Summer 1971

A Comparison of Emphasis of Training and On-The-Job Effectiveness of Media Personnel

Roy E. Williams
Central Washington University

A COMPARISON OF EMPHASIS OF TRAINING AND ON-THE-JOB EFFECTIVENESS OF MEDIA PERSONNEL

A Thesis

Presented to

the Graduate Faculty

Central Washington State College

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

---

by

Roy E. Williams

August, 1971

APPROVED FOR THE GRADUATE FACULTY

_____

Alexander H. Howard Jr., COMMITTEE CHAIRMAN

_____

Kenneth R. Berry

_____

Daryl Basler

TABLE OF CONTENTS

Page

LIST OF TABLES. v

ACKNOWLEDGEMENTS. vi

DEDICATION. vii

Chapter

I. NATURE OF THE STUDY 1

PROBLEM STATEMENT 1

DEFINITION OF TERMS 1

Media Specialist and Media Personnel. . . . 1

Instructional Media Center. 1

Instructional Media 2

Print Media Orientation 2

Non-print Media Orientation 2

Balanced Media Orientation. 2

PURPOSE OF THE STUDY. 2

LIMITATIONS OF THE STUDY. 3

HYPOTHESES. 4

A PRIORI ASSUMPTIONS. 5

ORGANIZATION OF THE REMAINDER OF THE REPORT . 5

II. REVIEW OF LITERATURE. 6

INTRODUCTION. 6

EFFECTIVENESS OF INSTRUCTIONAL MEDIA. 6

ADOPTION OF INSTRUCTIONAL MEDIA 8

Chapter		Page
	THE ROLE OF THE MEDIA SPECIALIST.	10
	TRAINING AND CERTIFICATION OF MEDIA PERSONNEL	14
	ATTITUDE DEVELOPMENT WITH RESPECT TO MEDIA USE	16
	EVALUATION OF EDUCATIONAL PROGRAMS.	17
	SUMMARY	18
III.	PROCEDURES.	20
	DESIGN OF THE STUDY	20
	DESIGN OF THE QUESTIONNAIRE	21
	SELECTION OF THE SAMPLE POPULATION.	23
IV.	FINDINGS OF THE STUDY	28
	RESPONSE TO THE QUESTIONNAIRE	28
	TRAINING ORIENTATION AND RANK ORDER ORIENTATION	30
	EXPERIENCE AND RANK ORDER CORRELATION . . .	31
	RANK ORDER CORRELATION AND PROFESSIONAL POSITION.	33
	RANKED IMPORTANCE OF INSTRUCTIONAL MEDIA. .	34
	RANKING BY MEDIA SPECIALISTS.	34
	Ranking by Print Oriented Media Specialists	37
	Ranking by Non-print Oriented Media Specialists	37
	Ranking by Balanced Oriented Media Specialists	37
	Summary of Ranking by Media Specialists .	38

Chapter Page

RANKING BY PRINCIPALS. 40

Ranking by Print Oriented Principals . . . 40

Ranking by Non-print Oriented Principals . 40

Ranking by Balanced Oriented Principals. . 40

Ranking by Principals with no Specific Instructional Media Training 41

Summary of Ranking by Principals 41

RANKING BY TEACHERS. 43

Ranking by Print Oriented Teachers 43

Ranking by Non-print Oriented Teachers . . 43

Ranking by Balanced Oriented Teachers. . . 44

Ranking by Teachers with no Specific Training in Instructional Media. 44

Summary of Ranking by Teachers 46

SUMMARY. 46

V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS . . . 48

SUMMARY. 48

CONCLUSIONS. 50

Hypothesis Two 51

Hypothesis Three 52

Hypothesis One 52

RECOMMENDATIONS. 53

EPILOGUE 55

BIBLIOGRAPHY 56

APPENDIXES 59

LIST OF TABLES

Table		Page
1.	Summary of Respondents.	29
2.	Rank Order Correlation Comparison by Training Orientation	32
3.	Rank Order Correlation Comparison by Experience.	35
4.	Rank Order Correlation Comparison Media Specialist vs Principal	36
5.	Frequency of Ranking by Media Specialists . . .	39
6.	Frequency of Ranking by Principals.	42
7.	Frequency of Ranking by Teachers.	45

ACKNOWLEDGEMENTS

The writer would like to express his sincere appreciation to Dr. Alexander Hamilton Howard for his guidance, encouragement and technical advice through the conduct of this study.

The writer wishes also to thank Dr. Daryl Basler for assistance rendered with regard to statistical treatment of the data and Dr. Kenneth R. Berry for serving on his committee.

Special thanks also to Dr. William Gaskell for the part he played in encouraging response to the questionnaire.

DEDICATION

I wish to dedicate this report to my loving wife Gwen, without whose understanding, encouragement, and assistance this report could not have been accomplished.

CHAPTER I

NATURE OF THE STUDY

I. PROBLEM STATEMENT

It has long been recognized in our society that formal training plays a strong role in the development of attitudes, and that attitudes are important determinants of behavior. Consequently, the behavior of one whose formal training has been oriented in a particular direction is often somewhat different from the behavior of one whose training has been oriented in a different direction.

Does the training orientation of instructional materials personnel affect their on-the-job effectiveness? Will a person who is primarily oriented toward print materials be more or less effective in promoting the use of instructional materials than one whose orientation is primarily non-print? Will one who has a balanced training orientation be more effective? Such questions prompted this writer to undertake a study to determine if such differences occur.

II. DEFINITION OF TERMS

Media Specialist and Media Personnel. The terms media specialist and media personnel both refer to the individual, at building level, designated responsible for the media center.

Instructional Media Center. Instructional media center

(IMC) refers to the place in the building where most of the instructional materials and equipment are stored.

Instructional Media. Instructional media refers to all equipment and materials used in instruction, such as slides filmstrips, projectors, textbooks, library books and other related items.

Three emphases in training of media personnel are identified:

Print Media Orientation. Print media orientation refers to a course of study primarily involving classes in selection, classification, administration, utilization and storage of printed materials such as are found in the traditional library.

Non-Print Media Orientation. Non-print media orientation refers to a course of study primarily involved with selection, classification, administration, utilization, production and storage of materials other than print produced, such as films, recordings and television.

Balanced Media Orientation. A balanced media orientation is one in which an approximate equal number of courses in the above two areas make up the course of study.

III. PURPOSE OF THE STUDY

Experts in the field of curriculum agree that in order for change to occur a change agent must be present. The

change agent may be the principal, the media specialist, or a classroom teacher. It is the feeling of many who are writing in the field today that in the area of instructional media, the change agent should be the one person at building level in charge of the media center.

The need for educators to determine the course of study that will produce the most effective media personnel has been cited in the literature.(13:161) Several benefits may be realized if it can be demonstrated that one type of training orientation equips media personnel to do a better job of promoting media use. First, it will provide information to prospective media specialists that will help them in planning their college program. It will provide data for certification committees involved in formulating guidelines for certification. Third, it will assist colleges in the development of programs that lead to certification. Fourth, it will provide administrators with additional data to assist in making decisions about future staffing. Fifth, it will give direction to efforts in inservice training of present staff.

IV. LIMITATIONS OF THE STUDY

The writer recognizes two major limitations to the study, both involving the sample population. First, it was impractical to determine the training orientation of the

media specialists prior to conducting the actual study. This naturally led to an uneven distribution of the three training orientations in the sample. Second, several respondents misinterpreted the instructions on page three of the questionnaire and responded inappropriately, jeopardizing their value to the study. Further, any conclusions or inferences derived from the data presented must be recognized as descriptive of the sample population and may not be generalizable to the greater educational community.

V. HYPOTHESES

The major hypothesis (H_1), stated in question form, was: Are media specialists with a balanced print non-print media orientation more effective in promoting instructional media use than media specialists with a print or non-print media orientation?

Answer to this question was sought through two sub questions: (H_2) Are media specialists with a balanced media orientation more or less effective in developing attitudes toward media use in teachers within their sphere of influence than media specialists with a print or non-print media orientation? (H_3) Are the attitudes toward media use of media specialists with a balanced media orientation different from and more desirable than those of other media orientations?

The answer to the former was sought through comparisons of the correlation between media specialist and teacher attitudes toward media use. The answer to the latter was sought through analysis of the frequency of ranking of the ten categories of media and through the literature.

VI. A PRIORI ASSUMPTIONS

The writer made several assumptions with regard to the design of the study. First, it was assumed teacher attitudes toward media use determine the degree of importance placed upon them. Second, attitudes are influenced by pre-service training. Third, attitudes may be influenced by supervisory personnel. Fourth, attitudes may be influenced by experience. Fifth, attitudes toward media use may be inferred from the rank ordering of ten categories of instructional media. Sixth, the effectiveness of a supervisory specialist may be inferred, in part, by the degree to which his teachers attitudes correlate with his own.

The validity and reliability of the instrument used to gather data was also assumed.

VII. ORGANIZATION OF THE REMAINDER OF THE REPORT

The remainder of the report consists of a review of literature, description of the procedures followed, presentation of the data and conclusions.

CHAPTER II

REVIEW OF LITERATURE

I. INTRODUCTION

Examination of the various indexes and reference guides revealed no literature pertaining to a study of the effectiveness of media personnel. Therefore, a review of the available literature in several related areas was undertaken. Six major areas were researched: The effectiveness of instructional media; the adoption of instructional media; the role of the media specialist; the training and certification of media personnel; attitude development relating to instructional media; evaluation of educational programs.

II. EFFECTIVENESS OF INSTRUCTIONAL MEDIA

A great deal of research has been conducted on the effectiveness of various media and combinations of media. The results of this research clearly show media can enhance instruction when it is used in conjunction with conventional teaching and can do at least as well, if not better, than conventional teaching when used alone.(9:368)

Research has demonstrated that use of media in teaching can result in up to twenty per cent increase in learning of facts and up to thirty eight per cent increase in retention. Media focuses attention, develops vocabulary, influences

opinion, reinforces attitudes, contributes to problem solving ability, and skill development. Use of multi-media can multiply results. (25:10-15)

Lange, in reporting a speech by Gagne', makes four points concerning the effectiveness of media. First, no medium is universally effective. There seems to be no medium which is the most effective in all instructional situations. Second, the medium used depends upon the nature of the learning task and is determined by how the learner is involved with the media. Third, the medium depends upon the instructional function and is determined by analysis of the instructional task. Fourth, combinations of media seem to produce the maximum results, when used consecutively. (18:557)

In 1962 the National Education Association's Department of Audio-Visual Instruction defined the function of the media program as two fold. First, media may be used to improve instruction by serving as a supplementary aid enabling an increase in the teacher's effectiveness. Second, media may bear the primary responsibility for the instructional task by serving alone. (9:367) Voluminous research demonstrates the efficacy of media in performing these functions, and educators are cognizant of that evidence. Wyman writes,

> There is no doubt in any modern educator's mind that the wide and good use of all kinds of print and non-print media is needed if teachers are to teach and students are to learn effectively and efficiently in our schools. (27:114)

III. ADOPTION OF INSTRUCTIONAL MEDIA

In spite of what we know about instructional media, adoption has been painfully slow. The degree of adoption is demonstrated in the level of support given to instructional media by school administrators. Morris (1963) reported that while industry spends three times as much for tools as for facilities, schools spend six tenths of one per cent of their capital expenditures on audiovisual equipment. (9:367).

