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ABSTRACT

Media programs were compared in 21 Utah high schools having student populations between 700 and 1,500. Differences in responses to a questionnaire administered by the Utah State Division of Instructional Media (USDIM) on the qualitative and quantitative aspects of the school media program were identified, and the levels of responses were compared with other characteristics of the high schools, including personnel, facilities, revenues, and expenditures. Comparisons were made of the data for the whole population, as it was obtained from the USDIM questionnaire, from an author-prepared questionnaire, from state financial records, and from personal visits to the schools. A computer program, Statistical Package for the Social Studies (SPSS), was used. Federal funds for school media programs, length of service of principals and media coordinators were found to be associated with the level of response to the state's questionnaire. Conclusions were descriptive, and pointed out individual differences in school media programs. The inadequacy of current instruments for measuring the quality of service in media programs was suggested. (Author)

A COMPARISON OF UTAH'S MIDDLE-SIZE HIGH SCHOOL MEDIA PROGRAMS

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Lucille G. Taylor
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ABSTRACT

Media programs were compared in twenty-one high schools having student populations between 700 and 1500. Differences in responses to a questionnaire administered by the Utah State Division of Instructional Media were identified, and the levels of response were compared with other characteristics of the high schools. Comparisons were made of the data for the whole population, as it was obtained from these sources: from the questionnaire of the State Division of Instructional Media, from an author-prepared questionnaire, from state financial records, and from personal visits to the schools. A computer program, "Statistical Package for the Social Studies," (SPSS) was used. Federal funds for school media programs, length of service of principals and media coordinators were found to be associated with the level of response to the state's questionnaire. Conclusions were descriptive, and pointed out individual differences in school media programs. The inadequacy of current instruments to measure the quality of service in media programs was suggested.

PREFACE

Assessing the relative strengths and weaknesses of high school media programs sounded simple; however, the attempt led to the collection of a mind-boggling array of data, from which only a few of the many possible observations have been made. Aside from the value of the study, the author has been personally enriched by the experience. In addition to awareness of the fine service and variety of ways this service is given in the schools studied, awareness has come of the practical skills that are required of media coordinators.

Statistics and descriptions cannot adequately explain the essence of the media programs in the schools studied. Each has its own distinct character; from each program has come ideas that the author may sometime be able to use.

The experiences connected with the accumulation of the data, in addition to providing educational insight and enjoyment, involved contacts with fine people to whom an expression of appreciation is due. Mrs. Jennie Kerr, state media specialist, and the librarians, media coordinators and principals in twenty-one high schools provided material help as well as courtesy and cooperation. Principal J. Rulon Nelson of Spanish Fork High School, Mr. Phillip Argyle, Nebo District media specialist, and Nebo Superintendent Joe A. Reidhead have all given help and encouragement, as have Omar Hansen, Boyd Goodrich, Donald Parker and other staff members at the Nebo School District office. The staff at the financial section of

the office of the State Superintendent of Public Instruction were also helpful.

The author also gratefully acknowledges the continuous help from the faculty and fellow students at Brigham Young University. Dr. Nathan M. Smith, Mr. Victor W. Purdy, Mr. Keith Stirling, and Mr. Merle Lamson have all assisted with this study, and have been patient and generous with time and advice, as has Dr. Gardner Snow. Fellow graduate students have given encouragement and valuable constructive criticism. Mr. Jerry Hintze of Brigham Young University Computer Service. gave statistical advice which was invaluable.

The year of study of which this paper is one product has been possible because of the sabbatical leave policy of Nebo School District. The author hopes to convey to the district proof of the conviction that the policy justifies itself in improved educational preparation of the staff, resulting in improved service to students in the district's schools.

During the year of study, the author has depended heavily upon the help, encouragement, patience, and hard work of her family. Richard, Martha, and John, who live at home year-round, have willingly done the author's share of the family work, and have endured long absences, short temper, and expense. Richard has contributed postage, gasoline, secretarial service, editorial advice, and his services as pilot for the visit to Dixie and San Juan high schools. Mary, Susan, Jim, Douglas, Peggy, and Max, who ordinarily expect regular letters from their mother and a reasonably well-kept home to come back to, have been remarkably patient during recent lapses. Gratitude to them all is accompanied by a promise to return to normalcy in the near future.

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INTRODUCTION

Rapid change in objectives, methods, content and materials for education is taking place. At the same time, the continual struggle for adequate financing of public schools is meeting with public demands for accountability. Educators in high schools everywhere feel an increased urgency to evaluate and improve their programs. Educational media programs in Utah's high schools are no exception.

Utah has eighty-seven high schools. They range in size from South Rich High School, with seventy-two students in grades seven through twelve, to Cottonwood High School, with 2392 students in grades ten through twelve.[1] The high school student population is allocated among the schools in three groups, as follows:

Over 1500 students (21 schools)----Approximately 38,085 students
700 to 1500 students (21 schools)--Approximately 22,095 students
Under 700 students (45 schools)----Approximately 13,654 students[2]

Each of these schools conducts an educational program which meets state requirements, and each has a program for administering instructional media. This study is concerned with the instructional media programs in the middle-sized high schools, with student populations between 700 and 1500 students.

The educational media program combines many functions in a school.

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[1]Utah State Board of Education, Utah School Directory 1973-74 (Salt Lake City: Utah State Board of Education, 1973).

[2]Ibid.

The school library is its base, and is now called the "instructional media center." Audiovisual materials and equipment of a wide variety, once administered separately from printed materials in many schools, are being added to the collection in the instructional media center. Instruction of students and assistance to teachers in selection, acquisition, production and use of the audiovisual and printed materials has become a major responsibility of the media coordinator (formerly called the "librarian"). Production of materials by and for students and faculty members is often done in the instructional media center. Participation by the media coordinator in curriculum development and instruction of large groups, small groups, and individual students is valued.[1]

A media program develops in a school or in a school district in response to needs and resources peculiar to the school or district, as well as in response to published information and guidelines from state and national literature. It also develops in response to observations of programs in other schools, communicated in many ways.[2] Still, each school's program remains unique because it is developed, administered, and used by a unique group of people.

In order to improve a media program, it is necessary to consider the needs and objectives of the school, to evaluate the present program, to consider the resources available for improvement, and to determine what alternate courses of action are available. Then choices and decisions can more intelligently be made.

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[1]Mary Virginia Gaver, "Services in Secondary School Media Centers: a Second Appraisal," School Libraries 20 (Fall 1970): 15-21.

[2]Bruce J. Kittilson, "Librarians, Audiovisualists, and School Media Programs," Illinois Libraries 53 (September 1971): 522-27.

This study is designed to help with the evaluation of present media programs in Utah's middle-size high schools, by comparing media programs with each other and with the guidelines published by the state. The study is made possible by the collection of self-evaluations and projections of plans for improvement which the state school system has made available, and by the cooperation of the administrators and media coordinators in the schools included in the study. It is hoped that the work will be useful to those who are planning further improvements of high school media programs.

CHAPTER I

THE PROBLEM

Statement of the Problem

In order to plan for future development of a local Utah high school media program, it is necessary to establish a basis for judgement of the present service and facilities. Assuming that the opinions and needs of the educators and students who work within the specific school are known, and that information about the resources of the school is available, planners then need to compare the media program in question with accepted standards and with other media programs in other schools of comparable capability and size. They need to know the characteristics, attitudes, needs, resources, etc., of the schools whose media programs they are comparing.

This study attempted to satisfy these needs for pl nners concerned with the middle-size high school in Utah. The study was an analysis of similarities and differences in high school media programs as reported to the Office of the Utah Superintendent of Public Instruction, Instructional Media Division. In addition, a survey was made to determine the characteristics of the schools, their facilities and personnel and resources, and the characteristics of the communities served by the schools. Statistical analysis provided cross-comparisons of the data and displayed relationships. Computer-stored data was provided by the Instructional Media Division, Office of Utah Superintendent of Public

Instruction, and computer facilities at Brigham Young University were also used for the analysis of the data by the SPSS program.

Further Definition and Delimitation of the Problem

The middle-size high schools selected for study were chosen on the basis of their projected enrollment for 1973-74.[1] They enroll a little less than one third of the total high school students in the state. All but four of the schools are three-year high schools. Two have grades nine through twelve, one has grades nine and ten, and one has grades seven through twelve. They are located in fourteen districts, in scattered areas in the state.[2]

The term "media center" is used in this paper to refer to the facility which is also called "library," "library-media center," "instructional materials center," and "learning resource center" in relevant literature. Likewise, "media program" is used instead of the equivalent terms "library-media program" and "library services." Where print and non-print items are handled in separate programs in a school, this study attempts to consider both as part of the total program.

The data from the Division of Instructional Media was obtained by use of a series of questionnaires completed by each school in the state.

Other kinds of information obtained included the age and nature of the school buildings, the length of service, professional preparation and affiliation with professional associations of the media personnel in each school. Student and faculty access to university and public libraries, to district or regional sources of materials and the location of

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[1]Utah State Board of Education, Utah School Directory 1973-74.

[2]The schools included in the study are listed in Appendix A.

public libraries in the communities served by the schools was investigated. The assessed valuation of property and the school mill levy were determined for each district, as were the amounts of various funds spent for media programs. The average salary of professional media personnel in each district was found.

The study did not attempt to place a value scale on the observed differences between schools or between programs and guidelines. It did not attempt to compare media programs in elementary schools with those of secondary schools nor to compare media programs in schools with over 1500 students or less than 700 students.

Because the most recent national standards for school media programs were published in 1969, the literature search was limited to those items published in 1969 or later which were available through the library of Brigham Young University or at the Office of the Utah State Superintendent of Public Instruction. Books and articles dealing with the characteristics of good school media programs or facilities were selected, as well as those dealing with criteria for excellence in school media programs and those discussing national or state standards for media programs.

Hypotheses

Two hypotheses were formulated and tested. The first was that it is possible to identify and describe differences and similarities in the media programs in the twenty-one Utah high schools having student populations between 700 and 1500, utilizing the responses to the "Current Status" questionnaire administered by the Instructional Media Division of the Office of the Utah State Superintendent of Public Instruction. The

second was that associations can be found between the responses of the schools to the "Current Status" questionnaire and other characteristics of the schools involved, including resources, personnel, expenditures, facilities, and other facts about their media programs.

Methodology

The Population

The limits of the middle-size group of schools were arbitrarily set after considering several other less homogeneous combinations. This study surveyed the media programs of all high schools in Utah with student populations ranging from 700 to 1500.

The Literature Search

Because the "Current Status" questionnaire was based on Utah's guidelines for media programs, the literature search was conducted to provide information about guidelines and standards. National standards and criteria for excellence were examined and compared, and Utah's development of guidelines was observed. Utah's guidelines were viewed in comparison to national standards and other evaluative devices.

Questionnaires

There were four questionnaires involved. Three were prepared and administered by the Instructional Media Division to the media coordinators in every school. The questions were identical in each instrument, but were applied to the conditions as of the 1973-74 school year, to the plans projected for the 1974-75 school year, and to the goals set for five years in the future, respectively. Respondents were asked to use the schedule of questions and phased responses in the booklet of state

guidelines.[1] Respondents were asked to select a phase description which most nearly fit every category of their program, and to indicate their selection on an optical scanning form.[2] A different colored score sheet was provided for the "Current Status," the "One Year Priorities," and the "Five Year Goals." The sheets were returned to the state office by June 30, 1974.[3] The Instructional Media Division recorded and stored the data in a computer and provided print-outs of the data. Only the "Current Status" portion was analyzed for this study.

