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FACTORS FACILITATING AND FACTORS INHIBITING THE
EFFECTIVE IMPLEMENTATION OF COMPETENCY-BASED
CERTIFICATION OF EDUCATIONAL MEDIA SPECIALISTS
BY THE STATE OF MICHIGAN.

Michigan State University, Ph.D., 1975
Education, general

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FACTORS FACILITATING AND FACTORS INHIBITING
THE EFFECTIVE IMPLEMENTATION OF COMPETENCY-
BASED CERTIFICATION OF EDUCATIONAL MEDIA
SPECIALISTS BY THE STATE OF MICHIGAN

By

Leslie E. Steen, Jr.

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Instructional Development
and Technology

1974

FACTORS FACILITATING AND FACTORS INHIBITING
THE EFFECTIVE IMPLEMENTATION OF COMPETENCY-
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The purpose of the study was to identify the facilitating factors and the inhibiting factors to effective implementation of competency-based certification of media specialists by the state of Michigan. The Delphi Technique was selected as the research method.

Participants in the study were selected from the areas of education most likely to have considerable influence upon, knowledge about, and/or to be affected by educational certification in Michigan.

Three instruments designed around the Delphi Technique were used in the study. Appropriate feedback of information and opinion accompanied the second and third instruments.

In Delphi Instrument I participants were asked to list their perception of facilitating factors and inhibiting factors to the effective implementation of the desired certification. Delphi Instrument II included a list of seventeen facilitating factors and fourteen inhibiting factors selected as representative of the factors submitted

on Instrument I. The participants were asked to rate the factors in Instrument II on a 1 to 5 scale indicating their perception of the relative importance of each factor.

Delphi Instrument III was a duplicate of number II, with the exception that the mean, to the nearest whole number, for each factor rating was indicated, thus providing group opinion. The participants were asked to again rate each factor in light of group opinion, as shown in Instrument III.

The study provided seventeen facilitating factors and fourteen inhibiting factors. The top five facilitating factors, as perceived by the participants and listed in the order of relative importance, as determined by the participants through group consensus, are as follows:

1. State Board of Education recognizing certification of media specialists as desirable.
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.
3. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.
4. Department of Education's recommendation that such certification is desirable.

5. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.

The top five inhibiting factors, as perceived by the participants and listed in the order of relative importance, as determined by the participants through group consensus, are as follows:

1. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.
2. Concern of the educational community about who will measure the competencies, what procedure will be used, and who will be the agent for certification.
3. Failure of administrators and their state associations to recognize the function of media specialists, related competencies, and the need for such qualified personnel.
4. Difficulty in determining which competencies are essential to a single certification program.
5. Failure of the educational community to recognize any value to such certification.

To make the most effective and immediate use of the factors generated by this study, it is recommended that some organization like the Michigan Association for Media in

Education establish a committee whose charge is to work toward implementation of certification of media specialists in Michigan.

The data collection techniques applied in this study have made persons who represent twelve educational groups having some influence on educational certification within the state of Michigan aware that:

1. Members of the Michigan Association for Media in Education desire certification by the state for media specialists.
2. Members of the Michigan Association for Media in Education desire a competency-based certification code.

It seems appropriate to suggest that effort to implement such certification be carried out as soon as possible, while the awareness still exists.

To my wife Betty.

She provided the love, patience, and understanding which enabled me to complete this study.

ACKNOWLEDGMENTS

I wish to express my sincere appreciation to my committee chairman, Dr. Castelle G. Gentry, for his excellent guidance and direction of the study.

I also appreciate the counsel and assistance of the members of my committee and true friends, Dr. James L. Page and Dr. George R. Myers.

I want to thank Dr. Norman T. Bell and his daughter, Jean, for their help in the design and implementation of the statistical analysis.

To Dr. I. Carl Candoli and Dr. Robert J. Chamberlain, friends and colleagues, whose encouragement provided me with the incentive to complete the doctoral program, my special appreciation.

To the participants in the study, whose perseverance in completing the Delphi Instruments made the study possible, my deepest gratitude.

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CHAPTER I

THE PROBLEM

The personnel area of instructional development and technology recently has expanded in scope to a point where it needs to be recognized and studied as a significant component of the total field. A few years ago, one could classify those people working in the field of educational media as audio-visual personnel or librarians. Today, there are as many titles for personnel working in the field of instructional development and technology as there are functions that require varied and specific skills, e.g., instructional developer, media manager, media specialist, graphic artist, and technician.

Only recently has any consideration been given to the necessity of studying the personnel area of instructional development and technology. The Media Guidelines Project, which was funded under a U.S. Office of Education grant, generated several studies relating to instructional development and technology personnel. One of the more significant of these studies, the JIMS study, classified the tasks performed by media personnel into three groups:

professional, technical, and aide.¹ The DAVI-AASL Joint Standards defined the levels of personnel in educational media as: media specialist, media technician, and media aide, again three groups representative of the professional, technical, and aide.²

The sudden realization that many types of persons exhibiting different competencies and expertise in varied areas are necessary (and desirable) to carry out the functions of instructional development and technology creates the need for systematic studies of such related topics as: present and future availability of personnel, proper training of personnel, certification and licensing, classification of jobs, efficiency of different media programs; administrative procedures, etc. Recently, the topic of certification or licensing of professionals in instructional media has received considerable emphasis.

Professionals in the media field are looking toward certification as providing: identification as a professional, indication of proper training or expertise in the media field, inter-state acceptance as a qualified media

¹James Wallington et al., Jobs in Instructional Media (Washington, D.C.: Department of Audiovisual Instruction, 1970), pp. 141-57.

²American Association of School Librarians and Department of Audiovisual Instruction, Standards for School Media Programs (Chicago: American Library Association, 1969; Washington, D.C.: National Education Association, 1969), pp. 7-17.

professional, and a method for qualifying and/or upgrading current practitioners in instructional media.

Faced with financial cutbacks, many educational institutions around the country have adopted the policy of hiring more technicians and aides, with reductions at the professional level either through normal attrition or in some instances by elimination of the position. Some professional media practitioners appear to believe their certification as media professionals may provide the recognition essential to prevent the reduction of professionals from the media field.³

Whatever the specific rationale for considering certification of media professionals to be desirable, it is definitely a phenomenon that is rapidly growing throughout the nation. In 1970, fourteen states had some type of certification specifically for nonprint media personnel working at the K-12 level of education. By 1972, the number of states offering such certification had increased to twenty-two.⁴ Of those states, only eight required training in both the areas of print and nonprint media, while only

³T. Burford and J. McWatt, "The Problem of Standards for Licensing/Certification of Media Personnel," paper presented at the Joint Spring Conference of the Michigan Audio Visual Association and the Michigan Association of School Librarians, Grand Rapids, Michigan, May 1973), pp. 1-4.

⁴William F. Grady, "Certification of Educational Media Personnel: A Developmental Look," Audiovisual Instruction, May 1973, p. 32.

three, namely New Jersey, Utah, and Washington, offered competency-based certification.

Currently, the only media personnel certification offered by the state of Michigan is in the field of library science. Until recently, the institutions that recommend the student for certification in library science have provided little, if any, nonprint media training. In May of 1972, the Michigan Department of Education issued a document entitled "Four Proposals Regarding the Certification and Professional Development of Michigan Teachers," which could have a significant bearing on future certification by that department, because it recommends changing basic certification from credit oriented to competency based, and provides for issuance of certification for other than teachers, i.e., administrators and curriculum specialists.⁵

Early in the fall of 1972, the president of the Michigan Audio Visual Association appointed a special task force to deal with the topic, "Certification of Media Specialists in the State of Michigan."⁶ The specific charge to the task force was to:

1. Analyze the Michigan Department of Education document, "Four Proposals Regarding the Certification and

⁵Michigan Department of Education, "Four Proposals Regarding the Certification and Professional Development of Michigan Teachers" (Lansing, 1972). (Mimeographed.)

⁶Michigan Audio Visual Association, Minutes of the meeting of the Board of Directors, September 28, 1972. (Mimeographed.)

Professional Development of Michigan Teachers," for its implications regarding the certification of educational media professionals. The underlying assumption in this analysis is that certification of media professionals is a desirable endeavor.

2. Analyze the same document for implications relating to the preparation and training of all professionally certified educators in effective media utilization.

3. Determine the potential success for certification of media professionals under:

- a. The competency-based certification approach as proposed in the Michigan Department of Education document.
- b. The present certification code. (This would consist of inclusion of audio-visual/instructional media personnel under the existing certification of library science specialists.)

4. Recommend to the Michigan Audio Visual Association Board of Directors procedures and subsequent steps for effectively pursuing the question of media specialist certification, as well as the general preparation of educational professionals in media utilization.⁷

The Task Force's report to the Board of Directors included the following recommendations:

⁷Ibid., p. 3.

1. The Michigan Audio Visual Association should form a joint committee with the Michigan Association of School Librarians to develop guidelines for certification of media personnel. If the Michigan Association of School Librarians declines the invitations to participate in such an endeavor, the Michigan Audio Visual Association should proceed to develop its own guidelines.

2. The Michigan Audio Visual Association should establish a committee whose basic charge will be to develop guidelines for preparing and training all professional educators in effective media utilization prior to their certification.

3. The guidelines created by either committee must be competency based, and the guidelines for certification of media specialists should be suitable for inclusion under the provisions of section 852(c)⁸ of the proposed statute to amend the School Code of 1955.⁹

In December, 1972, a committee whose members represented both the Michigan Audio Visual Association and the Michigan Association of School Librarians was established to pursue the issue of certification of media

⁸Section 852(c) provides the State Board of Education of Michigan with power to certify persons with instructional responsibilities employed other than as a classroom teacher including, but not limited to, administrators and curriculum specialists.

⁹Michigan Audio Visual Association, "Certification Task Force," paper presented to the Board of Directors of the Association in November 1972, p. 2.

specialists in Michigan. In the spring of 1973, this committee surveyed the membership of both organizations to determine, among other things, approximately what percentage of the membership supported the concepts of: national and/or state certification of professional media specialists, such certification based on print and nonprint media combined, competency-based certification, and exempting current practitioners from complying with the requirements for certification. Data from the survey indicated a majority of the respondents were receptive to: national and state certification of professional media personnel, standards for such certification to include both print and nonprint media, competency-based certification, and current professional media practitioners complying with certification requirements.¹⁰

Faced with these apparent mandates from both memberships, the Joint MAVA-MASL Certification Committee proceeded with the task of developing guidelines for competency-based certification of media specialists in Michigan. The Committee firmly believed that competency-based guidelines, developed by a cross-representation of media practitioners in Michigan, would provide the soundest and most workable basis for certification of media

¹⁰T. Burford and J. McWatt, "The Problem of Standards for Licensing/Certification of Media Personnel," paper presented at the Joint Spring Conference of the Michigan Audio Visual Association and the Michigan Association of School Librarians, Grand Rapids, Michigan, May 1973, pp. 1-4.

professionals in Michigan. The Committee also recognized that the thrust for certification of media professionals in Michigan is by the media professionals, not from the Department of Education. Therefore, after the Committee has formulated the guidelines for certification of media professionals, which meet with the approval of the new organization, the Michigan Association for Media in Education,¹¹ a strategy will need to be developed and employed to bring about actual certification by the state of Michigan, using these guidelines as the basis for such certification.

Purpose of the Study

The purpose of this study is to:

1. Provide the media professionals who desire certification by the state of Michigan with facilitating and inhibiting factors that could be of value in expediting the achievement of such certification.
2. Make those educators who are in a position to influence the establishment of certification in Michigan, i.e., the State Superintendent, State Board of Education members, deans of Colleges of Education, and others, aware that media professionals desire certification and that such

¹¹Michigan Association for Media in Education is the new organization formed after the dissolution of the Michigan Audio Visual Association and the Michigan Association of School Librarians on January 1, 1974. The membership of the new organization is essentially the combined memberships of the former organizations.

certification appears to be in the best interest of education in Michigan.

Need for the Study

Dr. Thomas Burford of Wayne State University, Chairman of the Certification Committee for the Michigan Association for Media in Education, reviewed the concept of this study and expressed the opinion that the outcome of such research could be of considerable value to his committee and thus to the media profession in Michigan.¹² Dr. George Grimes,¹³ past president of the Michigan Audio Visual Association, concurred with Dr. Burford and suggested that such research is essential to expediting the desired certification in Michigan.

One of the stated purposes of the study is to make certain educators aware that media professionals desire certification. Since a new organization has recently formed in Michigan which represents the media professionals, namely the Michigan Association for Media in Education, a positive outcome of the study, if conducted in the name of the association, would be greater and more rapid recognition of the association than would naturally

¹²Thomas Burford, Wayne State University, to Charles Schuller, Michigan State University, 12 April 1974, Personal Files of Castelle Gentry, Michigan State University, East Lansing, Michigan.

¹³Dr. Grimes was president of the Michigan Audio Visual Association at the time the Certification Task Force was formulated.

occur. This result becomes more significant when one realizes that the Michigan Association for Media in Education, still in its first year, represents over eleven hundred media professionals.

From a national viewpoint, the results of this research, although basic to Michigan, might hold a similar significance for other states. As previously mentioned, most states either have some form of certification for media professionals or desire such certification; however, only New Jersey, Utah and Washington currently have any form of competency-based certification.¹⁴ The methodology of the study might be worthy of duplication by state organizations wishing to determine similar information related directly to their specific state.

The literature indicates that, in the future, educational certification will most likely be based on verification of competency within the area in which certification is sought. If this becomes reality, the results of the proposed research should become significant beyond the confines of Michigan. The Association for Educational Communications and Technology recently has begun to publish several documents related to research findings concerning certification of media specialists. There would appear to

¹⁴William C. Grady, "Certification of Educational Media Personnel," pp. 29-31.

to be a place in future editions of these and other related publications for the findings of this study.

This study could also provide support for related studies, for example, "The Roles of the School Library Media Specialist in the Future."¹⁵ It might also complement or enhance current investigations such as "A Survey of the Current Practitioners' Opinion Regarding Certification of Media Specialists in the State of Michigan."¹⁶ Both of these studies are more fully discussed in the related research section of this proposal.

The Research Questions

This study should produce data which will enable the investigator to answer the following research questions:

1. Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors which are most likely to facilitate the effective implementation of competency-based certification of educational media specialists by the state of Michigan?"

¹⁵Margaret Jetter, "The Roles of the School Library Media Specialist in the Future" (Ph.D. dissertation, Michigan State University, 1973).

¹⁶Gregory Overland, "A Survey of the Current Practitioners' Opinion Regarding Certification of Media Specialists in the State of Michigan" (Ph.D. dissertation underway at Wayne State University, 1974).

2. Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors which are most likely to inhibit the effective implementation of competency-based certification of media specialists by the state of Michigan?"

Limitations

The broad area of the investigation is certification of educators. More precisely, however, the study is designed to determine the facilitating and inhibiting factors to certification of media specialists by the state of Michigan. The basic purpose of the study is to provide those persons who seek to implement competency-based certification of media specialists in Michigan with predictable factors that facilitate or inhibit such an effort. Therefore, the population surveyed by the study is limited to and selected from those individuals determined to be most familiar with the current educational and political systems of Michigan. It is acknowledged that inherent in the study is the limitation that the facilitating and inhibiting factors are limited to those identified by the study participants.

The investigator recognized the necessity for reviewing similar proceedings in other states to develop the most productive strategies for the design of the study.

Assumptions

In dealing with the problem and attempting to answer the research questions, this study is based upon the following assumptions:

1. A group of persons can be identified whose opinions concerning certification of media specialists are apt to be quite reliable.
2. By applying the proper techniques, the opinions of the above group of persons can be analyzed.
3. The analysis of their opinions will provide significant data upon which conclusions can be drawn in regard to the basic problem of the study.
4. Certification of educational media specialists in Michigan is considered a desirable process by many, if not the majority, of the media professionals in Michigan.
5. Media professionals in Michigan prefer competency-based certification.

Definitions

Terms used in the study are based on definitions found in the American Heritage Dictionary of the English Language. Exceptions are as follows:

Competency Based--requires a person to demonstrate mastery of learning behaviors by meeting explicit performance criteria, matched with explicit performance objectives.

Delphi Technique--a process for the controlled elicitation of group opinion by an iterative use of questionnaires with a selective feedback of earlier group responses as an informational input for later reference by group members.

Educational Media--those media which are used in the formalized educational process by the instructor or the learner or by both.

Media Aide--a media staff member with clerical or secretarial competence. The aide receives specific instructions about the tasks he performs.

Media Manager--a person who exercises direction and leadership for optimum operation of an educational media program.

Media Specialist--an individual who has broad, professional preparation in educational media and meets the requirements for teaching. The services of the media specialist must be based on:

1. Insight into the learning and communications process.
2. Understanding of curriculum and new instructional patterns.
3. Ability to inspire and gain the respect of other professional staff members.
4. Skill in the management of media services.

5. Comprehension of the broad spectrum of technology in instructional communications and its place in education.

Media Technician--a media staff member who has training below the media specialist level, but has special competencies in one or more of the following fields: graphic production and display, information and materials processing, equipment operations and simple maintenance, and photographic reproduction.

Overview of the Study

The background for the study was developed in Chapter I. This background included the purpose of the study, need for the study, the research questions to be answered by the study, the limitations and underlying assumptions of the study, definition of terms used, and an overview of the dissertation.