Several factors mitigate against the adoption of the newer media. Attitudes of educators toward the place of media in the instructional program is one. Formanek and Swayze report,

> Film has been used increasingly in schools over a number of years, although its use as an integral part of the curriculum is not well established. Often it is considered a frill, a dessert after the main course of printed material, rather than a major source of information about the world. (11:187)

Hence the potential of much media is unrealized.

Secondly, there are fears that machines will take the place of teachers or force them into unfamiliar roles. Media experts have not provided teachers with appropriate alternatives for, as Twyford points out, "Very little research has been done to define the new role of the teacher when media are employed to simplify the instructional task and to increase the number of students that can be handled." (9:370)

Cost of the newer media is a third barrier to adoption. However, cost is relative. For example, conventional classroom practices may be just as effective as television instruction; but if you are teaching hundreds or even thousands of students, rather than thirty, then conventional classroom instruction is considerably less efficient.

A fourth factor is the complexity of the newer media which makes it more difficult to manage. This writer has heard more than one educator say, "if it takes more time and effort to use than the things I'm doing now, I will not use it". Wendt maintains that until we can dispell the idea that it is easier to use words and make reading assignments, newer, more efficient methods will not be adopted. (25:30)

Hoban (1956) identified the detachment of basic research from normal classroom conditions as a barrier to acceptance of technological advances. (9:368) Acceptance of research findings and adoption into practices are more likely to occur when they are integrated into equipment and materials. (12:670)

Resistance to innovation with instructional media can be overcome. Van Wyck lists three keys to hurdling these barriers to adoption. First, the teacher must be included in planning the media program. Second, teachers must be included in the evaluation and selection of equipment and materials. Third, it is imperative that inservice training be provided in the use of instructional media. (23:90-91)

Writers agree this inservice training must be an ongoing program rather than a stop-gap measure that typifies so many inservice efforts today.

IV. THE ROLE OF THE MEDIA SPECIALIST

What is the role of the media specialist with regard to the effectiveness of the newer instructional media and its adoption into the mainstream of instruction? In chapter one of his book, Administering Audio-visual Services, Erickson outlines four roles the media specialist must perform. First, he is an executive who must administer the fiscal affairs of the media center. Second, he is a supervisor of the physical operations of the center, overseeing the storage and distribution of materials and equipment and the services of personnel. Third, he is an instructional materials specialist ready and able to give assistance to teachers in the selection of appropriate materials for their individual needs. Fourth, he is a technician, knowledgeable in the maintenance and operation of equipment and the production of materials. (10:chap. I)

Frequently, in examining the role of the instructional media specialist one overlooks what is happening in the classroom. Zulich maintains,

> His primary concern should and must be with the implementation of media in the school's curriculum and in the psychology of learning...[he must be free to

> be working] in the classroom or conducting workshops, developing and designing new approaches to the learning process, and opening up new avenues of learning. (28:10)

The idea that the media specialist must perform a larger, more vital role than an equipment and materials clerk has been reiterated by Chalmers,

> ...the audiovisual supervisor must recognize that a large and very important part of his work is involved in the inservice training of teachers in materials, equipment, technology, and methodology.... (7:60)

Another source describes the role of the media specialist thus:

> The person is one of the most vital components of a media center. He initiates the services which change a room full of materials into a well functioning center of learning. He provides guidance in the selection of materials to be used and purchased; organizes the materials, equipment, and space for maximum use; provides instruction in the use of the center and its contents; aids teachers in planning and preparing materials for their individual class use; serves on curriculum and textbook committees as a materials specialist; and helps organize inservice training for teachers. (17:7)

It has already been pointed out there is confusion concerning the roles of teachers with regard to the newer media. There is even more confusion among media specialists, the difference being a question of who is to perform these roles rather than what the roles are. The Iowa State Department of Instruction states,

> The first professional staff member should be a media generalist trained in both the library and the audio-visual fields, having the same general educational background as other teachers. (17:7)

Lieberman suggests the librarian must be able to

perform the leadership role in curriculum development with regard to selection and utilization of media. (20:128) Wyman, on the other hand, terms the ideal of a media generalist a utopian dream, implying it is not practical to expect a single individual to be fully competent in all the areas which that would require. (27:116) His proposal, equally utopian from this writer's point of view, would be to have a central administrator and a series of five or more specialists or technicians.

Bergeson calls for a clear division of roles:

> The professionally operating librarian has filled the role of providing a 'reservoir of knowledge' concerned with the needs of the scholar, the learner, and the inquiring citizen of the community he serves. He has been the professional guide to the resources needed by man to study the world, the evaluator and anticipator of academic needs for knowledge and information, and, in fact, the developer of required resource organizations and structures.... Today the world is, in fact, faced with a multi-media milieu. In such a world a companion specialist...is required--someone with informed concern for the structuring of nonlinguistic media messages, with knowledge of the influence that use of these media will have on the learner, and with understanding of the way they ought to be used. (3:103)

Bergeson is referring, of course, to the audiovisual specialist.

Such a division of roles has developed in our schools, though perhaps not to the degree of sophistication described by Bergeson. The pattern that has emerged in all too many instances is one in which the print media is presided over by a full-time librarian and the non-print media coordinated

by some other person who is released from one or two class periods a day for the purposes of distribution of films and equipment.

Librarians have failed to take the initiative in the promotion of the newer media. Wasserman, addressing libraries in general, writes,

> ...we live in a time when many library caretakers still remain firmly entrenched in their roles long past the time when libraries which need desperately to find new perspectives should be tolerating their perpetuity. (24:588)

Why has a professional concern not been shown toward the newer media? Elizabeth Stone, also writing about libraries in general, charges administrators with failing to challenge their staff with tasks involving responsibility and creativity. As a result, the librarian has not risen to fill the needs of modern society. (21:181-187)

Other writers have explored this lack of concern. Eleanor Godfrey, reporting on a study conducted in 1962, asks: "Why should there be a division of responsibility between handling of audio and visual and printed materials?" She then proceeded to answer: "It may represent a difference in the importance placed on visual and printed materials in the school curriculum. Or it may represent a lack of exposure to 'non-book' media and equipment maintenance in the training of the average school librarian." (14:104) This writer suggests it is a combination of both. The

former has already been supported by other writing in the field. The latter may be confirmed by reviewing certification requirements for instructional media specialists.

V. TRAINING AND CERTIFICATION OF MEDIA PERSONNEL

Grady, in a recent article, reported the state of the certification movement of audiovisual specialists. Currently, fourteen states have special certificates for audiovisual personnel. Of the remaining thirty-seven (District of Columbia included), twenty-two plan to have certification in effect within one to three years. Generally speaking, the requirements for certification include a Bachelor's Degree, valid teaching certificate, and some teaching experience. Of the fourteen states, all require additional specialized training in instructional media. Only three require a specific course in print materials--that one course being selection and utilization of print materials. None of the elective courses listed were of an obvious print nature. (15:8-9) Consequently, it is conceivable that in almost any state one could hold the position of instructional media specialist without any specialized background in traditional library materials. On the other side of the ledger, we find similar requirements for library certification. A review of the Requirements for Certification 1969-70 reveals most states require a teaching certificate and additional

specialized training in library science, the amount being sometimes dependent upon the level of the school in which the person wishes to practice. Some states have a special certificate and some add an endorsement to the teaching certificate. In nearly every state it is possible to become certified in school libraries with virtually no specific coursework in non-print media. (26:1-216) Examination of our own University of Washington Librarianship Program reveals that though non-print media courses are recommended, none are specifically required for the Masters Degree in Librarianship. (22:305,490)

The need for specific training has been recognized by leaders in library education. Lieberman (University of Washington School of Library Science) indicated in 1955,

> The integration of all materials of Communication; namely, print, graphics, pictorals, live and recorded presentations, should be taught in the library school by precept as well as example. (20:121)

Bramley, in 1969, reported the findings of an American Library Association Commission which studied the problem of establishing a national plan to train librarians. They failed to support a universal program of training. The commission reached two conclusions. There is a need for librarians to be adaptable in order to adjust to a changing curriculum. There is also a need for inservice training. (4:96-98)

VI. ATTITUDE DEVELOPMENT WITH RESPECT TO MEDIA USE

It is widely recognized that attitudes are basic determinants of behavior. Kelley gave evidence of that recognition,

> ...it has become abundantly clear, from research and from reason, that how a person feels is more important than what he knows. This seems true because how one feels controls behavior while what one knows does not. (19:455)

Attitudes of teachers have been shown to have a marked effect on their students. Aiken states, "It is generally held that teacher attitude and effectiveness in a particular subject are important determinants of student attitudes and performance in that subject." (1:572)

Research has shown that while attitudes are difficult to establish or eradicate, they can be modified and reinforced by training. In a study by Callis (1950) it was reported that a significant change in attitude toward children and school work was found to occur after the first six months of college training. (12:509)

It has been demonstrated that the emphasis of training affects attitude development. For example, Kearney and Rocchio (1956) found a significant difference in teacher attitudes toward children and schoolwork between groups of teachers with 1. a Liberal Arts background 2. a teachers college background and 3. a university background. (12:512)

Teacher's attitudes toward media have also been shown to be pliable. Belforte found when large amounts of instructional materials were carefully integrated to a specific instructional situation and made readily available to teachers, positive changes in attitude toward media were produced in teachers. (2:25)

VII. EVALUATION OF EDUCATIONAL PROGRAMS

Most of the attempts to evaluate educational programs have focused on pupil performance in relation to this program or that program or some innovative item of instructional media as opposed to conventional instruction. Much of the research in the area has been termed worthless because either no objective measure of the desired behavior was used or the criteria of effectiveness was invalid. (9:1423) Recently such terms as competency and accountability have appeared in the literature regarding the effectiveness of the teacher.

