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A Measurement of Biblical Knowledge in Pacific Northwest EUB Senior High Sunday School Classes

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A MEASUREMENT OF BIBLICAL KNOWLEDGE IN PACIFIC NORTHWEST
EUB SENIOR HIGH SUNDAY SCHOOL CLASSES

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CHAPTER ONE

INTRODUCTION

I. STATEMENT OF THE PROBLEM

The purpose of the following study was to determine (1) the extent of Bible knowledge found among high school students in the senior high Sunday School classes of the Evangelical United Brethren churches in the Pacific Northwest conference, and (2) to examine the correlation of such Bible knowledge to certain aspects of the Christian life.

II. JUSTIFICATION FOR THE STUDY

At least two personal factors provided the impetus for the following study. The first was an article in Fresbyterian Life, entitled, "How Well Do You Know the Bible?"¹ The article recorded the experience of a Presbyterian pastor who gave his congregation a Bible test consisting of thirty-three questions. His personal conclusion was as follows:

Study of Scripture is absolutely basic because the uninformed faith is not worth having. It is basic because without it there is an insufficient motive for sharing and serving... It is therefore disquieting, if not alarming, to find a typical Presbyterian congregation having so much trouble with a few basic questions about the Bible.²

¹Locke E. Bowman, Jr., "How Well Do You Know the Bible," Fresbyterian Life, September 15, 1964, pp. 20-21.

²Ibid., p. 20.

The second personal incident came in connection with the author's first pastorate. A short Bible test of ten questions was given to the high school Sunday School class. As the Presbyterian pastor stated, the results were "disquieting, if not alarming."¹

Out of these two incidents came the logical question, Is this great lack of acquaintance with God's Word the normal situation throughout the churches in the Pacific Northwest Conference of the Evangelical United Brethren Church?

There is also a very practical justification for a study of Biblical knowledge. In an evangelical church, the Scriptures are proclaimed as the final authority in all matters of faith and practice. Before a person is saved, he must have some contact with God's Word. Jesus Christ came to this earth to reveal unto mankind the Heavenly Father. The Bible records what Jesus said and did as well as things said about him, before he came and after he left. The Bible, then, is the written account of God's revelation. Before young people, the Bible is upheld as a guide for living. Therefore, it is very apparent that knowledge about this "authority," "written revelation," and "guide" is absolutely necessary.

III. LIMITATIONS OF THE STUDY

Every measuring device must have certain limitations in terms

¹Ibid.

of geographical area, age limit, and other similar variables. The following study was limited to senior high pupils in the Sunday Schools of churches in the Pacific Northwest Conference of the Evangelical United Brethren Church. It was also limited to certain questions which will be explained in chapter two.

The most important limitation was in the area of intention. It was not the purpose of this study to measure application of Biblical knowledge. Only through more personal contact and individual study would it be possible to determine how a student used in his daily life what he had been taught in the Sunday School class or church service. The following study was limited to measuring Bible knowledge and the relation of that knowledge to certain variables.

IV. OVERVIEW OF THE STUDY

Before turning to the body of the study, a brief overview will be helpful. Following the introductory chapter, the second chapter dealt with the method of procedure. The practical aspects of the thesis were recorded, i.e., the construction of the test, the selection of the variables, and the procuring and recording of the test results.

The results of the study were built into chapter three. First, the basic statistical results were recorded, both on each individual question of the Bible test and upon the test as a whole. Also in this chapter were the study of correlation and a comparison with secular students.

The fourth and final chapter recorded the summary and conclusions.

CHAPTER TWO

METHOD OF PROCEDURE

The nature of a study of Bible knowledge warranted an entire chapter concerning the method of procedure. Because the facts and figures contained in such a study are primary material, it is important to know how such knowledge was obtained. Three areas will be covered: (1) construction of the test, (2) selection of variables, and (3) procuring and recording the test results.

1. CONSTRUCTION OF THE TEST

There were numerous problems connected with constructing the test. How long should it be? How many questions should it contain? How difficult should the questions be? What parts of the Bible should be covered?

The final form of the test, a copy of which is included in Appendix A, contained ten questions. The main reason the test was not any longer was the amount of time required to give the test. The length of time to be spent in correcting and tabulating was also taken into consideration. The ten questions contained a total of twenty possible answers. Giving the student five points for each correct answer made the highest possible score an even one hundred.

A valid test is one in which there is at least one question which is easy for most of the students, at least one question which

is difficult for most of the students, and a number of questions which fall somewhere in between. Since there was no reference material as to the extent of Bible knowledge among high school students of the Pacific Northwest Conference, decisions concerning the difficultness of questions were made by the author. The first question dealing with the two divisions of the Bible was thought to be easy enough for almost everyone to answer correctly. This proved to be true. Question number ten was designed to be difficult for most everyone and this also proved to be true. The remainder of the test attempted to evaluate Bible knowledge somewhere between easy and difficult.

To cover the entire Bible in ten questions is obviously an impossibility. However, by taking a question from most of the major sections of the Bible, the whole of Scripture, in a sense, was covered. The first question dealing with the division of the Bible into the Old and New Testaments is as general as any question could be. The Pentateuch is represented by questions two and three concerning Adam and Eve and Moses. Question four deals with the writer of most of the Psalms. These first four questions with a total of six answers make an attempt to cover knowledge of the Old Testament. The remaining six questions with a total of fourteen answers deal with New Testament facts. This imbalance of New and Old Testament questions was based upon the assumption that most students in the churches to be tested would have had more teaching about and contact with the New Testament than the Old Testament. Questions five, eight, nine, and ten ask for facts con-

tained in the Gospels. Paul's letters are represented by the sixth question and a fact from the Acts of the Apostles is called for in the seventh question. Again, it is impossible to cover the Bible in ten questions, but the test was constructed to determine the extent of general Bible knowledge.