A review of the research literature related to the study is presented in Chapter II. This review is divided into three major areas: certification of educational media specialists nationwide, certification of educators by the state of Michigan, and the Delphi Technique as a research method.

In Chapter III the design of the study is developed. The information presented in this chapter includes: the research method, the method of participant selection, the procedures used in the study, a statement of the

research questions, a description of how the data are treated, and a summary of the chapter.

The analyses of the data are treated in Chapter IV. A determination of the facilitating factors and inhibiting factors is presented. This is followed by a summary of the results and procedures used in arriving at these conclusions.

In Chapter V the summary, conclusions and recommendations are reported. These include recommendations concerning strategies for implementing certification of media specialists by the state of Michigan.

Following Chapter V are the Bibliography and Appendices.

CHAPTER II

REVIEW OF THE LITERATURE

In preparing for this study, the writer found it necessary to review the literature in three basic areas: the certification of educational media specialists throughout the United States, the certification of educators in general by the state of Michigan, and the development of the Delphi Technique as a research tool. These areas were chosen in order to provide:

1. A background on the certification of educational media specialists as it exists in other states. This would help to establish precedence for certification, as well as give some insight into the various certification criteria.

2. Information concerning the history of educational certification in Michigan. This would help in establishing the types of certification issued by the state, the requirements for such certification, and possible future certification plans..

3. A basis for the selection of the Delphi Technique as the research method and to determine if there are advantages to using Delphi rather than the more

conventional methods, i.e., group discussion and personal interview.

The literature for each of these areas is reviewed separately and each in its own chronological order.

Certification of Educational Media Specialists

During the past six years, considerable effort has been expended studying the broad area related to certification of media specialists. Prior to 1968, the need for certification of media specialists had been recognized by several states and a few of these had taken steps to develop guidelines for such certification.¹ The wisdom of certification was emphasized as far back as 1962 and documented in the September issue of Audiovisual Instruction, which stated:

Slow but sure signs of the professionalization of the media specialist are beginning to appear in the requirements listed in state department certification manuals. These signs of recognition represent individual and cooperative efforts within states. They are the product of hard work on the part of DAVI affiliates whose committees have drafted numerous minimum standards for administrators, state department personnel, and other key educators; colleges and universities whose AV personnel have worked to get AV courses into the curriculum; and dedicated AV consultants in state departments who have written countless memos to their superiors arguing for the recognition and definition of the media specialist's job.²

¹Before 1968, only seven states had any form of certification for media specialists and only ten states were developing guidelines for such certification.

²"Standards for the Media Specialist," Audiovisual Instruction, September 1962, pp. 464-67.

The material that followed this statement was a review of standards established in the states of Florida, Illinois, Indiana, and Minnesota pertaining to the training of media specialists and its relation to certification in the individual states. It also gave an overview of the consideration being given to the subject in California, Ohio, North Carolina, and Pennsylvania.³ It is interesting that at that time only Indiana actually had a form of certification in effect. Of the eight states considering some form of certification for media specialists in 1962, seven indicated it would be an endorsement to their standard teacher certification and that the endorsement would be predicated on the attainment of a specified number of credits or courses in media. Ohio offered certification for Educational Administrative Specialist in five areas, one of which was Instructional Service. However, no specific requirements for this certificate could be linked to the media specialists per se. Another interesting point is that in North Carolina discussion of a proposed certification plan indicated a desire to stress competency-based requirements and yet in 1973, some eleven years later, an article was published, entitled "North Carolina Moves Toward Competency-Based Media Preparation Programs."⁴

³Ibid., pp. 466-67.

⁴James W. Carruth, "North Carolina Moves Toward Competency-Based Media Preparation Programs," Audiovisual Instruction, May 1973, pp. 33-34.

A review of the literature of 1965 shows the states of Illinois, Minnesota, and Florida to have some form of media specialist's certification in effect. It must be noted, however, that only Minnesota's certification appeared to hold any real potential significance to the media specialists. This point was brought out by Robert Bauman when he wrote:

Even in its present state, the program of certification has enhanced the AV program in the schools of Minnesota considerably since 1962. It has encouraged stronger AV training programs in the state's teacher education institutions, established greater respect for and more professionalism in the field and developed a unity through common experience for the field and especially the state organization.⁵

In contrast, James Sexson said of Illinois' certification code:

Although the State Standard Special Certificate now allows the endorsement in audiovisual, library, and instructional materials, as well as in any of the subject areas, the value of this certificate is weakened by the interpretation of the number of hours required in the area of specialization. The Certification Board has interpreted the required 32 hours of specialization to mean 32 hours in the field of audiovisual, and I strongly suspect that fewer than a dozen people in our state can qualify under this strict interpretation. To my knowledge, no one has ever applied for the certificate.⁶

Of Florida's certification code, as it existed in 1965, Ted Rosa stated:

⁵Robert A. Bauman, "Minnesota," Audiovisual Instruction, December 1965, pp. 788-89.

⁶James E. Sexson, "Illinois," Audiovisual Instruction, December 1965, p. 787.

The past and present Florida certification requirements for "Library and Audiovisual Service" have been of little or no benefit to the audiovisual field because they are heavily weighted in the area of library science, making it very difficult for a person interested in audiovisual instruction to enter this field. . . . Of the 24 semester hours required for certification in Library and Audiovisual Service, only two semester hours must be taken in audiovisual instruction, while six semester hours must be taken in books and related materials for young people; six semester hours in organization and administration of libraries, including a course in school libraries or material centers; two semester hours in classification and cataloging.⁷

In 1966, the Teachers Certification Board for the state of Illinois accepted reports that provided greater clarity to the existing requirement of thirty-two semester hours in the area of specialization for the standard special certificate with an audiovisual endorsement.⁸ The reports provided for three different endorsements, namely the instructional media specialist, audiovisual, and supervisory. The basic requirement still remained thirty-two semester hours of specialization. However, for the instructional materials specialist these could be a combination of library science and audiovisual courses, for the audiovisual endorsement a minimum of sixteen semester hours in library science and sixteen semester hours in audiovisual education.

⁷Ted Rosa, "Florida," Audiovisual Instruction, December 1965, pp. 793-94.

⁸James A. Boula, Maurice Iverson, and Loran C. Twyford, Jr., "Certification of Media Specialists: Illinois, New York, and Wisconsin," Audiovisual Instruction, February 1967, p. 117.

The New York State Education Department provided for the certification of directors of educational communications in 1967.⁹ This was strictly an administrative position reflecting the expanded role of the audiovisual director. The requirements for such certification were merely an extension of one's education on the graduate level, and three years teaching experience. A total of sixty semester hours of graduate study, of which fifteen must be in educational communications, was the specific course work requirement. This certification became mandatory in 1969 and remains the only media specialist type of certification in New York State at the time of this writing.

The Wisconsin Department of Public Instruction adopted as part of its certification code the certification of audiovisual directors and audiovisual coordinators in 1966 to become effective by January of 1967.¹⁰ Certification became compulsory for newly appointed personnel by the school year 1967-68. The Wisconsin Code stipulated that for certification as an audiovisual director, one must possess a valid Wisconsin teacher's certificate, have at least three years of successful teaching experience, and have completed at least fifteen semester hours in audiovisual instruction. For certification

⁹Ibid.

¹⁰Ibid., p. 119.

as an audiovisual coordinator, the qualifications were: possess a valid Wisconsin teacher's certificate and have completed at least four semester hours in audiovisual instruction. The Wisconsin Code points out that certification as audiovisual director or audiovisual coordinator is in relation to all technological aids to the instructional program such as films, recorded materials, radio, television, and other modern communications devices and materials; it does not specify print material, nor does it specify the acceptance of library science in its requirements.

By 1968, national interest toward certification of media specialists was developing. Besides the articles that were written concerning the individual states' attempts at certification of media specialists, research and position papers provided some semblance of synthesis. One of these was a position paper prepared for the Board of Directors of the Department of Audiovisual Instruction of the National Education Association, which provided that board with an overview of technology in the modern school, role of the media professional, qualifications and functions of the media professional, media professionals' functions at the various levels of education, and the general preparation required of the media professional.¹¹

¹¹Kenneth Norberg et al., "The Role of the Media Professional in Education," Audiovisual Instruction, December 1967, pp. 1027-29.

The Department of Audiovisual Instruction's Certification Committee, chaired by Clark P. Shelby,¹² published a proposed audiovisual certification requirements guideline, in order to garner constructive criticism from the media profession, and to assist states seeking to develop guidelines for certification. The committee established three levels of professional endeavor with requirements as follows:

- I. Requirements for the Chief Audiovisual Media Specialist for a school district or regional instruction materials center:
 - A. A Masters degree (or 30 graduate credits beyond the B.A.).
 - B. A valid State Teaching and Administrative Certificate and three years of successful teaching experience.
 - C. Thirty credit hours in the following areas:
 1. Eighteen credits in audiovisual courses including Methods and Selection, Production Laboratory, Administration, and Communications.
 2. Twelve credits in the following areas (at least three areas must be represented in the courses taken):
 - a. School Administration
 - b. Elementary Education
 - c. Secondary Education
 - d. Supervision of Instruction
 - e. Psychology of Learning
 - f. Library Science
 - g. Statistics and Methods of Research
 - D. At least two years of experience as an Audiovisual Building Coordinator or equivalent.
 - E. Allowances
 1. Certified personnel currently administering district or regional audiovisual programs may be granted up to five years to acquire these certification requirements.

¹²Clark A. Shelby, "Certification for AV Specialists," Audiovisual Instruction, December 1967, pp. 1032-34.

- II. Requirements for the Building Audiovisual Media Specialist for high schools and junior colleges:
 - A. Masters degree (or 30 graduate credits beyond the B.A.).
 - B. A valid state teaching certificate.
 - C. Two years of successful teaching experience.
 - D. Twenty credit hours in the following areas:
 - 1. Twelve credits in audiovisual courses including Methods, Selection, Production, Communications, and Administration.
 - 2. Eight credit hours from the following areas (at least three areas must be represented in the courses taken):
 - a. Secondary Education
 - b. Elementary Education
 - c. Psychology of Learning
 - d. School Administration
 - e. Research Methods
 - f. Library Science
 - g. Supervision of Instruction
- III. Requirements for the Elementary School Building Audiovisual Coordinator:
 - A. Baccalaureate degree
 - B. A valid state teaching certificate and one year of successful teaching experience
 - C. Twelve credits in the following areas:
 - 1. Six credits in audiovisual courses including Evaluation, Utilization, Production, and Administration.
 - 2. Six credits from:
 - a. School Administration
 - b. Elementary Education
 - c. Secondary Education
 - d. Supervision of Instruction
 - e. Psychology of Learning
 - f. Library Science
 - g. Statistics and Methods of Research
 - D. Allowances
 - 1. Certified personnel currently functioning as Audiovisual Building Coordinators may be allowed up to two years to satisfy these requirements.¹³

Even though these proposed guidelines follow a pattern similar to existing certification requirements in terms of minimum number of courses in prescribed areas, they

¹³Ibid., pp. 1033-34.

reflect another phenomenon of the time, of including all types of media training, both print and non-print. Many of the states by this time were developing unified instructional media programs, while still recognizing, as did Wisconsin,¹⁴ the apparent need for media specialists with specific expertise in one of the two major areas, print and non-print. Occasionally, however, someone spoke out for the need of an educational media specialist with competencies in both print and non-print media. One such spokesman was Clinton West,¹⁵ who stated:

A frequently missing agent in this picture of progress is the well-trained educational media specialist. He is usually responsible for establishing environmental facilities and content resources. He makes it possible for the teacher to use the best elements of our technological advances. In short, he maximizes the chances of success toward attainment of a basic goal to provide an education limited only by the capabilities of the learner.¹⁶

Utah adopted a certification code for instructional media endorsement which became effective September, 1968. On the surface, the requirements appeared to be similar to those in other states, with the exception that in

¹⁴Wisconsin Department of Audiovisual Instruction, "The Role of School Librarians and Audiovisual Specialists," Audiovisual Instruction, April 1968, pp. 378-79.

¹⁵L. Clinton West was with the Bureau of Educational Personnel Development Division of Program Administration of the U.S. Office of Education, Washington, D.C..

¹⁶L. Clinton West, "A New Partnership Is Needed," Audiovisual Instruction, October 1968, p. 926.

addition to holding a teaching certificate and a specified number of credits, the applicant needed to demonstrate proficiency in specific areas. This is apparently the first certification that qualifies as competency based. Some researchers¹⁷ fail to recognize Utah's certification as being competency based, most likely on the basis that a recommending institution attests to the proficiency level of the applicant and usually through course work. However, the state board of education issued a recommended proficiency guidelines document¹⁸ of some twenty-two pages, which has in its introduction the following statement:

Before recommending a candidate to the Utah State Board of Education for a media endorsement, the institution should be satisfied that he has acquired the necessary competencies. The recommending institution is free to determine how the competency will be demonstrated or ascertained. It is, however, recommended that when a candidate believes he already possesses the required competency, the evaluating institution provide a means by which actual possession of that proficiency can be determined.

Competencies may be determined one at a time. In demonstrating competency, alternatives to written responses are encouraged.

The competencies listed in this document are specific, leave no doubt about their meaning, and are written as behavioral objectives.

¹⁷Grady, "Certification of Educational Media Personnel," p. 32.

¹⁸Utah State Board of Education, Recommended Proficiency Guidelines for Media Endorsements (Salt Lake City, Utah: Utah State Board of Education, 1968).

By 1969, many articles began to appear under the headings of professionalism, certification, preparation of media personnel, all reflecting the movement toward certification of media specialists. In one such article by Sidney Eboch was the statement, "In attaining and maintaining true professional status, one of the most powerful tools of any organized group is the licensing procedure for group membership,"¹⁹ which seemingly portrayed the feeling of a substantial portion of the educational media specialists community.

Another significant trend in 1969 was that of specifying desired requirements for certification in terms of the functions or competencies of the media specialists. For example, Grady developed the role of the media specialist and the expectations of this person before translating them into recommended courses to meet certification requirements.²⁰ Grady was a member of the Department of Audiovisual Instruction Certification Committee and was reporting on the revision of the proposed certification requirements as published in the 1967 report by Clark Shelby. Shortly thereafter, the committee presented its report to the Board of Directors of DAVI, who endorsed it

¹⁹Sidney C. Eboch, "Toward a Professional Certification," Audiovisual Instruction, April 1969, pp. 72-74.

²⁰William F. Grady, "The Preparation and Certification of Educational Media Personnel," Audiovisual Instruction, January 1969, pp. 29-31.

and published it under the title Guidelines for Certification of AV Specialists.²¹ The final draft of this document provided for two levels of certification, the requirements for each level stated first in terms of hours of course work in specified areas and secondly, in terms of areas of competency. The two levels were identified as a minimal audiovisual program and a more sophisticated audiovisual program. These criteria for certification are still being published by the Association for Educational Communications and Technology, the new name for the Department of Audiovisual Instruction.

The Department of Audiovisual Instruction and the American Association of School Librarians prepared a Set of Standards for School Media Programs²² in 1969 and defined the media specialist as:

. . . an individual who has broad professional preparation in educational media. If he is responsible for instructional decisions, he meets requirements for teaching. Within this field there may be several types of specialization, such as (a) level of instruction, (b) areas of curriculum, (c) type of media, and (d) type of service. In addition, other media specialists, who are not responsible for instructional decisions, are members of the professional media staff and

²¹Association for Educational Communications and Technology, Guidelines for Certification of Media Specialists (Washington, D.C.: Association for Educational Communications and Technology, 1972), pp. 5-8.

²²American Association of School Librarians and Department of Audiovisual Instruction, Standards for School Media Programs (Chicago: American Library Association, 1969; Washington, D.C.: National Education Association, 1969).

need not have teacher certification, e.g. certain types of personnel in television, and other media preparation areas.²³

The Standards did not recommend any criteria for certification of media specialists. Basically, however, it did recommend a unified media program for the school. This fact has stimulated considerable discussion and joint meetings between affected professional organizations, and is bound to reflect upon subsequent certification requirements.

Connecticut, Idaho, North Dakota, and Oklahoma had joined the ranks of states offering certification of media specialists by 1970. This brought the total number offering such certification to fifteen. Connecticut certification was for an administrative or supervisory role. The basic requirements were a master's degree, a teaching certificate, five years of teaching experience, and fifteen semester hours in audiovisual courses beyond the master's degree. Idaho offered certification for an educational media generalist, requiring a bachelor's degree, a teaching certificate, three years of classroom teaching experience, and twenty-four semester hours of audiovisual courses including six in related areas. Certification in North Dakota and Oklahoma took on a more complex form, since it is possible to acquire more than one type of certification. North Dakota offered the following certificates:

²³Ibid., p. xv.

Library--requiring bachelor's degree, teaching certificate, recommended classroom teaching, sixteen semester hours of library science.

Library--AV--requiring bachelor's degree, teaching certificate, one or more years of teaching experience, ten semester hours of audiovisual courses, sixteen semester hours of library science.

Audiovisual--requiring bachelor's degree, teaching certificate, one or more years of teaching experience, twelve semester hours of audiovisual courses.

Media Director--requiring master's degree, teaching certificate, one or more years of teaching experience, ten semester hours of audiovisual courses, and sixteen semester hours of library science.

