| Barbara | 11 | 3.538 | 12.521 | 12 | 2.718 | 7.388 |
| Bob | 10 | 2.538 | 6.441 | 10 | . 718 | . 516 |
| Katherine | 10 | 2.538 | 6.441 | 11 | 1.718 | 2.952 |
| Jacque | 10 | 2.538 | 6.441 | 11 | 1.718 | 2.952 |
| Karen | 10 | 2.538 | 6.441 | 12 | 2.718 | 7.388 |
| Doug | 10 | 2.538 | 6.441 | 10 | . 718 | . 516 |
| Carol | 9 | 1.538 | 2.365 | 10 | . 718 | . 516 |
| Karen M. | 9 | 1.538 | 2.365 | 12 | 2.718 | 7.388 |
| Tim | 9 | 1.538 | 2.365 | 11 | 1.718 | 2.952 |
| Doug | 9 | 1.538 | 2.365 | 12 | 2.718 | 7.388 |
| Cheryl | 9 | 1.538 | 2.365 | 10 | . 718 | . 516 |

TABLE XVI Continued
QUESTIONNAIRE TEST DATA
Pre-Test
Post-Test

| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $(\underline{\mathrm{X}-\mathrm{M}})^{2}$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $(\underline{Y-M)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jane | 9 | 1.538 | 2.365 | 11 | 1.718 | 2.952 |
| Mary Ann | 9 | 1.538 | 2.365 | 9 | -. 282 | . 080 |
| Kenneth | 9 | 1. 538 | 2.365 | 10 | . 718 | . 516 |
| Nancy | 8 | . 538 | . 289 | 10 | . 718 | . 516 |
| Janie | 8 | . 538 | . 289 | 10 | . 718 | . 516 |
| John | 8 | . 538 | . 289 | 12 | 2.718 | 7. 388 |
| Terry | 8 | . 538 | . 289 | 10 | . 718 | . 516 |
| Noel | 8 | . 538 | . 289 | 8 | -1.282 | 1.644 |
| Connie | 8 | . 538 | . 289 | 9 | -. 282 | . 080 |
| Virgil | 7 | -. 462 | . 213 | 8 | -1.282 | 1.644 |
| Bill | 7 | -. 462 | . 213 | 11 | 1.718 | 2.952 |
| Bill S. | 7 | -. 462 | . 213 | 11 | 1.718 | 2. 952 |
| Alice | 7 | -. 462 | . 213 | 8 | -1.282 | 1.644 |

TABLE XVI Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | ( $\mathrm{X}-\mathrm{M}$ ) | $\left(\underline{X-M)}{ }^{2}\right.$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $\left(\underline{Y-M)}{ }^{2}\right.$ |
| Rosalee | 6 | -1.462 | 2.137 | 8 | -1. 282 | 1.644 |
| Mona | 6 | -1.462 | 2. 137 | 9 | - . 282 | . 080 |
| Karen | 6 | -1.462 | 2.137 | 7 | -2.282 | 5.208 |
| Nancy | 6 | -1.462 | 2.137 | 9 | -. 282 | . 080 |
| Virginia | 6 | -1.462 | 2.137 | 9 | - . 282 | . 080 |
| Gary | 6 | -1.462 | 2.137 | 7 | -2.282 | 5.208 |
| Patty | 6 | -1.462 | 2.137 | 9 | - . 282 | . 080 |
| Tim | 6 | -1.462 | 2.137 | 8 | -1.282 | 1.644 |
| Sharon | 6 | -1.462 | 2.137 | 6 | -3.282 | 10.772 |
| Kay | 5 | -2.462 | 6.061 | 6 | -3.282 | 10.772 |
| William | 4 | -3.462 | 11.985 | 7 | -2.282 | 5.208 |
| Kay M. | 4 | -3.462 | 11.985 | 9 | -. 282 | . 080 |
| Linda | 3 | -4.462 | 19.909 | 5 | -4.282 | 18.336 |