II. SELECTION OF VARIABLES

Variables, in connection with this study, were defined as "contributing factors," that is, those aspects of the normal Christian life which would influence one's knowledge of God's Word.¹ Six of these variables were contained in the first question under the heading, "Contributing Factors:" Sunday School attendance, morning worship attendance, evening worship attendance, prayer meeting attendance, personal devotions, and family altar. Three possible answers concerning these six variables were available: consistent, occasional, and seldom. Each student was asked to circle the most correct answer in relation to each of the six variables. Two additions could have improved this section. First, attendance at Youth Fellowship should have been included and second, a fourth answer, "never," should have been provided along with consistent, occasional, and seldom.

The second variable was contained in the question, How long have you been attending your church? Because the study was concerned with

¹See Appendix B.

Evangelical United Brethren churches, the word "your" was included to specify attendance at the church of which the student was now a part.

The third question under "Contributing Factors" was an attempt to determine the kind of home from which the student came. The definition of a Christian home was left to the student. Room was also allowed on the test itself for interpretative details concerning a "yes" or "no" answer to the question.

III. PROCURING AND RECORDING THE TEST RESULTS

After the test and the variables had been finalized, the next logical step was to reach the desired students. The most efficient way would have been to directly contact the teachers of the high school Sunday School classes. Because these names were not available to the author, the material was sent to the pastor of each church. A letter was enclosed asking the pastor to give the material to the teacher and also to make sure the tests were returned. This necessitated more hands and, of course, more time. All the tests were given during a regular Sunday School class period. No one was to sign their name and no one was supposed to see the completed tests except the one doing the research.

The largest and most time-consuming part of the entire study was the recording of the material contained in the test and in the "Contributing Factors" section. The first step was correcting the Bible test itself. The number of correct answers was multiplied by five to obtain a raw score which was recorded on the test paper. Each church

was treated as a unit. After correcting all the tests from one church, the scores were added together and then divided by the number of tests to obtain an average for the individual church. The name of the church, the number of tests, the average score, the highest score, and the lowest score were then recorded on a separate sheet and connected to the tests.

The next major step involved recording each correct answer on a tabulation sheet.¹ By doing this, the percentage of correct answers for the entire test sample could be determined. A special tabulation sheet, similar in form to the sample in Appendix C, was used to record the selection of answers to question six. The students were asked to name three of the thirteen or fourteen Pauline letters. Each individual choice was recorded.

In order that the raw score could be correlated with the variables, a system of scoring in the variable section was devised. The three answers, consistent, occasional, and seldom, were given values of ten points, five points, and one point, respectively. The highest possible score was sixty. Each test was then given a certain score for the variable section. This score was also recorded on the test itself.

The basis of all correlation figures was the statistical tool known as a scattergram. Scattergrams were built and used for every

¹See Appendix C.

correlation involved in the research.¹ As each test was received it was recorded on each of the scattergrams.

A number of less-involved facts were also recorded. The scores of those who indicated they were part of a Christian home were noted. In like manner the scores of those from non-Christian or partially Christian homes were recorded. Average scores of individual churches were tabulated with reference to the size of the Sunday School and the geographical location. In two of the Bible knowledge questions there were wrong answers which were consistently given. These were noted and recorded.

All tabulations and scattergrams were left open until the final test was received. At that time they were completed. The results were recorded in chapter three.

¹See Appendix D.

CHAPTER THREE

RESULTS OF THE TEST

I. BASIC STATISTICAL RESULTS

Someone has said, "Liars can figure, but figures can't lie."

Although it has been proven many times that figures can be easily misinterpreted, it is still true that, correctly presented, figures can reveal many important aspects of a problem.

A very high percentage of returns was realized in this study of Biblical knowledge. Of the eighty-one churches in the Pacific Northwest Conference of the Evangelical United Brethren Church in 1964-65, sixty-six responded, better than eighty-two per cent. In these eighty-one churches, in 1964, there were 1,135 young people enrolled in senior high Sunday School classes.¹ In that same year the percentage of those enrolled in the entire Sunday School who attended on any given Sunday was sixty-eight per cent.² Assuming this figure to be approximate for the senior high class meant that the average attendance for that class for the entire conference was 771 per Sunday. From the sixty-six churches who returned the tests sent to them, 653 individually completed tests were received. Approximately, therefore, eighty-five per cent of the

¹Official Proceedings of the One Hundred-Twelfth Annual Session of the Pacific Northwest Conference of the Evangelical United Brethren Church, 1965, p. xiii.

²Ibid., p. xiv.

high school students in the Sunday Schools of the churches in the Pacific Northwest Conference of the Evangelical United Brethren Church took the test upon which this study was based.

Results on each separate question. As stated before, the first question dealt with the two parts of the Bible. In correcting this question, as well as all the others, extreme leniency was the rule. For example, whereas the absolutely correct answer should have been "Old Testament" and "New Testament," answers such as "Old" and "New," or "O.T." and "N.T." were also credited as being correct. There were 644 correct answers to the first part (Old Testament) and 642 correct answers to the second part (New Testament). Thus, 98.6 per cent of the students correctly answered the first part and 98.5 per cent correctly answered the second part. There were very few incorrect answers. The question was either answered correctly or left blank. Here, then, is the evidence for the statement made previously, that the first question was easy enough for almost everyone to answer correctly.

In the second question, the test asked for the names of the parents of Cain and Abel. Of course, the correct answers were "Adam" and "Eve." Of the 653 students who took the test, 509 gave the correct answer "Adam," and 508 responded correctly with "Eve." Respectively, the percentages were 77.9 and 77.8. It would seem that "Adam" and "Eve" would always be connected as close as "bread" and "butter," but not so. Many times only one part was given and sometimes one of the

two was connected with some other person. In this question, as in a number of the others, was revealed the common fault among students of all ages of not really reading the question. Some of the wrong answers, such as "Abraham" and "Joseph," or "Moses" and "Jacob," indicate that little attention was given to what the question really said.