Regarding accountability of media specialists, Chavez writes,

> What seems obvious is a need to collect data that might lead to a hypothesis for identification of significant variables.... One such hunch [hypothesis] has been made that what a teacher is may be more important than what a teacher does. It is on the basis of such hunches that a collection of data might be directed toward self perception, personality factors, attitudes and demographic background. (8:57)

Gerlach, in discussing the education of the audiovisual man, states,

> It is only logical that a survey of programs be followed by a study of the relationship which exists between a college program and the performance of a media man after he finishes this program. Does he perform in a certain way because of his training? Or is it possible he could do everything he does as a media man without any academic AV training? (13:161)

Educators have long upheld the importance of academic training even though past research in evaluation has not been supportive. One possible reason the research has not supported the importance of training is the nature of the subjects involved in the study. The diversity of human experience produces many variables which may not be apparent to the researcher, much less controllable.

Evaluation must be based on performance objectives and have as its goal the improvement of instruction. Before evaluation can be undertaken, a consensus must be reached with regard to the roles of educators and instructional media.

VIII. SUMMARY

Educational technology has experienced great advances in recent years in the area of instructional media. Research has shown media to be highly effective in improving instruction when used to assist teachers and that certain newer media can be at least as effective as conventional teaching when used alone. In spite of these facts, the adoption of

these newer media has been slow at best and non-existent in many school districts.

The role of the media specialist has not been operationally defined nor given adequate status in curriculum development. The situation has been further clouded by an uncertainty with regard to who should perform the role. Training of the designated media specialist (media center director) has led to the newer media being left in the hands of a person untrained in its specific educational applications or with someone else with neither the time nor the administrative authority for its adequate promotion.

Attitudes have been shown to be strong determinants of behavior, and while they are difficult to establish or eradicate, it is possible to modify and reinforce them. It has been demonstrated that attitudes toward media can be changed. Educational evaluation is shifting in emphasis from student performance to teacher performance and the need to evaluate the performance of the media specialist has been indicated in the literature.

CHAPTER III

PROCEDURES

I. DESIGN OF THE STUDY

Several assumptions based upon the literature were made prior to the study. First, it was assumed that attitudes play a vital role in behavior and thus determine, to a large degree, the instructional strategy of teachers. Secondly, attitudes are influenced by the orientation of the training the teacher underwent. Third, attitudes may be influenced by supervisory personnel, including the building principal as well as the media specialist. Fourth, attitudes may be influenced by the amount of professional experience a teacher has had. Fifth, attitudes toward media use may be inferred from the degree of importance placed upon them by the teacher. The sixth and last assumption was that a useful measure of the effectiveness of a media specialist would be the degree to which the attitudes toward media use of teachers within his sphere of influence correlate with his own.

It was determined that a questionnaire type survey would be the most practical method of data collection to test the hypotheses. With the above assumptions in mind, a questionnaire was designed, using as a guide Hillway's Handbook of Educational Research. (16:32-33) See appendix A for an example of the questionnaire.

II. DESIGN OF THE QUESTIONNAIRE

Page one of the questionnaire consisted of an introductory letter to the respondent explaining the identity of the researcher, the nature and purpose of the study, the data desired, an estimate of the time required to respond and a pledge to send a report of the study to cooperating schools.

The second page of the questionnaire requested pertinent personal data including professional position, amount of professional experience, the number of years in present building and present assignment. This information was requested in order to accurately identify media personnel, teachers, and principals, and to provide a base for relating the effect of training and experience on their attitudes toward media use. This information also helped to insure that teachers had been under the media specialist's sphere of influence for at least a year, which would enhance the appropriateness of the data for analysis. Respondents were asked to assess their training orientation on the basis of one of four categories: Primarily Print Media Orientation; Primarily Non-Print Media Orientation; Balanced Print - Non-Print Orientation; and No Specific Training in instructional media. These categories were operationally defined in terms of course titles in Library Science and Instructional Media

taken from the 1969-70 Central Washington State College General Catalogue. (6:84-89)

Page three was designed to determine the degree of importance which educators place upon various instructional media. A list of thirty-five separate items of media was extracted from a recently published college text in Audio-visual Instruction. (5:31) It was felt that rank ordering of these items would be a useful measure of the degree of importance accorded each item. It was further felt that thirty-five items might prove to be so large a group to rank order as to become confusing and tend to discourage respondents. Therefore, the thirty-five items were divided into thirteen general categories, three of which were eliminated from the final form because they were deemed more accurately described as activities than materials. (5:XVI-XXI)

The final form contained the following ten categories, operationally defined by examples of the materials included in them:

1. PRINTED TEXTS AND REFERENCE MATERIALS - textbooks, workbooks, supplementary books, encyclopedia, newspapers, magazines, comics and microforms.
2. PROGRAMMED INSTRUCTIONAL MATERIALS - programmed texts, teaching machines.
3. INEXPENSIVE SUPPLEMENTARY MATERIALS - government documents, institute and association publications, trade journals, travel folders.

4. NON-PROJECTED MATERIALS - graphs, charts, diagrams, cartoons, posters, maps, gloves, flat opaque pictures.
5. PROJECTED MATERIALS - overhead transparencies, 35mm slides, filmstrips, 16mmfilms, 8mm film loops, multimedia presentations.
6. ELECTRONIC DEVICES - television, radio, computers, phono disc players, tape recorders, telelecture (telephone).
7. REALIA - kits, collections, live animals
8. SIMULATION DEVICES - models, mockups
9. DISPLAYS - teaching displays, bulletinboards, chalkboards, flannel boards, hook and loop boards.
10. CREATIVE CONSTRUCTION - puppets, scroll theaters, sand tables, contour maps, dioramas.

Respondents were asked to rank these categories of instructional media from 1 (high) to 10 (low) with regard to an assessment of their importance to instruction.

III. SELECTION OF THE SAMPLE POPULATION

Three basic criteria were established to guide in the selection of a sample population. First, the media specialist had to be located at building level rather than at a district center. Second, his position had to be full time. Third, he must have served in that capacity for at least a full year.

Additionally, teachers responding to the questionnaire had to be within the sphere of influence of the media specialist for one year.

It was decided to make the sample selection from within the Consortium of Washington Education Centers, a cooperative group composed of several school districts and Central Washington State College. This group was selected because their expressed goals are aimed at improving instruction in the public schools, and it was felt they would be more likely to fit the criteria outlined above. The population from which the sample was taken was further limited to Consortium schools on the West side of the Cascades. Recognizing that some larger schools might well have more than one media specialist, one further limitation was made. That limitation was to include only elementary schools and junior and senior high schools of less than six hundred enrollment.

One weakness in the selection of a sample population was that it was impractical to ascertain the training orientation of the media specialist ahead of time. This made it impossible to insure equal sampling of the three training orientations under study. To attempt to alleviate this problem somewhat, the 1969-70 edition of the Official WDAVI (Washington Department of Audio-visual Instruction) Membership Handbook and the 1970-71 WSASL (Washington State Association of School Librarians) Directory were utilized to compile a

list of media specialists who were currently employed in schools in the Consortium. Sixty individuals were identified in this manner. The sample population was taken from this group by arranging them by school districts, consecutively numbering them from one to sixty and then selecting all odd numbered individuals. Names and addresses of the building principal of each selected media specialist were obtained from the 1970-71 Washington Education Association Directory.

A field test of the instrument was conducted and minor wording changes were made in the letter of introduction. None of the field test respondents misinterpreted directions or indicated confusion which might have predicted the problem described in chapter one with regard to responses on the questionnaires.

Permission to circulate the questionnaire was secured from the Central Washington State College Graduate office, and mailing was accomplished on May 28, 1971. The questionnaires were sent in packets along with an explanatory memo, directly to the building principal. Each of the thirty packets contained twelve identical questionnaires with self addressed, stamped, return envelopes, one for the media specialist, one for the principal and one for each of ten teachers within the sphere of influence of the media specialist.

The data were analyzed by computing rank order correlations for each media specialist and the teachers in his

building. Comparisons of these correlations were made with regard to training background, professional experience, and the correlations of the building principal. Hypothesis two (H_2) was tested by computing an average correlation for all the media specialists within each of the three training orientations. Hypothesis three (H_3) was tested by computing simple percentages of responses of ratings in each category of media.

Statistical treatment was complicated due to the number of questionnaires returned with inappropriate responses. As has already been mentioned, forty two respondents misinterpreted the directions on the third page of the questionnaire and instead of rank ordering the ten categories of media assigned a rating from one to ten to each category. An attempt was made to translate these ratings to a rank order, using two guidelines: First, at least five of the categories had to be clearly discernable as to rank; Second, no more than three of the remaining five could be the same number. For example, if the rating was 2, 4, 5, 5, 6, 7, 8, 8, 9, 10, it is clear that the 2 is equivalent to a rank of 1; 4 is equivalent to a rank of 2; 6 is equivalent to a rank of 5; 7 is equivalent to a rank of 6; 9 is 9; and 10 is 10. An estimate must then be made to determine 3 and 4 from the ratings of 5, and 7 and 8 from the ratings of 8. This estimate could easily be made by examining the average

ranking of other educators of the same training orientation. If, however, the ratings appeared in this manner, 1, 1, 1, 4, 5, 5, 5, 5, 6, 6, there was not enough distinction between categories to allow translation. Ten questionnaires were salvaged in this manner, leaving thirty two that could not be used in calculating correlations. The thirty two were used to calculate percentage ratings used to test H_2.

A detailed presentation of the data, together with analysis and interpretation, follows in the next chapter.

CHAPTER IV

FINDINGS OF THE STUDY

The writer undertook a questionnaire survey in an attempt to gather data which might shed light on the effect that emphasis of training has on the on-the-job effectiveness of instructional media specialists. Media specialists, principals, and teachers were asked to rank ten categories of media as a measure of their attitude regarding the importance of the various categories to their instructional situation.

This chapter presents the data gathered by the questionnaire. A summary of the response to the survey is followed by an anlysis of the data.

Rank order correlations were computed for each media specialist and the teachers within the sphere of his influence. Rank order correlations were computed for each principal and media specialist and for each principal and his teachers. Comparisons were then made with regard to training orientation, professional experience, and professional position.

A frequency count of the rankings were computed and comparisons were made between media specialists, principals, and teachers in each training orientation.