The fourth questionnaire was devised for this study. It was administered to the principals and media coordinators in each school. Cover letters were mailed to principals and district superintendents, explaining the purpose of the study and requesting permission to visit the schools. The questionnaires and cover letters were mailed between April 15 and April 25, and visits were scheduled between April 18 and the end of May, 1974.[4] Copies of the letters and questionnaires were also mailed to the media coordinators in the schools. Separate letters were prepared for them. Just prior to the visits, the appointments were confirmed by telephone.

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[1]Utah State Board of Education, Media--How Are We Doing? Guidelines for the Development of an Instructional Media System, Part IV (Salt Lake City: Utah State Board of Education, 1971).

[2]A copy of the optical scanning form is in Appendix B, and sample pages of the guidelines are in Appendix C.

[3]Jennie Kearl, Instructional Media Specialist, Utah State Board of Education, interview at the office of the Instructional Media Division, March 4, 1974.

[4]Copies of the questionnaire and cover-letters are in Appendix D.

Visits

The visits gave opportunity to observe the nature of the buildings, and to ask open-ended questions about particular strengths and weaknesses of the media programs and facilities and about particular needs or characteristics of the schools or of their communities. A schedule of interview questions was prepared and used:

1. Do you have any questions about any of the items on the questionnaire?
2. What are the working arrangements between the various media personnel?
3. What methods do you use to assure faculty cooperation?
4. Do you receive adequate support from school and district administration?
5. What kind of student behavior do you expect and how do you attempt to control it?

The visits helped to assure complete return of the author-prepared questionnaires, since the author was able to collect them during the visit.

Other Sources of Data

Assessed valuation and amounts of various funds expended for media programs were obtained from the F-4 report, an annual statistical and financial report required by the State of Utah to be completed by every school district and filed with the Office of the State Superintendent of Public Instruction. The data was for the 1972-73 school year.

Statistical Analysis

Data were tabulated, keypunched and analyzed with a Statistical Package for the Social Studies (SPSS) program, using the Brigham Young University computer system. Distributions, means, variations, and standard deviations were computed in a breakdown description of sub-populations. Each sub-population consisted of those who gave a specified

response to one of the eighty-four questions in the "Current Status" questionnaire, compared with one of the fifteen variables selected by the author.

Means and standard deviations were used to identify associations between variables. These associations were then tabulated and displayed.

CHAPTER II

LITERATURE SEARCH

The media program in the high school is accepted as an essential element of good education[1] in a wide variety of published materials. Schools have always been expected to teach information, ideas, principles and concepts discovered by men of previous times. Transmission of man's heritage of accumulated knowledge is still a fundamental objective of schools, and a second basic objective is to teach the accepted techniques for discovering knowledge in the various disciplines of the arts, of the natural sciences and of the social sciences. The demands of today's rapidly changing society require a third objective, however: the development of students who can form new ideas to meet the needs of new situations. Individualization comes with the provision for this process of creative inquiry. The media program is essential to the school for achievement of all three objectives, and, like the rest of the school's program, the media program should be guided by those objectives.

The media center in the school, in responding to the educational objectives, provides services that the individual classroom cannot offer, and that the classroom teacher requires to make his work effective. The

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[1]Kenneth I. Taylor, "The Instructional Materials Center: A Theory Underlying Its Development," in Learning Resource Centers--Selected Readings, ed. Neville P. Pearson and Lucius A. Butler (Minneapolis: Burgess Publishing Company, 1973), p. 10.

[2]Robert C. Gerletti, "What Is a Media Center?" Audiovisual Instruction 14 (September 1969): 21-23.

teaching of knowledge and of techniques for discovering knowledge involves grouping students in large and small clusters, providing for independent study, allowing the individual student to have solitude for reflection and development of his own ideas, providing for sharing of ideas with classmates, and providing expert consultation.[1] Flexibility is an obvious need in the school program and in the media center. Collections of materials of many kinds and of the equipment to utilize the materials are essential, as is provision for their use at the moment of need by students and/or teachers. Duplication of materials and equipment of certain kinds for every classroom is necessary; other kinds are best used by many groups or by individual students. Flexibility in grouping and in methods and materials is enhanced for the classroom teacher by the media center's services and facilities. The professional media coordinator, teamed with the classroom teacher, provide increased expert guidance for the student. Free access to materials and equipment of the media center and to consultation with its personnel provide opportunities for learning and expression at critical times which may not be possible in a structured classroom situation.[2]

Schools and school systems in many nations have made improvements in their methods of collecting, storing, retrieving, and using the many forms of instructional media. In the United States, since the 1930's, successive statements of standards have been published. Many states

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[1]Taylor, "The Instructional Materials Center: A Theory Underlying Its Development," p. 10.

[2]Kenneth I. Taylor, "Instruction First and Media Next," Wisconsin Library Bulletin 68 (March-April 1972): 81-8.

have adopted national standards or adapted them for their own use.[1]

Earlier standards in the United States dealt with libraries only and did not mention audiovisual materials and equipment. During the last two decades, however, advancing educational technology has resulted in recognition of the new forms of instructional materials, and standards for audiovisual materials and equipment have also been formulated.[2] The two programs, library and audiovisual, were considered as one in national standards published in 1969.[3]

The 1969 statement of national standards for media programs is still recognized and used, although national professional associations are now preparing a new one for publication in 1974.[4] Each statement has a unique emphasis, suited to the needs of its time, and both statements are joint efforts of two national groups, representing librarians and audiovisual personnel. During the five-year interim, comments on national standards have been numerous, and effects on state standards and local practices have been observed.

The major emphasis of the 1969 national standards was the coordi-

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[1]Frances Henne, "Standards for Media Programs in Schools," Library Trends 21 (October 1972): 233-47.

[2]Department of Audiovisual Instruction, National Education Association, Quantitative Standards for Audiovisual Personnel, Equipment and Materials in Elementary, Secondary, and Higher Education (Washington, D.C.: Department of Audiovisual Instruction, National Education Association, 1966).

[3]American Association of School Librarians and the Department of Audiovisual Instruction, National Education Association, Standards for School Media Programs (Chicago and Washington, D.C.: American Library Association and National Education Association, 1969).

[4]Jane A. Hannigan, "The Promise of Media Programs: District and School," School Media Quarterly 3 (Fall 1973): 9-14.

nation of library and audiovisual services. Descriptions of programs and functions throughout the document are explicit in recommending the integration of school media services. Acceptance of the integrated media concept is discernible on a wide scale in the literature, but its application takes various forms in different states and in local schools. By 1971, thirty-nine states had state standards or guidelines[1] using national standards as models and as goals. Administrators, librarians and teachers had revised their ideas about material and personnel organization, and librarians, henceforth to be called "media coordinators," were becoming more involved with other faculty members in curriculum development.[2]

Reaction to various aspects of the 1969 standards produced demands for new guidelines that would deal with specific services and functions of the media staff on the school and district levels. Indications are that the national standards planned for 1974 will try to meet these needs. The change im emphasis anticipated in the 1974 document is based on a need for qualitative standards, as well.[3]

Utah's guidelines generally fall into the same categories as the national standards, with some omissions and additions. Utah places a higher priority on facilities for production of materials and on inclusion of filmstrips, 8 mm films, tape and disc recordings, slides and transparencies. However, the Utah guidelines do not place an equally

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[1]Henne, "Standards for Media Programs in Schools," p. 239.

[2]Carl T. Cox, "A Total System View of the School Library," School Media Quarterly 2 (Fall 1972): 38.

[3]Hannigan, "The Promise of Media Programs: District and School," p. 10.

high value on equipment for use of these items. In other categories, Utah's highest phase of development describes quantities that are less than the advanced phase recommendations of national standards (1969). Utah's guidelines do not recognize a need for microforms, for television or radio production facilities, nor for computer work areas; nor do Utah's guidelines include budgetary recommendations, which are indicated in national standards.

However, Utah's guidelines have some specific features that other standards observed did not have. Planning and performance evaluation are both explicit and implicit in the Utah document. Utah's guidelines also show a distinct attempt to describe programs in terms of behavior which can be observed and measured. Such statements are used in establishing the characteristics of four phases of development in Section I, "Philosophy and Program," and in Section II, "Personnel."[1]

Surveys to measure how actual school programs meet standards have been made.[2] Examples of these include Porter's Indiana dissertation[3] and Huang's dissertation in Idaho.[4] A self-administered evaluative instrument was developed in Oklahoma and widely tested, and was distri-

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[1]Sample pages of Utah's guidelines are in Appendix C.

[2]Gaver, "Services in Secondary School Media Centers: A Second Appraisal," p. 20.

[3]Hugh Calvert Porter, "A Determination of the Physical Components, Spatial Sizes and Spatial Relationships of a Secondary School Instructional Materials Center and Their Application to Selected Secondary Schools in the State of Indiana" (Ph.D. dissertation, Indiana University, 1968).

[4]George Wenhong Huang, "Public Secondary School Programs in Idaho" (Ph.D. dissertation, University of Idaho, 1969).

buted for use by the National Education Association.[1] California also had an instrument for cooperative evaluation of media programs.[2]

Utah has made prior attempts to provide evaluative outlines for its school media programs. One document had a comparison of recommendations from three different sources--the 1969 national standards, the criteria of the Northwest Accrediting Association, and Utah's guidelines--with a fourth parallel column in which school personnel were invited to rate their own programs.[3] A four-page instrument, dated 1971, appears to have been the forerunner of the presently used optical scanning sheets. Its instructions to users: "Rate yourself. Indicate with a dot under the highest phase which your school reaches completely. Then connect dots with a line for your media profile."[4] Apparently designed for use with the four-part series, Guidelines for the Development of an Instructional Media System, this instrument had categories which corresponded to those now in use.

The document being used at the present time was Part IV of the series, Guidelines for the Development of an Instructional Media System, and was titled Media--How Are We Doing? (See footnote, page 8) It was

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[1]W. R. Fulton, Evaluative Checklist: An Instrument for Self-evaluating an Educational Media Program in School Systems (Washington, D. C.: National Education Association, 1969.

[2]California State Department of Education, Bureau of Audio-visual and School Library Education, Guide for Cooperative Evaluation of County and District Audio-Visual Programs (Sacramento: California State Dept. of Education, 1967).

[3]Merle E. Lamson, "Plan for Developing a Media Center" (Research Paper, University of Southern California, 1970), pp. 218-31.

[4]Utah State Board of Education, "School Media Profile" (Salt Lake City: Utah State Board of Education, 1971), p. 1.

a set of quantitative and qualitative standards against which a system was evaluated by choosing the applicable behavioral statement from those describing each of four phases of development, and by recording choices on the optical scanning sheets.

Utah's state school system asked that all schools complete this evaluation and intended to request subsequent annual evaluations and plans. These requests and the practice of storing the data so collected in a computer so that the data could be conveniently retrieved for analysis illustrate the emphasis on planning and evaluation. The ready availability of the data for studies such as the present one further promote continued evaluation and change to meet changing needs. It is important to note that Utah's guidelines, like the national standards, recommended rather than mandated adherence. Both stressed the importance of structuring media programs to meet local needs and resources.

CHAPTER III

DATA COLLECTION

Suggestions of criteria for comparing Utah high school media programs came from many sources, including the author's personal experience, the ideas of fellow educators, the suggestions of several school librarians, the discussions in classes, and from the literature. Use of the Utah guidelines as a basis for comparison seemed logical.

Several advisors pointed out the importance of obtaining cooperation from the Utah State Department of Public Instruction. Mrs. Jennie Kearl, state media specialist, acquainted the author with the data which the state had collected, and gave some further suggestions about structuring the study, agreeing to provide a print-out of the state's computer-stored data. Through further correspondence with Mrs. Kearl, the criteria and methods were clarified.