Only one answer was required in the third question. "Moses" was the correct response to the question concerning the man who led the Israelites out of Egypt. There were 558 correct answers (85.4 per cent). Numerous incorrect answers were given to this question. Nearly every major male character in both Testaments was listed.

The fourth question asked for the name of the writer of most of the Psalms, i.e., David. Although this question was not intended to be one of the more difficult, only 67.4 per cent of the students answered correctly (440 out of 653). Here again, various incorrect answers were given. The most common wrong answers were "Paul" and "Peter."

Four answers were called for in the fifth question. The students were asked to list the first four books of the New Testament, which are Matthew, Mark, Luke, and John. At this point, it should be said that spelling was of minor importance as far as this study was concerned. If the word was in any way recognizable as the correct answer, credit was given. "Matthew" was very often misspelled, but, surprisingly, not as often as "Luke." For some reason, many students thought it was "Luck." It was also interesting that many students knew one or two of the books but not the rest. "Matthew" was best known with 588 responses (90.0 per

cent). "John" was next with 584 correct answers (89.4 per cent); then came "Luke" with 583 correct answers (89.2 per cent), and finally, "Mark," with 582 answers (89.1 per cent). This question, more than any other, revealed the fault of not reading the question. In a number of cases, students answered with the first four books of the Old Testament instead of the first four books of the New Testament. Generally speaking, anyone knowing the first four books in the Old Testament would also know the names of the four Gospels, which meant that not reading the question actually decreased the score by twenty points. As in the first question, there were very few incorrect guesses to the fifth question. Blanks were usually left instead of wrong answers.

The sixth question was similar in nature to the fifth. It called for three books written by Paul. The question stated that "thirteen books in the New Testament were written by Paul the Apostle." Although, in the opinion of many, Hebrews should not be included in Paul's works, because the question is still open-ended, credit was given for "Hebrews" as an answer. Three of Paul's writings are double letters; I and II Corinthians, I and II Thessalonians, and I and II Timothy. However, since each book of each pair is a unit by itself, credit was given for an answer of only one part, i.e., I Corinthians or II Timothy. This question proved to be much more difficult than intended. There were 372 correct answers of one book written by Paul (57.0 per cent). In other words, slightly more than half of the students could name one of the possible fourteen books. Naturally, the percentage of those

able to name two or three of Paul's writings was even less. There were 305 students who correctly named two of the books (46.7 per cent), and 166 who could name all three (25.4 per cent). One out of every four was able to name three of the thirteen or fourteen books written by the Apostle Paul. There were some interesting sidelights to this question. First, one wrong answer was very predominant. A total of 166 students gave "Acts" as one of the books credited to Paul. In more than half of these cases, the students gave two other correct answers. Very seldom were there two correct answers and a blank or a wrong answer other than "Acts." Another interesting point was the frequency of choice among the possible fourteen answers. Following is a listing in descending order in terms of number of choices: Romans (211), I Corinthians (174), Ephesians (93), Philippians (71), I Timothy (68), Galatians (56), II Corinthians (42), Hebrews (37), Titus (26), I Thessalonians (24), Colossians (23), II Timothy (11), Philemon (5), and II Thessalonians (1).

Question number seven actually required something slightly more than Biblical knowledge per se, in that the name of a specific day on the church calendar, Pentecost, was called for as an answer. However, the record of what happened on that day when the Holy Spirit descended upon the church is recorded in the Bible, justifying the question as one testing Bible knowledge. In a section of the Evangelical United Brethren Church that looks upon itself as a "holiness people," the results of a question dealing with the beginnings of New Testament "holiness" should be very revealing. Slightly less than half of the

students answered correctly. Out of 653 pupils, there were 325 correct responses (49.8 per cent). There was a greater variety of wrong answers on this question than any other. Some of the more frequent wrong responses were "December 25," "Christmas Day," "Easter," and "Sunday."

The eighth question asked for the naming of the disciple who betrayed Jesus. The correct answer, Judas, was given by 441 pupils (68.8 per cent). It causes one to think about the teaching program of the church when it is discovered that more students know about the treacherous act of Judas than about the Holy Spirit descending upon the church. One of the more frequent wrong answers to this question was "Peter." Evidently, students confused the betrayal of Judas with the denial of Peter. A surprising note was the spelling of "Judas." Such misspelled answers as "Jewdus," "Judus," and "Judous" were not uncommon.

In question number nine, the names of the three prominent disciples with Christ at His transfiguration were requested. As a helpful hint, the first letter of each name was given. The students were asked then to complete the name. Of the three, "John," "James," and "Peter," "John" was best known (571 correct answers, 87.4 per cent). With 449 correct responses (68.8 per cent), "James" was second. "Peter" received the least number of correct answers (388, 59.4 per cent). Although not intentionally, the giving of the letter "P" as the first letter of the third disciple's name apparently brought to mind "Paul" instead of "Peter" to many students. A total of 201

pupils gave "Paul" as one of the disciples.

The last question, as stated before, was intended to be the most difficult. Two quotations were given, the sixth Beatitude by Jesus, and the "Great Confession" by Peter. To have correctly answered, the student was supposed to identify the person who spoke each of the quotations. The second part of the question did prove to be the most difficult question in the entire test. There were only 121 correct answers (18.5 per cent). The response to the first part was much better (333 correct answers, 51.0 per cent).