I. RESPONSE TO THE QUESTIONNAIRE

A total of three hundred sixty questionnaires were

mailed, twelve in each of thirty packets. Questionnaires were returned from twenty five of the thirty schools, indicating eighty three percent of the principals distributed the questionnaires to their staff. A total of one hundred ninety seven questionnaires were returned, one hundred fifty five completed by teachers, twenty one by principals and twenty one by media specialists. Three teachers and one media specialist failed to rank the categories on page three of the questionnaire. An additional forty two misinterpreted the directions and assigned each category a rating instead of rank ordering them. Ten of these were salvaged using the procedures described in chapter three. Table I summarizes the respondents.

Table I

SUMMARY OF RESPONDENTS

	Total	Correct	Incorrect	Translated	Not Ranked	Usable
Teachers	155	121	31	5	3	126
Principals	21	15	6	3	0	18
Media S	21	15	5	2	1	17
Totals	197	151	42	10	4	161

II. TRAINING ORIENTATION AND RANK ORDER CORRELATION

Average rank order correlations of media specialists within each of the three training orientations--Print, Non-print, and Balanced--were compared to determine if one of the training orientations was superior in terms of correlation of the media specialists attitudes toward media use with those of teachers within his sphere of influence.

Twelve print oriented media specialists' rank ordering of the ten categories of instructional media were correlated with the ranking of a total of seventy-four teachers. The average correlation for all twelve print media specialists was found to be +.51 which approaches the .05 level of significance.

Two non-print oriented media specialists' rank ordering were correlated with the ranking of six teachers. The average correlation for the two was found to be +.64 which is significant at the .05 level.

Three balanced orientation media specialists' rank ordering were correlated with the ranking of seventeen teachers. The average correlation for the three media specialists was +.48.

The extremely small sample size, especially with regard to non-print and balanced orientations, makes generalization risky. The writer feels it would appear that, in

general, media specialists in each of the three training orientations are equally effective in reinforcing attitudes toward media use of teachers within their sphere of influence.

The writer also observes that there was generally a somewhat higher correlation between media specialists and teachers with training than with teachers without specific training in instructional media.

It seems particularly noteworthy to this writer that well over half of the teachers (54) indicated no specific training in instructional media. Equally surprising was the large number of teachers (25) who claimed to have a balanced orientation. Table II presents a complete report of rank order correlation comparison by training orientation.

III. EXPERIENCE AND RANK ORDER CORRELATION

The data regarding experience was requested to insure that teachers had been within the media specialists sphere of influence for at least a year. It is of little direct value to the study otherwise, however, the writer wishes to point out two interesting observations.

Rank order correlations of the seventeen media specialists were compared with regard to the experience of the teachers. Four experience levels were established; one to five years, six to ten years, eleven to fifteen years, and more than fifteen years. There were thirty-seven teachers in the one to five years group, eighteen in

Table II

RANK ORDER CORRELATION COMPARISON BY TRAINING ORIENTATION

T_1 = Teacher with print orientation
T_2 = Teacher with non-print orientation
T_3 = Teacher with balanced orientation
T_4 = Teacher with no specific training
* = Number of teacher respondents

Media	Print *74											Non-print *6		Balanced *17			
Spec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Ave.
T_1	.85	.32	.89					.70	.66			.36					.54	
			.61									.12					.76	
*11																	.75	
Ave.	.85	.32	.75					.70	.66			.24					.68	.60
T_2	.47	.44		.76								.25		.78	.75			
*7															.84			
Ave.	.47	.44		.76								.25		.78	.79			.54
T_3	.31		.62	.66	.55	.86	.72	.65		.84		.61	.50		.68	.32	.43	
	.87		.28		.49	.35	.52			.93			.76			.10	.66	
*25			.12				.12									.27		
Ave.	.59		.34	.66	.52	.61	.45	.65		.88		.61	.63		.68	.23	.55	.46
T_4	.88	.59	.68	.76	.42	.01	.76	.19	.78	.73	.74	.08	.54	.66	.27	.15		
	.77	.20	.87	.37	.68		.84	.77	.43	.80		.39		.59	.79	.37		
*54	.62	.64	.59	.64	.31		.44	.60	.41	.48		.87				.26		
		.59	.86	.22			.35		.69	.08		.70				.30		
			.50	.88					.58	.77								
				.60														
				.81														
Ave.	.78	.51	.70	.61	.37	.01	.22	.39	.58	.57	.74	.47	.54	.63	.53	.27		.52
Overall Ave.	.68	.46	.60	.49	.49	.41	.32	.51	.59	.66	.74	.34	.60	.68	.67	.25	.63	.52

Print .51 Non-print .64 Balanced .48

the six to ten years group, twelve in the eleven to fifteen years group, and thirty in the over fifteen years group.

It was found that the highest correlations were between media specialists and teachers with eleven to fifteen years of experience, and the lowest correlations were between media specialists and teachers with more than fifteen years experience. The writer, on the basis of his training and experience, suggests one possible explanation for the higher correlations within the eleven to fifteen years experience level is the fact that these teachers probably received their training during the late 1950's which was a period of favorable educational sentiment toward the newer media. Prior to that period, the newer media were still in their infancy. Training subsequent to that period has had a more humanistic emphasis with a built-in distrust of machines. Table III contains a summary of these comparisons.

IV. RANK ORDER CORRELATION AND PROFESSIONAL POSITION

Rank order correlations between media specialists and teachers were compared with correlations between principals and teachers in an effort to determine if media specialists or principals were more influential in the development of teachers' attitudes toward media use.

Ten of the thirteen principals received a lower correlation than their corresponding media specialist. Two

Table III

RANK ORDER CORRELATION COMPARISON BY EXPERIENCE
* = Number of teacher respondents

Media	Print Orientation											Non-print		Balanced			Ave.
Spec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Exper.	.85	.59	.87	.37	.55	.01		.70	.43	.73	.74	.12	.76	.66	.79		.54	
1 to		.64	.50	.81	.49	.35		.19	.41	.80		.25	.54		.68		.43	
5 yrs		.44						.60	.69	.48		.87					.76	
									.58	.08							.75	
*37									.78									
Ave.	.85	.56	.69	.59	.52	.18	-	.37	.58	.52	.74	.25	.65	.66	.74	-	.62	.54
Exper.	.88		.89	.76	.31		.44	.65	.66	.84		.61		.59		.26		
6 to			.28	.66						.93				.78				
10 yrs				.76						.77								
*18				.64														
Ave.	.88	-	.59	.37	.31	-	.44	.65	.66	.85	-	.61	-	.68	-	.26	-	.58
Exper.			.68	.88	.42	.86	.84	.77				.70	.50		.84	.37		
11 to			.59	.60														
15 yrs																		
*12																		
Ave.	-	-	.64	.74	.42	.86	.84	.77	-	-	-	.70	.50	-	.84	.37	-	.67
Exper.	.47	.20	.61	.22	.68		.72					.36			.75	.10	.66	
16 to	.62	.59	.62				.52					.08			.27	.32		
20 yrs	.31	.32	.12				.12					.39				.15		
	.87		.86				.76									.30		
*30	.77						.35									.27		
Ave.	.60	.37	.55	.22	.68	-	.19	-	-	-	-	.22	-	-	.51	.23	.66	.39

principals registered a slightly higher correlation while one was the same as the media specialist. From this, the writer concludes that the media specialist was the more influential of the two. The correlation comparisons are summarized in Table IV.

V. RANKED IMPORTANCE OF INSTRUCTIONAL MEDIA

A frequency count of the rankings assigned to the ten categories of media was computed to ascertain if there was a difference between media specialists, principals, and teachers in each of the training orientations with regard to their assessment of the importance of various instructional media. The following discussion describes the rankings in terms of relative importance ascribed. Those categories ranked one, two, and three are considered to be given a high degree of importance; those categories ranked four through seven are considered of moderate importance; those categories ranked eight, nine, and ten are considered to be of least importance.

Complete tabulation of the rankings of media specialists, principals, and teachers are found in Tables V, VI, VII. A list of the ten categories of media, operationally defined, may be found in APPENDIX A.

VI. RANKING BY MEDIA SPECIALISTS

The rankings of the ten categories of media by media

Table IV

RANK ORDER CORRELATION COMPARISON
MEDIA SPECIALIST vs PRINCIPAL

Case	Media S & Teachers	Principals & Teachers	Difference	Media S & Principals
1.	.68	.63	+.05	.96
2.	.46	.065	+.395	.15
3.	.60	.56	+.04	.81
4.	.49	.44	+.05	.32
5.	.49	-	-	
6.	.41	.26	+.15	.28
7.	.32	-	-	-
8.	.51	.51	.00	.77
9.	.59	.62	-.03	.42
10.	.66	.55	+.11	.49
11.	.74	.79	-.05	.90
12.	.34	.24	+.10	.20
13.	.60	.26	+.34	.16
14.	.68	.51	+.17	.20
15.	.67	.59	+.08	.62
16.	.25	-	-	-
17.	.63	-	-	-

specialists in each training orientation are discussed separately. Similarities and differences are identified following the discussion.

Ranking by Print Oriented Media Specialists

Print oriented media specialists placed a high degree of importance on Printed Texts and Reference Materials, with Projected Materials and Non-projected Materials most often listed second and third. Only moderate importance was accorded Electronic Devices and Realia. Little importance was placed on Inexpensive Supplementary Materials and least importance was placed on Programmed Materials, Simulation Devices, Displays, and Creative Construction respectively.

Ranking by Non-print Oriented Media Specialists

Non-print oriented media specialists agreed that Printed Texts and Reference Materials were most important and Projected Materials were second. Creative Construction and Simulation Devices were considered least in importance. Non-projected Materials, Electronic Devices, and Realia were considered of moderate importance. Opinion was divided with regard to Displays, Inexpensive Supplementary Materials, and Programmed Materials.

Ranking by Balanced Oriented Media Specialists

Media specialists with a balanced orientation ranked Printed Texts and Reference Materials, Projected Materials,

and Creative Construction high in importance. Those categories ranked moderate in importance were Electronic Devices, Displays, Realia, and Non-projected Materials. Little importance was accorded Simulation Devices, Programmed Materials, and Inexpensive Supplementary Materials.

Summary of Ranking by Media Specialists

Media specialists of all three orientations generally agreed Printed Texts and Reference Materials and Projected Materials were the most important media in their instructional situation. They agreed that Electronic Devices and Realia were of moderate importance; while Programmed Materials, Displays, Simulation Devices, and Inexpensive Supplementary Materials were considered less important.

Print oriented media specialists placed a higher degree of importance on Non-projected Materials than either Non-print or balanced oriented media specialists. Balanced oriented media specialists placed more importance on Creative Construction. Complete tabulation is found in Table V.

While these observations are characteristic of the sample population of media specialists, they may not be characteristic of media specialists in general due to the extremely small sample number--fifteen print oriented, two non-print oriented, and three balanced print oriented.