Preparation of the questionnaire followed. A preliminary draft was pretested. The sample selected for pretesting included Mrs. Kearl, a high school principal, a high school librarian, a junior high school librarian, a district-level media administrator and several fellow students. Slight revisions were made, based on pretest responses.

As previously described, permission was obtained from school districts and principals of schools concerned to send the questionnaires and to pick them up during a personal visit to each school. Telephone contacts with each school principal were made just before the visits,

and appropriate letters were sent after the visits.

The questionnaires were collected in person, in most cases. Every school in the group described for the study was visited, and the author was able to review the answers to the questionnaire during the visit. Some schools had mailed their responses back before the author's visit; one had misplaced the questionnaire and mailed it back after the visit.

Visits to the schools in Utah Valley were made in early morning hours, just after the high school day had begun. Visits to schools in Carbon, Uintah, Granite, Jordan, Murray, Tooele, Davis, Weber, Ogden, and Logan districts were made on three Fridays, April 26 to May 10. Several schools were visited each Friday. The final visits were in Washington and San Juan districts, on May 17. Without exception, the school personnel were cooperative and friendly, and seemed willing to give open, frank answers to questions and to welcome discussion of their programs.

In four cases, the media coordinator's copy of the questionnaire had not reached the person for whom it was intended. In two of these schools, the person who had received the questionnaire was called a "media coordinator," but worked with audiovisual equipment for only half of each day or less. In these instances, the author supplied new questionnaires for the full-time librarians; the part-time media coordinator's responses were not used. In two schools, there were two full-time professional media people; one worked with print materials and was called the "librarian," while the other worked with audiovisual materials and was called the "media coordinator." In the latter two schools the author supplied additional questionnaires and collected responses from both people, and both responses were used.

From the visits, observations were made which were valuable to the

author, but not possible to tabulate. Narrative descriptions of the observations made during the visits were written and kept in the author's papers. The chief value of the visits to this study was the assurance of complete response and more complete communication which clarified the questionnaire items and answers.

Some data from the author-prepared questionnaire was unusable. The information about the professional associations to which the media coordinators belonged and the information about special community or school needs varied so widely that it could not be considered. Some other items duplicated data found elsewhere, and were not used.

Because all the questionnaires were returned, and other data was obtained for all the schools studied, it was not necessary to make inferences from a sample for this study. Rather, descriptive data was presented and conclusions drawn about the whole population.

One problem arose in the use of the state-administered questionnaire. In a considerable number of responses, a "zero" answer was given, even though there was no definition of such an answer's meaning. These responses were impossible to interpret uniformly. Averages which used the "zero" values were unreliable. The author has attempted to deal with them on an individual basis in the interpretation of the data.

Another problem in the use of the data from the state questionnaire arose from the fact that in a number of categories, several "Phases" were identical on a given item. Yet, respondents had given varying responses. This fact will tend to skew means somewhat; the author has tried to identify all responses of this nature and to make appropriate corrections.

Some items of financial data were taken from individual reports

filed by the school districts, found in the files of the Office of the State Superintendent of Public Instruction, Financial Section. Other items were found in the Annual Report of the State Superintendent of Public Instruction 1972-73.[1] The financial data is for the school year prior to the year for which the questionnaire responses were received. The one-year gap was necessary, since the financial data for 1973-74 was not yet compiled. The gap results in data from questionnaires' being descriptive of programs that have already been affected by the financial arrangements being described.

The Utah state school finance formula was changed by the legislature in 1973, and a new formula was in effect during the 1973-74 school year. The effect of this change is unknown; for this study a necessary assumption was made that the financing of the school media programs followed the same general pattern in 1973-74 as it had the previous year.

Data from the author-prepared questionnaire was tabulated and keypunched by school, as was the data from the state questionnaire. The financial data was obtained by district, and the district figure was entered for each high school from that district. For example, the total expenditure per pupil for instructional media programs for Davis District was entered in the appropriate column opposite Davis, Bountiful, and Woods Cross high schools. District figures rather than individual school figures were used because (1) they were available, while individual school figures would have been much more difficult to obtain, and (2) the F-4 report is standardized, and presents more nearly comparable data.

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[1]Utah, Office of the State Superintendent of Public Instruction, Utah Public School System; Annaul Report of the State Superintendent of Public Instruction 1972-73 (Salt Lake City: Office of the State Superintendent of Public Instruction, 1973).

In general, the author found that much more data was collected than one study could assimilate. Some selections of data were made on the basis of ease of interpretation, and some items were selected for analysis because of interest. It is quite possible that other data, if compared, might have provided observations of equal or greater value. It is likely that further cross-comparisons would reveal some interesting relationships. The data collected for this study has been preserved, and will be shared willingly should another person desire to make further use of it.

CHAPTER IV

COMPARISON OF DATA COLLECTED BY THE STATE

The questionnaire administered by the Instructional Media Division was divided into five sections, corresponding to the sections of the state guidelines. The findings of this chapter will also be presented in five corresponding sections, followed by a summary.

A summary of the responses to the "Current Status" questionnaire is in Appendix E. The items are listed, followed by the number and percentage of responses in each of the columns available on the score sheet. The "zero" response, undefined in the guidelines or on the score sheet, was marked frequently. The four other columns corresponded to "Phase One," "Phase Two," etc. Because of the varied nature of the "zero" responses, averages of responses to each item have not been used. However, the author has computed totals and percentages of responses for each column in each of the five sections.

The administrator of the Instructional Media Division requested that this study avoid comparisons which identified individual schools; therefore, general comparisons have been shown by the tabulation of the data, and are discussed below.

Philosophy and Program

Since there were twenty-one schools responding, ten responses to any item would indicate a substantial cluster. Responses totalled ten

or more in a single phase on eleven items in this section. The following paragraphs present these items, along with the description of the phase in which the clustering occured, paraphrased from the Utah guidelines.

Selection (Phase One, ten responses): School leaves selection to the media coordinator with verbal understandings from the faculty.

Weeding (Phase One, fifteen responses): School leaves weeding to the media coordinator.

Circulation (Phase One, ten responses): School leaves the circulation policy to the media coordinator.

Names of Facility (Phase One, thirteen responses): The central media facility is called the library and/or AV center.

Professional Person's Title (Phase One, twelve responses): The professional media person (s) is called "Librarian" and/or "AV Coordinator."

Staff Utilization (Phase One, eleven responses): The average percentage of faculty and staff members using the center, not including faculty meetings, is less than 50 percent weekly.

Inventory (Phase Two, thirteen responses): Schools maintain a central inventory of both materials and equipment (all materials and equipment in the school.) Physical inventory (counting) is taken annually.

Location of Materials (Phase Two, fourteen responses): All printed materials are available for immediate student usage. Audiovisual materials are behind counters or in locked rooms.

Hours (Phase Two, twelve responses): The center is open during school hours (including lunch period) and at least thirty minutes preceding the beginning and following the ending of classes.

Scheduling Students (Phase Three, ten responses): Students are free to come to the center at any time it is open.

Scheduling Professional Media Persons (Phase Four, eleven responses): Media professionals are free to work with those needing help at least 70 percent of the time. Scheduled time with large groups does not exceed 30 percent.

This section had only four "zero" responses, partly because few of the items' wording left opportunity to use that response. "Lower than Phase One" was the interpretation given to three of the four "zero" responses.

Personnel

A broader range of responses is found in this section than in the previous one. There were a substantial number (15.48 percent) of "zero" responses. Clustering of ten or more responses occurred in five of the eight items. Those with no clustering referred to the utilization functions of professional personnel, to the number of technical and clerical personnel, and to the utilization functions of clerical and technical personnel.

The items for which clustering occurred are as follows:

Number of Professional Educators (Media) Employed (Phase One, eleven responses): At least one per 1,000 students.

Management Functions of Professional Personnel (Phase Four, ten responses): Spend less than 30 percent of their time training members of media teams, supervising members of media teams, and planning and organizing the media program, facilities, etc.

Clerical and Technical Functions of Professional Personnel (Phase Two, eleven responses): Spend between 20 and 50 percent of their time ordering and cataloging materials and equipment, producing transparencies, audio tapes, charts, graphs, etc., circulating materials and equipment, repairing materials and equipment, typing, duplicating audio and video recordings, and taking inventory.

Certification (Phase Three, ten responses): All professional media personnel have qualified for and received the teaching certificate with basic media endorsement.

Clerical and Technical Functions of Nonprofessional Personnel (Phase Four, ten responses): Spend 100 percent of their time in clerical and technical areas; do not attempt to operate a center but work under the direction of a professional media coordinator. (Although five responses were in Phase Two or Phase Three on this item, Phase Two and Phase Three are the same as Phase Four. The number of responses in this category could, therefore, be said to be fifteen, instead of ten.)

Facilities

Facilities are predominantly in the earlier stages of development, as indicated by 34.07 percent response in "zero" and 26.10 percent res-

ponse in Phase One. Clustering occurred four times in the "zero" column and once in Phase One. No clusters occurred in other phases. In all but two items, responses in the "zero" and Phase One column were more than half of the total response. The two items for which this is not true were "Group Viewing and Listening," and "Office Space."

The following descriptions represent Phase One. Since all clusters occurred either in Phase One or "zero" it is assumed in all but one items that the meaning of "zero" is "Less than Phase One." The item relating to a large classroom as part of the media center lists "None" as Phase One. It is, therefore, impossible to guess why ten respondents indicated "zero."

Display and Circulation Areas (four zero responses, ten Phase One): 100 to 150 square feet.

Size of Individual Study Area (three zero, eight Phase One): 5 percent of student enrollment can be handled simultaneously at 15 square feet per student.

Power Available without the Use of an Extension Cord (nine zero, six Phase One): 10 percent of the seating capacity equipped with power.

Carrels (six zero, five Phase One): Carrels for less than 1 percent of student enrollment.

Equipped (eleven zero, four Phase One): At least one each of the following set up and ready for individual use: Filmstrip viewer and tape listening.

Conference Rooms (five zero, seven Phase One): At least one room.

Large Classroom as Part of the Media Center (ten zero, four Phase One): Equipped with appropriate audiovisual equipment and accoustical treatment, not assigned to any specific class or group. None.

Production Area (eight zero, nine Phase One): 200 or more square feet of floor space and 30 square feet of production supply storage as part of the media center.

Equipment Storage (eight zero, four Phase One): 100 or more square feet for storage of circulating AV equipment.

Work Area (five zero, nine Phase One): At least 100 square feet for processing materials and minor maintenance.

Professional Area (twelve zero, one Phase One): Over 150 square feet, designed as a teachers' lounge and conference area adjacent to the production area if possible.

Equipment

Clusters of responses in the "zero" column occurred for five of the thirty-two items in this section; two Phase One clusters plus a combination of "zero" and Phase One responses forming eight more clusters were observed, making a total of fifteen items with responses in the earlier phases. Eight clusters were noted in Phase Four, but there were no clusters in columns representing Phase Two or Three. The following list presents the Phase Four clusters first, followed by the lower ones.

16 mm Projector (ten Phase Four responses): One plus one per five teaching stations.

Filmstrip or Combination Filmstrip/Slide Projector (twelve Phase Four): One plus one per eight teaching stations.

Opaque Projector (twelve Phase Four): One plus one per thousand students.

Record Player (thirteen Phase Four): Two plus two per fifteen teaching stations, plus one for music department, one for girls' physical education department, and one for auditorium.

Audio Tape Recorders (ten Phase Four): One plus one per ten teaching stations.