The differences in the types of media certificates issued in Oklahoma are related more to duration or advancement than to level or function. There is a temporary certificate requiring a bachelor's degree, a teaching certificate, two years of teaching experience, and eight semester hours of audiovisual courses. Next is the provisional certificate requiring, in addition to the above, two semester hours of audiovisual courses and eight semester hours of

related courses. Finally, they offer an audiovisual specialist + standard certificate requiring an additional five semester hours of audiovisual courses and seven semester hours in related subjects.

"When AV people congregate these days, chances are that before long some of them will ask who they are, what their function should be, and how much security can they expect in today's rapidly changing world,"²⁴ said John Vergis in 1970. Dr. Vergis, of Arizona State University, was speaking at an open forum in Detroit, relative to the 1969 DAVI/AASL Standards. Most of his statements were built around the premise that media programs would eventually become unified and thus demand personnel well versed in media as communications. He concluded with a prediction about personnel requirements of the future by stating, "As our field crystallizes into new and more exciting patterns, there will continue to be a shift, a shifting of media personnel. Those with the most appropriate competencies will displace those with the least."²⁵ Statements such as this on the national level indicated a trend for the 1970's toward competency-based credentialing or certification. By 1970, however, only Utah had a certification

²⁴John Vergis, "An Open Forum--Together or Separate," Audiovisual Instruction, October 1970, p. 22.

²⁵Ibid., p. 25.

program for media specialists that could be termed competency based.

In 1971, Massachusetts joined the ranks of those states offering some form of certification for media specialists, bringing the total to sixteen at that time. A letter from Dr. Phillip Sleeman, chairman of the Massachusetts Audio Visual Association Certification Committee, to the Department of Audio Visual Instruction staff, dated July 10, 1970, contained the following statement:

On June 22, 1970, the Governor signed into legislation for the Commonwealth of Massachusetts a bill "Providing that the Board of Education Grant Certificates to Certain Audio Visual Media Specialists." For the first time in the history of the Commonwealth, personnel holding a media position must be certified. The philosophy, rationale and intent of this bill requiring certification of media personnel is simple: To guarantee that every child, teacher and administrator involved in the learning-teaching-administration process in the Commonwealth, be guaranteed the opportunity of working with media personnel certified to have the minimum competencies so necessary to maintain pace with the continual growth in our educational technological society.²⁶

Although Sleeman referred to necessary competencies for media personnel, Massachusetts certification (which did not become effective until 1974),²⁷ like that of most of the other states, was based on a degree, a teaching certificate, and a set number of semester hours of accredited media courses.

²⁶"AECT News," Audiovisual Instruction, September 1970, p. 71.

²⁷Grady, "Certification of Educational Media Personnel," p. 29.

One of the motivational factors attributed to the movement toward certification of media specialists, according to Robert E. Fite,²⁸ is: "The grass roots membership in the Association for Educational Communications and Technology can't wait idly by and see their jobs being filled by those who have not successfully completed college or university-level audiovisual courses."²⁹ He called this fact a search for certification for identity. Whether this was truly a significant factor or not, the profession did witness a 73 percent increase in the number of states offering certification of media specialists by March, 1973, two years after the publication of Fite's article. Included in the 73 percent increase were Arkansas, Hawaii, Massachusetts, Missouri, Nebraska, New Jersey, Oregon, South Dakota, Texas, Washington, and Wyoming.

Arkansas, Massachusetts, Nebraska, New Jersey, and Washington offered certification at one level only. Their requirements included a bachelor's degree and a teaching certificate. Arkansas and New Jersey required teaching experience but Massachusetts, Nebraska, and Washington did not. New Jersey's and Washington's

²⁸Dr. Robert E. Fite was a former national membership and affiliate relations director for the Department of Audiovisual Instruction and as such had an opportunity to familiarize himself with the many issues involved in certification nationwide.

²⁹Robert E. Fite, "Certification for Identity," Educational Screen and Audiovisual Guide, March 1971, p. 19.

certification was competency based, while Arkansas, Massachusetts and Nebraska required from eighteen to thirty semester hours of media or related areas.

Three states provided for certification at two different levels; they were Hawaii, Missouri, and Oregon. The entrance level in all three states required a bachelor's degree, a teaching certificate, and eighteen to twenty-one semester hours in media work. None of the three required experience beyond student teaching at the entrance level. The advanced level of certification in these states had varying requirements. Hawaii required a master's degree or a minimum of thirty hours beyond the bachelor's teaching certificate, one year's experience, and twenty-one semester hours in media work. Missouri required a master's degree, a permanent teaching certificate, at least two years' media experience, eighteen semester hours in audio-visual courses and eighteen semester hours in library science. Oregon merely increased the semester hour requirement by fifteen hours.

South Dakota, Texas and Wyoming established three levels of certification. The only significant difference in the requirements at each level in South Dakota was an increase in semester hours of media work. South Dakota required a bachelor's degree, a teaching certificate, and ten to eighteen semester hours of media work, depending on the level of certification sought. The requirements in

Texas were: Level I--bachelor's degree, teaching certificate, and eighteen semester hours of media work; Level II--master's degree, teaching certificate, three years of teaching experience, and eighteen semester hours of media work; Level III--master's degree, teaching certificate, three years of experience at Levels I or II, and twelve semester hours of media work. The significant difference in the requirements by Wyoming at the three levels was in experience and semester hours of media work. All three levels required a bachelor's degree and a teaching certificate; however, the experience required varied from none to five years, and semester hours of media courses varied from twelve to thirty.

Several states are currently in the process of developing plans for certification of media specialists and several more are revising existing certification codes. Among those currently seeking certification is Michigan. The Michigan Association for Media in Education has a committee developing guidelines for competency-based certification, which it hopes the Department of Education will adopt in the near future. This study was conducted to help expedite the implementation of that certification.

Some of the states that are revising their existing certification appear to be seeking a competency-based

program.³⁰ The competency-based criteria for media certification is the most significant recent development in the certification process. In the past few years, several significant studies have emerged, which provide support for the development of competency-based certification. Among the most outstanding of these studies are: Jobs in Instructional Media Study, Behavioral Requirements Analysis Checklist (an outgrowth of the School Library Manpower Project³¹), and Media Guidelines.

Jobs in Instructional Media Study³² provided an abundance of information related to the types of tasks being performed by the various instructional media personnel across the nation. The report classified media personnel according to job-related tasks, which in essence provides us with job descriptions for the majority of instructional media personnel of that period. Data from this study have been and are being used for determining which competencies to include in certification programs. The JIMS study is the most comprehensive study of its type

³⁰James W. Carruth, "North Carolina Moves Toward Competency-Based Media Preparation Programs," Audiovisual Instruction, May 1973, pp. 33-34.

³¹Robert N. Case and Anna Mary Lowrey, School Library Manpower Project Phase I--Final Report (Chicago: American Library Association, 1970).

³²The JIMS study was carried out under a grant from the Office of Education, Department of Health, Education and Welfare.

to date, and its structure includes a list of behavioral objectives developed for each function performed by media personnel.

The Behavioral Requirements Analysis Checklist, known as BRAC, is a compilation of competency-based job functions and task statements for school library media personnel.

Each major area of competency and its definition is presented as a separate section of BRAC. Each broad competency area is broken down into behaviorally stated job functions supported by task statements. The task statements represent the required behaviors of the school library media specialist who functions as a generalist in a school library media center.³³

A major difference between the JIMS study and BRAC is the inclusion of non-professional jobs and their related tasks by the JIMS study. Both studies, however, list tasks related to all types of media, both print and non-print.

[The Media Guidelines Project] employed intensive job analysis and clustering techniques aimed at determining competencies currently being performed in managing, developing, and utilizing media in instruction. The purpose of the project was to produce guidelines and other information for planning media training programs and evaluating media-related training proposals and training program outputs. The ultimate purpose is to help insure that present and prospective training programs produce the

³³ Robert N. Case and Anna Mary Lowrey, Behavioral Requirements Analysis Checklist (Chicago: American Library Association, 1973), p. ix.

competencies that will be required five or more years from now.³⁴

The concluding portion of Media Guidelines gave a detailed analysis of job-related functions reported in terms of the tasks performed by media specialists, very similar to the method used in the JIMS study and the Behavioral Requirements Analysis Checklist.

As previously mentioned, Robert Heinich, president of AECT, appointed a task force to work on problems pertaining to certification of educational communications and technology personnel in December, 1971. This task force held fifteen working sessions over the three-year period. Ten of these sessions were held to plan, to synthesize collected data, and to write and rewrite its report. Included in these meetings were three sessions to solicit feedback and reactions from the membership at large.

The first was held at the Northeast Regional Leadership Conference in January, 1973 in Newport, Rhode Island, with 80 persons in attendance. The second was held at the National Convention in April, 1973 in Las Vegas, with 240 persons in attendance. The third and final meeting was held at the National Convention in March, 1970 in Atlantic City with 320 persons in attendance.³⁵

³⁴Dale G. Hamreus, ed., Media Guidelines: Development and Validation of Criteria for Evaluating Media Training, Vol. II (Monmouth, Oregon: Division of Teaching Research, Oregon State System for Higher Education, June 1970), p. i.

³⁵William F. Grady and Clarence O. Bergeson, "Accreditation and Certification: A Report," Audiovisual Instruction, November 1974, p. 11.

During the National Convention of AECT in Atlantic City between March 17 and 22, 1974, the Certification Task Force presented the Board of Directors with a substantial written report.³⁶ In this report, the Task Force recommended:

1. That serious consideration be given to the approval and publication of these guidelines;
2. That a vehicle be established whereby continuing study can be made of the impact of the Guidelines in the field for further revision and refinement;
3. That a vehicle be established to develop guidelines for the certification of educational communications and technology personnel graduating from two-year programs;
4. That a vehicle be established to study the problems of "certifying" aides, as defined in this report; and
5. That a vehicle be established to study the role of the technician in instructional program development.³⁷

³⁶William F. Grady, James W. Brown, and Roland Mergener, "Certification Task Force: Report to the AECT Board of Directors" (Atlantic City, New Jersey, March 17, 1974).

³⁷Ibid., p. 2.

The first of these recommendations has been complied with, and the guidelines were published in the periodical Audiovisual Instruction.³⁸

The guidelines recognized three areas of responsibility in the field, namely: media management, media product development, and instructional program development. Within each of these areas of responsibility, the guidelines call for certification at two levels of complexity, which are termed technician and specialist, the specialist being the more complex of the two. The Task Force then identified nine functions within the three major areas.³⁹ A list of competencies or tasks that existed within these functions and that could be assigned a level of complexity was then determined. These competencies or tasks were adapted from the Jobs in Instructional Media Study previously cited.⁴⁰

The Task Force recommended that certification in each of the three areas and at the two levels of complexity be based on: (a) appropriate competencies, (b) formal education, and (c) experience.

³⁸Certification Task Force, "Guidelines for Certification of Personnel in Educational Communications and Technology," Audiovisual Instruction, November 1974, pp. 20-69.

³⁹*Ibid.*, p. 20.

⁴⁰Certification Task Force, "Appendix A--A Competency and Task List for Specialists and Technicians in Media Management, Media Product Development and Instructional Program Development," Audiovisual Instruction, November 1974, p. 29.

It is interesting that even though the Task Force was aware of the prevalent practice of certifying media specialists by the states offering such certification, being based upon completion of a minimum number of semester hours of media courses, that it chose to base its recommendations upon specific competencies. It did not, however, state how a candidate for certification should be judged to possess the stated competencies. This may have been, in effect, leaving the way open for institutional recommendations for certification based upon satisfactory completion of a prescribed set of course offerings, which would include student learning of the required competencies.

Also worthy of note is the fact that all competencies or tasks were extracted from only the JIMS study, rather than selection from the several major related studies, e.g., Behavioral Requirements Checklist and the School Manpower Project.

The Task Force did not recommend certification for the technician level of instructional program development at the time of its report, because there appeared to be an insufficient number of related tasks to warrant certification.⁴¹

⁴¹Certification Task Force, "Guidelines for Certification," p. 21.

David Bender, Assistant Director, Maryland State Department of Education, Division of Library Development and Services, is chairman of the American Association of School Librarians Certification of Media Personnel Committee. Under Dr. Bender's leadership, a subcommittee of the Certification of Media Personnel Committee met in Pennsylvania in October, 1974, to develop a model for media personnel certification.⁴² The model is being developed and field tested under the J. Morris Jones-World Book Encyclopedia-American Library Association Goals Award of \$12,000 given to the American Association of School Libraries for 1974-75. While the two national organizations, AECT and AASL, representing media personnel are not working jointly on the question of certification, they are both actively engaged in individual endeavors to give direction to the certification movement. The model being developed by AASL is consistent with the new joint standards adopted by AASL and AECT according to the editors of American Libraries, which also states: "The certification model will be offered to the states to assist in revising certification that is consistent with nationally and professionally accepted terminology in library media programs and education."⁴³

⁴²"Certification Model Developed," American Libraries, November 1974, p. 562.

⁴³Ibid.

Summary

Even though interest in certification of media specialists was indicated over a decade ago, no significant adoption of certification codes involving media specialists by individual states occurred prior to 1965. That year, Florida, Illinois, Indiana, and Minnesota offered some form of certification for media specialists. By 1971, there were sixteen states that provided for certification of media specialists and by 1973 twenty-six offered such certification.

Of the states certifying media specialists in 1973, the approximate average requirements included: a bachelor's degree, a valid teacher's certificate, and fifteen to twenty-four credits in media and related areas.

Three of the twenty-six states offered competency-based certification.

National media organizations, the Association of Educational Communications and Technology, and the American Association of School Librarians have developed certification guidelines or models that are either competency based or task oriented. These national exemplary guides are designed to assist those states seeking certification, as well as those attempting to revise existing certification codes.

Several major research studies are available that have determined a substantial number of the functions of

current media specialists and the competencies or tasks necessary to perform these functions satisfactorily. These studies, along with the national guidelines developed by AASL and AECT, should provide a significant base for the development of competency-based certification of media specialists.

Teacher Certification in Michigan

The first legislation to make mention of the certification of teachers was a law enacted in 1827 by the territorial legislature, to provide for a system of common or primary schools, as they were then called. In section four of the 1828 Territorial Act, the system for certifying teachers was defined:

That the inhabitants of said townships respectively shall choose a suitable number of persons within their respective townships, not exceeding five, who shall be inspectors of schools in said townships respectively; which inspectors shall examine the teachers, and approve or disapprove of the same, . . . three or more of said inspectors shall be competent, both to examine the teachers and the respective schools, and no person shall be employed as a teacher in any one of the schools in any of the townships or districts in this territory, who shall not have been previously examined by the inspectors aforesaid, and have received a certificate, signed by at least two of said inspectors, importing that he is duly qualified to teach the school for which he may be an applicant, and is of good moral character;⁴⁴

⁴⁴Michigan, Territorial Laws (1827), Vol. 2, p. 474.

Michigan became a state in 1835. The first legislation under statehood to provide for teacher certification was in 1837. Public Act LXIII provided that candidates for teachers' certificates should be examined for their knowledge of the several branches of study usually taught in the primary grades, their moral character, and their ability to govern a school.⁴⁵ The responsibility for this certification was given to the township board of school inspectors. However, the legislation made no provision with respect to the educational qualifications of township inspectors.

In 1857, Public Act 104 established the first teaching certificate, issued by the state of Michigan, to be valid in any township or county in the state.⁴⁶ This was also the first life certificate to be issued in the state. The act provided:

That the board of instruction of the State Normal School is authorized to grant to graduates of said institution diplomas, which, when signed by the members of the State Board of Education. . . . Each diploma so conferred shall be accompanied by a certificate, signed by the board of instruction, which, when recorded in the office of the clerk of any township in this state, shall serve the holder as a certificate of qualification to teach in any primary school of said township. . . .⁴⁷

⁴⁵Michigan, Legislature, Public Acts, 1837, Act No. LXIII, p.123.

⁴⁶Michigan, Legislature, Public Acts, 1857, Act No. 104, pp. 231-32.

⁴⁷Ibid.

By 1867, the Legislature had established three certificating authorities: (1) The County Superintendent, (2) The State Normal School, and (3) the Superintendent of Public Instruction. The qualifications for certification had been broadened to include satisfactory examination in orthography, reading, writing, grammar, geography, and arithmetic. Certification of public school teachers was mandatory by this time. Certificates issued by the State Normal School and the Superintendent of Public Instruction were lifetime certificates (unless revoked), while the County Superintendent issued three grades of certification. The certificates issued by the County Superintendent were valid only in the county issued and for the time specified.

In 1891, the University of Michigan was authorized by Public Act 144 to issue life certificates to its graduates.⁴⁸ By 1893, the State Board of Education was authorized to grant teaching certificates to any person receiving a bachelor's, master's, or doctor's degree from any college in the state having a course of study of not less than four years, and a teacher preparation program approved by the State Board of Education.⁴⁹

⁴⁸ Michigan, Legislature, Public Acts, 1891, Act No. 144.

⁴⁹ Michigan, Legislature, Public Acts, 1892, Act. No. 136.

With the turn of the century, a trend toward shifting of certification responsibility from several agencies to one state authority began to develop. In 1903, the certification authority of the four state normal schools was transferred to the State Board of Education.⁵⁰ By 1929, the state superintendent was either an active member of each agency issuing teaching certificates or was authorized to prescribe the conditions under which the agency could issue a certificate.