Table V

FREQUENCY OF RANKING BY MEDIA SPECIALISTS
P = Print Orientation (15 respondents)
NP = Non-print Orientation (2 respondents)
B = Balanced Orientation (3 respondents)

		Category									
Rank	*	%1	%2	%3	%4	%5	%6	%7	%8	%9	%10
1	P	80	13.3			13.3					
	NP	100									
	B	67									33
2	P	13.3	6.7	6.7		60	13.3			6.7	
	NP			50		50					
	B					67					33
3	P		13.3	6.7	33.3	13.3	13.3			13.3	
	NP		50							50	
	B	33					33			33	
4	P			6.7	20	13.3	33.3			6.7	
	NP				50		50				
	B			33			33			33	
5	P			20	13.3		33.3		6.7	13.3	20
	NP				50	50					
	B				33	33		33			
6	P		6.7	20	6.7			13.3	6.7	20	6.7
	NP						50	50			
	B							67		33	
7	P		13.3		20		6.7	46.7		6.7	
	NP			50					50		
	B		33						67		
8	P			13.3	6.7			26.7	46.7	13.3	20
	NP							50	50		
	B			33	67						
9	P		6.7	13.3				6.7	26.7	20	13.3
	NP									50	50
	B			33			33				33
10	P	6.7	13.3	13.3					13.3		40
	NP		50								50
	B		67						33		

* Percent sign (%) before the category numbers refers to the numbers below. For example, 80 percent of print oriented media specialists ranked category one as number one in importance.

VII. RANKING BY PRINCIPALS

The ranking of the ten categories of media by principals in each training orientation are discussed separately. Similarities and differences are identified following the discussion.

Ranking by Print Oriented Principals

Print oriented principals ranked Printed Texts and Reference Materials and Projected Materials as most important with Electronic Devices next. Simulation Devices, Non-projected Materials, Inexpensive Supplementary Materials, and Programmed Materials were considered of moderate importance. Least important were Realia, Displays and Creative Construction.

Ranking by Non-print Oriented Principals

Non-print oriented principals ranked Projected Materials, Printed Texts and Reference Materials, and Electronic Devices as most important. Creative Construction, Non-projected Materials, Realia, Displays, and Simulation Devices were considered of moderate importance. Inexpensive Supplementary Materials were least important with opinion divided on Programmed Materials.

Ranking by Balanced Oriented Principals

Balanced oriented principals ranked Printed Texts

and Reference Materials and Electronic Devices highest in importance. Projected Materials, Inexpensive Supplementary Materials, Non-projected Materials, and Realia were listed as moderately important. Simulation Devices and Creative Construction were considered least important. Opinion was divided on Programmed Materials and Displays.

Ranking by Principals with no Specific Instructional Media Training

Principals who classified themselves as untrained in instructional media listed Printed Texts and Reference Materials and Projected Materials as most important. Non-projected Materials, Electronic Devices, Realia, Simulation Devices, Displays, and Creative Construction were ranked moderately important. Programmed Materials and Inexpensive Supplementary Materials were viewed least important.

Summary of Ranking by Principals

There was less consensus of opinion among principals with regard to the importance of the various categories of instructional media. They generally agreed Printed Texts and Reference Materials, Electronic Devices, and Projected Materials were most important. Simulation Devices, Non-projected Materials, and Realia were considered moderate in importance. Opinion was divided between moderate and

Table VI

FREQUENCY OF RANKING BY PRINCIPALS
P = Print Orientation (2 respondents)
NP = Non-print Orientation (6 respondents)
B = Balanced Orientation (2 respondents)
N = No Specialized Training (11 respondents)

		Category									
Rank		%1	%2	%3	%4	%5	%6	%7	%8	%9	%10
1	P	50				50					
	NP	33.3	33.3			33.3					
	B	100									
	N	36	9			18	9				
2	P	50				50					
	NP	16.7			16.7	33.3	33.3				
	B		50		50						
	N					54	9				18
3	P						50		50		
	NP	16.7				33.3	16.7				33.3
	B						50			50	
	N			9	9	9	27	18	9	9	
4	P		50				50				
	NP						50			33.3	16.7
	B					100					
	N	9		9	18		9	27			18
5	P				50				50		
	NP		16.7		16.7				33.3	33.3	
	B				50		50				
	N		27	9	18		9		27	18	18
6	P			50	50						
	NP			16.7				50	33.3		
	B			50				50			
	N	9		9	27		18			27	27
7	P		50	50							
	NP				33.3			33.3		16.7	16.7
	B			50				50			
	N	9	9	9	18			18	27	27	
8	P							100			
	NP			33.3	16.7				16.7	16.7	16.7
	B								50		50
	N	9	9	9		9	9	27	18	9	9
9	P									100	
	NP		50	16.7	16.7						16.7
	B								50	50	
	N	18	9	18	9				18		
10	P										100
	NP	33.3		33.3				16.7	16.7		
	B		50								50
	N	9	36	27		9	9	9		9	

low on Creative Construction, Inexpensive Supplementary Materials, and Displays.

VIII. RANKING BY TEACHERS

The ranking of the ten categories of media by teachers in each training orientation are discussed separately. Similarities and differences are identified following the discussion.

Ranking by Print Oriented Teachers

Print oriented teachers ranked Printed Texts and Reference Materials and Projected Materials high in importance. Non-projected Materials, Electronic Devices, Realia, and Displays were considered moderately important. Least important were Programmed Materials, Inexpensive Supplementary Materials, Simulation Devices, and Creative Construction.

Ranking by Non-print Oriented Teachers

Non-print oriented teachers listed Printed Texts and Reference Materials and Projected Materials as most important. Electronic Devices, Non-print Materials, Displays, and Creative Construction were most often ranked moderate in importance. Programmed Materials and Inexpensive Supplementary Materials were ranked least important. Opinion was widely divided with regard to Realia and Simulation

Devices with the ranking from moderate to low in importance.

Ranking by Balanced Oriented Teachers

Teachers with a balanced training orientation listed Printed Texts and Reference Materials and Projected Materials as high in importance. Non-projected Materials and Realia were most often ranked moderate in importance. Programmed Materials, Inexpensive Supplementary Materials, Displays, and Simulation Devices were ranked low, while there was little consensus on Electronic Devices and Creative Construction which were ranked from moderate to low in importance.

Ranking by Teachers with no Specific Training in Instructional Media

Teachers who identified their training orientation as lacking in specific coursework in instructional media ranked Printed Texts and Reference Materials and Projected Materials highest in importance. Non-projected Materials, Electronic Devices, and Displays were ranked moderately important. Programmed Materials, Inexpensive Supplementary Materials, Simulation Devices, and Creative Construction were considered least important. Realia was ranked from moderate to low.

Table VII

FREQUENCY OF RANKING BY TEACHERS
P = Print Orientation (15 respondents)
NP = Non-print Orientation (9 respondents)
B = Balanced Orientation (29 respondents)
N = No Specialized Training (99 respondents)

		Category									
Rank		%1	%2	%3	%4	%5	%6	%7	%8	%9	%10
1	P	73.3	13.3			6.7		6.7		6.7	
	NP	44.4			11.1	22.2		11.1			11.1
	B	62	3.4		3.4	27.5	3.4	6.8		3.4	3.4
	N	66	4	3	6	17	6	9	4	15	10
2	P		13.3	13.3		40	20	6.7	6.7		
	NP	11.1	22.2	11.1	11.1	22.2	11.1	11.1			11.1
	B	6.8		3.4	13.7	38	17.2			6.8	10
	N	6	5	8	10	37	15	5	6	6	7
3	P				20	26.7	13.3	6.7	13.3	20	6.7
	NP	11.1		11.1	11.1	22.2	22.2	11.1	11.1	22.2	
	B	6.8	6.8	3.4	6.8	13.7	13.7	6.8	3.4	31	3.4
	N	4	12	6	18	15	11	7	7	13	3
4	P	6.7	6.7		20	6.7	26.7	6.7		26.7	6.7
	NP			11.1	11.1		22.2	11.1	22.2	22.2	
	B	6.8	10		6.8	6.8	10	6.8	6.8	31	10
	N	5	9	6	12	8	12	12	5	15	7
5	P	6.7		6.7	20	6.7	13.3	13.3		20	13.3
	NP		11.1			11.1	22.2			33.3	
	B			13.7	24	6.8	13.7	10		6.8	21
	N	3	11	9	20	7	23	9	3	15	11
6	P	6.7	6.7	13.3	6.7			33.3	6.7	6.7	13.3
	NP			11.1	22.2	11.1	11.1	11.1	11.1		11.1
	B	3.4	6.8	10	13.7	3.4	10	21	6.8	6.8	13.7
	N	2	3	7	16	7	10	10	13	11	8
7	P			6.7	33.3		6.7	6.7	13.3	6.7	20
	NP	11.1	11.1	11.1	22.2				11.1	11.1	33.3
	B	10	13.7	10	10	3.4	6.8	13.7	10	3.4	13.7
	N	6	7	7	8	4	4	16	17	7	7
8	P	6.7	20	20			13.3	6.7	20	6.7	6.7
	NP	11.1	22.2	22.2					33.3	11.1	11.1
	B		10	10	3.4		10	10	38	6.8	6.8
	N	2	7	10	8	2	9	11	16	6	13
9	P		6.7	33.3		6.7	6.7	6.7		6.7	26.7
	NP		11.1	22.2		11.1		33.3	11.1		
	B		3.4	17.2	13.7		10	10	24		17.2
	N	2	15	15		1	6	11	17	9	12
10	P		33.3	6.7		6.7		6.7	40		6.7
	NP	11.1	22.2		11.1		11.1	11.1			22.2
	B	3.4	44.8	31	3.4			13.7	10	3.4	
	N	3	26	28	1	1	3	9	11	2	21

Summary of Ranking by Teachers

Teachers, regardless of stated orientation, rank Printed Texts and Reference Materials and Projected Materials high in importance. Non-projected Materials, Electronic Devices, and Displays were ranked moderately important. Programmed Materials, Inexpensive Supplementary Materials, and Simulation Devices were generally ranked low.

Print oriented teachers ranked Non-projected Materials higher than did teachers in the other groups. Both print and non-print oriented teachers ranked Electronic Devices higher than did teachers with a balanced orientation or no training.

IX. SUMMARY

Media specialists of all three orientations appeared to be equally effective in developing attitudes toward media use in teachers within their sphere of influence when the correlation of attitudes toward media use was used for the criteria of effectiveness.