Duplicating Maching (ten Phase Four): One per media center plus one per thirty teaching stations. (Phase Three is the same, and had four additional responses.)

Paper Cutter (ten Phase Four): One 15-inch or larger paper cutter for every twenty teaching stations and at least one 24-inch or larger for the school.

Primary Typewriter (thirteen Phase Four): One per school. (All phases above Phase One are the same, and had one additional response.)

The observation was made that the items in which Phase Four development occurred were standard, basic equipment, traditionally used for regular instruction by most classroom teachers. The items which follow,

which were in lower stages of development were those which would be used for individual or small-group study, not directly under the supervision of a teacher. They utilize newer forms of media, and represent changes in teaching methods.

8 mm Projector (eleven zero, one Phase One): Two plus one per fifty teaching stations.

Filmstrip Viewers (fourteen zero, five Phase One): One per fifty students.

2x2 Slide Viewer (twelve zero, seven Phase One): One per school.

TV Receiver (eighteen zero, one Phase One): One per four teaching stations.

Micro-projector (eight zero, five Phase One): Zero per school.

Audio Tape Players (eight zero, three Phase One): One per twenty teaching stations.

Listening Stations (seven zero, five Phase One): One portable listening station with eight or more earphones.

Projection Cart (five zero, twelve Phase One): One per every four portable pieces of equipment.

Radio Receiver (ten zero, one Phase One): One AM-FM set per media center.

Video Tape Recorder (six zero, nine Phase One): One per media center.

Transparency Equipment (three zero, eight Phase One): One type.

Rapid Process Camera (five zero, eight Phase One): None.

Film Rewind (six zero, four Phase One): None. (Phase Two is the same, and had five additional responses.)

Mechanical Lettering Device (eleven Phase One): None.

In this section there were several categories for which the "zero" response was meaningless because Phase One indicates "None." Percentages in the various columns demonstrate the high and low pattern of distribution. The "zero" column had 20.98 percent; Phase One had 20.53 percent; Phase Two had 14.88 percent; and Phase Four had 28.42 percent.

Materials

The responses indicated that the collections are lower than Phase

One in the following items: filmstrips, 8 mm films, tape and disc recordings, study prints, art prints, overhead transparencies or masters, professional books and professional magazines. No schools are below Phase One in books or newspapers, and only one is below Phase One in magazines. One cluster appeared in Phase One, opposite "Professional Collection, curriculum guides." A single cluster in Phase Two referred to books, and another in Phase Three was for magazines. The only Phase Four cluster was related to pamphlets, clippings, and other ephemera.

For six items, there were no responses in Phase Four: magazines, 8 mm films, study prints, art prints, professional books, and professional curriculum guides. There was only one response (Phase Four) above Phase One for filmstrips, and for tape and disc recordings. Study prints had no responses above Phase Two. The following descriptions relate to the clustered responses.

Books (eleven Phase Three responses): Thirty books per student.

Magazines (ten Phase Four): Over eighty titles with duplication of titles and indexes as required.

Pamphlets, Clippings and Ephemera (ten responses, Phase Four): Have a file available for teacher and student use.

Filmstrips (thirteen zero, seven Phase One): Five hundred filmstrips or one per pupil, whichever is greater.

8 mm Films (fourteen zero, four Phase One): One print for every twenty-five students with a minimum of twenty-five prints.

Tape and Disc Audio Recordings (seventeen zero, three Phase One): Over one thousand records or tapes or one per student, whichever is greater, exclusive of language laboratory, controlled reading materials, etc.

Study Prints (sixteen zero, three Phase One): One set per teaching station plus ten sets all to be housed in the media center.

Art Prints (fifteen zero, two Phase One): 150 reproductions.

Overhead Transparencies and/or Transparency Masters (fifteen zero, two Phase One): One per student.

Professional Collections, Books (twelve zero, six Phase One): Over fifty titles.

Professional Collections, Magazines (twelve zero, six Phase One): Over ten titles.

Courses of Study and Curriculum Guides (seven zero, ten Phase One): One copy of each state and district course of study guide available from the district office.

The general trend in this section is to low responses, with 41.96 percent in the "zero" column and 19.64 percent in Phase One.

Summary

The clusters of responses indicate trends regarding some items, although variations occurred. Higher phases of development were noted in the scheduling of professional personnel, in the management functions of professional personnel, and in the clerical and technical functions of non-professional personnel. Eight types of traditional, basic equipment were found to have clusters in Phase Four, as did collections of books, magazines and ephemeral print materials.

Areas which were notably low were more numerous in all sections except "Personnel." The greatest proportion of "zero" or Phase One responses was in the section describing non-print materials. Responses in the section describing facilities were also predominantly either in the "zero" column or Phase One. Items of equipment which provide for individual student use of non-print materials were in the lower stages of development. There is a low response to items in the "Philosophy and Program" section which describe names of facilities and personnel.

CHAPTER V

OTHER CHARACTERISTICS OF THE SCHOOLS

Information about fifteen other characteristics of the schools was tabulated. Each school was assigned a code number, and the figures regarding each item of data were recorded opposite the code number of the school to which they applied. These tabulations are presented in Appendix F.

For ease of tabulation, each item of information has been assigned a number. The list of items, which will be referred to as "Variables," with their respective numbers follows (the numbers were derived from the keypunch column for the computer program which was used):

Personnel

85. The years of service of the principal in his or her present position.
86. The years of service of the librarian or media coordinator (the full-time, professional person in charge of the media center) in his or her present position.
87. Possession of a master's degree by the media coordinator or librarian.

Facilities

88. Age of the school building.
89. Determination of whether remodelling had been done so as to affect the media center.
90. Presence or absence of accoustical floor covering (carpet) in the media center.

Expenditures

91. Per pupil expenditures for library books and periodicals.

92. Per pupil expenditures for audiovisual materials and equipment.

Sources of Revenue

93. Per pupil expense from state and local funds for instructional materials program, total.
94. Per pupil expense from State Media Improvement Fund.
95. Per pupil expense from federal funds for instructional materials program.
96. Assessed valuation of property in district, per pupil.
97. Total school district mill levy.

Other Data

98. Average salary of the class of "Other Instructional Personnel," which includes librarians.
99. Student-teacher ratio, not including remedial teachers, for the district.

Personnel

The principals' years of service did not vary as widely as did the media coordinators'. The longest period reported for a principal in his present position was fourteen years, while there were two with one year and six with two years. The media coordinators' terms in their present positions varied from twenty-six years to one year. The means and standard deviations illustrate the comparison:

	Mean	Standard Deviation
Principals' Terms	5.0952 years	3.6181 years
Media Coordinators' Terms	8.1429 years	7.1644 years

Media coordinators with master's degrees were located in eight schools. Seventy-five percent of the media coordinators with master's degrees had terms of service shorter than the mean. They comprised 43 percent of those whose term was less than the mean, or 29 percent of the total number of media coordinators. Twenty-five percent of the media coordinators with master's degrees had terms of service longer than the

mean. They comprised 29 percent of those whose terms were longer than the mean, or 10 percent of the total.

Seven principals had terms longer than the mean; fourteen had terms shorter than the mean. Only one of the "older" principals had a media coordinator with a master's degree, while six did not. Among the principals with shorter terms of service, half had media coordinators with master's degrees and half did not.

Facilities

The mean age of buildings was 19.3810 years, with a standard deviation of 20.0. This presents extremely wide difference, which is modified in fact by the remodelling that has been done. Seven of the eight buildings which were older than the mean had been remodelled in ways that affected the media center. Only one of the schools whose building was younger than the mean had been so remodelled, and only one of the media centers in a building older than the mean had not been affected by remodelling. There were two instances when the age of the school was not given, due to conflicting or missing information. One of these had been remodelled.

Fifteen of the schools had carpeted floors in their media centers. Carpeting had been added in every one of the eight schools that had been remodelled. The average age of the non-remodelled buildings (disregarding one whose age is unknown) with carpet is 7.67 years. The average age of the buildings without a carpeted media center is 19.66 years. The non-carpeted schools have principals with an average term of service of 7.5 years, and media coordinators with an average term of 6.33 years.

Expenditures

Per pupil expenditures for library books and periodicals had a mean of $2.86, with a standard deviation of $1.01. The high figure was $5.14, while no school went below $1.75. Seven schools exceeded the mean.

Audiovisual expenditures had a mean of $3.02 per pupil, with a standard deviation of $1.57. Greater variation between extremes occurred in audiovisual expenditures than in print materials' expenditures; three schools had a high figure of $5.34, and the low was $.52. It was interesting to note that the schools which spent the least on audiovisual materials ($.52 per pupil) spent a fairly large amount ($4.04 per pupil) on library books and periodicals, while the schools with the high figure for audiovisual expense were next to lowest in their allotment for print materials ($1.88 per pupil). Twelve of the schools, on the other hand, had print and non-print expenditures that were less than one dollar apart.

Sources of Revenue

Funds for schools in Utah are drawn from local, state and federal sources. Most of the state and local revenue in 1972-73 was administered according to a formula which guaranteed every district a basic amount per distribution unit, based on student population. The districts could add to this amount by levying additional local taxes or by obtaining additional funds under certain state and federal programs. Three fund categories considered for this study were the total state and local funds, a special State Media Improvement Fund, and a group of federal funds authorized by various titles and amendments of the National Defense

Education Act and the Elementary and Secondary Education Act. These federal sources were listed separately in the F-4 reports, but were combined for this study.

There is a notable variation in the per-pupil amounts of state and local funds used for instructional media programs. The high figure is $30.7 and the low is $11.0, with a mean of $18.9 and a standard deviation of $5.68. These figures include salaries of media personnel as well as costs of materials and equipment. They include funds for maintenance and operation as well as capital outlay money used for instructional materials programs. The school with the highest per pupil total had used a large amount of its capital outlay funds for the purchase of equipment for its instructional media program.

State Media Improvement Funds were used by the districts in amounts varying from $4.29 to $1.49 per pupil (the mean was $2.13 and the standard deviation was $.83). This variation was less wide than the variation in federal funds used by the districts, however. Per pupil federal funds ranged from $11.14 to $.03. The mean and standard deviation were $2.50.

While the Utah state school finance formula tended to narrow the differences in funds available to districts, it was interesting to note that this study included schools from both the richest and the poorest districts, in terms of their assessed valuations. The highest assessed valuation per pupil was $193 million, while the lowest was $35 million. The mean was $67 million, and five schools were in districts which were above the mean.

The assessed valuation was related to the mill levy, in some

degree. The highest mill levy was 56.73, and it occurred in a district with an assessed valuation of $64 million per pupil. However, the lowest mill levy (32.60) was in the district with the highest valuation. The mean mill levy was 50.32, with a standard deviation of 5.13.

Other Data

The salary figures tabulated are not for classroom teachers, but for a group of instructional professional personnel that includes, in addition to librarians, school psychologists, counselors and social workers. The other groups may have skewed the figure to be higher than the actual average media coordinator's salary, but the classroom teacher figure would have been misleading. The mean salary was $10,200, with a standard deviation of $747. These salaries are determined by the educational preparation and years of service of the person, applying the basic salary schedule of the district.

The teacher-pupil ratio varied from 22 to 28 students per secondary teacher, not including remedial teachers. There is a mean of 25 and a standard deviation of 2. Nine schools are below the mean, seven above it, and five are at the mean. The schools above the mean did not seem to form any pattern in reference to other data tabulated here, but the analysis of association provided some additional observations in this and other categories.