Certification of all Michigan teachers was finally delegated to one agency, the State Board of Education, in 1935.⁵¹ The State Board of Education was charged with the development of a teacher certification code which, prior to this time, really never existed. To accomplish this goal, the State Board referred the matter to the Extra Legal Advisory Planning Commission.⁵²

The Commission examined the types of certificates then in use in Michigan, studied policies and procedures being practiced, reviewed certification requirements in other states and involved interested groups in the state.

⁵⁰Michigan, Legislature, Public Acts, 1903, Act No. 202.

⁵¹Michigan, Legislature, Public Acts, 1935, Act No. 55.

⁵²Lee B. Lonsberry, "A Study of the Historical Development of Teacher Certification in Michigan" (Ph.D. dissertation, University of Michigan, 1970).

Based on this background, the Commission recommended a certification code, which the State Board of Education adopted in 1936.⁵³ Since this code, with only minor revisions, was to stand until 1967, it seems appropriate to review the changes brought about by the code:

1. The fifteen former kinds of Michigan teachers' certificates will be replaced by five significantly named certificates: The Elementary Provisional-Permanent Certificate, the Secondary Provisional-Permanent Certificate, the Junior College Certificate, the State Limited Certificate, and Renewal.

2. "Blanket" certification is eliminated, and certificates will be granted to teachers for elementary grades, or secondary grades or Junior Colleges.

3. Life Certificates will not be granted.

4. Provisional Certificates will be granted to graduates from teacher training institutions offering approved four-year courses.

5. Elementary Provisional Certificates will become permanent upon submission of evidence of three years of successful teaching.

6. Secondary Provisional Certificates will become permanent upon completion of three years of successful teaching and additional college work.

⁵³Ibid., p. 132.

7. Provisional and Permanent Certificates will become invalid when the holder is unemployed as a teacher for five years.

8. Limited certificates will be granted to candidates who complete specific one- or two-year courses of study. These certificates are renewable upon completion of additional prescribed college work. Limited certificates have restricted validity.

9. The regulations of the Certification Code will be placed in force over a period of years. For instance, no Life Certificate will be granted after June 30, 1939. No part of the new Certification Code is retroactive. The State Board of Education will administer the certification program in such a manner that no present professional teacher will be penalized.⁵⁴

Only minor changes in the 1936 code were made and adopted from its inception in 1936 until its demise in 1967.

The development of the 1967 certification code began in 1954 when the State Board of Education directed its Advisory Committee on Teacher Education and Certification to proceed with its study of proposed plans for

⁵⁴Michigan, Department of Public Instruction, Teachers' Certification Code, Bulletin 601 (Lansing: Department of Public Instruction, 1936), p. 8.

revision of the certification code.⁵⁵ Subsequently, the work of this committee and a second committee was the basis for the certification code adopted by the State Board of Education in 1967. Despite the sincere efforts of those involved in development of the 1967 code to upgrade the professional level of the Michigan teacher, a careful review of the code provisions reveals that it amounts to little more than an increase and/or shift in emphasis on college credits and degrees. There is no reference in the code to competency of teachers or competencies of teaching. One of the best examples in the 1967 code demonstrating the emphasis on the accumulation of credits rather than on the achievement of competence in teaching is the requirement that teachers with Provisional Certificates must complete an eighteen-semester-hour planned course of study beyond the bachelor's degree.⁵⁶ The full implementation of the 1967 code is scheduled for 1976.

In 1972, the Michigan Department of Education submitted to the State Board of Education a document entitled "Four Proposals Regarding Certification and Professional

⁵⁵State Board of Education, Minutes of meeting of the Michigan State Board of Education, Lansing, Michigan, December 10, 1954, p. 63.

⁵⁶Michigan Department of Education, Rules Governing the Certification of Michigan Teachers (Lansing, Mich.: Michigan Department of Education, 1967), Rule 32, p. 29.

Development of Michigan Teachers."⁵⁷ The introduction reminded the Board of their responsibilities concerning certification and professional development of those persons currently certified. The purpose of the document was to propose the following:

1. That a system of fees be charged for teacher certificates and permits.
2. That a competency- or performance-based certification system be developed.
3. That a comprehensive professional development program be developed.
4. That a commission on teacher certification and professional development be established to work directly with the State Board of Education.⁵⁸

This document holds some relevance to the issue for the competency-based certification of media specialists by the state. First, the proposal concerning competency-based or performance-based certification of teachers would establish a preference for this type of certification over the current system involving credits. Appendix C to the document consisted of a proposed statute to amend sections 851 and 852 of Act No. 269 of the Public

⁵⁷Michigan Department of Education, "Four Proposals Regarding Certification and Professional Development of Michigan Teachers" (Lansing, Mich: Department of Education, 1972). (Mimeographed.)

⁵⁸Ibid., p. 1.

Acts of 1955.⁵⁹ The proposed revision of Sec. 852 provided for the State Board of Education's issuance of certificates: "(c) To persons with instructional responsibilities employed other than as a classroom teacher including, but not limited to, administrators and curriculum specialists."⁶⁰ This revision could provide for certification of media specialists.

Currently, the method of certification, other than that of a classroom teacher, by the state of Michigan is through endorsement of the teaching certificate. There are two areas with endorsement at this time: vocational and counseling.

In 1972, the state established a penalty to be assessed against those school districts hiring unqualified teachers. "A district employing teachers not legally qualified shall have deducted the sum equal to one-half the amount paid the teachers."⁶¹ The deduction was to be made from the state support of the offending school district.

Summary

Certification of teachers in Michigan dates back to 1827, before Michigan became a state. From that time

⁵⁹Ibid., Appendix C.

⁶⁰Ibid., p. 19.

⁶¹Michigan, Legislature, Public Acts, 1972, Act No. 258, Sec. 163.

until 1935, certification was generally based on the moral character of the applicant as well as limited educational attainments. The authority for issuing certification shifted many times during this period.

The State Board of Education became the sole agency for issuing teacher certification in 1935. In 1936, a certification code was adopted by the Board and remained in effect, with minor revisions, until 1967. This code recognized college degrees and credits in educational training as the basis for certification.

In 1967, the present certification code was adopted with full implementation to be effective in 1976. To this code have been added amendments providing for certification endorsement in the areas of vocational and counseling. The State Board of Education is currently considering, among other changes, the feasibility of establishing competency-based certification, additional endorsements to the teaching certificate, and certification of educational personnel other than classroom teachers.

Delphi Technique

This section of the review of the literature is devoted to examining the utilization made of the Delphi Technique as a method of research, particularly in the field of education.

Much of the early development of the process called Delphi Technique can be attributed to Drs. Olaf

Helmer and Norman Dalkey. Brownlee Haydon, in a presentation to the Chevrolet Academy at Wayne State University in 1967, gave Helmer and Dalkey credit for development of the Delphi Technique and stated:

Twenty years ago, they suggested that it might be possible to get a better notion of what lies ahead if you ask a panel of experts to give their opinions. The idea is inherently logical, but it attracted little attention at the time. They made a few pilot tests that satisfied them that the idea had promise. Helmer and Dalkey call this the "Delphi technique."⁶²

Helmer and Dalkey, researchers at the Rand Corporation, a research and development organization, utilized versions of the Delphi Technique in several of their projects. Much of their work was in conjunction with military and government contracts and not until recent years have they adapted the technique to educational research.⁶³

Helmer described the technique this way:

The so-called Delphi Technique is a method for the systematic solicitation and collation of expert opinions. It is applicable whenever policies and plans have to be based on informed judgment, and thus to some extent to virtually any decision-making process.

Instead of using the traditional approach toward achieving a consensus through open discussion, the Delphi Technique in its simplest form, eliminates committee activity altogether, thus reducing the influence of certain psychological factors, such as specious persuasion, the unwillingness to abandon publicly expressed opinions, and the bandwagon effect of

⁶²Brownlee Haydon, The Year 2000 (Santa Monica, California: Rand Corporation, 1967), p. 7.

⁶³Olaf Helmer, The Use of the Delphi Technique in Problems of Educational Innovations (Santa Monica, California: Rand Corporation, 1966).

majority opinion. This technique replaces direct debate by a carefully designed program of sequential individual interrogations (best conducted by questionnaires) interspersed with information and opinion feedback derived by computed consensus from the earlier parts of the program.⁶⁴

In regard to the uses of the Delphi Technique in the field of education, Helmer stated:

. . . a district superintendent of public schools, intending to institute a curriculum reform, may want to take opinion soundings through the Delphi Technique among selected administrators and teachers within his district; a state educational planning office might decide on a building program after first consulting, via Delphi, with the local superintendents; a university's long-range expansion program must reconcile the views of its various departments, and a Delphi approach, using one or two administrators and a cross-section of departmental representatives as a panel of respondents, may well be the most appropriate way to achieve this; . . .⁶⁵

In this same publication, Helmer described in detail a pilot experiment utilizing the Delphi Technique, conducted at the Institute of Government and Public Affairs, UCLA, and sponsored by the Kettering Foundation. The conclusions drawn from the study indicate the methodology used was found to hold much promise for future studies.⁶⁶

In a publication prepared for the Revista Italiana di Amministrazione Industriale, Helmer wrote:

The effect has been to extend customary planning horizons into a more distant future and to replace haphazard intuitive gambles, as a basis for planning,

⁶⁴Ibid., p. 1.

⁶⁵Ibid., p. 6.

⁶⁶Ibid., p. 22.

by sober and craftsmanlike analysis of the opportunities the future has to offer.⁶⁷

In elaborating upon this statement, he indicated that there were new and more effective ways of doing something about the future. Further, he projected the idea that a great deal could be said about future trends in terms of probability, and moreover that through proper planning we could exert considerable influence over these probabilities. Of the Delphi Technique as a research method, Helmer said:

Among the new methods mentioned above that are under development is one that has become known as the Delphi Technique, which attempts to make effective use of informed intuitive judgment. It derives its importance from the realization that projections into the future, on which public policy decisions must rely, are largely based on the personal expectations of individuals rather than on predictions derived from well-established theory.⁶⁸

Much of the Delphi research conducted at Rand was by Dalkey, who defined Delphi as "the name of a set of procedures for eliciting and refining the opinions of a group of people. In practice, the procedures would be used with a group of experts or especially knowledgeable individuals."⁶⁹ Dalkey said the Delphi procedure has three distinctive

⁶⁷Olaf Helmer, Analysis of the Future: The Delphi Method (Santa Monica, California: Rand Corporation, 1967), p. 1.

⁶⁸Ibid., p. 4.

⁶⁹Normal C. Dalkey, Delphi (Santa Monica, California: Rand Corporation, 1967), p. 1.

characteristics, that of anonymity, controlled feedback, and statistical group response. In support of the Delphi procedure, some of the experiments performed at the Rand Corporation indicated that "when opinions are involved, face-to-face discussion may, more often than not, result in a group opinion which is less accurate than simply the average of the individual opinions without discussion."⁷⁰

Robert M. Campbell used the Delphi Technique in a study in which business and economic indices were forecast. He conducted a controlled experiment using students in two graduate seminars in business forecasting. Each seminar was divided at random into two equal groups. One group in each seminar used the traditional methods of making business forecasts and the other used the Delphi process. The traditional method allowed participants to interact freely with others in the group for the purpose of obtaining information relative to the forecasts. The Delphi experimental group gave individual responses to a series of four questionnaires over a period of six weeks. The group participants who used the Delphi process made more accurate forecasts than the group using the traditional business forecasting technique.⁷¹

⁷⁰Norman C. Dalkey, Predicting the Future (Santa Monica, California: Rand Corporation, 1968), p. 7.

⁷¹Robert M. Campbell, "A Methodological Study of the Utilization of Experts in Business Forecasting" (Ph.D. dissertation, UCLA, 1966).

Nicholas Rescher explored the possibility of using the Delphi method in research involving "values."⁷² Rescher reasoned that the Delphi Technique was a tool for testing group opinion and therefore could be directed at group opinion about values as well as facts. He felt the relevant techniques could be deployed in much the usual way, as a means for discovering and sharpening an area of group consensus in the value sphere.

In 1970, the dean of the School of Education of the University of Virginia, Dr. Frederick R. Cyphert, used the Delphi Technique in an attempt to assess the needs, desires, and opinions of the school's clientele.⁷³ In the first Delphi instrument, the participants were asked to suggest prime targets on which the School of Education should concentrate its energies and resources in the next decade. The use of four Delphi instruments was made with a relatively large group of participants. In the researchers' conclusions regarding the use of the Delphi Technique, they suggested limiting the number of participants as well as the number of instruments. They suggested three instruments as sufficient to bring about the desired consensus.

⁷²Nicholas Rescher, Delphi and Values (Santa Monica, California: Rand Corporation, 1969).

⁷³Frederick R. Cyphert and Walter L. Gant, "The Delphi Technique: A Tool for Collecting Opinions in Teacher Education," Journal of Teacher Education, Fall 1970, pp. 417-25.

Concerning the value of the study's findings, the researchers concluded, "The data generated by this study are quite usable for assisting in formulating the future targets of the School of Education."⁷⁴

Timothy Weaver concluded, after studying the Delphi Technique, that any consideration of the future should attempt to clarify what can reasonably be made to happen, in order to furnish the foundation for decision making and for choosing desirable alternatives.⁷⁵ Further, said Weaver, the more promising educational applications of the Delphi Technique are in the areas of:

(a) a method for studying the process of thinking about the future, (b) a pedagogical tool or teaching tool which forces people to think about the future in a more complex way than they ordinarily would, and (c) a planning tool which may aid in probing priorities held by members and constituents of an organization.⁷⁶

One of the more recent studies utilizing the Delphi Technique was that of Margaret Jetter at Michigan State University.⁷⁷ Her study was designed to elicit the opinions of experts, through the Delphi Technique, concerning their conception of the roles of the school library media specialist of the future. She chose to limit the number

⁷⁴Ibid., p. 425.

⁷⁵Timothy Weaver, "The Delphi Forecasting Method," Phi Delta Kappan, January 1971, pp. 267-71.

⁷⁶Ibid., p. 271.

⁷⁷Jetter, "The Roles."

of participants to between fifty and seventy-five, a number considered by some researchers to be the most manageable from a statistical viewpoint. Also, her use of only three Delphi questionnaires is in agreement with the findings of Cyphert, who felt that more than three produce no significant change in opinion and can result in loss of participation.⁷⁸

Summary

The Delphi Technique is a research method that attempts to make systematic, effective use of informed intuitive judgments by persons in a given field of inquiry about the future conditions of that field. The technique utilizes a series of questionnaires interspersed with information and opinion feedback derived from previous questionnaires. It relies on individual, anonymous response so that each participant can respond according to his own perceptions, with no outside pressure to influence his judgment. By determining a statistical group response, the individual opinion is reflected in the group response.

Review of the literature also revealed the Delphi Technique to be of value as a research method in educational research.

⁷⁸Ibid., p. 70.

CHAPTER III

DESIGN OF THE STUDY

The purpose of the study was to determine the factors most likely to facilitate and those most likely to inhibit the implementation of competency-based certification of educational media specialists by the state of Michigan. Since this work was a study of future possibilities, the Delphi Technique, as developed by Olaf Helmer at the Rand Corporation, was selected as the research method.¹ This research method in recent years has gained a great deal of recognition as a technique used with the behavioral sciences in the area of prediction.

Leading educators were asked to consider what might be the facilitating factors and inhibiting factors to implementation of competency-based certification of

¹Several papers have been published by the Rand Corporation, which explain the development and application of the Delphi Technique; e.g.: Bernice B. Brown, Delphi Process: A Methodology Used for the Elicitation of Opinions of Experts (Santa Monica, California: Rand Corporation, 1968); Normal C. Dalkey, The Delphi Method: An Experimental Study of Group Opinion (Santa Monica, California: Rand Corporation, 1969); Olaf Helmer, Analysis of the Future: The Delphi Method (Santa Monica, California: Rand Corporation, 1967).

educational media specialists by the state of Michigan.² These participants were asked to submit a list of factors that, in their opinion, would facilitate competency-based certification of educational media specialists by the state of Michigan and the factors they felt would inhibit such certification. Next, the participants were asked to evaluate and rate each of the suggested factors, both facilitating and inhibiting, thus indicating the relative importance of each factor as they perceived it. Finally, the participants were provided the opportunity to agree or disagree with the average rating given to each factor (facilitating and inhibiting).

The research method, participant selection, procedure of study, research questions, treatment of data, and a summary are included in this chapter.

Research Method

The Delphi Technique was the method of research selected for this study, because it permitted the acquisition of individual and group opinion concerning the certification of educational media specialists without

²These educators were representative of one of the following groups: State Board of Education, Michigan Department of Education, Michigan Education Association, North Central Accreditation Association, Colleges of Education, Colleges of Library Science, Michigan Association of Elementary School Principals, Michigan Association of Secondary School Principals, Superintendents of K-12 districts, and media staff members (representing K-12 districts and intermediate districts).

encountering some of the problems often associated with the more recognized methods, i.e., interview technique, group discussion, single structured questionnaire, and opinion survey.

Olaf Helmer adapted the Delphi Technique to educational research as a method of data collection to help alleviate the less desirable aspects of the alternate methods listed above.³ By employing a series of questionnaires, which provide for individual input as well as opinion feedback and the opportunity to change one's opinion, the Delphi Technique overcomes the common group discussion dilemma of compromising divergent views. Influencing factors in the group discussion, i.e., lack of equal participation by all members of the group, domineering individuals, desire to conform, and reluctance to change expressed opinion, are negated by this relatively new technique.