Overall test results. Each of the twenty blanks was given a value of five points which made 100 the highest possible score. As the envelopes from each church were returned, each test was corrected and given a numerical score based upon the number of correct answers. After all the tests from one church were corrected, the scores were added together. The sum of the scores was then divided by the number of tests to obtain an average score for each individual church.

To ascertain the conference average, the average scores of all sixty-six churches were added together and divided by sixty-six. The conference average was 70.24. The peculiar workings of chance were seen in some related figures at this point. There were sixty-six (number of books in the Bible) churches that responded. Thirty-nine (number of Old Testament books) churches scored above the conference average and twenty-seven (number of New Testament books) churches

scored below the conference average.

The highest average for any single church was 98.00. The lowest average for one church was 50.00. The median of the church average scores was 68.50 which meant that half of the churches were below 68.50 and half were above. Notice that the median is slightly lower than the average.

Various other comparative tabulations were made. One such study involved the average scores of those from Christian, non-Christian and partially Christian homes. These figures were based upon the answers to question three of the "contributing factors" section of the questionnaire. Students from Christian homes had the highest average, 71.51. Those from partially Christian homes scored an average of 69.28, while those from non-Christian homes were lowest with an average of 68.85. The difference between the average scores of students from Christian homes and students from non-Christian homes was slightly more than half the value of one single question (2.66).

Another comparative study dealt with the difference of scores between students from rural churches and students from city churches. The city churches came out on top with an average of 70.83. The average for rural churches was 68.41, a difference of 2.42.

The Pacific Northwest Conference is divided into three districts which are called the north, the east, and the south. The average score of each district was obtained, shown in the following comparison: east district - 71.57, north district - 69.99, south

district - 69.58.

To ascertain if the size of the church had any effect upon the student's Bible knowledge, a comparison was made on the basis of the average attendance in Sunday School during 1964. Churches with an average attendance of less than fifty had an average score of 68.36. Those in the 51-100 category had an average of 70.24. In the next group, those Sunday Schools with an average attendance of 101-150, the average score was 69.61. In churches with a Sunday School of 151-200, the average was 70.24. Finally the largest Sunday Schools, 201 and up, produced the highest average, 71.13. Here again, however, the difference was comparatively slight (2.77).

II. CORRELATION RESULTS

Definition of a correlation. The concept of co-relationship was developed in the latter part of the nineteenth century by Sir Francis Galton and the pioneer statistician, Karl Pearson. The study and work of these two men led to the theory of and provided the basis for what is known as correlation. Correlation is simply defined as the relationship between two variates, for example, height and weight. Innumerable studies of correlation have been made. The results of such studies are found in nearly all test manuals as well as in most educational material.¹

¹C.C. Ross, Measurement in Today's Schools (Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated, 1954), pp. 85-6.

In the study represented by this thesis, the theory of correlation was used to determine the relation between the student's score on a Bible test and the normal aspects of a Christian life. Such activities as Sunday School attendance, worship attendance, Bible reading, and prayer were considered to be a part of the weekly routine of an average Christian young person.

Three warnings concerning the use of correlation are made by most statisticians. First, correlation cannot be interpreted directly as a percentage. An r (the letter given to denote correlation) of 0 represents no relationship at all, but an r of .60 does not indicate a sixty per cent relationship. As r 's get larger, a small gain means a considerable increase in the degree of relationship. Therefore an r of .80 indicates much more than twice the relationship of an r of .40.

The second warning is that correlation does not necessarily mean causation. There are often other factors which should enter into the picture. An example from a statistics textbook provides an illustration.

It is probably true that in the United States there is a moderate positive correlation between the average salaries of teachers in various high schools and the percentages of their graduates who go on to college, but to say that these students attend college because their teachers are well paid is as inaccurate as to say that their teachers are well paid because many of their graduates attend college. The situation is complex, but one prominent factor is the financial condition of the community, which to considerable extent determines ability to pay both teachers' salaries and college expenses.¹

¹Ibid., p. 88.

However, while correlation does not directly establish a "causal" relationship, it may furnish clues to causes. Studies of correlation are therefore used for exploratory purposes, attempting to find reasons why certain conditions exist.

The third warning is somewhat definitive as well as cautionary. A negative r is just as meaningful as a positive r . Negative correlations reveal an inverse relationship between two factors. Positive r 's indicate a direct relation, but both have equal predictive value.¹

Correlation of score and attendance. As stated before, a system of scoring was devised for the first part of the contributing factors section² which dealt with the frequency of attendance at various church services plus personal devotions and family altar. Three possible answers were provided: consistent, occasional, and seldom. The three answers were respectively given values of ten, five, and one, making sixty the highest possible score.

In the study of the correlation of score and overall attendance, as well as in all other correlation studies, the use of a scattergram was employed. A sample of such a tool along with explanatory comments may be reviewed in the appendix section.³

The first two variates to be considered in this study of cor-

¹Ibid., pp. 88-89.

²See Appendix B.

³See Appendix D.

relation were the raw score on the Bible test and the overall attendance score. In this case, an r of .48 was obtained,¹ indicating a positive relationship between Bible knowledge and Sunday School attendance, church attendance, etc.

According to Helen M. Walker and Joseph Lev, "a very small r may be significant if the sample is very large. Thus, for 500 cases, $r = .09$ is significant, but still too small to be useful for most purposes."²

To determine the relationship of each of the six parts (Sunday School attendance, personal devotions, etc.) to the Bible test score, scattergrams were built for each one. The results were as follows: Sunday School attendance and score, r of .32;³ morning worship attendance and score, r of .34;⁴ evening service attendance and score, r of .30;⁵ prayer meeting attendance and score, r of .27;⁶ frequency of personal devotions and score, r of .21;⁷ frequency of family altar and score, r of .16.⁸

¹See Appendix L.