There was strong agreement among most media specialists, principals, and teachers that Printed Texts and Reference Materials and Projected Materials were most important to the instructional situation. Further, media specialists

generally ranked Programmed Materials, Simulation Devices, and Inexpensive Supplementary Materials low in importance.

Principals tended to rank Electronic Devices and Programmed Materials higher than did teachers or media specialists.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

I. SUMMARY

The writer undertook this study in an attempt to investigate the relationship between the training orientation of media specialists and their on-the-job effectiveness. The central hypothesis (H_1) stated in question form was: Are media specialists with a balanced print non-print orientation more effective in promoting instructional media use than media specialists with a print orientation or media specialists with a non-print orientation?

Investigation of the hypothesis involved seeking answers to two questions: Are media specialists with a balanced orientation more or less effective in developing attitudes toward media use in the teachers within their sphere of influence (H_2)? Are the attitudes toward media use of media specialists with a balanced orientation different from and more desirable than those of other media orientations (H_3)?

The first is a question of quantity and the second is a question of quality. Answers to these questions were sought in the data gathered with a questionnaire and in the literature.

Media specialist was defined as the individual charged with the responsibility of managing the media center, traditionally known as the library. Instructional media was defined to include all equipment and materials used in the educational process.

Three emphases of training orientation were identified. Print orientation, non-print orientation, and balanced print-non-print orientation. The orientation of training was determined by the nature of the college course work, whether primarily concerned with print media, non-print media, or a balance between the two.

The need for such a study is apparent; for, in spite of the fact that great gains have been made in instructional technology, little of the newer media has been adopted into educational practice. The media specialist serves as a change agent as well as a caretaker of materials. If it can be demonstrated that a certain training orientation may make a media specialist more effective in promoting media use, the time lag between invention and adoption may be shortened.

The writer acknowledges the scope of the study was limited in several ways. First, the sample population was relatively small. Second, there was an uneven distribution of the three training orientations in the sample. Third,

the sample was drawn from a particular group of schools and may not be random in nature.

A questionnaire was designed to gather data regarding professional training, experience, and position, and an indication of the educators attitudes toward media use. The latter were inferred from the rank ordering of ten categories of instructional media by media specialists, principals, and teachers. The questionnaires were circulated, twelve in a packet, to thirty schools which were members of the Consortium of Washington Education Centers, on the West side of the Cascade Mountains. A total of one hundred ninety-seven questionnaires were returned by twenty-five of the thirty schools.

Rank order correlations were computed and compared to test hypothesis two (H_2). Frequency of rankings were computed to test hypothesis three (H_3). Hypothesis one (H_1) was then accepted or rejected on the basis of two and three.

II. CONCLUSIONS

The conclusions concerning hypotheses two and three provide the basis for the conclusions to hypothesis one, therefore, hypotheses two and three are considered first.

Hypothesis Two

Analysis of the data pertaining to correlation of attitudes toward media use resulted in four tentative conclusions.

First, there was no difference in the effectiveness of media specialists with balanced training orientation, print training orientation, or non-print training orientation with regard to the development of attitudes toward media use in teachers within their sphere of influence. Positively stated, the media specialist with a balanced media training orientation was at least as effective as media specialists with print or non-print media training orientation.

Second, media specialists were in a somewhat more influential position than principals with regard to attitudes toward media use.

Third, it would appear that training of any of the three orientations resulted in a higher degree of agreement with regard to attitudes toward media use. The writer recognizes high correlation does not indicate causation; nevertheless, from the data, training appeared to be a strong determining factor.

Fourth, it appeared that there had been a decline in emphasis on instuuctional materials in the training of

teachers since the late 1950's. The writer again recognizes high correlation does not indicate causation; however, training again seemed to be a strong determining factor in this population of educators.

Hypothesis Three

Analysis of the data relating to the frequency of ranking of the various categories results in the following conclusions.

First, there was a strong agreement among these educators that Printed Texts and Reference Materials and Projected Materials are of primary importance to their instructional situation.

Second, there was strong agreement that Programmed Materials, Simulation Devices, and Inexpensive Supplementary Materials are low in importance.

Third, principals tended to rank media designed to teach masses higher than did teachers and media specialists.

Fourth, differences existed among the educators' attitudes toward media use. Training may make the difference, but it was difficult to assess the magnitude and implications of the differences from the data provided by this study.

Hypothesis One

Examination of the data in terms of testing the basic

hypothesis was delayed until conclusions concerning hypotheses two and three could be presented. The writer wishes to reiterate his cognizance of two important facts which directly affect the conclusions of this study. First, the sample size was relatively small and not random; thus making generalization risky. Second, high correlation does not indicate causation. With these cautions in mind the writer would conclude that, on the basis of the conclusions pertaining to hypotheses two and three, training did make a difference in the effectiveness of media specialists. How great the difference is and how important it may be is the subject for another study.

III. RECOMMENDATIONS

One of the weaknesses of educational research that has been called to the attention of this writer centers around validity and reliability. In as much as the sample population of this study was small and not necessarily random, a similar study is recommended to test the validity and reliability of this one. It is further recommended that a larger population be sampled with special attention given to selecting an even distribution of training orientations.

Many variables contribute to the determination of human behavior, this study was confined to one aspect--

attitude toward media use. It is recommended that similar studies involving multiple variables be initiated in an effort to single out the significant characteristics of an effective media specialist.

In view of the fact that far more of the media specialists in this study claimed little or no training in non-print media and recognizing the potential of the newer media, it is recommended that all persons aspiring to perform in the role of a media specialist give careful consideration to all areas of instructional media.

This writer was considerably surprised at the number of principals and teachers who responded that their training lacked specific instructional materials course work. If these educators are representative of the general education community, then this writer would make three additional recommendations, First, as instructional leaders, all principals should make an effort to increase their competence with regard to selection and utilization of instructional media. Second, school administrators ought to give serious consideration to inservice education of a continuous nature in order to develop the competence in instructional materials of teachers who have completed their training. Third, teachers in training ought to familiarize themselves with all types of instructional media and attempt to become aware of the application of each.

EPILOGUE

It has been the thesis of this writer, throughout the conduct of this study, that media specialists with a balanced print - non-print orientation with regard to instructional media are better equipt to promote the use of all instructional media than media specialists with either a primarily print or primarily non-print media orientation. This thesis is somewhat supported by the literature but has not been sufficiently documented by research. The conclusions merited by this study only hint that this thesis is a supportable one. Further research was recommended by the writer in the belief that data will be collected that will conclusively support it. The business world has long recognized that in order to sell a product one must know it inside and out. He must know what it can and can not do and how it compares with alternatives. It seems to this writer that the same is true of instructional media. The media specialist who aspires to influence the conduct of instruction with less than complete knowledge of the media involved must surely be at a great disadvantage. How, indeed can he recommend one type of media over another if he is not familiar with the advantages and disadvantages of each? He can not, for surely his ignorance will become apparant, casting doubt on his expertise.

BIBLIOGRAPHY

1. Aiken, Lewis R., Jr. "Attitudes Towards Mathematics", Review of Educational Research, 40:551-596, October, 1970.

2. Belforte, John. "Exploring Ways to Integrate Audio-Visual Media with Elementary School Instructional Practices", ERIC ED015669, 1966.

3. Bergeson, Clarence O. "Relationship of Library Science and Audiovisual Instruction", Audiovisual Instruction, 12:100-103, February, 1967.

4. Bramley, Gerald. A History of Library Education, Hamden, Conn.: Archon Books, 1969. 131 pp.

5. Brown, James W., Lewis, Richard B., Harcleroad, Fred F. AV Instruction, Media and Methods, New York: McGraw-Hill, 1969. 621 pp.

6. Central Washington State College General Catalog, 61: 84-89, July, 1969.

7. Chalmers, John J. "Audiovisual Inservice Training", Audiovisual Instruction, 15:60-63, May, 1970.

8. Chavez, Simon J. "Performance Accountability in Teacher Education", Audiovisual Instruction, 16:55-57, March, 1971.

9. Ebel, Robert L. (ed.). Encyclopedia of Educational Research, London: Collier McMillan Ltd., 1969. 1522 pp.

10. Erickson, Carlton W. H. Administering Audio-visual Services, New York: MacMillan Company, 1959. 660 pp.

11. Formanek, Ruth and Swayze, John. "Teachers and Technology: Exploring Visual Literacy", Audiovisual Instruction, 16:86-87, March, 1971.

12. Gage, N. L. (ed.). Handbook of Research on Teaching, Chicago: Rand McNally, 1963. 1218 pp.

13. Gerlach, Vernon S. "Studying the Education of the Audiovisual Man. The PEMS Commission", Audiovisual Instruction, 12:160-161, February, 1967.

14. Godfrey, Eleanor P. "The Role of the Building Coordinator--Fact and Potential", Audiovisual Instruction, 12:104-109, February, 1967.

15. Grady, William F. "Certification of Audio-visual Personnel--A Nation-wide States Report", Audiovisual Instruction, 16:8, March, 1971.

16. Hillway, Tyrus. Handbook of Educational Research, Boston: Houghton Mifflin, 1969. 117 pp.

17. Iowa State Department of Public Instruction, "Plan for Progress in the Media Center", ERIC ED033588, 1969.

18. Lange, Phil C. "Media and the Learning Process", Audiovisual Instruction, 13:554-557, June, 1968.

19. Kelley, Earl C. "The Place of Affective Learning", Educational Leadership, 22:455, April, 1965.

20. Lieberman, Irving. Audio-visual Instruction in Library Education, New York: Columbia University Press, 1955. 213 pp.

21. Stone, Elizabeth W. "Administrators Fiddle while Employees Burn--or Flee", American Library Association, 63:181-187, February, 1969.

22. University of Washington Bulletin, 1970-1972.

23. Van Wyck, William F. "Reducing Teacher Resistance to Innovation", Audiovisual Instruction, 16:90-91, March, 1971.

24. Wasserman, Paul. "Elements in a Manpower Blueprint--Library Personnel for the 1970's", American Library Association, 63:581-599, May, 1969.

25. Wendt, Paul R. What Research Says to the Teacher--Audio-Visual Instruction, Washington, D.C.: National Education Bulletin, 1957. 32 pp.

26. Woellner, Elizabeth H., and Wood, M. Aurilla. Requirements for Certification, Chicago: University of Chicago Press, 1969. 216 pp.

27. Wyman, Raymond. "The Instructional Materials Center--Whose Empire", Audiovisual Instruction, 12:114-116, February, 1967.

28. Zulich, John M. "Under the Magnifying Glass: The A-V Specialist", Educational Screen and Audio Visual Guide, 48:10, December, 1969.