The basic Delphi Technique utilizes a series of questionnaires,⁴ usually three or more, each successive one providing information and opinions garnered from the previous one. The technique is intended to make systematic, effective use of informed individuals' intuitive judgments

³Helmer, Analysis of the Future, p. 7.

⁴See Appendices B, D, and F.

about the future conditions which are most likely to exist in their field of expertise.⁵

The first of the questionnaires provides the participant in the study with the opportunity to have direct, individualized input to the total data. No attempt is made at this point to influence or structure the participant's initial reactions to the stated problem; he is merely requested to consider the situation and state his opinions concerning it.

The second questionnaire is basically a compilation of the opinions expressed by all participants responding to the first questionnaire, and requests the participant to rate the opinions in the order of importance as he perceives them. Thus, participants are given an opportunity to reevaluate their initial thinking, to concur with it or to rate their opinions with those supplied by their colleagues.

The third questionnaire indicates the results of the ratings established on the second questionnaire, and asks the participants to consider these ratings and to express agreement or disagreement with each one.

Subsequent questionnaires provide the participants with the results obtained on the previous one and again seek to develop additional consensus, if any exists. This

⁵Helmer, Analysis of the Future, p. 4.

technique allows the investigator to ascertain if group consensus about the predictions can actually be substantiated. '

The interview method was originally considered by the investigator for this study. To achieve the basic results produced by the Delphi Technique, however, it would have necessitated interviewing each participant at three different times, an extremely difficult task in terms of scheduling and expense. A single interview would have produced initial participant response without the benefit of group feedback, a procedure which provides one with the opportunity to reflect on his decision and to support or revise it.

In addition to the advantages previously referred to, the Delphi Technique provides at least two indirect but significant features. The first of these is the participant's development of an awareness of possible options for the future concerning the field of study. This is certainly essential to any significant future long-range planning. The second feature provides a desirable spin-off in many cases--that of creating an awareness, among influential members of the field of inquiry, of the possibility for future development within the area of study.

Participant Selection

The selection of participants for the study was primarily determined by first establishing the areas of

education whose current practitioners were most likely to have a viable input to the proposed research. With the help of several leading educators in the state of Michigan,⁶ the following areas of education or educational groups were determined to have considerable influence upon, knowledge about, and/or be affected by educational certification in Michigan:

State Board of Education

Michigan Department of Education

Michigan Education Association

North Central Accreditation Association

Colleges of Education

Colleges of Library Science

Michigan Association of Secondary School Principals

Michigan Association of Elementary School Principals

Superintendents of K-12 districts

Media staffs serving K-12 districts

Previous research has indicated that approximately fifty participants provide the anticipated interaction, and that larger groups become unmanageable in terms of

⁶Dr. George Grimes, past president of the Michigan Audio-Visual Association; Ms. Jeannine Marchand, past president of the Michigan Association of School Librarians; Dr. Thomas Burford and Mrs. June McWatt, Co-Chairpersons of the Certification Committee of the Michigan Association for Media in Education; and Dr. James Page of Michigan State University contributed to the determination of the areas for inclusion in this study.

questionnaire development.⁷ With the limit of fifty participants in mind, the determination of how many from each selected area of education had to be made. In arriving at this decision, the following questions were considered:

1. Which organizations or groups within those selected for inclusion in the study would have the greater direct input to implementation of educational certification?
2. Which personnel within the organization are most likely to have the greater influence upon educational certification?
3. Which personnel within the organization are most likely to be affected by educational certification?
4. How large is the organization in terms of personnel?
5. What individual or small group of individuals can best represent the total organization?

Utilizing the questions established above, the investigator made the participant selections. It should be noted that the study was conducted by the investigator under the auspices of the Michigan Association for Media in Education. All letters carried the Association letterhead

⁷Frederick R. Cyphert and Walter L. Gant, "The Delphi Technique: A Tool for Collecting Opinions in Teacher Education," Journal of Teacher Education, Fall 1970, p. 422.

and all other communications indicated that it was an Association study.

Data in Table 3.1 report the selection of participants from representative groups.

Table 3.1.--Selection of participants according to representative groups.

Group Represented	Number Selected
State Board of Education	1
Michigan Department of Education ^a	9
Michigan Education Association	2
North Central Accreditation Association	1
Colleges of Education ^a	15
Colleges of Library Science	2
Michigan Association of Secondary School Principals	1
Michigan Association of Elementary School Principals	1
Superintendents of K-12 districts ^a	8
Media staffs serving K-12 districts ^a	13
Total	53

^aSee Table 3.2 for representation of groups within the major group.

Data in Table 3.2 report the selection of participants within certain representative groups.

Table 3.2.--Selection of participants within representative groups.

Representative Group	Internal Group	Number Selected
Michigan Department of Education	Executive Branch	2
	General Education	3
	Teacher Education	1
	Library	2
Colleges of Education	Deans	7
	Librarians	4
	Instructional Developers	4
Superintendents of K-12 Districts	Large Districts	4
	Small Districts	4
Media Staffs Serving K-12 Districts	Local	10
	Intermediate	3

Fifty-three persons were originally selected from the ten representative groups to constitute the participants in the study. Each of the fifty-three was invited to participate in the study by a personal letter from the investigator. Forty persons agreed to participate; ten failed to reply, two were leaving the state, and one felt his response might bias the data. Actual participation agreement was 76 percent. Data in Table 3.3 report the actual number of participants in the study according to

representative groups and the percentage participation of those invited to participate.

Table 3.3.--Participants in the study according to representative groups.

Represented Group	Number Participating	Percentage of Selected Number
State Board of Education	1	100
Michigan Department of Education	7	78
Michigan Education Association	1	50
North Central Accreditation Association	1	100
Colleges of Education	10	67
Colleges of Library Science	2	100
Michigan Association of Secondary School Principals	1	100
Michigan Association of Elem. School Principals	1	100
Superintendents of K-12 Districts	4	50
Media Staffs Serving K-12 Districts	12	92
Total	40	76

Of the forty persons responding to the first instrument, only thirty-nine responded to the second instrument. This did provide a 97 percent participation response to the second instrument, however.

Thirty-nine participants were sent the third and final instrument. Of these, twenty-eight were returned within the requested time interval. The remaining eleven participants were contacted by telephone and all eleven responded within a reasonable time interval. The reasons for their original delay varied, but the majority hinged upon vacations occurring during the period of data collection. The response to the third instrument represented 100 percent participation.

Procedure of Study

Three instruments designed around the Delphi Technique were used in the study. Each instrument was introduced through an accompanying letter to the participant. Previous Delphi studies determined that three instruments properly designed and administered would produce movement toward consensus. The use of more than three instruments seems to produce little, if any, significant difference in the opinions, while tending to reduce participation.⁸

⁸Ibid., p. 423.

Delphi Instrument I

The accompanying letter (Appendix A) with Delphi Instrument I introduced the selected participant to the Michigan Association for Media in Education, explaining that it was formed by a merger of the memberships of the Michigan Audio-Visual Association and the Michigan Association of School Librarians. It further indicated that the Association had a committee developing guidelines for competency-based certification of media specialists since it was the membership's desire to bring about such certification. The letter then stated that the investigator had been charged with the responsibility for determining those factors most likely to facilitate and those factors most likely to inhibit the effective implementation of competency-based certification of educational media specialists by the state of Michigan. The investigator explained the methodology of the Delphi Technique and the procedure to be followed in the development and administration of the three Delphi Instruments. Also indicated was the proposed deadline for return of the instrument.

Enclosed with the introductory letter was Delphi Instrument I (Appendix B) and a stamped envelope addressed to the investigator for return of the instrument. Delphi Instrument I explained that a recent survey of educational media specialists in Michigan indicated a desire on their part for certification by the state. As did the cover

letter, the instrument pointed out the current effort toward developing guidelines for competency-based certification. Based on these facts, the participant was asked to indicate in the spaces provided facilitating factors and inhibiting factors to the effective implementation of the desired certification. There was a space provided at the end of the instrument for the participant's name, followed by a notation that names would not be used in published tabulations of the results of the study. Most participants listed three or more facilitating factors and three or more inhibiting factors.

Delphi Instrument II

The letter (Appendix C) that introduced the participant to Delphi Instrument II (Appendix D) opened by thanking the addressee for participating in the MAME Delphi Study on certification of media specialists. Introduction to Delphi Instrument II was accomplished in the letter by indicating that the identified factors were combined by related ideas into generic statements with an attempt to retain the basic idea in each new statement. The participant was then asked to indicate on Delphi Instrument II his opinion of the relative importance of each facilitating and inhibiting factor to the implementation of competency-based certification of media specialists, by the following rating scale:

1. highly significant
2. above average significance
3. average significance
4. below average significance
5. least significant

The participant was then asked to be discriminating in the assignment of the ratings by using the total range of high to low in order to establish definitive significance among the factors.

Some difficulty was experienced in the development of Delphi Instrument II, which appears to this investigator to be the more difficult phase of the Delphi Technique. The ideal method would be to use all original statements from Delphi Instrument I in the development of Delphi Instrument II. However, in most studies this would create an instrument of such magnitude that low participation would likely occur, thus defeating the value of the research method. To bring about the greatest degree of success, then, the data from Instrument I, if voluminous in nature, must be analyzed and related ideas combined into generic terms, retaining as nearly as possible the basic concept of the originals. This would, in most studies, create a second instrument felt to be manageable by the participant and constructed of ideas or concepts he recognizes as his own, as well as those of others. This

latter phenomenon is the more difficult portion of the instrument construction process.

Delphi Instrument II was constructed utilizing the above concept. There were approximately 108 original facilitating factors, which were analyzed and combined into seventeen generic statements. The inhibiting factors originally totaled 102. These were analyzed and combined into fourteen generic statements. Delphi Instrument II consisted of two pages containing the seventeen facilitating factors followed by the fourteen inhibiting factors. Each factor was preceded by numbers 1 to 5 with the word high above the 1 and 2, the word low above the 4 and 5. As previously mentioned, the participant was instructed to rate each factor relative to its importance to the implementation of competency-based certification of media specialists.

Delphi Instrument III

The final letter (Appendix E) thanked the participant for completing the second instrument in the MAME Delphi study. It stated the final instrument was enclosed, described how the instrument was constructed, and provided instructions to the participant for the completion of the instrument. A final date for return of the instrument was established and an addressed, stamped envelope provided for this purpose. The participant was thanked on behalf

of the Michigan Association for Media in Education for his valuable contribution to the study.

Delphi Instrument III (Appendix F) was basically a duplicate of Delphi Instrument II. The rating most often selected by the participants for each factor was circled on the scale preceding each factor. The participants were instructed to consider this rating in light of their original appraisal and then to determine if they agreed with the majority rating or whether, in fact, they felt the relative importance of certain factors to be different from that expressed by the majority. If they agreed with the majority rating, they were to place an X in the circled rating. If they felt another rating more appropriate, they were to place an X on the rating selected.

Research Questions

This study should produce data that will enable the investigator to answer the following research questions:

1. Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors that are most likely to facilitate the effective implementation of competency-based certification of educational media specialists by the state of Michigan?"

2. Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors that are most likely

to inhibit the effective implementation of competency-based certification of media specialists by the state of Michigan?"

Treatment of Data

The perceived facilitating factors and inhibiting factors to the effective implementation of competency-based certification of educational media specialists by the state of Michigan were the major data produced by this study. These data obtained from Delphi Instrument I were subjected to content analysis providing for: elimination of duplicate responses, editing without distortion of submitted opinions and care not to introduce the investigator's bias.⁹

The data from Delphi Instrument II and Delphi Instrument III were subjected to a statistical analysis to determine if group consensus occurred. A mean score and standard deviation for each of the facilitating factors and each of the inhibiting factors was computed from the rating data on both instruments. A decrease in the standard deviation would indicate progress toward group consensus.

It was anticipated that there would be a difference in relative importance assigned the individual factors,

⁹This procedure was gleaned from the advice given by Olaf Helmer to Margaret Jetter during their phone conversation of April 7, 1972. See Jetter, "The Roles," p. 73.

both facilitating and inhibiting, by the various groups participating in the study, i.e., Michigan Department of Education, Colleges of Education, Colleges of Library Science, Superintendents, etc. Another statistical analysis was made of the factor ratings in order to determine consensus within the various groups of participants.

A mean score and standard deviation for each of the factors were determined from the data obtained from the second and third instruments for each group of participants. A decrease in the standard deviation indicates movement toward consensus.

Summary

Utilizing the Delphi Technique, thirty-nine participants provided the study with a list of facilitating factors and inhibiting factors to the effective implementation of competency-based certification of educational media specialists by the state of Michigan. Participants in the study were selected on the basis of having some influence on educational certification in Michigan. Three successive Delphi Instruments were administered to the participants in the Delphi Technique.

The first Delphi Instrument sought the participants' perceived concept of the factors most likely to facilitate and the factors most likely to inhibit the effective implementation of competency-based certification of educational media specialists by the state of Michigan.

Delphi Instrument II was a list of the facilitating factors and inhibiting factors that had been developed by the investigator, from those submitted by the participants, through eliminating duplicate responses, editing and combining similar opinions. Care was taken not to distort submitted opinions or to interject the investigator's bias. The participants were asked to rate each factor on a 1 to 5 scale, 1 indicating the factor to be highly significant and 5 indicating the factor to be of least significance.

The third Delphi Instrument was a duplicate of Instrument II, with the exception of the majority rating indicated for each factor. The participants were to rate each factor again, either agreeing with the majority or disagreeing.

Data provided by the study were the facilitating factors and inhibiting factors with their ratings of significance.

The data were subjected to a statistical analysis to determine if two different types of group consensus occurred:

1. Movement toward consensus among the total group of participants on the seventeen facilitating factors and the fourteen inhibiting factors.
2. Movement toward consensus among the participants within each of the individual groups, i.e., Michigan

Department of Education, Colleges of Education, and Media Staffs, on the seventeen facilitating factors and the fourteen inhibiting factors.

The results of the analysis of the data are presented in Chapter IV.

CHAPTER IV

ANALYSIS OF DATA

The techniques for analyzing the factors facilitating and inhibiting media certification, as perceived by the study's participants, are presented in this chapter. A statistical analysis of the rating scores for both sets of factors, comprising a mean and standard deviation for each factor, is presented for the purpose of determining movement toward group consensus regarding the relative importance of each factor. A similar statistical analysis of the rating scores of individual groups of participants (i.e., Michigan Department of Education, Colleges of Education, and K-12 systems) is presented in Appendix G and briefly discussed in this chapter. The chapter concludes with a discussion of the differences of opinion regarding the relative importance of both facilitating and inhibiting factors among the several groups who participated in the study. Participants in the study were representative of the following groups: Michigan Department of Education, Colleges of Education (deans), Colleges of Education (staff), North Central Accreditation Association, Michigan Education Association, Michigan Board of Education, Michigan Association of Elementary

School Principals, Michigan Association of Secondary School Principals, K-12 media specialists, regional media specialists, and K-12 superintendents.

Facilitating Factors

Delphi Instrument I (Appendix B) solicited the opinions of the participants regarding the important facilitating factors and inhibiting factors to effective implementation of competency-based certification of media specialists. The 108 facilitating factors obtained from Instrument I were combined by related ideas into seventeen generic statements with an attempt to retain the basic idea in each new statement. The same process was conducted with the 102 inhibiting factors, producing fourteen generic statements. Delphi Instrument II (Appendix D) lists these seventeen facilitating factors and fourteen inhibiting factors.

In Table 4.1, the facilitating factors obtained from the study are arranged in the order of the means as derived from the ratings on Delphi Instrument III (Appendix F). The arrangement of factors in Table 4.1 should be viewed as relative values, since all seventeen were initially established as the most important factors to be considered in the study.

Of the five most important facilitating factors as shown in Table 4.1, numbers 1, 9, and 14 relate directly

Table 4.1.--Facilitating factors to implementation of competency-based certification of media specialists arranged by means.

Mean	Facilitating Factors
1.23	1. State Board of Education recognizing certification of media specialists as desirable.
1.23	2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.
1.33	9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.
1.85	14. Department of Education's recommendation that such certification is desirable.
1.95	7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
2.10	12. The acceptance and encouragement given to the certification program by school administrators.
2.26	16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
2.28	15. MAME's willingness to provide the basic guidelines to such certification.
2.56	6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.
2.56	11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.
2.69	13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.
2.74	8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.

Table 4.1.--Continued.

Mean	Facilitating Factors
2.85	3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.
3.00	10. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.
3.00	17. MAME's willingness to provide an assessment model for determining the effect certification brings about.
3.36	4. A number of the states have a certification program for media specialists; some are competency based.
3.36	5. Substantial professional literature defining media competencies is available for development of competency-based certification.

to the mechanical aspect or method for obtaining certification. This analogy becomes much more meaningful if the three factors are stated in the following sequence:

(14) Department of Education's recommendation that such certification is desirable; (1) State Board of Education recognizing certification of media specialists as desirable; (9) Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification. The other two factors selected in the top five, numbers 2 and 7, are more directly associated with the necessity for well-trained professionals in media and the method for determining well trained when founded on competency-based criteria. Number 2 reads

"Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology," and number 7, "Several educational groups, including the Department of Education, favor competency-based criteria for certification programs."

Further study of the data in Table 4.1 shows that less significance is placed on the facts, that other states offer such certification and that media competencies have been defined in current professional literature, e.g., factors 4 and 5.