²Helen M. Walker and Joseph Lev, Elementary Statistical Methods (New York: Henry Holt and Company, 1958), p. 264.

³See Appendix E.

⁴See Appendix F.

⁵See Appendix G.

⁶See Appendix H.

⁷See Appendix I.

⁸See Appendix J.

Notice particularly that all the correlation coefficients (r 's) between single aspects of the contributing factors section and the score were much lower than the overall attendance and score coefficient. In other words, a well-rounded Christian life had more effect on Bible knowledge than did any single aspect of that life.

There was an interesting note in connection with the correlation of family altar to the score on the Bible test. Out of 483 students who indicated they lived in a Christian home, seventy-two reported having a consistent family altar, less than fifteen per cent.

Correlation of score and years of attendance. The second question in the contributing factors section dealt with the length of time the student had been attending his or her church. No distinction was made concerning frequency of attendance. The intent was to determine connection with an Evangelical United Brethren Church.

Many students, in answer to this question, replied, "all my life," or "since childhood," or something similar. Assuming the sophomore year to be a conservative average for high school classes in Sunday School, these answers were given a value of fifteen years.

The average number of years of attendance in Evangelical United Brethren churches of students in high school Sunday School classes in Pacific Northwest congregations was ten and one-half. Based upon the study through another scattergram, the correlation coefficient between

years of attendance and the score on the Bible test was .23,¹ indicating a moderate degree of relationship.

III. A COMPARISON WITH OTHER HIGH SCHOOL STUDENTS

One of the greatest problems in this study was the lack of material with which to compare the results obtained through the research. In an attempt to provide some kind of picture that could serve as a basis for comparison, the test upon which this thesis was based was given to some high school students other than those in Pacific Northwest Evangelical United Brethren churches.

Two groups of students were selected. The first was a senior problems class from Sherwood High School. There are approximately 300 students in Sherwood High which is located in the small town of Sherwood, Oregon. From the class, forty-six students volunteered to take the Bible test. Only the ten Bible knowledge questions were used.² Because of various reasons, the contributing factors section was deleted.

The average score for the forty-six Sherwood students was 43.59. The score is comparable to the church average of 70.24.

The second group of students were members of two study hall classes at Franklin High in Portland, Oregon, a school with a student

¹See Appendix K.

²See Appendix A.

body of more than 2,000. All classes were represented by this sample of fifty-four students. They scored an average of 51.85 on the Bible test.

To compare the efforts of the Sunday School pupils with those of the secular high school students, several tables were devised.¹ Through these tables, especially the one contained in Appendix O, it can readily be seen that the big difference between the church related students and the regular high school students was in their answers to question number five which asked for the first four books of the New Testament. The Sunday School pupils gave from thirty-six to thirty-nine per cent more correct answers than did the students from the high schools. Notice also the plus-thirty per cent differences between the two groups in their answers to questions four and seven. The former asked for the writer of most of the Psalms, David, and the latter called for the name of the day upon which the Holy Spirit was given to the church.

IV. A PICTURE OF THE AVERAGE STUDENT

Although no one is average and nothing is normal in this day and age, it is still possible to construct a picture of an average, normal student with facts heretofore presented in this study. Only the church related students are under consideration at this point.

¹See Appendixes M, N, and O.

The average student has been connected with an Evangelical United Brethren church for ten and one-half years. There is a seventy-eight per cent chance that he or she resides in a Christian home. On the ten-question Bible test used in this study, the average student scored 70.24, meaning he or she answered correctly questions one, two, three, four, five, eight, and nine. The average pupil, even with ten and one-half years of church connection, could not name one book written by Paul, could not name the day of the descent of the Holy Spirit, and could not identify the person who uttered the Beatitudes nor the disciple who spoke the "Great Confession."

CHAPTER FOUR

SUMMARY AND CONCLUSIONS

I. SUMMARY

As presented in the statement of the problem at the beginning of this thesis, the aim of the research conducted as the basis of this study was to determine the extent of Bible knowledge possessed by students in the high school Sunday School classes of Evangelical United Brethren churches in the Pacific Northwest Conference. The correlation of such knowledge to certain variables, aspects of a Christian life, was a secondary purpose.

The questionnaire method of research was employed to obtain the necessary information. Eighty-two per cent of the churches in the conference under consideration responded with approximately eighty-five per cent of the high school students in those churches taking the test.

The average score for all church-related students was 70.24 out of a possible 100.00. By comparison, 100 secular high school students, selected at random, scored an average of 47.77 on the same test.¹

The studies of correlation revealed that the overall, total program of the church had more effect upon Bible knowledge than did any single aspect of that program. It was also apparent that the number of years of church attendance was not a really significant

¹See Appendix A.

contributing factor when related to Bible knowledge.

II. CONCLUSIONS

First of all, it is obvious that, generally speaking, the churches in the Pacific Northwest Conference have failed in the divinely assigned task of teaching children and young people the Word of God. If a person has been connected with a church for ten and one-half years, he or she should be able to name just one of the letters written by Paul. That same person ought also to know that it was Jesus Christ who said, "Blessed are the pure in heart, for they shall see God" (Matthew 5:8).

In the second place, it is evidently common thinking that teaching the Bible is the task of the church alone. Less than fifteen per cent of the Christian families with high school students in Sunday School classes of the churches in the Pacific Northwest Conference have a consistent family altar. At what other functions in the home is the young person made aware of the content of the Bible?

The church, then, has two possible paths of action, both of which need to be well-planned and well-promoted. The first is to encourage the practice of family worship in the home. It is so much easier for two parents to teach two or three children the Bible for a few moments each day than it is for one Sunday School teacher to minister to five, ten, or twenty young people once a week.