TABLE XVI Continued
QUESTIONNAIRE TEST DATA

| Pre-Test |  |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw | (X-M) | $\left(\underline{(X-M)}{ }^{2}\right.$ | Raw Score | $(\mathrm{Y}-\mathrm{M})$ | $\underline{(Y-M)}^{2}$ |
| Claude | 2 | -5.462 | 29.833 | 3 | $-6.282$ | 39.464 |
|  | 291 |  | 177.759 | 386 |  | 169.886 |
| Mean $_{1}=291 / 39=7.462$ |  |  |  | Mean $_{2}=386 / 39=9.282$ |  |  |

TABLE XVII
QUESTIONNAIRE TEST DATA

|  | re-Test |  |  | Post-Test |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of Student | Raw Score | (X-M) | $(\underline{X-M})^{2}$ | Raw Score | $(\underline{Y-M})$ | $\left(\underline{Y-M)}{ }^{2}\right.$ |
| WALLOWA HIGH SCHOOL |  |  |  |  |  |  |
| Mrs. Dixon | 9 | 2.800 | 7.840 | 10 | 2.300 | 5.290 |
| Dale | 8 | 1.800 | 3.240 | 8 | . 300 | . 090 |
| Lynda | 8 | 1.800 | 3.240 | 8 | . 300 | . 090 |
| Raymond | 7 | . 800 | . 640 | 10 | 2.300 | 5.290 |
| Carolyn | 6 | . 200 | . 040 | 7 | . 700 | . 490 |
| Barbara | 5 | 1.200 | 1.440 | 6 | 1. 700 | 2.890 |
| Elsie | 5 | 1.200 | 1.440 | 7 | . 700 | . 490 |
| Fred | 5 | 1.200 | 1.440 | 7 | . 700 | . 490 |
| Minnie | 5 | 1.200 | 1.440 | 8 | . 300 | . 090 |
| Connie | 4 | 2.200 | 4.840 | 6 | 1. 700 | 2.890 |
|  | 62 |  | 25.600 | 77 |  | 18.100 |

THE MASTER TAPE
THE PRIVATE INDEPENDENT COLLEGE

The treasure you seek in the way of an education may lie in an independent college or university. You will find them in picturesque country settings or fighting for sun and air among tall city buildings. Many of them were founded by religious denominations and in times gone by you were eligible to go to one of them if you were of its particular persuasion. This certainly is not true today. With few exceptions students of other faiths are welcome, and faculty too. The religious experiences on some campuses will be direct and ever present while on others the religious emphases will be more philosophical and academic. They offer the Bachelor of Arts degree and Bachelor of Arts in Science degree. In some you can even earn degrees in music, science, and in other fields of interest, a few offer graduate degrees. What are the se schools like?

## (Student Life)

For the most part the private college is small both in physical plant and in enrollment. You will be one of a student body of anywhere from 200 to 2,000. You will not be lost in the crowd here, and you as an individual will count for a good deal. You have to or you will let your college down. What you contribute to the college in the way of scholarship, leadership, character, by putting in your
best licks in the glee club, on the athletic field, in the student council, what you are and what you do will make a big difference when there are fewer of you. The small student body means that eventually you will have a friendly acquaintance with a number of students. Even if you fancy yourself as the lone eagle type, that you have hermit blood in your veins and can't mix well, you will have a hard time staying in seclusion on the small college campus. A dormitory will be your home, and you will have a roommate or two- the best antidote in the world for misery and homesickness or loneliness. Good soil also to grow a sense of humor, if you haven't one now. You will get to know your faculty too, and your profs will call you by name. You will meet them at informal parties, dances, and games, and discover they really are human, they are even fun! Because classes will be small - from five to 25 students you will be able to get individual help from your professors and be dble to enter into discussions. You won't be able to get in a few extra winks. As in other institutions of higher learning, the private college feels that you, the freshman student, should receive the best in instruction from the very first day. Because of the relatively small number of faculty, all are involved with teaching freshman through to senior classes. To augment class work some private schools offer practical work in the state legislature, in industry, or in state hospitals. We try to give you the best in the way of teachers. Teachers who want to stimulate their students to respect
the importance of the subject and to work hard at it because of genuine interest.