Also, among those facilitating factors rated lower on relative value was factor 3, "Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members." Only two other factors dropped as much in relative value on group rating, between Delphi Instrument II and Delphi Instrument III, while still obtaining movement toward group consensus, as did factor 3. (See Table 4.4.) This phenomenon suggests that North Central Accreditation standards may not be held in as high a priority as perhaps they would have been in earlier years.

Data in Table 4.2 report that in Delphi Instrument II ratings, participants failed to use the extreme ratings 1 and 5 for only five factors--2, 7, 8, 9, and 11. Table 4.3 indicates that in Delphi Instrument III ratings, participants did not use the extreme ratings 1 and 5 for

Table 4.2.--Delphi Instrument II--rating scores.

High		Low			Facilitating Factors
① 24	2 6	3 6	4 0	5 1	1. State Board of Education recognizing certification of media specialists as desirable.
① 20	2 8	3 4	4 5	5 0	2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.
1 4	2 14	③ 14	4 3	5 2	3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members
1 1	2 9	③ 15	4 8	5 4	4. A number of the states have a certification program for media specialists; some are competency based.
1 2	2 11	③ 12	4 11	5 2	5. Substantial professional literature defining media competencies is available for development of competency-based certification.
1 4	② 20	3 6	4 4	5 3	6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.
1 13	② 19	3 5	4 1	5 0	7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
1 5	② 15	3 13	4 4	5 0	8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.
① 20	2 11	3 3	4 3	5 0	9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.
1 1	2 13	③ 14	4 8	5 2	10. The fact that certification of some specialists, i.e., school nurses, does exist, thus establishing precedence.

Table 4.2.--Continued.

High		Low		Facilitating Factors	
1	2	③	4	5	11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.
6	14	13	5	0	
1	②	3	4	5	12. The acceptance and encouragement given to the certification program by school administrators.
8	15	12	3	1	
1	2	③	4	5	13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.
4	13	11	7	3	
1	②	3	4	5	14. Department of Education's recommendation that such certification is desirable.
15	14	8	0	1	
1	②	3	4	5	15. MAME's willingness to provide the basic guidelines to such certification.
15	7	11	2	2	
1	②	3	4	5	16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
9	18	5	4	1	
1	2	③	4	5	17. MAME's willingness to provide an assessment model for determining the effect certification brings about.
7	13	8	7	2	

Note: The number of participants selecting each score is indicated under the rating scale for each factor.

Table 4.3.--Delphi Instrument III--rating scores.

High		Low			Facilitating Factors
① 33	2 3	3 3	4 0	5 0	1. State Board of Education recognizing certification of media specialists as desirable.
① 30	2 9	3 0	4 0	5 0	2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.
1 3	2 5	③ 28	4 1	5 2	3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.
1 0	2 1	③ 28	4 5	5 5	4. A number of the states have a certification program for media specialists; some are competency based.
1 1	2 3	③ 22	4 7	5 6	5. Substantial professional literature defining media competencies is available for development of competency-based certification.
1 2	② 22	3 8	4 5	5 2	6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.
1 7	② 27	3 5	4 0	5 0	7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
1 1	2 19	③ 11	4 5	5 3	8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.
① 31	2 4	3 3	4 1	5 0	9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.
1 0	2 6	③ 27	4 6	5 0	10. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.

Table 4.3.--Continued.

High		Low		Facilitating Factors	
1	2	③	4	5	11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.
2	16	18	3	0	
1	②	3	4	5	12. The acceptance and encouragement given to the certification program by school administrators.
4	30	2	3	0	
1	2	③	4	5	13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.
3	10	23	2	1	
1	②	3	4	5	14. Department of Education's recommendation that such certification is desirable.
12	22	4	1	0	
1	②	3	4	5	15. MAME's willingness to provide the basic guidelines to such certification.
2	26	9	2	0	
1	②	3	4	5	16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
2	29	5	2	1	
1	2	③	4	5	17. MAME's willingness to provide an assessment model for determining the effect certification brings about.
1	6	25	6	1	

ten out of the seventeen factors. Delphi Instrument III thus reveals a movement toward group consensus.

A determination of significant movement toward group consensus regarding relative value of the facilitating factors was brought about by comparing the mean score and standard deviation for each factor in Delphi Instruments II and III. When comparing standard deviations for the same factor, a decrease from instrument II to instrument III

denotes a movement toward group consensus. This comparison for all facilitating factors is reported in Table 4.4, and indicates movement toward group consensus on all factors except number 8.

Facilitating factor number 8, "Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these," received a considerable increase in lower ratings, in instrument III (Table 4.3) over ratings in instrument II (Table 4.2), while the number of higher ratings remained the same on both instruments. The reason for this divergence of opinion is not clear; perhaps additional Delphi Instruments would have produced convergence, thus indicating eventual consensus. Another possibility is that the new joint national standards had not been published at the time of data collection. Thus many participants may have felt an uncertainty as to their emphasis on certification.

Inhibiting Factors

As indicated in the discussion of the facilitating factors, Delphi Instrument I produced 102 suggested inhibiting factors, which in turn were the basis for development of the fourteen generic statements used as inhibiting factors in Delphi Instrument II (Appendix D).

The inhibiting factors to implementation of certification of media specialists, as obtained from the study, are shown in Table 4.5, arranged by means derived from the

Table 4.4.--Means and standard deviations for facilitating factors--all participants.

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable	II III	1.59 1.23	.96 .58
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	1.84 1.23	1.09 .43
3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.	II III	2.59 2.84	.98 .81
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.14 3.36	1.00 .74
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	3.00 3.36	1.01 .93
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	2.51 2.56	1.10 .97
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	1.84 1.95	.75 .56

Table 4.4.--Continued.

Facilitating Factors		Instrument	Mean	Standard Deviation
8.	Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II	2.43	.87
		III	2.74	.99
9.	Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II	1.70	.94
		III	1.33	.74
10.	The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II	2.92	.94
		III	3.00	.56
11.	Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II	2.45	.92
		III	2.56	.72
12.	The acceptance and encouragement given to the certification program by school administrators.	II	2.32	.99
		III	2.10	.68
13.	Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.	II	2.79	1.12
		III	2.69	.80
14.	Department of Education's recommendation that such certification is desirable.	II	1.89	.92
		III	2.28	.65
15.	MAME's willingness to provide the basic guidelines to such certification.	II	2.16	1.19
		III	2.28	.65
16.	Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II	2.19	1.02
		III	2.26	.75
17.	MAME's willingness to provide an assessment model for determining the effect certification brings about.	II	2.57	1.17
		III	3.00	.73

Table 4.5.--Inhibiting factors to implementation of competency-based certification of media specialists arranged by means.

Mean	Inhibiting Factors
1.90	5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.
1.90	7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.
1.95	1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.
1.97	2. Difficulty in determining which competencies are essential to a single certification program.
1.97	10. Failure of the educational community to recognize any value to such certification.
2.05	11. State Board of Education's reluctance to provide for certification of media specialists.
2.05	13. Conflict between the state and the teacher associations over who should control the certification process in general.
2.15	8. Teachers in general and their associations are opposed to competency-based certification.
2.21	6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.
2.95	12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.
3.08	14. Lack of support from the Michigan Education Association.
3.10	4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.

Table 4.5.--Continued.

Mean	Inhibiting Factors
3.13	9. Difficulty in providing the legal basis which will permit state certification of media specialists.
3.85	3. Fear that the established competencies may become irrelevant in the near future.

rating scores on Delphi Instrument III. The mean score arrangement denotes relative value of each factor in regard to every other factor; thus the first factor listed held the highest priority and the last factor listed the lowest priority. It must be recognized, however, as with the facilitating factors, that all factors were initially determined to be important and the use of Delphi Instruments II and III was primarily to establish relative importance.

Data in Table 4.5 show the means of the first seven of the fourteen statements to be separated by .15 or less on a scale of 1 to 5; i.e., statements 5 and 7 have a mean rating of 1.90, while statements 11 and 13 have a mean rating of 2.05, with statements 1, 2 and 10 somewhere in between 1.90 and 2.05. This narrow separation between 50 percent of the inhibiting factors on the upper end of the scale suggests the participants had difficulty in determining the relative value of these seven and would tend to indicate their importance as a group.

A reciprocity of opposites appears to exist with statements 10 and 11 of Table 4.5 and 2 and 1 of Table 4.1, i.e., "Failure of the educational community to recognize any value to such certification," and "Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology." Although it is true that failure to accomplish a facilitating factor could certainly be an inhibiting factor, the data show that corresponding factors in Table 4.1 and Table 4.5 do not necessarily carry the same relative value to the other factors on those tables; e.g., facilitating factor number 5 is given the lowest priority and yet as an inhibiting factor, number 2, it ranks quite high in priority. Another interesting example of this situation is facilitating factor number 9, "Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification," rated very high, and inhibiting factor number 9, "Difficulty in providing legal basis which will permit state certification of media specialists," rated very low. This apparent contradiction would seem to imply that the factor is a must for implementation of certification while at the same time not as difficult to achieve as some other factors.

Inhibiting factor number 3 ranked the lowest in significance and its mean score was much higher (meaning

less significant) than the factor above it, as well as higher than any of the facilitating factors.

Data in Table 4.6 show that in Delphi Instrument II ratings, participants used the extreme ratings 1 and 5 in all fourteen statements. In Table 4.7, showing the rating scores of Delphi Instrument III, the extreme ratings of 1 and 5 were utilized in seven of the fourteen statements. This comparison of ratings shown in Tables 4.6 and 4.7 indicates a movement toward group consensus.

Also indicative of a movement toward group consensus is the comparison of standard deviations between Delphi Instrument II and Delphi Instrument III as shown in Table 4.8. As standard deviation decreases, movement toward group consensus increases. Data in Table 4.8 show a decrease in standard deviations for all fourteen inhibiting statements.

Group Differences

Means and standard deviations for each factor on both Instruments II and III were computed for each educational group represented by four or more participants. These data are reported in Tables G1-G5 of Appendix G. All groups had one or more factors whose standard deviations indicated divergence, thus a movement away from consensus. The group with only one such factor, as indicated by Table G3, was the Colleges of Education (staff). Table G2,

Table 4.6.--Delphi Instrument II--rating scores.

High		Low			Inhibiting Factors
1	②	3	4	5	1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.
14	18	5	0	1	
1	②	3	4	5	2. Difficulty in determining which competencies are essential to a single certification program.
12	12	10	3	1	
1	2	3	④	5	3. Fear that the established competencies may become irrelevant in the near future.
2	6	10	11	7	
1	2	③	4	5	4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.
6	11	8	7	6	
1	②	3	4	5	5. Insufficient funding on the local school level to provide for certified media personnel rather than paraprofessionals may reduce support for the concept.
15	10	9	3	1	
1	②	3	4	5	6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.
9	10	12	3	4	
1	②	3	4	5	7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.
14	15	6	2	1	
1	②	3	4	5	8. Teachers in general and their associations are opposed to competency-based certification.
12	9	9	4	3	
1	2	③	4	5	9. Difficulty in providing the legal basis which will permit state certification of media specialists.
11	5	6	7	7	

Table 4.6.--Continued.

High		Low		Inhibiting Factors	
1	②	3	4	5	10. Failure of the educational community to recognize any value to such certification.
9	11	12	3	3	
1	②	3	4	5	11. State Board of Education's reluctance to provide for certification of media specialists.
16	9	7	3	2	
1	2	③	4	5	12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.
6	8	17	6	1	
1	②	3	4	5	13. Conflict between the state and the teacher associations over who should control the certification process in general.
12	9	11	5	1	
1	2	③	4	5	14. Lack of support from the Michigan Education Association.
9	9	11	6	2	

Note: The number of participants selecting each score is indicated under the rating scale for each factor.

Table 4.7.--Delphi Instrument III--rating scores.

High		Low			Inhibiting Factors
1	②	3	4	5	1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.
9	24	5	1	0	
1	②	3	4	5	2. Difficulty in determining which competencies are essential to a single certification program.
8	25	5	1	0	
1	2	3	④	5	3. Fear that the established competencies may become irrelevant in the near future.
0	2	6	27	4	
1	2	③	4	5	4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.
3	7	15	11	3	
1	②	3	4	5	5. Insufficient funding on the local school level to provide for certified media personnel rather than paraprofessionals may reduce support for the concept.
8	27	4	0	0	
1	②	3	4	5	6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.
6	22	8	3	0	
1	②	3	4	5	7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.
11	24	2	1	1	
1	②	3	4	5	8. Teachers in general and their associations are opposed to competency-based certification.
7	24	4	3	1	
1	2	③	4	5	9. Difficulty in providing the legal basis which will permit state certification of media specialists.
0	6	25	5	3	

Table 4.7.--Continued.

High		Low			Inhibiting Factors
1	②	3	4	5	10. Failure of the educational community to recognize any value to such certification.
4	32	3	0	0	
1	②	3	4	5	11. State Board of Education's reluctance to provide for certification of media specialists.
11	20	5	1	2	
1	2	③	4	5	12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.
2	4	28	4	1	
1	②	3	4	5	13. Conflict between the state and the teacher associations over who should control the certification process in general.
7	27	2	2	1	
1	2	③	4	5	14. Lack of support from the Michigan Education Association.
2	5	23	6	3	

Note: The number of participants selecting each score is indicated under the rating scale for each factor.

Table 4.8.--Means and standard deviations for inhibiting factors--all
participants.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	1.84 1.95	.86 .69
2. Difficulty in determining which competencies are essential to a single certification program.	II III	2.18 1.97	1.06 .67
3. Fear that the established competencies may become irrelevant in the near future.	II III	3.35 3.85	1.21 .67
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	2.89 3.10	1.33 1.05
5. Insufficient funding on the local school level to provide for certified media personnel rather than paraprofessionals may reduce support for the concept.	II III	2.08 1.90	1.10 .55
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	2.55 2.21	1.25 .80
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	1.97 1.90	1.00 .82

Table 4.8.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	2.38	1.28
	III	2.15	.90
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	2.83	1.54
	III	3.13	.77
10. Failure of the educational community to recognize any value to such certification.	II	2.47	1.18
	III	1.97	.43
11. State Board of Education's reluctance to provide for certification of media specialists.	II	2.08	1.21
	III	2.05	1.00
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	2.68	1.02
	III	2.95	.72
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.32	1.14
	III	2.05	.83
14. Lack of support from the Michigan Education Association.	II	2.54	1.19
	III	3.08	.90

Colleges of Education (deans), show ten factors exhibiting divergence, the largest number shown by any group. The disparity between these two groups' ability to move toward consensus may lie in the fact participants representing Colleges of Education (staff) were in the field of media and therefore more closely associated with the situation upon which the study was based than were the deans of Colleges of Education.

Table 4.9 was developed to make a brief comparison of the top five facilitating factors as determined by total group consensus and the top five as determined by each educational group represented by the participants. The data in Table 4.9 indicate that six of the twelve groups included all of the top five factors, as determined by total-group consensus in their top five, while only two of these had the five factors in the same order of priority. The factor most often listed, which was not consistent with the top five, as determined by total-group consensus, was factor number 12. Factor number 12 was rated sixth in priority by total-group consensus.

Table 4.10 lists the top five inhibiting factors in rank order, as determined by total-group consensus and then as determined by each educational group represented by the participants. Data in Table 4.10 indicate only one group having the same five factors as the total group, and these were also ranked the same. Two groups failed to list

educational group represented in the study.

[illegible]

Note: Circled figures indicate those not appearing in top five of group consensus.

educational group represented in the study.

5	7	1	2	10	Group Consensus
8	11	2	5	7	State Board of Education
13	11	8	1	2	Michigan Department of Education
5	10	1	6	8	Colleges of Education (deans)
5	7	1	8	2	Colleges of Education (staff)
7	2	14	5	10	Michigan Education Association
5	7	1	2	10	Michigan Association of Elementary School Principals
11	5	7	1	2	Michigan Association of Secondary School Principals
5	7	1	2	6	North Central Accreditation Association
2	13	1	10	7	K-12 Systems Superintendents
7	1	2	11	5	K-12 Systems Media Specialists (Print Expertise)
1	5	6	7	10	K-12 Systems Media Specialists (Non-Print Expertise)
11	13	7	10	14	K-12 Systems Regional Media Specialists

Circled figures indicate those not appearing in top five of group consensus.

as many as three of the top five inhibiting factors, as determined by total-group consensus.

Although between-group ranking of the top five facilitating factors (Table 4.9) appeared to be rather consistent and representing in-group consensus close to total-group consensus, between-group ranking of the top five inhibiting factors (Table 4.10) was not as consistent and represented in-group consensus somewhat less than total-group consensus. This could indicate that most of the educational groups represented in the study had less difficulty determining the factors most likely to facilitate certification of media specialists than they did selecting those most likely to inhibit certification of media specialists.

Summary

The facilitating factors and inhibiting factors to effective implementation of competency-based certification of media specialists, as perceived by the participants, were reported and analyzed. A rank ordering by means of the seventeen generic facilitating factors and fourteen generic inhibiting factors produced significant lists of facilitating and inhibiting factors, as well as their relative importance.

To determine if movement toward group consensus occurred from the study, a mean and standard deviation were determined from the rating scores for each facilitating factor and each inhibiting factor on Delphi Instruments II

and III. The standard deviation decreased for all but one of the seventeen facilitating factors and fourteen inhibiting factors. The decrease in standard deviation indicated a movement toward group consensus.