CHAPTER VI

ASSOCIATION OF VARIABLES

The SPSS computer program provided breakdown charts comparing the groups which responded in each phase for each of the eighty-four items on the state questionnaire with twelve of the fifteen variables listed in Chapter V. Three variables, numbers 87, 89, and 90, were excluded from further analysis because their "yes or no" answers did not fit the format that was being used.

From this analysis it was possible to identify associations that existed between the two sets of variables. Means and standard deviations provided in the breakdown charts were used to locate and compare the distribution of responses for each of the twelve variables. "Positive association" was seen when high quantity in the variable co-occurred with high (Phase Four) response to the questionnaire. When the high quantity in the variable coincided with low response in the questionnaire item, the association was termed "negative." For many items no association, either positive or negative, could be found.

Each chart in the print-out was examined for positive, negative, or no association. "Zero" responses which could not be interpreted to mean "less than Phase One" were discarded. The association value, in the form of a plus, minus, or zero was tabulated for each of the variables. These tabulations are in Appendix G, and are discussed below.

Table 1 summarizes the positive, negative, and non-association

values for each of the twelve variables. Single asterisks mark the predominant value for each variable, and double asterisks identify those values which are equal to or greater than half of the possible total value (84) if the association were complete.

TABLE 1

SUMMARY OF ASSOCIATION VALUES OF TWELVE VARIABLES

Variable Number	Number of Associations (Total = 84)		
	Positive	Negative	No Association
85	42 *	9	33
86	4	44 *	36
88	15	20	49 **
91	6	33	45 **
92	23	27	34 *
93	8	20	56 **
94	24	14	46 **
95	70 **	1	13
96	12	21	51 **
97	6	37	41 *
98	22	20	42 *
99	15	29	40 *

Non-association of the variables was the mode, considering the comparison in general. Only two variables showed a positive association in half or more of the items, and only one showed a negative association value above 50 percent.

The most striking association occurred with Variable 95, "Per

pupil expenditures of federal funds for instructional materials programs." This variable had a positive association with every section of the questionnaire. The bulk of its thirteen non-association scores were in the section describing facilities, and the one negative association had to do with the number of non-professional employees.

The length of service of principals in their present positions was strongly associated with high scores on the questionnaire, and had few negative associations. Specific categories of positive association included selection, weeding and circulation policies, the names for the facility and the title of the professional personnel, inventory, and the management, utilization and clerical and technical functions of the media personnel, as well as with certification. "Older" principals were also positively associated with group study areas, conference rooms, equipment storage area, work areas, professional areas, office space, and 16 mm projectors, slide projectors and filmstrip projectors. Their schools had more TV receivers, micro-projectors, record players and audio tape players, as well as listening stations, projection carts and projection screens, and copying and duplicating machines. They were strong in the provision of rapid process cameras, primary typewriters, and copy cameras, film rewinds, film and tape splicers, and mechanical lettering devices. Their collections were strong in 8 mm films, 16 mm films, tape and disc recordings, study prints and globes.

The negative association value of the length of service of media coordinators in their present position was even more striking. Some of the negative associations were with categories in which rapid change has occurred, such as the name of the facility and title of professional personnel, audiovisual software and its equipment which was designed to

be used by individual students in the media center, and with photographic production tools. Other negative associations were with facilities that were atypical of older buildings: conference rooms, storage space, etc.

Variable 91, "Per pupil expense for library books and periodicals," and Variable 92, "Per pupil expense for audiovisual materials and supplies," provided some interesting contrasts and conflicts. Both had fairly strong negative associations, but the audiovisual expense had strong positive association value as well. The associations of the two variables were opposite each other in eleven items: title of the media person, scheduling of students, non-professional personnel utilization, group study area, conference room, TV receiver, projection carts, radio receiver, transparency production equipment, study prints (in all these Variable 91 was negative), and scheduling of media coordinator (here Variable 91 was positive and Variable 92 was negative).

The two variables both had negative associations with location of materials, card catalog, hours, certification, number of non-professional persons employed, space for display, circulation, and individual study area, large classroom, professional area, slide projectors and viewers and filmstrip viewers, listening stations, primary typewriters, numbers of books, tape and disc recordings. High audiovisual expense had a positive association with policies for selection, weeding, circulation, name of facility and title of media person.

"Per pupil expenditures of state and local funds," Variable 93, had strong negative associations, primarily in regard to production tools and audiovisual equipment. This circumstance may be related to the fact that these funds are the basic source for all school district programs,

and districts with high phases of development in instructional media had often obtained additional funds from other sources for instructional media, using their basic source for maintenance and operation. This speculation is partly supported by the fact that Variable 94, "Per pupil expenditure of State Media Improvement Funds," had some positive associations opposite the negative ones of Variable 93, and, as mentioned previously, the variable dealing with federal funds was almost wholly positive.

The positive associations with the use of State Media Improvement funds extended into all sections except the one describing facilities. Policies, non-professional personnel functions, viewing and listening equipment, production tools were strongly associated.

The negative associations of Variable 96 and Variable 97 were broadly scattered in all sections. Since high assessed valuation (Variable 96) and high mill levy (Variable 97) are related in a way that is almost inverse, it was difficult to guess why they both were associated negatively with the higher phases of media program development.

Higher salaries for professional media personnel and higher teacher-pupil ratios had positive associations in common in eight categories: general philosophy, selection and circulation policies, inventory, card catalog, utilization of non-professional personnel, transparency production equipment, and filmstrips. Higher salaries (Variable 98) had strong associations of both positive and negative values. Its positive relationships lay in the philosophy and program sections, in the production materials area, and in a few classes of equipment. It

had more negative associations with items describing facilities, some kinds of equipment, and with the less conventional items in the collection. The negative associations in these areas coincided in some cases with the negative associations of the "older" media coordinators; this is reasonable, because long experience is a factor in the higher salary of the media coordinator.

A high teacher-pupil ratio had a large number of negative associations. These were the highest in the sections describing equipment, materials, and facilities. However, there were also negative associations between high teacher-pupil ratio and utilization by faculty and staff, scheduling of the media coordinator to provide for accessibility to students, certification, and the number of non-professional personnel employed. These negative associations can be seen as symptomatic of districts whose financial strain is great; the high teacher-pupil ratio is accompanied by strain in other areas.

CHAPTER VII

SUMMARY AND CONCLUSIONS

In order to establish a basis for future planning, this study compared media programs in twenty-one Utah high schools. Those schools having between 700 and 1500 students were selected.

The study satisfied its two hypotheses by employing methods that were primarily descriptive, although some statistical computations were used. Differences and similarities in the media programs of the schools were identified and described, using the responses to the "Current Status" questionnaire administered by the Utah Instructional Media Division, as well as responses to an author-prepared questionnaire, observations from visits to the schools, and other data. Both positive and negative associations were found between responses to the "Current Status" questionnaire and other characteristics of the schools, although there were many instances in which no association could be shown.

School media programs were seen to vary from "zero" response to Phase Four in all five sections of the state guidelines. Some clustering of responses occurred in each section. Generally, the development of school media programs appeared to be low, as measured against the state guidelines. However, the variation was very large, and occurred in all areas.

Associations were strongest between high quantities of federal funds used for media programs and responses indicating higher phases

of development on the questionnaire. The length of service of principals also showed positive association with high phases of development in many instances, while the longer service of media coordinators was associated with low responses to the questionnaire.

Conclusions

1. The associations noted in the data were descriptive only. No cause and effect relationships were inferred, nor could be, by these methods of analysis.
2. Although differences in the media programs in the high schools in the study were many, the general level of development was very low. The guidelines suggested types of media programs that were still in the future for most schools.
3. The levels of media program development appeared to be related to financial support. This was borne out by the positive association of federal funding with advanced development. The frequent incidence of low development in facilities, equipment, non-print materials and supportive personnel also imply lack of funds.
4. Conflict existed between the traditional view of library service and the newer audiovisual elements of the media program. Expenditures for print and non-print items were in competition in some schools despite consistent emphasis in the guidelines on an integrated program. Attitudes toward the integrated concept were less than totally enthusiastic. The negative association between length of service of media coordinators and levels of response illustrated the divergence in

concept. The wording of the guidelines advocated the adoption of new technology and new terminology. Wording may have been related to some of the negative associations that were identified.

5. There was little in the guidelines to indicate the quality of service which was being given to the faculty and students for whom the media programs were designed. Although visits and interviews gave the author the general impression that good service was present in the schools, there were no adequate instruments to measure service.

Recommendations

1. The state guidelines should be revised in such a way that:
   a. the ambiguity of "zero" responses and of varying responses to items in which several phases had identical descriptions will be eliminated;
   b. concepts of the revised national standards, as soon as they become available, will be incorporated;
   c. as many school-level professional media persons as possible will be involved in the restatement of guidelines, and will have greater understanding of and committment to the new guidelines;
   d. measures of effectiveness of the media program for students and faculty will be stated in a usable way.
2. The strong association between federal funds and advanced development of media programs suggests that increased federal funding should be sought actively by state, local and district

media personnel.

3. An exchange of visits between media coordinators would facilitate sharing of ideas and discussion of common problems, and should be encouraged.

Suggestions for Further Study

1. The data collected for this study are available for further investigation of the relationships of the variables. There are indications that some dependent relationships might exist.
2. The relationship between the "Current Status" and [illegible] one-year priorities and the five-year goals reported in response to the state questionnaire invites a study.
3. Another worthwhile study could investigate attitudes of media personnel toward the state guidelines and toward the changes in educational technology that are occurring.
4. The purposes, uses, and effects of the State Media Improvement Funds would make an interesting study which might give some guidance in future financial arrangements for media programs.
5. There is an urgent need to identify criteria which can be used to measure the effectiveness of media programs.

APPENDIX A

LIST OF HIGH SCHOOLS STUDIED

APPENDIX A

LIST OF HIGH SCHOOLS STUDIED

School Name	Size	Grades	School District
American Fork High School	851	10-12	Alpine
Ben Lomond High School	1454	10-12	Ogden
Bingham High School	1179	10-12	Jordan
Bountiful High School	1397	10-12	Davis
Carbon High School	875	10-12	Carbon
Cyprus High School	1401	10-12	Granite
Davis High School	1232	10-12	Davis
Dixie High School	749	10-12	Washington
Jordan High School	1224	10-12	Jordan
Logan High School	1012	10-12	Logan
Murray High School	1425	10-12	Murray
Payson High School	725	10-12	Nebo
Pleasant Grove High School	989	9-12	Alpine
Roy High School	1338	10-12	Weber
San Juan High School	758	7-12	San Juan
Spanish Fork High School	867	10-12	Nebo
Springville High School	855	10-12	Nebo
Tooele High School	1465	9-12	Tooele
Uintah High School	750	10-12	Uintah
Weber High School	1447	10-12	Weber
Woods Cross High School	875	10-12	Davis

APPENDIX B

OPTICAL SCANNING FORM

On the following page is a facsimile of the optical scanning form used by the Utah State Board of Education, Instructional Media Division, to record responses from school libraries. Each school completes three of these: one, in green, indicates the current status of the school's media program; one, in red, indicates priorities set for the next year; another, in blue, indicates goals set for five years ahead. The booklet of guidelines must be used with the scanning form. Sample pages of the booklet of guidelines are in Appendix D.

SCHOOL MEDIA PROFILE

PROFILE TYPE:	(mark one)
Current Status	(Green form)
Priorities list vs. objectives	(Red form)
Goals-5 yr. objectives	(Blue form)

SCHOOL CODE

DISTRICT CODE

NUMBER OF STUDENTS ENROLLED

TO BE FILLED IN BY OPSCAN OPERATOR: LAST FORM

DATE: MO. DAY YR.