You want to be a Greek letter man or woman? These are available too as well as many other groups and clubs. Supervised sure, but this brings out the best in them:

1. To encourage beneficial extracurricula activities.
2. To provide supervision of studies and behavior.
3. To give experience in cooperative living.

And discourage the snobbishness, time wasting, and anti-intellectual attitudes. How a student spends his liesure hours is one of the surest signs of the quality of a college. Social life, athletics, and other extra-curricula activities are good when they are shared by all of the students in a sensible way.

## (Progressive too)

The private colleges and universities are progressive. They are not content with the way things were many years ago. No college worth its salt is content to go on doing things in the same old way. Being small, it is likely that the private college will have the flexibility to try new things. This may take the form of such programs as: (1) studying abroad, (2) a series of distinguished lecturers, (3) a new arrangement in group living, or (4) an original approach to a method of instruction.
(Accreditation)
Just as you and I must meet certain standards in our work, so must the colleges meet certain prescribed standards in theirs. Every institution of higher learning has to meet certain preestablished standards before it can receive a state charter and grant degrees that are recognized by other educational bodies. The colleges and universities that make up the Northwest conference are all accredited by the Northwest Accrediting Association. Not only does this give prestige to the schools, but, more important, it offers protection to you. It means being able to transfer credits from one school to another, to be able to be admitted to graduate study, and finally, to be able to practice your profession once you have earned your degree.

## (Meeting the Cost)

There are four important factors in obtaining a college education, (1) ability, (2) will, (3) purpose, and (4) means. If ability is evident, the purpose is clear, and the will strong, the student will probably discover the necessary ways and means. There is no question about it, some of our Northwest colleges and universities are expensive in comparison with the state schools of higher education. Tuition, room, and board will cost in the neighborhood of a minimum of $\$ 1500.00$ and in some institutions may exceed $\$ 2000.00$. Certainly if one wants something badly enough he is sure to find a way to obtain it. The private colleges of which

I speak all have some sort of financial program available for those who need help. This help, in the majority of cases, will be threefold: (1) scholarships, (2) loans, and (3) job opportunities. When you ask for financial assistance we will respond by providing a small scholarship, a job opportunity somewhere on the campus, and a lowinterest loan either from the church or the Federal Government. In our selection of recipients of scholarships, "need" is the key word because not all deserving students have access to adequate means and often fail to realize their educational goals for lack of funds.

## (Entrance Standards)

The barrier for many young men and women who desire to obtain their education at a private college is the high standards of selection imposed by a number of the Northwest colleges. Careful selection by means of the highest class standing, high performance on the College Entrance Examination Achievement and Scholastic Aptitude Tests, strong personal recommendations, and rigid screening by interviews guarantees that the students have the preparation, and the motivation to do the work at the highest undergraduate level. Sometimes a student will be admitted because of talents in leadership, musical ability, or outstanding character. In other words, entrance requirements need not be completely scholastic. For those for whom normal competition is no challenge a few of the colleges have honors programs where the exceptional boy or girl can delve deeply into his or her field of interest.

The philosophy of these schools is that your philosophy of life, your technical training, your understanding of human nature, your world view, your respect of values, and probably your life companion will be determined while you are on the college campus.