To determine if movement toward consensus within each educational group represented by four or more participants had occurred, a mean and standard deviation were computed from the rating scores for each factor, both facilitating and inhibiting, for Delphi Instruments II and III. The data indicated that all such groups exhibited movement toward consensus on the majority of factors, although all groups had divergence or movement away from consensus on one or more factors.

The data also show that the participants in the study found it easier to assign priority ordering to the top five facilitating factors than to the top five inhibiting factors.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the purpose and methodology of the study, the conclusions, recommendations, and suggestions for further research.

Summary of the Study

The purpose of the study was to identify the facilitating factors and the inhibiting factors to effective implementation of competency-based certification of media specialists by the state of Michigan. The Delphi Technique was selected as the research method.

Participants in the study were selected from the areas of education most likely to have considerable influence upon, knowledge about, and/or to be affected by educational certification in Michigan.

Three instruments designed around the Delphi Technique were used in the study. Appropriate feedback of information and opinion accompanied the second and third instruments.

In Delphi Instrument I participants were asked to list their perception of facilitating factors and inhibiting factors to the effective implementation of the desired

certification. Delphi Instrument II included a list of seventeen facilitating factors and fourteen inhibiting factors selected as representative of the factors submitted on Instrument I. The participants were asked to rate the factors in Instrument II on a 1 to 5 scale indicating their perception of the relative importance of each factor. Delphi Instrument III was a duplicate of number II, with the exception that the mean, to the nearest whole number, for each factor rating was indicated, thus providing group opinion. The participants were asked to again rate each factor in light of group opinion, as shown in Instrument III.

The data derived from Delphi Instruments II and III were subjected to statistical analysis in order to provide two kinds of information. First, a mean score was computed for each factor in Instrument III, so that the seventeen facilitating factors and fourteen inhibiting factors could be rank ordered. These two lists provided the most important data derived from the study. Second, mean scores and standard deviations were determined for each facilitating factor and each inhibiting factor on both Instruments II and III. This information indicated significant movement toward group consensus on most factors.

Finally, the data were analyzed to determine which factors each educational group, represented by participants, ranked as the top five facilitating and top five inhibiting factors.

Conclusions

This study, through the use of the Delphi Technique, produced data that enabled the investigator, through the use of statistical analysis, to answer the research questions.

Research Question 1

Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors which are most likely to facilitate the effective implementation of competency-based certification of media specialists by the state of Michigan?"

The participants in the study were identified as those having some influence on educational certification in Michigan. The facilitating factors, as perceived by the participants and listed in the order of relative importance, as determined by the participants through group consensus, are as follows:

1. State Board of Education recognizing certification of media specialists as desirable.
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.
3. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.

4. Department of Education's recommendation that such certification is desirable.
5. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
6. The acceptance and encouragement given to the certification program by school administrators.
7. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
8. Michigan Association for Media in Education's willingness to provide the basic guidelines to such certification.
9. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.
10. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.
11. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.
12. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.

13. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.
14. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.
15. Michigan Association for Media in Education's willingness to provide an assessment model for determining the effect certification brings about.
16. A number of the states have a certification program for media specialists; some are competency based.
17. Substantial professional literature defining media competencies is available for development of competency-based certification.

Research Question 2

Based on the opinions of persons identified as those having some influence on educational certification in Michigan: "What are the factors which are most likely to inhibit the effective implementation of competency-based certification of media specialists by the state of Michigan?"

The inhibiting factors, as perceived by the participants and listed in the order of relative importance, as determined by the participants through group consensus, are as follows:

1. Insufficient funding on the local school level to provide for certified media personnel rather than paraprofessionals may reduce support for the concept.
2. Concern of the educational community about who will measure the competencies, what procedure will be used, and who will be the agent for certification.
3. Failure of administrators and their state associations to recognize the function of media specialists, related competencies, and the need for such qualified personnel.
4. Difficulty in determining which competencies are essential to a single certification program.
5. Failure of the educational community to recognize any value to such certification.
6. State Board of Education's reluctance to provide for certification of media specialists.
7. Conflict between the state and the teacher associations over who should control the certification process in general.
8. Teachers in general and their associations are opposed to competency-based certification.
9. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.

10. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.
11. Lack of support from the Michigan Education Association.
12. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.
13. Difficulty in providing the legal basis that will permit state certification of media specialists.
14. Fear that the established competencies may become irrelevant in the near future.

In addition to answering the research questions, data derived from the study indicate that while the educational groups represented by the participants tend to agree on the top five facilitating factors, there were seven exceptions out of the sixty. Data likewise indicate that while the same educational groups tend to agree on the top five inhibiting factors, there were fifteen exceptions out of the sixty possibilities.

It is therefore concluded that some of the educational groups represented by the study participants did indeed hold certain facilitating factors and certain inhibiting factors to be of an importance great enough for

them to defy group consensus in the final rating of the top five facilitating and top five inhibiting factors.

Recommendations

This study has identified seventeen factors that are most likely to facilitate effective implementation of competency-based certification of media specialists by the state of Michigan and likewise fourteen factors most likely to inhibit such certification. These factors are perceived as significant by educators who were determined to have some influence on educational certification in Michigan and are based on the conditions existing during the summer of 1974. While this is a limitation of the study, the facilitating and inhibiting factors may be generalizable to other states, and, given the structure of our legislative processes, both in state government and in other institutions, they will probably be factors for some time.

To make the most effective and immediate use of the factors generated by this study, it is recommended that some organization like the Michigan Association for Media in Education establish a committee whose charge is to work toward implementation of certification for media specialists in Michigan. This committee must be familiar with the work of the present Guidelines Committee of the Michigan Association for Media in Education. The two committees (Guidelines Committee and Implementation Committee) could coordinate their efforts toward certification. The facilitating

factors and inhibiting factors determined through this study and their relative value provide a basis for the strategies these two committees could develop to meet their charge. Some of these strategies and their rationale are as follows:

Guidelines Committee

The Guidelines Committee should develop competency-based guidelines for media specialist certification, which meet with the approval of a substantial number of practicing media specialists in Michigan. The study brought out the fact that there is substantial professional literature defining media competencies. Use of such information could greatly reduce the time and effort needed to develop certification guidelines.

When the guidelines have been developed and competency criteria established, which meet with the approval of those persons seeking certification, the committee should meet with the representatives of the Michigan Department of Education¹ and Colleges of Education.² The primary purpose of this and successive meetings with these groups is to present the guidelines for their criticism and input. Cooperative effort developing from such meetings should produce

¹The first meetings should involve primarily representatives from the certification branch.

²Representatives should include persons with curriculum responsibilities and media staff members.

better guidelines and help to emphasize the following facilitating factors:

1. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
2. Michigan Association for Media in Education's willingness to provide the basic guidelines to such certification.
3. Michigan Association for Media in Education's support for the concept of a single media certification program that is competency based.

This process of guideline development would also tend to reduce the effects of the following inhibiting factors:

1. Concern of the educational community about who will measure the competencies, what procedure will be used, and who will be the agent for certification.
2. Difficulty in determining which competencies are essential to a single certification program.
3. Schools of Education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.

The Guidelines Committee should also offer to provide at these meetings an assessment model for determining the effect certification brings, which is another facilitating factor as determined by the study.

Implementation Committee

A second committee, termed the Implementation Committee, would be responsible for developing means to make the guidelines operational. Most of the members of this committee should be thoroughly familiar with the guidelines and competent to respond to questions concerning method of development, as well as rationale for the guidelines. It would also be advantageous to have members on this committee with expertise in the areas of legislation and public relations. Many of the suggested facilitating and inhibiting factors, as well as their relative importance, lead the investigator to believe much of the work of this committee will be of a public relations nature.

The Implementation Committee would need to convince the State Board of Education, Department of Education, Michigan Education Association, school district personnel directors and others that the certification of media specialists is desirable.³ To accomplish this, the following recommendations are made:

1. Implementation Committee members should meet with representatives of the Michigan Education Association:
 - a. To establish the kind of certification the Association would support, i.e., endorsement to

³Of the seventeen facilitating factors, seven relate directly to this concept and six of the fourteen inhibiting factors could also be categorized along this line.

teaching certificate or separate certification.

- b. To get their reaction to mandatory regulation of the hiring of certified media specialists.
2. The Implementation Committee should also hold meetings with representatives of the Michigan Department of Education. These meetings should be based on:
- a. Seeking to determine what type of certification of media specialists would be most suitable.
 - b. Determining if the legislative vehicle for such certification is currently in effect.
 - c. Deciding how a person will be judged to have met the certification requirements and by whom.
 - d. Considering the advisability and feasibility of regulated mandatory hiring of certified media specialists similar to that currently in effect with teachers versus non-regulated optional hiring.

The positive effect of these proposed meetings would provide the necessary data required by the Department of Education to establish that certification of media specialists is desirable. This accomplishment should lead to acceptance by the State Board of Education of the desirability for such certification.⁴

⁴The Department of Education probably has the most influence upon the decisions made and positions taken by the State Board of Education.

3. A series of articles should be developed that are designed to apprise educational organizations of the possibility of certification of media specialists and the advantages such certification offers them specifically, as well as education generally; e.g., an article placed in the periodical for personnel directors could emphasize the following facilitating factor: Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists. The articles could point out that certification of media specialists is in line with the proposed North Central Accreditation Association standards for elementary schools, which encourage media centers with professional staff members and the new national standards for school media programs.⁵ Both of these were considered facilitating factors in the study. These articles should be published in the educational periodicals and journals of Michigan, i.e., Michigan Elementary Principal, School Board Journal, Michigan Education Journal, and Media Spectrum. These articles should also be published nationally in publications such as Audiovisual Instruction and NEA Journal.

⁵ A new set of standards, Media Programs: District and School, as yet unpublished, being developed jointly by the American Association of School Librarians and the Association for Educational Communications and Technology.

If current legislation does not exist, which will provide for certification of media specialists, the committee should work with the Department of Education to help bring about the necessary legislation. The Department of Education has already determined the need for amending the school code concerning certification and would most likely welcome any assistance the Implementation Committee might render, i.e., legislative lobby or sponsor of the bill. Providing for this type of legislation was determined, through this study, to be a high-priority facilitating factor.

The data collection techniques applied in this study have made persons⁶ aware that:

1. Members of the Michigan Association for Media in Education desire certification by the state for media specialists.
2. Members of the Michigan Association for Media in Education desire a competency-based certification code.

It would, therefore, seem appropriate to suggest that effort to implement such certification be carried out as soon as possible, while the awareness still exists.

⁶These persons represent twelve educational groups having some influence on educational certification within the state of Michigan.

Suggestions for Further Research

This study has helped to identify several areas that are appropriate to consider for further research. Studies in the following areas would provide better understanding of the value of certification of media specialists:

1. Certification of media specialists is a relatively new phenomenon existing in at least half of the states. A study should be conducted to determine what effect the certification of media specialists has had upon the media profession within those states having such certification.

2. A concern of some participants in this study dealt with the type of certification offered to media specialists. Research should be carried on to determine the advantages and disadvantages to certification of media specialists by endorsement of teaching certificates versus special certification.

3. Another area of concern brought out by the high relative value given to certain facilitating and inhibiting factors by the study participants was the value of having well-trained, competent, professional media specialists. A study should be conducted to resolve this issue by identifying which tasks educators would have media specialists perform that are not generally being performed by the

majority of media specialists and which, in the view of the same educators, would place media specialists in a professional role worthy of certification.

APPENDICES

APPENDIX A

FIRST LETTER TO PARTICIPANTS

APPENDIX A

FIRST LETTER TO PARTICIPANTS



MICHIGAN ASSOCIATION for MEDIA in EDUCATION

May 8, 1974

Dear

The membership of the Michigan Association for Media in Education, formed by the merger of the Michigan Audio Visual Association and the Michigan Association of School Librarians, has expressed a desire for competency-based certification. The Association currently has a committee developing guidelines for such competency-based certification. As a member of MAME, I have been given the charge of determining those factors which would most likely facilitate, and those factors most likely to inhibit effective implementation of competency-based certification of media specialists by the State of Michigan.

To accomplish this, I have chosen to utilize the Delphi Technique, a method intended to make systematic, effective use of informed individuals' intuitive judgments about the future conditions which are most likely to exist in the specific area of study. Because participants have been individually identified, and the number of participants purposely limited in order to utilize the Delphi Technique most effectively, I hope that you will consent to participate.

The procedure will be as follows:

1. In this mailing I am enclosing an open-ended instrument, which asks you to list facilitating factors and inhibiting factors which you judge to be significant to implementing certification of media specialists by the State of Michigan.
2. I will send a random order listing of the factors obtained from the first instrument and ask you to rate each factor on a five-point scale, indicating your perception of the importance of each factor.
3. The third instrument will report for each factor, your original rating and the group rating in the form of a median score. You are asked to review these ratings and to revise any rating which you may wish to change after learning the group rating.


Bureau of School Services / University of Michigan / 401 South Fourth Street / Ann Arbor, Michigan 48103 / (313) 764-8240

Page 2

Each of the three instruments should require no more than 10 or 15 minutes of your time, and I have enclosed a stamped, addressed envelope for added convenience. Your input is vitally needed, and I would appreciate return of the enclosed instrument by May 24. The second and third instruments will follow in about two-week intervals.

On behalf of the Michigan Association for Media in Education, and particularly its certification committee, thank you very much for your cooperation.

Sincerely yours


Leslie E. Steen, Jr.

Enclosures--2

APPENDIX B

DELPHI INSTRUMENT I

APPENDIX B

DELPHI INSTRUMENT I

A MICHIGAN ASSOCIATION FOR MEDIA IN EDUCATION STUDY

Delphi Instrument I

A recent survey indicates that educational media specialists in Michigan desire certification as media specialists. To this end, competency-based certification guidelines are being developed by MAME. With these facts in mind, please indicate in the space provided facilitating factors and inhibiting factors which you consider significant to implementing the above certification. For example, the media specialist's desire for certification could be considered a facilitating factor, and the failure of educators in general to recognize any advantage of having certification for media specialists could be an inhibiting factor.

Feel free to list more than one factor if you so desire. Please return by May 24, and thank you for your cooperation.

Facilitating Factors

Inhibiting Factors

Name _____

*Participants names will not be used in published tabulations of the results of the study.

APPENDIX C

SECOND LETTER TO PARTICIPANTS

APPENDIX C

SECOND LETTER TO PARTICIPANTS



MICHIGAN ASSOCIATION for MEDIA in EDUCATION

May 29, 1974

Dear

Thank you for participating in the MAME Delphi Study on certification of media specialists.

The second instrument summarizes the responses to the first instrument. The factors you identified may not appear exactly as you stated them since I combined related ideas into generic statements. An attempt was made to retain your basic idea in each new statement.

Please indicate on Delphi Instrument II your opinion of the relative importance of each facilitating and inhibiting factor, to implementation of competency-based certification of media specialists, by circling the appropriate number. The rating scale is as follows:

1. highly significant
2. above average significance
3. average significance
4. below average significance
5. least significant

Please be discriminating in the assignment of the ratings, using the total range of high to low in establishing definitive significance among the factors.

Return the completed instrument in the enclosed envelope by June 7, 1974.

On behalf of MAME thank you for your valuable contribution to the study.

Sincerely yours

Leslie E. Steen, Jr.

Enclosures--2

APPENDIX D

DELPHI INSTRUMENT II

APPENDIX D

DELPHI INSTRUMENT II

A MICHIGAN ASSOCIATION FOR MEDIA IN EDUCATION STUDY

Delphi Instrument II

Facilitating Factors to Implementation of Competency-based

Certification of Media Specialists

<u>High</u>			<u>Low</u>			
1	2	3	4	5		
					1.	State Board of Education recognizing certification of media specialists as desirable.
1	2	3	4	5	2.	Recognition by educators that well trained, competent, professional media specialists are needed to properly manage educational technology.
1	2	3	4	5	3.	Proposed North Central Accreditation Association standards for elementary schools encourages media centers with professional staff members.
1	2	3	4	5	4.	A number of the states have a certification program for media specialists, some are competency-based.
1	2	3	4	5	5.	Substantial professional literature defining media competencies is available for development of competency-based certification.
1	2	3	4	5	6.	Michigan Association for Media in Education supports the concept of a single media certification program, competency-based.
1	2	3	4	5	7.	Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.
1	2	3	4	5	8.	Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.
1	2	3	4	5	9.	Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.
1	2	3	4	5	10.	The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.
1	2	3	4	5	11.	Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.
1	2	3	4	5	12.	The acceptance and encouragement given to the certification program by school administrators.
1	2	3	4	5	13.	Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.
1	2	3	4	5	14.	Department of Education's recommendation that such certification is desirable.
1	2	3	4	5	15.	MAME's willingness to provide the basic guidelines to such certification.

- 1 2 3 4 5 16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
- 1 2 3 4 5 17. MAME's willingness to provide an assessment model for determining the effect certification brings about.