Directions: For each criterion indicate your school's status by darkening the bubble of the highest PHASE reached on the CURRENT FORM. For each criterion indicate the PHASE representing the objective your school will attain on the ground of time indicated. (First yr. Red form, 4th yr. Blue form).

(School)

I. PHILOSOPHY & PROGRAM

		PHASE
A	General	1 2 3 4
B-1	Selection	1 2 3 4
B-2	Weeding	1 2 3 4
B-3	Circulation	1 2 3 4
B-4-a	Names of Facility	1 2 3 4
B-4-b	Professional Person's Title	1 2 3 4
B-5	Inventory	1 2 3 4
B-6	Location of Materials	1 2 3 4
B-7	Card Catalog	1 2 3 4
C-1-a	Staff Utilization	1 2 3 4
C-1-b	Student Utilization	1 2 3 4
C-1-c	Extent of Use	1 2 3 4
C-1-d	Hours	1 2 3 4
C-2-a	Scheduling Students	1 2 3 4
C-2-b	Sched. Prof. Media Persons	1 2 3 4

(District)

II. PERSONNEL

A-1	Number of Professionals	1 2 3 4
A-2	Management Functions	1 2 3 4
A-3	Utilization Functions	1 2 3 4
A-4	Clerical & Technical Functions	1 2 3 4
A-5	Certification	1 2 3 4
B-1	Number Tech. & Clerical	1 2 3 4
B-2	Utilization Functions	1 2 3 4
B-3	Clerical & Technical Func.	1 2 3 4

III. FACILITIES

A	Display & Circulation Areas	1 2 3 4
B-1	Size	1 2 3 4
B-2-a	Power	1 2 3 4
B-2-b	Carrels	1 2 3 4
B-2-c	Equipped	1 2 3 4
C-1	Group Viewing & Listening	1 2 3 4
C-2	Conference Rooms	1 2 3 4
C-3	Large Classroom	1 2 3 4
D	Production Area	1 2 3 4
E	Equipment Storage	1 2 3 4
F	Work Area	1 2 3 4
G	Professional Area	1 2 3 4
H	Office Space	1 2 3 4

(Principal)

IV. EQUIPMENT

A	16mm Projector	1 2 3 4
B	8mm Projector	1 2 3 4
C	2 x 2 Slide Proj., Rem. C.	1 2 3 4
D	Filmstrip or Comb. Proj.	1 2 3 4
E	10 x 10 Overhead Projector	1 2 3 4
F	Opaque Projector	1 2 3 4
G	Filmstrip Viewers	1 2 3 4
H	2 x 2 Slide Viewer	1 2 3 4
I	TV Receiver	1 2 3 4
J	Micro-Projector	1 2 3 4
K	Record Player	1 2 3 4
L	Audio Tape Players	1 2 3 4
M	Audio Tape Recorders	1 2 3 4
N	Listening Stations	1 2 3 4
O	Projection Cart	1 2 3 4
P	Projection Screens	1 2 3 4
Q	Radio Receiver (AM-FM)	1 2 3 4
R	Copying Machine	1 2 3 4
S	Duplicating Machine	1 2 3 4
T	Light Control	1 2 3 4
U	Video Tape Recorder	1 2 3 4
V-1	Dry Mount Press	1 2 3 4
V-2	Paper Cutter	1 2
V-3	Transparency Equipment	1 2
V-4	Rapid Process Camera	1 2 3 4
V-5	Primary Typewriter	1 2 3 4
V-6	Copy Camera	1 2 3 4
V-7	35mm Camera	1 2 3 4
V-8	Film Rewind	1 2 3 4
V-9	Film Splicers	1 2 3 4
V-10	Tape Splicer	1 2 3 4
V-11	Mechanical Lettering Device	1 2 3 4

V. MATERIALS

A	Books (Non-Text)	1 2 3 4
B	Magazines	1 2 3 4
C	Newspapers	1 2 3 4
D	Pamph., Clip., & Eph. Mat.	1 2 3 4
E	Filmstrips	1 2 3 4
F	8mm Films	1 2 3 4
G	16mm Films & Video Rec.	1 2 3 4
H	Tape & Disc Audio Rec.	1 2 3 4
I	Slides	1 2 3 4
J	Study Prints	1 2 3 4
K	Art Prints	1 2 3 4
L	Globes	1 2 3 4
M	O.H. Transparencies/Masters	1 2 3 4
N	Prof. Coll., Books	1 2 3 4
O	Prof. Coll., Magazines	1 2 3 4
P	Prof. Coll., Guides	1 2 3 4

APPENDIX C

SAMPLE PAGES OF UTAH GUIDELINES

On the following pages are samples from the Utah State Board of Education, Instructional Media Division, publication Media--How Are We Doing? Guidelines for the Development of an Instructional Media System, Part IV. Note that this booklet is used with an optical scanning form to record responses. The person completing the form reads the item in the booklet, then selects the phase which describes his program.

I. PHILOSOPHY AND PROGRAM

	Phase I	Phase II	Phase III	Phase IV
A. General	School has a verbal educational philosophy	School has a written educational philosophy	School has a written educational philosophy and a separate written philosophy for the media program	School has a written educational philosophy including a section dealing with the role or mission of the media program
B. Specific				
1. Selection	School leaves selection to media coordinator with verbal understandings from faculty	School has a written policy approved by the principal	School has a written policy which has been officially approved and which provides for specific ways in which teachers will be included	School has a written policy which has been officially approved and which provides for specific ways in which teachers and students will be included
2. Weeding	School leaves weeding to media coordinator	School has a written policy which has been officially approved	Same as Phase IV	School has a written policy which has been officially approved and which provides for specific ways in which teachers help determine discard policy for materials and equipment
3. Circulation	School leaves the circulation policy to media coordinator	School has a written policy which has been officially approved	Same as Phase IV	School has a written policy which: a. Has been approved by the principal

I. PHILOSOPHY AND PROGRAM

	Phase I	Phase II	Phase III	Phase IV
C. Evidence of philosophy in action				
1. Utilization of the IMC				
a. Faculty and staff: Average percentage of faculty and staff members using the center. (Do not count faculty meetings)	Less than 50% of faculty visit the center each week	50 to 65% weekly	65 to 80% weekly	More than 80% weekly
b. Students: Average percentage of the studentbody using the center	Less than 20% of the students daily	20 to 35% of the students daily	35 to 50% of the students daily	Over 50% of the students daily
c. Extent of use	During the time the center is open, students or faculty are present 70% or more of the time	During the time the center is open, it is being used by students or faculty at least 80% of the time	During the time the center is open it is being used by students or faculty at least 90% of the time	There is no time during the period the center is open, when it is not being used by some student or faculty member
d. Hours	The center is open only during school hours	The center is open during school hours (including lunch period) and at least 30 minutes	In addition to the hours outlined in Phase II, the center is open at least an additional 6	In addition to the hours outlined in Phase II, the center is open at least an additional 20 hours

APPENDIX D

QUESTIONNAIRE AND COVER LETTERS

The questionnaire was designed for this study and sent to the principals and media coordinators in each of the schools studied. There are three cover letters, which were sent to district superintendents, principals, and media coordinators, respectively.

QUESTIONNAIRE

The following questions should be answered by the principal and the media coordinator. The term "media coordinator" refers to the person who administers instructional material, print and non-print, in the school. If the responsibility is divided, please use the second copy of the questionnaire which was sent to the media coordinator and give information for both people. The term "media program" includes both library and AV services and assumes that they are combined.

I. Personnel

1. How many years have you served in your present position?
   Principal_____
   Media Coordinator_____

2. What was your previous assignment in the school system? If you were a teacher, indicate your grade level and/or subject area.
   Principal_____

   Media Coordinator_____

3. How many years have you been a professional educator in public schools?
   Principal_____
   Media Coordinator_____

4. Check the following items which describe the Media Coordinator's professional training:
   Basic Teaching Certificate___Grade and/or Subject _____
   Professional Teaching Certificate___ Grade and/or Subject_____
   Basic Media Endorsement___ Professional Media Endorsement ____
   In-service preparation or Special Media Courses____
   Master's Degree___ Subject of Master's Degree_____
   Other (Specify)_____

5. List the professional organizations to which the Media Coordinator belongs and check the blank(s) indicating activity in each organization.
   _____ Officer ___ Committee Member___
   _____ Officer ___ Committee Member___
   _____ Officer ___ Committee Member___

II. Resources Available to School

1. Does your school district maintain and circulate a collection of (check those which apply)
   Materials, including 16mm films, filmstrips, tapes, pictures, etc.____
   AV equipment, including projectors, tape recorders, etc. ____

2. If your district has the items mentioned above, how often do you use this service?
   Regularly____ Occasionally____ Seldom ____ Never ____

3. Does your district have a rental or borrowing arrangement with a university or regional AV center? Yes____ No ____

4. If you answered "Yes" to #3, how often do you use this service? Regularly____ Occasionally___ Seldom ____ Never _____

5. Do the students and faculty of your school have access to a public library in your community? ____Yes ____No. If "Yes" give the name of the library_____

6. Do the students and faculty of your school have a university library near enough for use? ____Yes ____No. If "Yes" give the name of the university:_____

7. Does the Utah State Library provide bookmobile service in your area? Yes ___ No ___

III. Building and Facilities

1. How old is your school building? _____

2. Has your building been remodelled in such a way as to affect the library or media program? ____Yes ____No.

3. If you answered "Yes" to #2, give the date and a description of the remodelling:_____

_____

3. Does your Instructional Materials Center (Library) have acoustical floor covering? _____Yes ____No

4. Does your school have access to equipment for making and playing back video tape recordings? ____Yes ____No

IV. Special Needs and Interests

1. Has your school had any curriculum development projects or special programs that have affected your media program? Please describe them:

_____

_____

_____

_____

2. Does your community have special needs or interests that affect your school's media program? Please describe any of these that you can:

_____

_____

_____

3. Are there any groups of citizens who express specific interest in school policies which affect your media program? Please describe any of these:

_____

_____

LETTER TO SUPERINTENDENTS

Dear Superintendent _____,

You have been an active participant in the effort to improve the instructional media resources in your district, and you are undoubtedly aware that Utah's State Board of Education has promoted growth of media programs, publishing a set of state guidelines for the use of schools and districts.

This year, for the first time, a complete body of raw data is available to permit comparison of the instructional media programs in Utah schools with the state's guidelines. The Instructional Media Division of the Office of the State Superintendent of Public Instruction has collected from each district and school an evaluation of the current program and facilities as well as each school's projected changes for one and five years hence. The date is stored in the computer at the state office.

You are probably asking the same questions that the people in Nebo District, where I teach, are: (1) How do my schools' media programs compare with the state guidelines? and (2) How do the programs of the schools in my district compare with those in other districts? I chose this problem for a study in connection with a Master's program in Library and Information Science at Brigham Young University, and I am hoping for your cooperation.

My study will analyze the state's data for the twenty-one Utah high schools with enrollment between 700 and 1500 students. A list of these schools is enclosed, and it includes _____ High School (s) in your district. The study should be useful to all the schools and districts involved.

In order to make the study more meaningful, some additional information is needed. I have prepared a short questionnaire which I am sending to the principals of the schools, to be completed by them with the help of the media coordinators. I would like to make personal visits to each school to pick up the completed questionnaires and to observe the media centers.

I would deeply appreciate your consent to submit the questionnaire and to visit the school (s) in your district. If you do not wish to cooperate in this study, please notify me by return mail so that I can change my plans. A stamped, self-addressed envelope is enclosed for this purpose. Unless I hear from you, I will assume that you are willing for me to send the questionnaire and to visit, and I will plan to provide you and each school with a copy of the finished study.