## GENERAL INFORMATION QUESTIONNAIRE

## PRIVATE COLLEGES AND UNIVERSITIES

|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | The following group of questions is designed to test your knowledge |  |  |
|  | of private colleges and universities. PLEASE CIRCLE THE ONE |  |  |
|  |  |  |  |

1. What is a private college?
a. A college operated and supported by the church
b. A college operated by the state but not supported by private funds
c. A college under private control supported by the State, the Federal Government, and private funds
d. A college under private control supported by other than public funds
2. What control does the church have over the private college?
a. All private colleges are related to some degree to the church but the church does not control them
b. All private colleges were related to some degree to the church but the amount of control varies from none to complete
c. Some private colleges are no longer related to the church
d. None of the above
3. What students can go to the private colleges?
a. Only those students from the upper social classes
b. Only those students of a particular religious denomination
c. All students who are academically in the highest class standings
d. All students of good character and a sound academic background
4. Is religion forced on all students?
a. Yes, but the students are all of the same religion
b. Yes, but the students expect this when they go to a private college
c. No, some of the colleges have required courses in religion but this is all
d. No, but some colleges do vary in the amount of religious activities required of their students
5. What entrance requirements are common to most of the Northwest private colleges?
a. The high school transcript, personal references, and physical
b. The high school transcript, personal references, and scores on the CEEB test series (the achievement and aptitude tests)
c. The high school transcript, and church references
d. Your score on the College Entrance Examination Board series, and personal references
6. What courses of study is one likely to find on the private college campus?
a. Liberal arts courses only
b. Professional courses of study
c. Graduate courses such as in music and law
d. All of the above
7. What is the social life on a private campus like?
a. Very rigid and narrow
b. Closely knit and one that encourages participation from all
c. Closely knit and one that is centered exclusively around the church
d. None of the above
8. What is the most prevalent attitude held by the private colleges towards fraternities and sororities?
a. They will prevent student development
b. They are good and all students should participate in one
c. They are good when they contribute to the maturity and academic development of the student
d. They are good when they contribute to the student's development in the social graces of our culture
9. What type of athletic program is one likely to find?
a. No athletic program
b. A very limited athletic program
c. A program including all of the major and minor sports
d. All of the above
10. What do the private colleges mean by "financial aid"?
a. A scholarship providing for all or part of the student's college education
b. A church or federal loan to cover all of the student's expenses
c. Job opportunities on the campus
d. All of the above
11. What will the approximate cost be for a student to attend a private college for a full school year?
a. Between $\$ 500$ and $\$ 700$
b. Between $\$ 700$ and $\$ 900$
c. Between \$900 and \$1200
d. Between $\$ 1200$ and $\$ 2200$
12. What attitude toward the student can one expect to find on the private college campus?
a. The college should be solely devoted to its academic teaching
b. Helping the student mature socially and academically is of prime importance
c. The student's social preparation is of greater importance than his academic preparation
d. The student is only important when he can be a part of a research program

## The Itemized Account of the Audio-Visual Program Proposed in the Study

1. The cost to produce the audio-tape by a professional speaker would cost in the neighborhood of $\$ 25.00$.
2. The preparation of 131 duplicates of the master tape on three inch reels would vary in accordance with the quality of the magnetic tape used. The following prices were quoted by the Radio and Television Department of the Meier and Frank Store, Salem, Oregon.
a. \$0.70 for one and a half mil ( 150 feet) plastic magnetic tape manufactured by Scotch Brand
b. $\$ 1.00$ for one mil ( 200 feet) polyester magnetic tape manufactured by Scotch Brand
c. $\$ 1.60$ for one half mil ( 300 feet) polyester magnetic tape manufactured by Scotch Brand

Because the audio portion of the presentation requires only eight minutes the $\$ 1.00$ value magnetic tape would suffice. One hundred and thirty-one would cost \$131.00.
3. The usual price for slide duplication is $\$ 0.25$ for each slide if eight or more slides are duplicated. The expense to provide the 15 slides for the 131 packets would be $\$ 691.25$.