The other needed action is for the church to re-evaluate and revise, if necessary, its program of indoctrination. If the church

is to meet the challenge of having almost the entire responsibility for teaching the Bible to young people, it will take a better program than has been used in the past.

Some of the author's thoughts and suggestions may be seen in the following list of subjects for further study.

1. The pattern of Bible-teaching in the Sunday School.
2. The program of teacher-training in relation to Bible knowledge.
3. Why the great decline in the family altar?
4. The use of scholastic tests and measurements in the Sunday School.

BIBLIOGRAPHY

BIBLIOGRAPHY

Bowman, Locke E, Jr. "How Well Do You Know the Bible?," Presbyterian Life, September 15, 1964, pp. 20-21.

Official Proceedings of the One Hundred-Twelfth Annual Session of the Pacific Northwest Conference of the Evangelical United Brethren Church, 1965.

Ross, C. C. Measurement in Today's Schools. Englewood Cliffs, New Jersey: Prentice-Hall, Incorporated, 1954.

Walker, Helen M. and Joseph Lev. Elementary Statistical Methods. New York: Henry Holt and Company, 1958.

APPENDIXES

APPENDIX A

SAMPLE TEST

Instructions:

1. Answer each question to the best of your ability.
2. Do not be embarrassed. Only the person conducting the research will see the papers.
3. Do not sign your name.

Test Questions:

1. The Bible is divided into two parts. They are the _____ and the _____.
2. Cain and Abel were the sons of _____ and _____.
3. The man God chose to lead the Israelites out of Egypt was _____.
4. Most of the Psalms were written by _____.
5. Name the first four books of the New Testament: a. _____
b. _____ c. _____ d. _____.
6. Thirteen books in the New Testament were written by Paul the Apostle. Name three: a. _____ b. _____ c. _____.
7. The Holy Spirit descended on the Church on the day of _____.
8. One of the twelve disciples betrayed Jesus. His name was _____.
9. Three prominent disciples of Jesus were with Him at the Transfiguration. Complete their names: a. J _____ b. J _____ c. P _____.
10. Identify the persons who spoke the following sentences:
_____ a. "Blessed are the pure in heart, for they shall see God."
_____ b. "You are the Christ, the Son of the living God."

APPENDIX B

SAMPLE OF CONTRIBUTING FACTORS SECTION

1. Circle the most correct answer:

a. Sunday School attendance	Consistent	Occasional	Seldom
b. Morning worship attendance	Consistent	Occasional	Seldom
c. Evening worship attendance	Consistent	Occasional	Seldom
d. Prayer meeting attendance	Consistent	Occasional	Seldom
e. Personal devotions	Consistent	Occasional	Seldom
f. Family altar	Consistent	Occasional	Seldom

2. How long have you been attending your church?

3. Do you come from a Christian home?

4. Please comment on any other factors you think might have influenced your knowledge of the Bible.

DO NOT SIGN YOUR NAME

APPENDIX C

SAMPLE TABULATION SHEET

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. O.T.																				
2. N.T.																				
3. Adam																				
4. Eve																				
5. Moses																				
6. David																				
7. Matthew																				
8. Mark																				
9. Luke																				
10. John																				
11. One																				
12. Two																				
13. Three																				
14. Pentecost																				
15. Judas																				
16. John																				
17. James																				
18. Peter																				
19. Jesus																				
20. Peter																				

Notes:

1. Number 11, one book written by Paul; number 12, two books written by Paul; number 13, three books written by Paul.

2. Four marks and a tally were entered in each square.

APPENDIX D

SAMPLE SCATTERGRAM

						Height (inches)			Height
						50-54	55-59	60-65	
$x'Sy'$	Sy'	$fx(x')^2$	f_{xx}'	x'	fx				
0	25	0	0	0	20	5	5	10	100-109
25	25	30	30	1	30	10	15	5	110-119
100	50	200	100	2	50	20	10	20	120-129
125	100	230	130		100	100	35	35	$\Sigma y'$
D	A	E	C		N		0	2	$\Sigma y'^2$
						100	30	70	$\Sigma f_{xy}'$
						A	1	30	$\Sigma f_y(y')^2$
						170	30	140	$\Sigma Sx' y' Sx'$
						B	0	35	
						130	35	90	
						C			
						D			

Explanation:

1. The two variates are height and weight. In 100 cases, there were 10 who were between 60 and 65 inches in height and who were also between 100 and 109 pounds in weight. Each of the other squares represent a similar comparison, i.e., in the lower left square, there were 20 cases 50-54 inches in height and 120-129 pounds in weight.
2. The purpose of the scattergram is to plot the distribution of cases for any two variables. It is also called a bivariate frequency distribution.
3. The scattergram is used extensively because of its accuracy. Eight of the ten figures used to compute the correlation coefficient are crosschecked through the scattergram (E, A, C, and D).
4. By the use of capital letters, the complicated formula for computing the correlation coefficient,

$$r = \frac{NSf_{xy}x'y' - (Sf_{xx}')(Sf_{yy}')}{\sqrt{\{NSf_x(x')^2 - (Sf_{xx}')^2\}\{NSf_y(y')^2 - (Sf_{yy}')^2\}}}$$

is reduced to the less complex formula,
$$r = \frac{ND - AC}{\sqrt{(NE - A^2)(NE - C^2)}}$$

APPENDIX E

SCATTERGRAM FOR THE STUDY OF THE CORRELATION BETWEEN
SUNDAY SCHOOL ATTENDANCE AND SCORE

$x'Sy'$	Sx'	$fx(x')^2$	$f_{xy}x'$	x'	fx	$1\#$	$5*$	$10\#$		Score
0	24	0	0	0	19	2	10	7	0-25	
179	179	107	107	1	107	9	17	81	26-50	
812	406	856	428	2	214	0	22	192	51-75	
1644	548	2538	846	3	282	1	14	267	76-100	
2635	1157	3501	1381		622	12	62	547	Σy	
D	A	E	C		M	0	1	2	y'	
						0	62	1094	$\Sigma y'$	
					A	0	62	2168	$\Sigma y'^2$	
					B	0	62	1266	Sx'	
					C	12	103	2532	$y'Sx'$	
					D	0	103			