Very truly yours,

Mrs. Lucille G. Taylor
160 South 100 East
Spanish Fork, Utah 84660

LETTER TO PRINCIPALS

Dear Principal _____,

You and the media coordinator in your faculty have completed a self-evaluation of your media program and a projection of your plans for the media program for one and five years in the future, and have sent the forms to the state school office. The same process is going on in every school in the state this year, and the data is available from the computer in the state office.

In Nebo District, where I teach, we wondered how we compared with other schools and with the state's guidelines. I assumed that other districts and schools would be asking the same questions, and decided to make the analysis of the data my project for my Master's program in Library and Information Science at Brigham Young University.

To make the study more meaningful, I need some additional information, which only you and the media coodinator in your school can provide. The enclosed short questionnaire will take only a few minutes, and I will be grateful if you will complete it. In addition, I would like permission to visit you and the media coordinator, to collect the questionnaire and to observe your media center. I am tentatively planning this visit for _____, at about _____ m.

I am enclosing a copy of a letter to your superintendent, and a list of the schools which will be included in the study. If the date for visiting your school is inconvenient for you, or if you do not wish to participate in the study, please use the enclosed self-addressed envelope to notify me by return mail. Otherwise, I will plan to come, and will call you the day before to remind you.

As I indicated in the letter to the superintendent, I will be happy to provide a copy of the study for your use. Thank you, again, for your help.

Very truly yours,

Mrs. Lucille G. Taylor
160 South 100 East
Spanish Fork, Utah 84660

LETTER TO MEDIA COORDINATOR

Media Coordinator
_____ High School

Dear Media Coordinator,

Help! I am a teacher in Nebo District, on sabbatical leave to complete a Master's degree in Library and Information Science at Brigham Young University, and only you can provide the information I need to complete my study.

My project involves the media programs at twenty-one high schools with enrollments between 700 and 1500 students. Your school is one of these. The data that you have already given the state school office will be used to find out how this group of schools stand in comparison with the state media guidelines and with each other's programs. Then, to give more meaning to the state's data, I will use the information from the enclosed questionnaire and from the observation I would like to make when I visit your media center. The tentative date for the visit is _____ at about ____m.

I am enclosing copies of material which was sent to your principal. Only one copy of the questionnaire needs to be completed for your school, but you and the principal will need to work on it together. I would like to pick up the completed form when I visit you.

The principal has a stamped, self-addressed envelope to send me a quick reply if the date for my visit is inconvenient or if you'd rather I didn't come. I hope I don't hear from you, because your help is extremely important and because I'm looking forward to the visit.

Thanks, in advance, for the time and effort.

Very truly yours,

Mrs. Lucille G. Taylor
160 South 100 East
Spanish Fork, Utah 84660

APPENDIX E

CURRENT STATUS RESPONSE SUMMARY

CURRENT STATUS

		0	1	2	3	4
I.	PHILOSOPHY AND PROGRAM	N / %	N / %	N / %	N / %	N / %
A.	General	0/0	4/19	7/33	5/23	5/23
B1.	Selection*	0/0	10/47	3/14	5/23	3/14
B2.	Weeding*	0/0	15/71	3/14	1/4	2/9
B3.	Circulation*	0/0	10/47	6/28	2/9	3/14
B4A.	Names of Facility*	1/4	13/61	4/19	1/4	2/9
B4B.	Prof. Person's Title*	0/0	12/57	6/28	1/4	2/9
B5.	Inventory*	0/0	1/4	13/61	0/0	7/33
B6.	Location of Materials*	0/0	2/9	14/66	3/14	2/9
B7.	Card Catalog*	0/0	9/42	4/19	3/14	5/23
C1A.	Staff Utilization	0/0	11/52	4/19	4/19	2/9
C1B.	Student Utilization	0/0	9/42	5/23	6/28	1/4
C1C.	Extent of Use	1/4	1/4	3/14	9/42	7/33
C1D.	Hours*	0/0	2/9	12/57	6/28	1/4
C2A.	Scheduling Students*	0/0	0/0	2/9	10/47	9/42
C2B.	Sched. Prof. Media Persons	2/9	1/4	0/0	7/33	11/52
	Total Responses (315)	4	100	86	63	62
	Percentage of Total Response	1.27	31.55	27.94	20.00	19.68
II.	PERSONNEL					
A1.	No. of Professionals	0/0	11/52	5/23	4/19	1/4
A2.	Management Functions	2/9	1/4	6/28	2/9	10/47
A3.	Utilization Functions	2/9	6/28	5/23	2/9	6/28
A4.	Clerical & Tech. Functions	2/9	4/19	11/52	2/9	2/9
A5.	Certification*	0/0	3/14	10/47	3/14	5/23
B1.	No. Tech. & Clerical	8/38	7/33	4/19	1/	1/4
B2.	Utilization Functions	7/33	4/19	5/23	2/	3/14
B3.	Clerical & Tech. Functions*	5/23	1/4	2/9	3/14	10/47
	Total Responses (168)	26	40	48	19	38
	Percentage of Total Response	15.48	23.81	28.57	11.31	22.62

* "Zero" responses to these items could not be interpreted to mean less than "Phase One".

III. FACILITIES	0 N / %	1 N / %	2 N / %	3 N / %	4 N / %
A. Display & Circ. Areas	4/19	10/47	5/23	1/4	1/4
B1. Size	3/14	8/38	7/33	2/9	1/4
B2A. Power	9/42	6/28	3/14	2/9	1/4
B2B. Carrels	6/28	5/23	5/23	5/23	0/0
B2C. Equipped	11/52	4/19	5/23	1/4	0/0
C1. Group Viewing & Listening	10/47	0/0	6/28	0/0	5/23
C2. Conference Rooms	5/23	7/33	4/19	3/14	2/9
C3. Large Classroom*	10/47	4/19	1/4	6/28	0/0
C. Production Area	8/38	9/42	1/4	2/9	1/4
E. Equipment Storage	8/38	4/19	4/19	2/9	3/14
F. Work Area	5/23	9/42	2/9	2/9	3/14
G. Professional Area	12/57	1/4	1/4	5/23	2/9
H. Office Space	2/9	4/19	5/23	7/33	3/14
Total Responses (273)	93	71	49	40	21
Percentage of Total Response	34.07	26.01	17.95	14.65	7.69

IV. EQUIPMENT					
A. 16 mm Projector	0/0	0/0	2/9	9/42	10/47
B. 8 mm Projector	11/52	1/4	4/19	0/0	5/23
C. 2 x 2 Slide Projector	2/9	4/19	7/33	4/19	4/19
D. Filmstrip or Comb. Proj.	0/0	1/4	5/23	3/14	12/57
E. 10 x 10 Overhead Proj.	2/9	6/28	7/33	5/23	1/4
F. Opaque Projector*	1/4	0/0	6/28	2/9	12/57
G. Filmstrip Viewers	14/66	5/23	1/4	0/0	1/4
H. 2 x 2 Slide Viewer	12/57	7/33	1/4	0/0	1/4
I. TV Receiver	18/85	1/4	2/9	0/0	0/0
J. Micro-projector*	8/38	5/23	3/14	1/4	4/19
K. Record Player	1/4	1/4	2/9	4/19	13/61
L. Audio Tape Players	8/38	3/14	3/14	2/9	5/23
M. Audio Tape Recorders	2/9	3/14	4/19	2/9	10/47
N. Listening Stations	7/33	5/23	5/23	2/9	2/9
O. Projection Cart	5/23	12/57	0/0	1/4	3/14
P. Projection Screens	1/4	2/9	3/14	8/38	7/33
Q. Radio Receiver (AM-FM)	10/47	1/4	0/0	3/14	7/33
R. Copying Machine	1/4	7/33	4/19	3/14	6/28
S. Duplicating Machine	2/9	2/9	3/14	4/19	10/47
T. Light Control	1/4	4/19	4/19	6/28	6/28
U. Video Tape Recorder	6/28	9/42	5/23	0/0	1/4
V1. Dry Mount Press	6/28	1/4	0/0	6/28	8/38
V2. Paper Cutter	1/4	1/4	7/33	2/9	10/47
V3. Transparency Equipment	3/14	8/38	1/4	0/0	9/42
V4. Rapid Process Camera*	5/23	8/38	1/4	3/14	4/19
V5. Primary Typewriter*	3/14	4/19	1/4	0/0	13/61
V6. Copy Camera*	4/19	3/38	1/4	4/19	4/19
V7. 35 mm Camera*	1/4	4/19	2/9	6/28	8/38
V8. Film Rewind*	6/28	4/19	7/33	2/9	2/9
V9. Film Splicers*	1/4	6/28	5/23	2/9	7/33
V10. Tape Splicer*	1/4	8/38	1/4	7/33	4/19
V11. Mech. Lettering Device*	0/0	11/52	3/14	5/23	2/9
Total Responses (672)	141	138	100	94	191
Percentage of Total Responses	20.98	20.53	14.88	13.98	28.42

V. MATERIALS	0 N / %	1 N / %	2 N / %	3 N / %	4 N / %
A. Books (Non-Text)	0/0	2/9	11/52	7/33	1/4
B. Magazines	1/4	3/14	7/33	10/47	0/0
C. Newspapers	0/0	2/9	6/28	5/23	8/38
D. Pamphlets, Clippings, etc.*	1/4	1/4	0/0	9/42	10/47
E. Filmstrips	13/61	7/33	0/0	0/0	1/4
F. 8 mm Films	14/66	4/19	0/0	3/14	0/0
G. 16 mm Films & Video Rec.	3/14	2/9	5/23	8/38	3/14
H. Tape & Disc Audio Rec.	17/80	3/14	0/0	0/0	1/4
I. Slides	9/42	8/38	1/4	2/9	1/4
J. Study Prints	16/76	3/14	2/9	0/0	0/0
K. Art Prints	15/71	2/9	2/9	2/9	0/0
L. Globes	7/33	3/14	5/23	4/19	2/9
M. O.H. Transparency/Masters	15/71	2/9	1/4	2/9	1/4
N. Prof. Collection, Books	12/57	6/28	2/9	1/4	0/0
O. Prof. Collection, Mags.	12/57	6/28	0/0	2/9	/4
P. Prof. Collection, Guides	7/33	10/47	3/14	1/4	0/0
Total Responses (336)	141	64	43	56	29
Percentage of Total Response	41.96	19.64	12.80	16.66	8.63

APPENDIX F

OTHER SCHOOL CHARACTERISTICS

Other school characteristics, determined from various sources, are tabulated as variables, with their values given for each school in the study. Schools are identified by code numbers.