APPENDIXES

APPENDIX A

Fellow Educator:

My name is Roy Williams. I am a graduate student at Central Washington State College working on the Masters Degree in Education with a Specialization in Instructional Media. Would you take ten minutes from your busy schedule to respond to the attached questionnaire related to my thesis study?

The purpose of this study is to examine the relationship between the emphasis of training and the on-the-job effectiveness of media personnel. Three emphases in training are identified; Primarily Print Media Orientation, Primarily Non-Print Media Orientation and Balanced Print - Non-Print Media Orientation. A useful measure of effectiveness of a Media Specialist is the degree to which he is able to foster the development of sound attitudes toward media use in those teachers within the sphere of his influence. This study will attempt to compare the attitudes toward media use held by Media Specialists with those held by Teachers within their sphere of influence. A comparison will then be made between Media Specialists in each of the three categories of training emphasis.

Additional data is requested on the Personal Data sheet in order to give proper weight to several factors: The Building Principal's influence on teacher's attitudes toward media use, the amount of professional experience, and the emphasis of professional training with regard to instructional media.

Names of persons responding to this questionnaire are not necessary. A code number is used for the sole purpose of comparing the appropriate sets of data.

A report of this study will be sent to cooperating schools.

Thank you

Roy Williams

PERSONAL DATA:

Position:

___ Principal; ___ Teacher; ___ Librarian/Media Specialist

This position is ____ full-time; ____ part-time

Experience:

_____ Years professional experience

_____ Years in present building

_____ Years in present assignment

Please check one of the following categories which best describes your professional training in instructional media.

1. ____ Professional preparation in instructional media primarily limited to such courses as:
"The School Library Profession and its Literature"
"Instructional Media: Utilization"
"School Reference Work"
"Selection of Library Materials"
"Cataloging and Classification"
"School Library Administration"
"Advanced Cataloging & Classification"
"Reference in Subject Areas"
"Historical Survey of Books and Libraries"
"Oral Reading of Children's Literature"
"Research and Bibliography"
PRIMARILY PRINT MEDIA ORIENTATION

2. ____ Professional preparation in instructional media primarily limited to such courses as:
"Instructional Media: Utilization"
"Instructional Media: Production"
"Instructional Media: Advanced Theory and Practice"
"Instructional Media: Administration"
"Radio and Television in the Classroom"
"Audiovisual Electronics"
"Production of Photographic Instructional Materials"

2. cont.
"School Plant Planning"
"Advanced Photography"
"Serigraphy"
PRIMARILY NON-PRINT MEDIA ORIENTATION

3. ____ Professional preparation in instructional media included an approximate equal number of courses such as those listed in categories 1 and 2 above
BALANCED PRINT - NON-PRINT MEDIA ORIENTATION

4. ____ Professional preparation did not include specific courses in instructional media such as those listed in categories 1 and 2 above.
NO SPECIFIC TRAINING IN INSTRUCTIONAL MEDIA

Please rank the following categories of instructional media from 1 (high) to 10 (low) with regard to your assessment of their importance to your instructional situation.

_____ PRINTED TEXTS AND REFERENCE MATERIALS
textbooks, workbooks, supplementary books, encyclopedia, newspapers, magazines, comics and microforms.

_____ PROGRAMMED INSTRUCTIONAL MATERIALS
programmed texts, teaching machines.

_____ INEXPENSIVE SUPPLEMENTARY MATERIALS
government documents, institute and association publications, trade journals, travel folders.

_____ NON-PROJECTED MATERIALS
graphs, charts, diagrams, cartoons, posters, maps, globes, flat opaque pictures.

_____ PROJECTED MATERIALS
overhead transparencies, 35mm slides, filmstrips, 16mm films, 8mm film loops, multi-media presentations.

_____ ELECTRONIC DEVICES
television, radio, computers, phono disc players, tape recorders, telelecture (telephone).

_____ REALIA
kits, collections, live animals.

_____ SIMULATION DEVICES
models, mockups.

_____ DISPLAYS
teaching displays, bulletin boards, chalk boards, flannel boards, hook & loop boards.

_____ CREATIVE CONSTRUCTION
puppets, scroll theaters, sand tables, contour maps, dioramas

APPENDIX B

Master Data Sheet

Experience
- P - Professional
- B - Building
- A - Assignment

Training Orientation
- Category 1 - Print Media Orientation
- Category 2 - Non Print Media Orientation
- Category 3 - Balanced Orientation
- Category 4 - No specific training

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	Experience B	Experience A	Training Orientation 1	2	3	4
School-1																	
Media S	1	10	9	8	2	3	7	9	3	5	11	6	6	X			
T-1	1	5	2	1	1	2	1	1	1	1	12	3	12				X
T-2	1	10	8	5	2	4	6	7	3	9	2	2	2	X			
T-3	1	2	8	10	3	4	9	7	5	6	19	6	19		X		
T-4	2	3	10	1	4	5	6	9	7	8	23	6	12			X	
T-5	1	10	7	4	2	5	9	8	3	6	22	6	4			X	
T-6	4	8	10	7	1	2	5	9	3	6	8	6	6				X
T-7	1	7	9	3	2	5	8	10	4	6		19					X
T-8	1	9	10	2	4	8	7	6	3	5	17	11	17				X
Prin	1	10	5	5	1	2	3	5	4	4	12	3	10				X
School-2																	
Media S	1	6	4	7	2	5	8	10	3	9	27	1	11	X			
T-1	4	9	10	3	2	8	5	6	1	7	20	1	1	X			
T-2	1	10	5	4	2	3	6	7	8	9	2	2	2				X
T-3	2	10	8	5	6	7	1	9	3	4	16	3	3				X
T-4	1	8	10	6	2	3	5	9	4	7	2	2	2				X
T-5	1	10	10	10	1	1	10	10	1	1	11	4	4			X	
T-6	1	10	10	5	2	4	10	10	7	10	2	2	2				X
T-7	NO RESPONSE										21	1	1				X
T-8	7	8	5	6	3	4	3	6	6	2	22	6	17				X
T-9	1	10	2	6	9	3	5	8	3	7	3	3	3		X		
T-10	1	10	8	3	5	5	6	7	3	10	23	3	3				X
School-3																	
Media S	NO RESPONSE										9	4	9	X			
T-1	1	5	7	5	1	3	1	2	5	5	17	3	14				X
T-2	1	6	6	2	2	2	5	5	1	2	27	18	1				X
T-3	1	9	10	3	2	8	7	6	5	4	10	3	2				X
T-4	1	8	5	4	2	3	6	7	9	10	2	2	2	X			
T-5	1	7	6	5	2	10	4	3	8	9	1	1	1				X
T-6	1	10	5	6	2	8	9	7	3	4	2	2	2				X
Prin	6	7	10	9	1	5	4	3	8	2	20	6	14				X

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	Experience B	Experience A	Training Orientation 1	2	3	4
School-4																	
Media S	1	10	8	8	1	2	8	9	9	10	2	2	2	X			
T-1	7	8	8	7	1	2	3	3	3	2	3	3	3		X		
T-2	1	7	2	4	3	5	8	6	9	10	13	1	1				X
T-3	1	7	4	3	2	6	8	9	5	10	13	6	4				X
T-4	1	3	10	6	2	9	7	8	4	5	15	4	4				X
T-5	4	7	2	3	1	8	9	6	5	10	1	1	1				X
Prin	1	10	7	2	4	5	6	9	3	8	32	5	5			X	
School-5																	
Media S	1	7	6	4	2	3	8	9	5	10	10		5	X			
T-1	1	10	7	5	2	3	6	8	4	9	10	5	5	X			
T-2	1	8	9	6	5	2	7	10	3	4	29	10	25	X			
T-3	1	10	6	9	2	3	7	8	4	5	20	5	12			X	
T-4	1	7	10	5	3	8	9	6	4	2	8	6	1			X	
T-5	7	8	5	4	1	9	10	6	2	3	28	3	19			X	
T-6	1	10	2	3	4	5	9	6	7	8	12	6	11				X
T-7	1	9	7	4	2	5	6	10	3	8	4	3	3				X
T-8	1	3	10	5	6	4	9	7	2	8	12	2	2				X
T-9	1	9	10	3	2	8	4	7	5	6	2	2	1				X
T-10	1	7	2	5	4	2	8	9	3	10	26	12	12				X
Prin	1	5	6	5	2	3	8	7	6	5	29	3	3				X
School-6																	
Media S	2	1	10	3	4	5	7	9	6	8	10	3	3	X			
T-1	1	4	10	2	3	5	6	7	8	9	14	3	3			X	
T-2	3	10	9	2	1	6	7	8	4	5	5	1	1			X	
T-3	5	10	9	6	3	4	7	8	1	2	2	2	2				X
Prin	10	9	8	7	1	2	6	5	4	3	15	2	2		X		
School-7																	
Media S	NO RESPONSE																
T-1	8	2	4	6	10	9	7	5	6	7	8	1	4	X			
T-2	4	9	10	8	5	7	2	3	6	1	2	5	2				X
T-3	8	9	10	6	4	5	2	3	7	1	7	1	7				X
Prin	9	8	7	3	1	6	4	5	10	2	31	10	10				X
School-8																	
Media S	1	9	5	3	2	4	6	8	7	10	17	8	10	X			
T-1	2	9	4	1	3	6	10	8	5	7	10	8	8		X		
T-2	10	3	8	6	7	9	1	4	5	2	8	4	5			X	
T-3	1			2	3						11	1	1		X		
T-4	1	5	8	3	2	6	7	9	4	10	10	4	1				X
T-5	7	9	10	1	2	5	6	3	4	8	3	3	3				X
T-6	3	1	4	6	5	2	10	7	8	9	7	7	7				X
T-7	2	1	9	7	3	4	10	5	6	8	27	7	6				X
T-8	1	7	3	4	2	5	9	8	6	10	13	7	5				X