* Consistent

* Occasional

Seldom

$$r = \frac{ND - AC}{\sqrt{(NB - A^2)(ME - C^2)}}$$

$$r = \frac{41153}{\sqrt{16626049053}}$$

$$r = \frac{41153}{128942} = .32$$

$x'Sy'$	Sx'	$fx(x')^2$	$f_x x'$	x'	fx	1#	5*	10**	
0	20	0	0	0	18	3	10	5	0-25
128	128	108	108	1	108	28	32	48	26-50
670	335	832	416	2	208	25	31	152	51-75
1533	511	2529	843	3	281	15	21	245	76-100
2331	994	3469	1367		615				
D	A	E	C		615	71	94	450	f_y
						0	1	2	y'
									$f_{vy'}$
									$f_y(y')^2$
									Sx'
									$y'Sx'$

* Consistent

* Occasional

Seldom

$$r = \frac{ND - AC}{\sqrt{(NB-A^2)(NE-C^2)}}$$

$$r = \frac{74767}{\sqrt{46800209404}}$$

$$r = \frac{74767}{216334} = .34$$

[illegible]

$x'Sy'$	Sx'	$fx(x')^2$	$f_{xx'}$	x'	fx	S^*	10^*	
0	6	0	0	0	23	19	3	3
36	36	112	112	1	112	86	16	10
190	95	856	428	2	214	153	27	34
687	229	2474	858	3	286	145	53	88
913	366	3442	1398	4	635	403	98	134
D	A	E	C	N	635	0	1	2
				A	366	0	98	268
				F	634	0	98	536
				C	1398	827	229	342
				D	913	0	229	684

Score

C-25

26-50

51-75

76-100

Fy

y'

$f_{y'y'}$

$f_y(y')^2$

Sx'

$y'Sx'$

* Consistent

* Occasional

Seldom

$r = \frac{ND - AC}{\sqrt{(NE-A^2)(NE-C^2)}}$

$r = \frac{68087}{\sqrt{61857276644}}$

$r = \frac{68087}{248711} = .27$

$x'Sy'$	Sx'	$fx(x')^2$	f_{xx}'	x'	fx	$1\#$	$5*$	$10**$	Score
0	11	0	0	0	22	13	7	2	0-25
91	91	114	114	1	114	46	45	23	26-50
402	201	832	416	2	208	66	63	59	51-75
1047	349	2547	849	3	283	58	101	124	76-100
1540	652	3493	1379		627	123	236	208	f_y
D	A	B	C		K	123	0	2	y'
* Consistent					A	652	0	416	f_{xy}'
* Occasional						1068	236	832	$f_y(y')^2$
# Seldom					B	1379	514	513	Sx'
$r = \frac{ND - AC}{\sqrt{(NE-A^2)(NE-C^2)}}$					C	1540	514	1026	$y'Sx'$
$r = \frac{56472}{\sqrt{70550146040}}$					D	0			

APPENDIX J

SCATTERGRAM FOR THE STUDY OF THE CORRELATION BETWEEN
THE FREQUENCY OF FAMILY ALTAR AND SCORE

x'Sy'	Sx'	fx(x') ²	f _{xx'}	x'	fx	#	5*	10**	Score
0	2	0	0	0	21	19	2	0	0-25
35	35	112	112	1	112	84	21	7	26-50
148	74	832	416	2	208	153	36	19	51-75
438	146	2547	849	3	283	183	54	46	76-100
621	257	3491	1377		624	439	113	72	
D	A	E	C		N	624	113	72	
					A	257	113	144	
					B	401	113	288	
					C	1377	255	163	
					D	621	255	366	

fy y' fy(y')² Sx' y'Sx'

* Consistent

* Occasional

Seldom

r = $\frac{ND - AC}{\sqrt{(NE-A^2)(NE-C^2)}}$

r = $\frac{33615}{\sqrt{44801489625}}$

r = $\frac{33615}{211664} = .16$

APPENDIX K

SCATTERGRAM FOR THE STUDY OF THE CORRELATION BETWEEN
SCORE AND YEARS OF ATTENDANCE

						Years of Attendance								Score
$x'Sy'$	Sx'	$fx(x')^2$	$fx x'$	x'	fx	0-2	3-5	6-8	9-11	12-14	15-17	18-20		
0	0	0	0	0	2	2							0-4	
0	0	2	2	1	2	2							5-12	
52	25	44	22	2	11	3	3			2	3		13-20	
18	6	18	6	3	2				2				21-28	
256	64	400	100	4	25	5	5	2	3	4	6		29-36	
315	63	500	100	5	20	2	4	2	1	3	8		37-44	
1056	176	2196	366	6	61	8	9	13	6	6	15	4	45-52	
1512	216	3479	497	7	71	6	11	12	14	4	21	3	53-60	
968	121	2752	344	8	43	7	5	6	9	4	11	1	61-68	
3213	357	8586	954	9	106	7	13	14	17	13	39	3	69-76	
2030	203	6100	610	10	61	4	8	6	16	6	15	6	77-84	
3861	351	13310	1210	11	110	11	19	11	16	7	42	4	85-92	
4836	403	15408	1284	12	107	4	13	8	13	14	51	4	93-100	
18117	1986	52795	5495	621	621	61	90	74	97	63	211	25	$\Sigma y'$	
D	A	E	C	N		0	1	2	3	4	5	6	$\Sigma y'^2$	
				A		0	90	148	291	252	1065	150	$\Sigma y'^2$	
				B		0	90	296	673	1008	5275	900	$\Sigma y'^2$	
				C		0	779	631	874	553	1970	232	$\Sigma x'$	
				D		0	779	1262	2622	2212	9850	1392	$\Sigma x'^2$	