## OREGON STATE UNIVERSITY

NAME AND ADDRESS OF PRINCIPAL (see list)

Dear (Name of principal):
Any of your seniors planning to go on to college are undoubtedly interested in the opportunities in private colleges and universities in Oregon. A study is now underway here at Oregon State University to determine whether an audio-visual presentation that can be operated by a member of the high school staff is feasible for acquainting high school seniors with the opportunities available at Oregon's private colleges.

For this study one high school the size of yours will be selected in each county to try the slide-tape combination this year. If it proves adaptable to your uses copies will be furnished to you for use in later years. There is no cost and the time required is one class period.

Would you like to have your high school represent County? If so please fill in the information requested below and return this letter in the enclosed self-addressed envelope.

Cordially,

Hollis W. Plimpton Jr.

1. How many of your 1962 class went on to college?
a. to the State colleges and universities?
b. to the private colleges and universities?
2. How many of your seniors are considering college?
a. are considering the state colleges and universities?
b. are considering private colleges and universities?

OREGON STATE SYSTEM OF HIGHER EDUCATION COMMITTEE ON HIGH SCHOOL-COLLEGE RELATIONS
P.O. BOX 5175

EUGENE, OREGON
February 8, 1963

Mr. Hollis Plimpton
639 Boice St.
Salem, Oregon
Dear Mr. Plimpton:
As requested in your call on February 7, we are sending you a list of the " B " and " C " high schools in Oregon.

Our classification of a "C" high school is one which has up to 35 seniors; a "B" school is one which has from 35 to 75 seniors.
"B" Schools:

| Banks | McKenzie River | Sheridan |
| :--- | :--- | :--- |
| Central Linn | Neah-Kah-Nie | Sherman |
| Clatskanie | Nestucca | Sherwood |
| Creswell | North Marion | Siuslaw |
| Douglas | OakRidge | Stayton |
| Drain | Pacific | Sutherlin |
| Enterprise | Phoenix | Taft |
| Gervais | Pilot Rock | Thurston |
| Glide | Pleasant Hill | Toledo |
| Gold Beach | Rainier Union | Vale |
| Grant Union | Reedsport | Waldport |
| Heppner | Riddle | Warrenton |
| Hood River | Rogue River | Willamina |
| Illinois Valley | Santiam | Woodburn |
| Knappa | Scio | Yamhill-Carlton |

"C" Schools:

Adrian
Alsea
Amity
Arlington
Bly
Bonanza

McKenzie River
Neah-Kah-Nie
Nestucca
North Marion
Oak Ridge
Pacific
Pilot Rock
Pleasant Hill
Rainier Union
Reedsport
Riddle
Santiam
Scio

Butte Falls
Camas Valley
Canyonville
Cascade Locks
Chiloquin
Coberg

Colton
Condon
Corbett
Cove
Crane
Crow-Applegate

| Culver | Imbler | Powers |
| :--- | :--- | :--- |
| Days Creek | Ione | Prairie City |
| Dayton | Jefferson | Prospect |
| Dayville | Jewell | Riverside |
| Detroit | Jordan Valley | Siletz |
| Dufur | Joseph | Sisters |
| Eagle Point | Long Creek | Spray |
| Eagle Valley | Lostine | Stanfield |
| Echo | Lowell | St. Paul |
| Eddyville | Malin | Triangle Lake |
| Elgin | Mapleton | Ukiah |
| Elkton | McEwen | Umapine |
| Elmira | Merrill | Umatilla |
| Falls City | Mitchell | Union |
| Flora | Mohawk | Valsetz |
| Gaston | Monroe | Vernonia |
| Gilchrist | Monument | Wallowa |
| Glendale | Mosier | Wasco |
| Griswold | Mt. Vernon | Westfir |
| Harper | Oakland | Weston |
| Hereford | Paisley | Wheeler |
| Harisburg | Pine Valley | Yoncalla |
| Huntington | Powder Valley |  |

If we can help you further in your study, let us know.