TABULATION OF OTHER SCHOOL CHARACTERISTICS

Items	School Codes										
	1	2	3	4	5	6	7	8	9	10	11
85[a]	5	2	1	5	2	2	14	12	2	3	1
86[a]	10	5	5	16	2	26	5	1	2	3	6
87[a]	no	no	no	yes	yes	no	no	yes	no	yes	no
88[a]	15	20	42	22	15	63	59	8	60	--	21
89[a]	no	yes	yes	yes	no	yes	no	no	yes	yes	yes
90[a]	yes	yes	yes	yes	no	yes	no	no	yes	yes	no
91[b]	$4.04	$2.12	$2.59	$2.16	$3.34	$1.75	$2.16	$3.19	$2.59	$4.03	$2.91
92[c]	$ .52	$3.03	$2.89	$1.93	$2.17	$1.73	$1.93	$5.34	$2.89	$3.39	$3.48
93[d]	$11.0	$30.7	$15.2	$18.8	$22.9	$11.6	$18.8	$25.9	$15.2	$24.0	$13.5
94[d]	$3.91	$1.72	$1.49	$1.76	$4.29	$1.46	$1.76	$2.15	$1.49	$1.92	$1.73
95[d]	$ .69	$ .03	$ .82	$3.09	$6.06	$1.41	$3.09	$11.14	$ .82	$4.74	$3.70
96[e]	$53m.	$65m.	$135m.	$35m.	$89m.	$54m.	$35m.	$47m.	$135m.	$57m.	$64m.
97[f]	52.05	51.78	47.68	51.85	54.34	56.37	51.85	46.35	47.68	52.55	56.75
98[g]	$11.40	$10.40	$10.40	$10.40	$ 9.20	$10.00	$10.40	$ 9.30	$10.40	$ 8.30	$10.40
99[h]	29	25	24	23	23	25	23	26	24	23	25

SOURCE: a--author-prepared questionnaire.
b--F-4 Reports from each district, in files of Office of Superintendent of Public Instruction, Salt Lake City.
c--Utah, Office of the State Superintendent of Public Instruction, Utah Public School System, p. 22, with additional computation by the author.
d--Ibid., p. 19, with additional computation by the author.

TABULATION OF OTHER SCHOOL CHARACTERISTICS
(Continued)

Items	School Codes									
	12	13	14	15	16	17	18	19	20	21
85[a]	2	5	5	8	7	8	7	9	5	2
86[a]	2	17	4	6	14	18	8	18	1	2
87[a]	yes	yes	yes	no	no	no	no	no	yes	no
88[a]	6	15	10	8	12	7	--	21	1	2
89[a]	no	yes	no	no	no	no	no	yes	no	no
90[a]	yes	yes	yes	no	yes	no	yes	yes	yes	yes
91[b]	$1.88	$4.04	$2.75	$4.74	$1.88	$1.88	$5.14	$1.93	$2.75	$2.16
92[c]	$5.17	$ .52	$2.18	$1.82	$5.34	$5.34	$5.17	$4.54	$2.18	$1.93
93[d]	$18.7	$11.0	$16.7	$29.8	$18.7	$18.7	$24.7	$14.5	$16.7	$18.8
94[d]	$1.99	$3.91	$1.66	$2.41	$1.99	$1.99	$1.99	$1.67	$1.66	$1.76
95[d]	$1.68	$ .69	$ .57	$2.42	$1.68	$1.68	$2.55	$1.96	$ .57	$3.09
96[e]	$46m.	$53m.	$42m.	$193m.	$46m.	$46m.	$54m.	$87m.	$42m.	$35m.
97[f]	51.70	52.05	51.72	32.60	51.70	51.70	42.60	49.82	51.72	51.85
98[g]	$10.70	$11.40	$ 9.60	$ 9.90	$10.70	$10.70	$11.00	$ 9.60	$ 9.60	$10.40
99[h]	28	29	25	22	28	28	23	26	25	23

SOURCES (continued): e--Ibid., p. 95 and p. 82, with computation by the author; figures expressed in millions of dollars.
f--Ibid., p. 96.
g--Ibid., p. 86; figures expressed in thousands of dollars
h--Ibid., p. 83.

APPENDIX G

ASSOCIATION OF VARIABLES

Variables numbered 1 through 84, derived from responses to the state-administered "Current Status" questionnaire, were tested for association with twelve other variables, derived from other characteristics of the schools. Coincidence of high levels of response to Variables 1-84 with high quantities in the other variables indicated a positive association, shown by a plus (+) symbol. Coincidence of low levels of response to high quantities indicated a negative association, shown by a minus (-) symbol. Lack of either positive or negative association was indicated by a zero (0).

ASSOCIATION OF VARIABLES

PHILOSOPHY AND PROGRAM

Questionnaire Items	Variable Numbers											
	85	86	88	91	92	93	94	95	96	97	98	99
1. Philosophy	-	+	0	0	0	0	+	+	0	0	+	+
2. Selection	+	-	+	0	+	+	+	+	0	-	+	+
3. Weeding	+	0	+	0	+	0	0	+	+	-	0	0
4. Circulation	+	0	+	0	+	0	+	+	0	-	+	+
5. Name of Facility	+	-	+	0	+	+	-	+	+	-	0	-
6. Title of Professional Media Person	+	-	+	-	+	+	-	+	+	-	0	-
7. Inventory	0	0	0	0	0	0	+	+	+	0	+	+
8. Location of Materials	+	-	-	-	-	0	0	+	0	-	-	0
9. Card Catalog	0	0	0	-	-	0	+	+	-	0	+	+
10. Utilization--Faculty and Staff	+	0	+	0	+	0	0	+	+	-	0	-
11. Utilization--Student	-	-	0	0	0	0	0	+	0	0	0	0
12. Extent of Use	0	0	0	0	0	0	+	+	0	+	+	0
13. Hours	0	-	-	-	-	-	0	+	0	-	0	0
14. Scheduling Students	0	+	+	-	+	-	+	+	-	-	0	+
15. Scheduling Media Coordinator	0	-	-	+	-	0	+	+	0	0	+	-

ASSOCIATION OF VARIABLES

PERSONNEL

Questionnaire Items	Variable Numbers											
	85	86	88	91	92	93	94	95	96	97	98	99
16. Number Professional People Employed	0	0	0	0	0	0	0	-	0	0	0	0
17. Management Function	+	-	-	0	0	0	0	+	0	0	+	0
18. Utilization Functions	+	-	-	0	0	0	0	+	0	0	0	0
19. Clerical and Technical Function	+	0	0	0	0	0	+	+	0	0	0	0
20. Certification	+	0	0	-	-	-	-	+	-	-	-	-
21. Nonprofessional Number Employed	-	-	0	-	-	0	0	+	0	0	0	-
22. Utilization Functions	0	0	0	-	+	0	+	+	0	0	+	+
23. Clerical and Technical Functions	+	0	0	0	0	0	+	+	0	0	0	0

ASSOCIATION OF VARIABLES

FACILITIES

Questionnaire Items	Variable Numbers											
	85	86	88	91	92	93	94	95	96	97	98	99
24. Display and Circulation Area	0	-	-	-	-	0	-	0	0	-	-	-
25. Study Area Size	0	-	0	-	-	0	-	+	0	0	-	-
26. Power	0	-	-	0	0	0	-	0	0	0	0	0
27. Carrels	0	-	-	0	0	0	0	0	0	0	0	+
28. Equipped	0	-	0	0	-	0	0	0	0	0	0	0
29. Small Group Viewing and Listening	+-	-	0	-	+	0	-	+	-	-	0	-
30. Conference Rooms	+	0	0	-	+	0	0	+	-	-	-	0
31. Large Classroom	-	+	0	-	-	+	-	+	+	+	-	-
32. Production Area	0	-	-	0	0	0	0	0	0	0	0	0
33. Equipment Storage	+	-	-	0	0	0	0	+	0	0	0	0
34. Work Area	+	0	-	-	0	0	0	+	-	-	0	0
35. Professional Area	+	-	0	-	-	+	-	+	0	0	-	-
36. Office Space	+	0	0	-	0	0	0	0	-	0	0	0

ASSOCIATION OF VARIABLES

EQUIPMENT

Questionnaire Items	Variable Numbers 65	86	88	91	92	93	94	95	96	97	98	99
37. 16mm Projector	+	0	+	0	0	-	0	+	+	0	+	0
38. 8mm Projector	-	-	+	0	0	0	-	+	+	-	-	-
39. 2x2 Slide Projector	+	0	0	-	-	-	0	+	-	-	0	-
40. Filmstrip Projector	+	0	0	0	+	0	-	+	0	0	+	0
41. 10x10 Overhead Proj.	0	0	+	0	0	-	0	+	-	-	0	0
42. Opaque Projector	+	+	+	0	+	-	0	+	-	0	0	0
43. Filmstrip Viewer	0	-	0	-	-	-	0	+	-	-	-	0
44. 2x2 Slide Viewer	-	-	0	-	-	0	0	+	0	-	-	-
45. TV Receiver	+	-	-	-	+	+	-	+	-	+	-	-
46. Micro-Projector	+	0	0	0	-	0	+	+	0	+	-	-
47. Record Player	+	0	+	0	0	0	+	+	0	0	+	0
48. Audio Tape Player	+	0	-	0	-	0	0	+	-	-	0	0
49. Audio Tape Recorder	0	-	0	+	0	0	0	+	+	+	+	0
50. Listening Stations	+	0	0	-	-	0	0	+	0	-	0	0
51. Projection Cart	+	-	0	-	+	-	+	+	-	-	+	+
52. Projection Screens	+	0	0	0	+	0	+	+	0	0	+	0
53. Radio Receiver	0	0	0	-	+	-	+	+	0	-	-	+
54. Copying Machine	+	0	0	0	0	0	0	+	-	0	0	0
55. Duplicating Machine	+	0	0	-	0	-	0	+	-	-	0	0
56. Light Control	0	0	-	0	+	0	0	+	0	0	0	0
57. Video Tape Recorder	0	-	0	0	-	0	0	+	0	0	0	-
58. Dry Mount Press	0	-	+	0	-	0	+	0	0	-	+	-
59. Paper Cutter	0	0	0	0	0	0	+	+	0	0	+	0
60. Transparency Equip.	-	0	-	+	-	0	+	+	0	0	+	+
61. Rapid Process Camera	+	0	0	+	+	-	+	+	0	-	0	+
62. Primary Typewriter	+	-	-	-	-	-	+	+	-	-	+	-
63. Copy Camera & Stand	+	-	0	0	+	-	0	+	-	-	0	+
64. 35mm Still Camera	0	-	0	-	0	-	-	+	-	-	-	-
65. Film Rewind	+	-	0	-	+	-	0	+	-	-	0	-
66. Filmsplicers	+	-	-	0	0	0	0	0	0	0	+	+
67. Tape Splicer	-	-	0	0	-	0	+	+	0	0	+	-
68. Mechanical Lettering Device	+	0	0	0	0	+	0	+	+	0	-	-

ASSOCIATION OF VARIABLES

MATERIALS

Questionnaire Items	Variable Numbers 85	86	88	91	92	93	94	95	96	97	98	99
69. Books (Non-text)	0	0	0	-	-	0	0	0	0	0	0	0
70. Magazines	0	0	0	+	0	+	0	+	0	+	0	0
71. Newspapers	0	-	-	+	0	-	0	+	0	0	+	0
72. Pamphlets, Clippings	0	0	0	0	0	0	+	+	+	0	0	+
73. Filmstrips	-	-	-	0	-	0	-	0	0	0	-	-
74. 8mm Films	+	-	+	0	+	0	0	+	+	-	0	-
75. 16mm Films and VTR	+	0	0	0	0	-	0	+	0	0	0	0
76. Tape & Disc Records	+	-	-	-	-	-	-	+	-	-	-	-
77. Slides	0	0	0	0	0	0	0	0	0	-	-	-
78. Study Prints	+	-	0	-	+	+	0	+	0	-	0	0
79. Art Prints	0	-	+	-	0	0	+	0	0	0	-	-
80. Globes	+	-	0	0	+	+	0	+	+	-	0	0
81. Overhead Transparencies	0	-	0	-	0	0	0	0	0	-	0	0
82. Professional Books	-	-	0	0	-	-	0	+	0	0	0	0
83. Prof. Magazines	0	-	0	-	0	0	0	0	0	-	-	-
84. Curriculum Guides	0	-	0	0	-	0	0	+	0	0	0	0

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