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	B	A	Training Orientation 1	2	3	4
School-8 cont.																	
T-9	4	5	3	2	1	8	10	7	6	9	12	5	6				X
T-10	1	8	10	3	2	4	6	7	5	9	5	5	5				X
Prin	3	1	9	5	2	4	10	6	7	8	13	8	1		X		
School-9																	
Media S	3	10	9	8	2	4	5	7	6	1	5	2	2			X	
T-1	6	10	9	7	3	4	1	2	8	5	4			X			
T-2	1	10	5	6	2	9	3	8	4	7	3	1	1			X	
T-3	1	10	9	7	2	5	3	8	4	6	5	1	1	X			
T-4	1	10	9	7	3	4	2	8	5	6	3	1	1	X			
T-5	6	8	7	9	1	2	3	10	4	5	24	14	14			X	
School-10																	
Media S	NO RESPONSE																
T-1	1	4	10	3	2	5	7	9	8	6	2	2	2				X
T-2	1	3	6	5	4	2	7	8	9	10	6	2	2				X
T-3	1	9	10	6	3	2	5	8	4	7	6	6	6				X
T-4	9	1	10	7	2	3	5	8	4	6	2	2	2				X
T-5	9	6	10	8	7	5	1	3	4	2	2	2	2				X
School-11																	
Media S	10	7	2	3	2	2	3	5	3	5	4	4	4	X			
T-1	7	4	4	5	6	5	3	5	5	5	10	10	6				X
T-2	4	5	1	3	3	8	10	10	5	10	3	3	3				X
T-3	1	10	2	6	2	6	10	8	8	4	1	1	1				X
T-4	1	8	6	5	4	7	10	9	3	2	32	12	12			X	
T-5	1			3	2		4	5	6		18	12	6			X	
T-6	1	8	4	5	3	2	6	7	9	10	4	4	4				X
School-12																	
Media S	1	3	6	4	2	5	7	8	9	10	4	4	4	X			
T-1	1	4	2	7	6	3	8	9	10	5	1	1	1			X	
T-2	1	7	3	5	2	8	9	10	4	6	4	4	4			X	
T-3	1	10	8	4	1	3	8	8	4	6	12	7	6				X
T-4	1	4	8	7	2	5	6	9	3	10	19	6	6				X
T-5	1	9	3	7	2	5	10	8	6	4	7	4	4				X
T-6	5	4	2	4	1	2	6	3	4	3	18	4	6	X			
T-7	1	9	3	2	1	1	2	2	1	1	15	4	4				X
Prin	10	5	3	6	10	10	7	5	5	3	15	3	3				X
School-13																	
Media S	1	10	5	7	1	5	8	8	8	10	3	10	3	X			
T-1	1	8	6	3	2	7	4	10	5	9	9	3	3	X			
T-2	10	5	9	3	2	4	1	6	7	8	3	1	1		X		
T-3	4	9	8	5	2	10	1	3	6	7	7	6	6			X	
T-4	1	10	8	2	3	5	7	6	4	9	20	15	15				X
T-5	1	5	4	3	2	9	7	8	6	10	6	3	3				X

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	Experience B	Experience A	Training Orientation 1	2	3	4
School-13 cont.																	
T-6	6	5	1	4	2	7	8	9	3	10	3	2	2				X
T-7	1	4	9	3	2	5	7	8	6	10	21	20	10				X
T-8	1	4	7	3	2	5	9	10	6	8	3	1	1				X
Prin	1	5	6	2	3	4	7	10	8	9	41	23	23		X		
School-14																	
Media S	1	10	7	5	2	4	6	8	3	9	18	3	3		X		
T-1	3	10	9	2	1	6	7	8	4	5	5	1	1			X	
T-2	1	4	10	2	3	5	6	7	8	9	14	3	3			X	
T-3	5	10	9	6	3	4	7	8	1	2	2	2	2				X
T-4	3	3	5	10	1	1	1	1	1	1	11	3	3				X
Prin	10	9	8	7	1	2	6	5	4	3	15	2	2		X		
School-15																	
Media S	1	2	9	5	3	4	7	10	8	6	16	4	4	X			
T-1	1	7	10	5	2	3	8	9	4	6	35	29	28			X	
T-2	1	6	10	9	5	2	4	8	3	7	23	8	6			X	
T-3	7	10	9	6	1	2	5	8	3	4	16	10	10			X	
T-4	7	10	6	5	8	9	4	2	1	3	20	8	8				X
T-5	1	2	10	8	3	6	4	9	7	5	13	3	1				X
T-6	1	10	9	4	2	5	3	8	6	7	8	3	7				X
T-7	2	3	10	5	6	9	4	7	1	8	40	15	14				X
T-8	1	2	5	3	1	2	3	4	1	2	12	2	1				X
Prin	7	10	4	7	8	8	8	7	6	6	21	4	4				X
School-16																	
Media S	1	3	10	4	2	7	9	8	6	5	26	4	7	X			
T-1	1	2	6	5	3	4	8	10	7	9	2	2	2	X			
T-2	2	1	6	7	3	4	10	8	5	9	10	6	4			X	
T-3	10	9	8	7	2	3	4	5	1	6	3	2	2				X
T-4	1	2	10	3	4	5	6	7	9	8	20	4	4				X
T-5	2	4	8	6	7	5	10	9	3	1	3	3	3				X
T-6	1	9	4	6	2	6	9	4	9	10	1	1	1				X
T-7	1	5	5	2	1	3	4	3	4	5	8	2	2				X
Prin	4	1	10	5	2	6	7	9	3	8	13	6	6				X
School-17																	
Media S	1	10	3	6	2	4	7	8	5	9	5	2	5	X			
T-1	1	6	8	7	3	2	9	10	4	5	6	2	2	X			
T-2	1	10	6	5	3	2	8	4	7	9	4	2	4				X
T-3	3	4	7	6	1	2	9	10	8	5	1	1	1				X
T-4	1	4	9	5	3	6	10	7	2	8	3	2	2				X
T-5	1	6	5	4	2	3	7	9	10	8	3	2	1				X
T-6	1	3	2	7	6	4	8	9	5	10	2	2	2				X
Prin	1	2	6	5	4	3	7	8	9	10	13					X	

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	Experience B	Experience A	Training Orientation 1	2	3	4
School-18																	
Media S			NO	RESPONSE													
T-1	10	4	8	7	5	6	1	3	9	2	2	1	1				X
T-2	1	3	6	1	2	3	3	2	3	1	5	1	1				X
School-19																	
Media S			NO	RESPONSE													
T-1	1	3	10	5	6	4	8	9	2	7	20	7	10				X
T-2	1	10	8	7	2	6	5	9	3	4	2	2	2			X	
T-3	1	10	9	4	2	3	6	7	5	8	1	1	1				X
Prin	1	9	10	4	3	2	8	7	6	5	11	4	4				X
School-20																	
Media S	1	10	6	3	4	5	7	9	2	8	5	5	5	X			
T-1	4	10	5	3	1	7	6	8	2	9	9	2	2			X	
T-2	1	10	7	5	2	4	6	9	3	8	6	4	4			X	
T-3	3	10	8	5	1	2	7	6	4	9	1	1	1				X
T-4	1	10	9	3	4	7	8	6	2	5	2	2	2				X
T-5	1	10	9	4	2	8	5	6	7	3	1	1	1				X
T-6	7	10	9	8	5	6	3	4	1	2	1	1	1				X
T-7	1	5	8	2	3	4	2	4	2	6	10	4	4				X
T-8	1	3	2	1	1	1	6	6	4	4	25	6	6				X
Prin	1	9	10	8	2	3	7	6	5	4	29	8	8		X		
School-21																	
Media S	1	3	2	4	5	6	8	7	9	10	2	2	2		X		
T-1	1	2	3	4	5	10	6	9	8	7	6	3	3		X		
T-2	1	3	5	8	2	4	6	10	9	7	3	3	1				X
T-3	1	3	7	6	4	5	2	8	9	10	6	3	1				X
T-4	1	5	10	5	7	4	5	10	5	10	2	2	2				X
T-5	10	10	3	4	2	6	0	0	8	3	5	2	2	X			
Prin	2	1	10	9	3	4	6	8	5	7	20	1	1		X		
School-22																	
Media S	1	7	4	8	5	9	6	10	3	2	34	23	19			X	
T-1	1	10	9	4	2	5	3	8	6	7	8	3	7				X
T-2	1	6	10	9	5	2	4	8	3	7	23	8	6			X	
T-3	7	10	9	6	1	2	5	8	3	4	16	10	10			X	
T-4	7	10	6	5	8	9	4	2	1	3	20	8	8				X
T-5	1	7	10	5	2	3	8	9	4	6	35	29	28			X	
T-6	1	2	10	8	3	6	4	9	7	5	13	3	1				X
T-7	2	3	10	5	6	9	4	7	1	8	40	15	14				X
School-23																	
Media S	2	1	8	5	3	4	7	6	9	10	10	3	2	X			
T-1	3	5	10	4	1	2	8	7	6	9	4	4	4				X
T-2	10	10	1	5	10	10	5	9	10	9	17	2	2				X

Media Category	1	2	3	4	5	6	7	8	9	10	Experience P	Experience B	Experience A	Training Orientation 1	2	3	4
School-23 cont.																	
T-3	7	5	5	3	1	1	1	1	1	1	3	2	1				X
Prin	1	4	7	6	2	3	8	5	9	10	22	6	16	X			
School-24																	
Media S	1	10	5	3	2	4	7	9	6	8	32	7	11	X			
T-1	1	2	9	3	4	8	5	10	6	7	30	7	7	X			
T-2	7	9	10	6	1	4	2	3	8	5	1	1	1	X			
T-3	8	10	9	7	6	5	2	4	3	1	1	1	1		X		
T-4	1	10	9	8	2	4	6	7	3	5	8	4	3			X	
T-5	2	1	3	8	9	5	7	6	4	10	35	2	8				X
T-6	1	10	9	6	7	5	3	8	2	4	20	2	2				X
T-7	1	10	8	2	3	4	7	6	5	9	5	1	1				X
T-8	1	8	10	6	2	3	4	9	5	7	15	1	1				X
T-9	1	10	10	1	1	1	1	10	5	5	3	3	3				X
Prin	8	10	9	6	2	1	3	5	7	4	17	3	14				X
School-25																	
Media S	1	10	8	7	2	5	8	8	6	9	16	5	5			X	
T-1	1	10	5	4	3	8	7	4	7	9	3	1	1			X	
T-2	8	10	10	8	2	10	1	2	9	1	6	3	1				X
T-3	5	9	2	2	3	2	7	7	2	5	2	2	2				X
T-4	10	9	9	1	1	1	9	9	1	9	2	2	2				X
T-5	6	10	5	3	1	2	2	1	3	1	5	2					X
T-6	3	7	6	2	1	5	9	8	4	10	18	4	4		X		
T-7	1	8	7	6	2	3	9	4	5	10	12	5	5		X		
T-8	1	2	7	6	5	8	9	4	3	10	16	6	6				X
T-9	1	8	7	5	2	4	9	10	3	6	5	3	3				X
Prin	2	7	6	5	1	4	8	3	9	10	19	2	14	X			