$r = \frac{ND - AC}{\sqrt{(NE - A^2)(ME - C^2)}}$

$r = \frac{337587}{\sqrt{2065403658620}}$

$r = \frac{337587}{1437151} = .23$

APPENDIX L

SCATTERGRAM FOR THE STUDY OF THE CORRELATION BETWEEN
SCORE AND OVERALL ATTENDANCE

Attendance Scores																	
						0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-60
x'Sy'	Sx'	fx(x')	fx	x'	fx												
0	0	0	0	0	3	3											0-4
14	14	4	4	1	4		1	2				1					5-12
94	47	52	26	2	13	1		4	4	1	1	1					13-20
48	16	27	9	3	3					1		2					21-28
460	115	416	104	4	26		1	5	5	6	2	3	1	1			29-36
590	118	500	100	5	20			2	2	2	1	6	2	2	2		37-44
2010	335	2376	396	6	66	1	1	7	12	14	6	8	4	2	5	5	45-52
2842	406	3479	497	7	71		1	8	7	7	13	11	5	7	6	2	53-60
2024	253	2816	352	8	44			2	6	6	7	11	3	2	1	6	61-68
6399	711	8505	945	9	105			3	10	15	7	13	10	15	13	14	69-76
4410	441	6300	630	10	63			2	7	4	3	9	10	7	9	8	77-84
8756	796	13552	1232	11	112			7	2	11	4	21	17	15	13	12	85-92
11064	922	15696	1308	12	109			1	5	5	3	7	14	13	9	27	93-100
38711	4174	53723	5603		639	639	5	41	62	72	47	91	68	64	58	74	fy
D	A	E	C		N		0	1	2	3	4	5	6	7	8	9	fy'
						4174	0	4	82	186	235	546	476	512	522	740	fy'
						32768	0	4	164	558	1175	3276	3332	4586	4698	7400	fy(y') ²
						5603	8	18	288	451	576	871	783	645	548	754	Sx'
						38711	0	18	576	1353	2304	4698	4515	4936	4932	7540	y'Sx

ND - AC

r = $\frac{ND - AC}{\sqrt{(NE - A^2)(NE - C^2)}}$

1549407

r = $\frac{1549407}{\sqrt{10287056692688}}$

1549407

r = $\frac{1549407}{3207344}$

.48

APPENDIX M

COMPARISON OF PERCENTAGE OF CORRECT ANSWERS
ON EACH INDIVIDUAL BLANK

<u>Franklin High</u>	<u>Sherwood High</u>
1. 96.3	1. 93.5
2. 96.3	2. 93.5
3. 70.4	3. 58.7
4. 70.4	4. 58.7
5. 83.3	5. 69.5
6. 40.7	6. 21.5
7. 50.0	7. 52.1
8. 53.7	8. 52.1
9. 55.5	9. 50.0
10. 50.0	10. 50.0
11. 27.7	11. 28.2
12. 20.4	12. 17.4
13. 14.8	13. 8.7
14. 24.1	14. 10.8
15. 55.5	15. 45.3
16. 79.6	16. 73.9
17. 46.3	17. 34.8
18. 46.3	18. 23.9
19. 50.0	19. 26.1
20. 12.9	20. 4.3

APPENDIX N

COMPARISON OF PERCENTAGE OF CORRECT ANSWERS
ON EACH INDIVIDUAL BLANK

<u>Churches</u>	<u>Schools (combined)</u>
1. 98.6	1. 95
2. 98.5	2. 95
3. 77.9	3. 65
4. 77.8	4. 65
5. 85.4	5. 77
6. 67.4	6. 32
7. 90.0	7. 51
8. 89.1	8. 53
9. 89.2	9. 53
10. 89.4	10. 50
11. 57.0	11. 28
12. 46.7	12. 19
13. 25.4	13. 12
14. 49.8	14. 18
15. 66.6	15. 51
16. 87.4	16. 77
17. 68.8	17. 41
18. 59.4	18. 36
19. 51.0	19. 39
20. 18.5	20. 9

APPENDIX O

COMPARISON OF PERCENTAGE DIFFERENCES ON
EACH INDIVIDUAL BLANK

<u>Between Churches and Schools</u>		<u>Between Franklin and Sherwood</u>	
1. Schools	-3.6	1. Sherwood	-2.8
2. Schools	-3.5	2. Sherwood	-2.8
3. Schools	-12.9	3. Sherwood	-11.7
4. Schools	-12.8	4. Sherwood	-11.7
5. Schools	-8.4	5. Sherwood	-13.8
6. Schools	-35.4	6. Sherwood	-19.2
7. Schools	-39.0	7. Franklin	-2.1
8. Schools	-36.1	8. Sherwood	-1.6
9. Schools	-36.2	9. Sherwood	-5.5
10. Schools	-39.4	10. Even	
11. Schools	-29.0	11. Franklin	-.5
12. Schools	-27.7	12. Sherwood	-3.0
13. Schools	-13.4	13. Sherwood	-6.1
14. Schools	-31.8	14. Sherwood	-13.3
15. Schools	-15.6	15. Sherwood	-9.9
16. Schools	-10.4	16. Sherwood	-5.7
17. Schools	-27.8	17. Sherwood	-11.5
18. Schools	-23.4	18. Sherwood	-22.4
19. Schools	-12.0	19. Sherwood	-23.9
20. Schools	-9.5	20. Sherwood	-8.6