Sincerely,

J. Richard Pizzo<br>Executive Secretary

CLASS "B" AND "C" OREGON PUBLIC SECONDARY SCHOOLS

CLASS COUNTY HIGH SCHOOL CLASS COUNTY HIGH SCHOOL

BAKER
C
C
C
C
Eagle Valley
Hereford Unity
Huntington
Pine Valley
BENTON
C

C

C

C
B
B

B

B

C

C

Alsea
Monroe
CLACKAMAS
Colton
CLATSOP
Jewell
Knappa
Warrenton
COLUMBIA
B
Clatskanie
Ranier Union
Vernonia
COOS
Powers
CROOK

B
B
CURRY
Gold Beach
Pacific
DESCHUTES
Sisters
DOUGLAS
Camas Valley
Canyonville
Days Creek
Douglas
Drain
Elkton
Glendale
Glide
Oakland
Reedsport Union
High
Riddle
Sutherlin
Yoncalla
GILLIAM
Arlington
Condon

| CLASS | COUNTY HIGH SCHOOL | CLASS | COUNTY HIGH SCHOOL |
| :---: | :---: | :---: | :---: |
| GRANT |  |  | LANE |
| C | Dayville | C | Coburg |
| C | Grant Union | B | Creswell |
| C | Long Creek | C | Crow-Applegate |
| C | Monument | C | Elmira |
| C | Mt. Vernon | C | Lowell |
| C | Prairie City | C | Mapleton |
| HARNEY |  | B | McKenzie River |
| C | Crane | C | Mohawk |
|  | HOOD RIVER | B | Oak Ridge |
| C | Cascade Locks | B | Pleasant Hill |
| C | Hood River | B | Siuslaw |
| JACKSON |  | B | Thurston |
| C | Butte Falls | C | Triangle Lake |
| C | Eagle Point | C | Westfir |
| B | Phoenix | LINCOLN |  |
| C | Prospect | C | Eddyville |
| B | Rogue River | C | Siletz |
| C | Culver | B | Taft |
|  | JOSEPHINE | B | Toledo |
| B | Illinois Valley | B | Waldport |
| KLAMATH |  | LINN |  |
| C | Bly | B | Central Linn |
| C | Bonanza | C | Harrisburg Union |
| C | Chiloquin | B | Santiam |
| C | Gilchrist | B | Scio |
| C | Malin |  | MALHEUR |
| C | Merrill | C | Adrian |
| LAKE |  |  |  |
| C | Paisley |  |  |

CLASS COUNTY HIGH SCHOOL CLASS COUNTY HIGH SCHOOL

C

C

B

MARION
C
B
C
B
C
B
B
Jordon Valley B Union

Vale Union

Woodburn
MORROW
Detroit
C
Gervais Union
C
Jefferson
North Marion
B
St. Paul
C
Stayton Union
C
C
C
C
Heppner
Ione
Riverside
MULTNOMAH
C

C

POLK
C
C
SHERMAN
B

Corbett
C

B

Moro Sherman
C County

C

Falls City
Valsetz
C C

TILLAMOOK
Cloverdale Nestucca Union

Neah-Kah-Nie
UMATILLA
McEwen
Echo
Griswold
Pilot Rock
Stanfield
Ukiah
Umapine
Umatilla
Weston
UNION
Cove
Elgin
Imbler
Powder Valley
Union
WALLOWA
Enterprise
Joseph
Lostine
Wallowa

CLASS COUNTY HIGH SCHOOL CLASS COUNTY HIGH SCHOOL WASCO

C

C
Dufur
C

B

WASHINGTON

B
Banks
B
Gaston Union
B
Sherwood Union
WHEELER
C
Fossil Wheeler County

C
Mitchell

YAMHILL
Amity Union
Dayton
Sheridan
Spray
Willamina Union
Yamhill-Carlton Union


[^0]:    * These percentages were tabulated from the students going to college and not from the total senior class.