Inhibiting Factors to Implementation of Competency-based
Certification of Media Specialists

- | <u>High</u> | | <u>Low</u> | |
|-------------|---|------------|---|
| 1 | 2 | 3 | 4 5 |
| | | | 1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel. |
| 1 | 2 | 3 | 2. Difficulty in determining which competencies are essential to a single certification program. |
| 1 | 2 | 3 | 3. Fear that the established competencies may become irrelevant in the near future. |
| 1 | 2 | 3 | 4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept. |
| 1 | 2 | 3 | 5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept. |
| 1 | 2 | 3 | 6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members. |
| 1 | 2 | 3 | 7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification. |
| 1 | 2 | 3 | 8. Teachers in general and their associations are opposed to competency-based certification. |
| 1 | 2 | 3 | 9. Difficulty in providing the legal basis which will permit state certification of media specialists. |
| 1 | 2 | 3 | 10. Failure of the educational community to recognize any value to such certification. |
| 1 | 2 | 3 | 11. State Board of Educations reluctance to provide for certification of media specialists. |
| 1 | 2 | 3 | 12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification. |
| 1 | 2 | 3 | 13. Conflict between the state and the teacher associations over who should control the certification process in general. |
| 1 | 2 | 3 | 14. Lack of support from the Michigan Education Association. |

APPENDIX E

THIRD LETTER TO PARTICIPANTS

APPENDIX E

THIRD LETTER TO PARTICIPANTS



MICHIGAN ASSOCIATION for MEDIA in EDUCATION

June 12, 1974

Dear

Thank you for completing the second instrument in the MAME Delphi study.

The final instrument is enclosed. It is a duplicate of the second instrument with the addition of a circle around each rating most often selected for each factor by the study participants.

The objective of this final instrument is to discover, now that you are aware of how others responded, whether you agree with the majority rating of each factor or if you feel the relative importance of certain factors to be different from that expressed by the majority. If you agree with the majority rating of a factor, place an "X" in the circle. If you disagree with the majority opinion, place an "X" on the rating you believe to be appropriate.

I would appreciate the return of this instrument by June 21.

On behalf of the Michigan Association for Media in Education, thank you for your valuable contribution to our study.

Sincerely yours

Leslie E. Steen, Jr.

Enclosures--2

APPENDIX F

DELPHI INSTRUMENT III

APPENDIX F

DELPHI INSTRUMENT III

A MICHIGAN ASSOCIATION FOR MEDIA IN EDUCATION STUDY

Delphi Instrument III

Facilitating Factors to Implementation of Competency-based

Certification of Media Specialists

- | High | 1 | 2 | 3 | 4 | Low | 5 | |
|------|---|---|---|---|-----|---|---|
| | ① | | | | | | 1. State Board of Education recognizing certification of media specialists as desirable. |
| | ① | | | | | | 2. Recognition by educators that well trained, competent, professional media specialists are needed to properly manage educational technology. |
| | | | ③ | | | | 3. Proposed North Central Accreditation Association standards for elementary schools encourages media centers with professional staff members. |
| | | | ③ | | | | 4. A number of the states have a certification program for media specialists, some are competency-based. |
| | | | ③ | | | | 5. Substantial professional literature defining media competencies is available for development of competency-based certification. |
| | | ② | | | | | 6. Michigan Association for Media in Education supports the concept of a single media certification program, competency-based. |
| | | ② | | | | | 7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs. |
| | | ② | | | | | 8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these. |
| | ① | | | | | | 9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification. |
| | | | ③ | | | | 10. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence. |
| | | | ③ | | | | 11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists. |
| | | ② | | | | | 12. The acceptance and encouragement given to the certification program by school administrators. |
| | | | ③ | | | | 13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job. |
| | | ② | | | | | 14. Department of Education's recommendation that such certification is desirable. |
| | | ② | | | | | 15. NAME's willingness to provide the basic guidelines to such certification. |

- 1 ② 3 4 5 16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.
- 1 2 ③ 4 5 17. MAME's willingness to provide an assessment model for determining the effect certification brings about.

Inhibiting Factors to Implementation of Competency-based
Certification of Media Specialists

- | High | | Low | |
|------|---|-----|---|
| 1 | 2 | 3 | 4 |
| 1 | ② | 3 | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | 3 | ④ |
| 1 | 2 | ③ | 4 |
| 1 | ② | 3 | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | ③ | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | ③ | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | ③ | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | ③ | 4 |
| 1 | ② | 3 | 4 |
| 1 | 2 | ③ | 4 |
- 5 1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.
- 5 2. Difficulty in determining which competencies are essential to a single certification program.
- 5 3. Fear that the established competencies may become irrelevant in the near future.
- 5 4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.
- 5 5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.
- 5 6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.
- 5 7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.
- 5 8. Teachers in general and their associations are opposed to competency-based certification.
- 5 9. Difficulty in providing the legal basis which will permit state certification of media specialists.
- 5 10. Failure of the educational community to recognize any value to such certification.
- 5 11. State Board of Educations reluctance to provide for certification of media specialists.
- 5 12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.
- 5 13. Conflict between the state and the teacher associations over who should control the certification process in general.
- 5 14. Lack of support from the Michigan Education Association.

APPENDIX G

APPENDIX TABLES

Table G1.--Means and standard deviations for facilitating factors and inhibiting factors:
Michigan Department of Education.

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable.	II III	1.33 1.00	.52 .00
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	2.17 1.17	1.47 .41
3. Proposed North Central Accreditation Association standards for elementary schools encourages media centers with professional staff members.	II III	2.50 1.00	.55 .00
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.50 3.33	1.05 .82
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	3.33 3.17	1.03 .98
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	3.17 2.50	1.17 1.22
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	2.17 1.83	.75 .41
8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II III	3.17 2.83	.75 1.17
9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II III	1.67 1.67	1.21 .82

Table G1.--Continued.

Facilitating Factors		Instrument	Mean	Standard Deviation
10.	The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II	2.83	.75
		III	3.00	.63
11.	Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II	3.00	.89
		III	2.67	1.03
12.	The acceptance and encouragement given to the certification program by school administrators.	II	3.00	.63
		III	2.50	.84
13.	Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.	II	3.17	.98
		III	3.00	.63
14.	Department of Education's recommendation that such certification is desirable.	II	2.00	.89
		III	1.50	.54
15.	MAME's willingness to provide the basic guidelines to such certification.	II	3.17	1.33
		III	2.33	.82
16.	Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II	3.17	1.33
		III	2.67	1.21
17.	MAME's willingness to provide an assessment model for determining the effect certification brings about.	II	3.00	1.26
		III	3.33	1.03

Table Gl.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	1.83 2.00	.75 .63
2. Difficulty in determining which competencies are essential to a single certification program.	II III	1.67 2.00	.82 .00
3. Fear that the established competencies may become irrelevant in the near future.	II III	3.00 3.83	1.41 .41
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	3.17 2.83	.75 .98
5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.	II III	3.00 2.17	.63 .75
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	2.83 2.17	1.47 1.17
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	2.17 2.17	1.47 1.17

Table G1.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	2.00	1.55
	III	1.83	.75
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	2.67	1.51
	III	3.17	.98
10. Failure of the educational community to recognize any value to such certification.	II	3.00	1.10
	III	2.00	.63
11. State Board of Education's reluctance to provide for certification of media specialists.	II	2.67	1.63
	III	1.67	.82
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	3.33	1.37
	III	2.50	.84
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.00	1.10
	III	1.67	.52
14. Lack of support from the Michigan Education Association.	II	2.33	1.21
	III	2.67	.52

Table G2.--Means and standard deviations for facilitating factors and inhibiting factors:
Colleges of Education (deans).

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable.	II III	1.67 1.33	1.03 .82
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	2.00 1.17	1.26 .41
3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.	II III	2.67 2.33	.82 .82
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.17 3.17	1.17 .41
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	2.33 2.83	.52 .41
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	2.33 2.83	.82 1.17
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	1.50 1.83	.84 .75
8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II III	2.17 1.83	.41 .41
9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II III	1.67 1.33	.82 .82

Table G2.--Continued.

Facilitating Factors		Instrument	Mean	Standard Deviation
10.	The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II	3.33	.82
		III	3.17	.41
11.	Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II	2.17	.98
		III	2.33	.52
12.	The acceptance and encouragement given to the certification program by school administrators.	II	2.17	.41
		III	1.83	.41
13.	Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.	II	2.67	1.21
		III	2.50	.84
14.	Department of Education's recommendation that such certification is desirable.	II	2.00	.89
		III	1.83	.98
15.	MAME's willingness to provide the basic guidelines to such certification.	II	2.50	1.38
		III	2.67	.52
16.	Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II	1.83	.75
		III	2.33	.82
17.	MAME's willingness to provide an assessment model for determining the effect certification brings about.	II	2.83	.75
		III	2.83	.41

Table G2.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	1.50 1.67	.84 .82
2. Difficulty in determining which competencies are essential to a single certification program.	II III	2.17 2.33	.98 1.03
3. Fear that the established competencies may become irrelevant in the near future.	II III	3.50 4.00	1.05 .63
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	2.50 2.83	1.64 1.47
5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.	II III	2.00 1.67	.89 .52
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	2.17 2.00	.98 .89
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	2.17 2.33	.98 1.37

Table G2.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	2.50	1.05
	III	2.00	1.10
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	3.17	1.17
	III	3.33	.52
10. Failure of the educational community to recognize any value to such certification.	II	2.17	.98
	III	1.67	.52
11. State Board of Education's reluctance to provide for certification of media specialists.	II	1.17	.41
	III	2.17	.75
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	2.83	.41
	III	3.00	.63
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.83	.75
	III	2.33	1.03
14. Lack of support from the Michigan Education Association.	II	1.83	.98
	III	3.33	1.03

Table G3.--Means and standard deviations for facilitating factors and inhibiting factors:
Colleges of Education (staff).

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable.	II III	2.20 1.50	1.79 .84
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	2.20 1.17	1.30 .41
3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.	II III	2.40 2.50	1.14 .84
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.50 3.17	1.05 .41
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	3.17 3.17	.98 .41
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	2.17 2.50	1.47 1.05
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	1.83 2.17	.98 .41
8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II III	2.17 2.83	.98 .75
9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II III	1.50 1.33	1.22 .82

Table G3.--Continued.

Facilitating Factors	Instrument	Mean	Standard Deviation
10. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II III	2.83 2.83	1.33 .75
11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II III	2.67 2.67	1.03 .52
12. The acceptance and encouragement given to the certification program by school administrators.	II III	2.33 2.00	1.37 1.10
13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.	II III	2.67 2.71	1.51 1.25
14. Department of Education's recommendation that such certification is desirable.	II III	2.17 2.17	1.47 .41
15. MAME's willingness to provide the basic guidelines to such certification.	II III	1.33 2.00	.82 .63
16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II III	2.33 1.67	1.03 .52
17. MAME's willingness to provide an assessment model for determining the effect certification brings about.	II III	2.17 2.83	1.17 .41

Table G3.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	1.67 1.83	.82 .75
2. Difficulty in determining which competencies are essential to a single certification program.	II III	2.83 2.17	.75 .41
3. Fear that the established competencies may become irrelevant in the near future.	II III	4.33 3.67	1.21 .52
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	2.83 3.00	1.72 .89
5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.	II III	2.00 1.50	1.26 .55
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	3.50 2.83	1.38 .98
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	1.50 1.67	.55 .52

Table G3.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	3.33	.82
	III	1.88	.64
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	2.80	1.79
	III	2.83	.75
10. Failure of the educational community to recognize any value to such certification.	II	2.83	1.60
	III	2.17	.41
11. State Board of Education's reluctance to provide for certification of media specialists.	II	1.80	1.30
	III	2.33	1.03
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	2.83	1.17
	III	2.83	.98
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.17	1.47
	III	2.33	1.03
14. Lack of support from the Michigan Education Association.	II	3.00	.89
	III	3.33	1.03

Table G4.--Means and standard deviations for facilitating factors and inhibiting factors:
K-12 systems (print expertise).

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable.	II III	1.00 1.00	.00 .00
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	1.00 1.40	.00 .54
3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.	II III	2.00 2.60	1.15 .89
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.25 3.40	1.26 .89
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	2.75 3.40	.96 .55
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	1.75 2.40	.50 .89
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	1.50 1.80	.58 .44
8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II III	1.75 2.20	.50 .44
9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II III	1.25 1.00	.50 .00

Table G4.--Continued.

Facilitating Factors	Instrument	Mean	Standard Deviation
10. The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II	2.50	.58
	III	2.80	.44
11. Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II	2.25	.50
	III	2.20	.45
12. The acceptance and encouragement given to the certification program by school administrators.	II	2.00	.82
	III	1.80	.45
13. Adoption of broad competency-based processes, rather than detailed skills which will tend to vary from job to job.	II	3.00	1.41
	III	2.60	.55
14. Department of Education's recommendation that such certification is desirable.	II	1.50	.58
	III	1.20	.45
15. MAME's willingness to provide the basic guidelines to such certification.	II	1.00	.00
	III	2.00	.00
16. Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II	1.25	.50
	III	2.20	.45
17. MAME's willingness to provide an assessment model for determining the effect certification brings about.	II	2.00	.82
	III	3.00	.71

Table G4.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	1.50 1.60	.58 .55
2. Difficulty in determining which competencies are essential to a single certification program.	II III	2.00 1.60	1.41 .55
3. Fear that the established competencies may become irrelevant in the near future.	II III	2.50 3.60	1.00 .89
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	2.00 2.80	.82 .84
5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.	II III	1.75 1.80	1.50 .45
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	1.75 2.00	.96 .71
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	1.50 1.40	.58 .55

Table G4.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	1.50	.58
	III	2.00	.00
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	1.00	.00
	III	2.80	.45
10. Failure of the educational community to recognize any value to such certification.	II	2.00	1.41
	III	1.80	.45
11. State Board of Education's reluctance to provide for certification of media specialists.	II	1.25	.50
	III	1.60	.55
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	2.25	.50
	III	3.00	.00
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.50	.58
	III	1.80	.45
14. Lack of support from the Michigan Education Association.	II	2.50	.58
	III	3.20	.45

Table G5.--Means and standard deviations for facilitating factors and inhibiting factors:
K-12 systems (nonprint expertise).

Facilitating Factors	Instrument	Mean	Standard Deviation
1. State Board of Education recognizing certification of media specialists as desirable.	II III	1.00 1.00	.00 .00
2. Recognition by educators that well-trained, competent, professional media specialists are needed to properly manage educational technology.	II III	1.67 1.00	1.15 .00
3. Proposed North Central Accreditation Association standards for elementary schools encourage media centers with professional staff members.	II III	2.00 3.25	.00 .50
4. A number of the states have a certification program for media specialists; some are competency based.	II III	3.00 3.75	1.00 .96
5. Substantial professional literature defining media competencies is available for development of competency-based certification.	II III	3.33 4.00	.58 .82
6. Michigan Association for Media in Education supports the concept of a single media certification program, competency based.	II III	2.33 2.25	1.15 1.26
7. Several educational groups, including the Department of Education, favor competency-based criteria for certification programs.	II III	2.00 2.25	.00 .50
8. Publication of the new national joint standards for school media programs and the emphasis at the national level for certification in relation to these.	II III	2.67 3.75	.58 .96
9. Senate and House Education Committees' support of the concept, resulting in legislation providing the vehicle for such certification.	II III	1.33 1.00	.58 .00

Table G5.--Continued.

Facilitating Factors		Instrument	Mean	Standard Deviation
10.	The fact that certification of some specialists (i.e., school nurses) does exist, thus establishing precedence.	II	3.00	1.00
		III	3.00	.82
11.	Educators with personnel selection responsibilities desire a recognizable form of competency in media specialists.	II	2.67	.58
		III	3.25	.50
12.	The acceptance and encouragement given to the certification program by school administrators.	II	1.67	.58
		III	2.00	.00
13.	Adoption of broad competency-based process, rather than detailed skills which will tend to vary from job to job.	II	2.33	1.15
		III	2.50	.58
14.	Department of Education's recommendation that such certification is desirable.	II	1.00	.00
		III	2.00	.00
15.	MAME's willingness to provide the basic guidelines to such certification.	II	2.33	1.15
		III	2.25	.50
16.	Schools of Education desire to establish preparation programs leading to their recommendations for such certification.	II	1.67	.58
		III	2.00	.00
17.	MAME's willingness to provide an assessment model for determining the effect certification brings about.	II	2.67	1.53
		III	3.25	.50

Table G5.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
1. Failure of administrators and their state associations to recognize the function of media specialists, related competencies and the need for such qualified personnel.	II III	2.00 2.00	.00 .00
2. Difficulty in determining which competencies are essential to a single certification program.	II III	3.67 2.25	1.15 .50
3. Fear that the established competencies may become irrelevant in the near future.	II III	4.33 4.50	.58 .58
4. Failure of North Central Accreditation Association to recognize the need for certified media specialists, thus not supporting the concept.	II III	1.67 3.50	.58 1.29
5. Insufficient funding on the local school level to provide for certified media personnel rather than para-professionals may reduce support for the concept.	II III	1.67 2.00	.58 .00
6. Schools of education are currently not responsive to competency-based instruction, which implies a new role for their faculty members.	II III	3.00 2.00	1.00 .00
7. Concern of the educational community about who will measure the competencies, what procedure will be used and who will be the agent for certification.	II III	3.33 2.00	1.15 .00

Table G5.--Continued.

Inhibiting Factors	Instrument	Mean	Standard Deviation
8. Teachers in general and their associations are opposed to competency-based certification.	II	3.33	1.53
	III	3.00	.82
9. Difficulty in providing the legal basis which will permit state certification of media specialists.	II	3.00	2.00
	III	3.25	1.26
10. Failure of the educational community to recognize any value to such certification.	II	2.67	.58
	III	2.00	.00
11. State Board of Education's reluctance to provide for certification of media specialists.	II	3.00	2.00
	III	2.75	1.50
12. Concern by most educators that certification of too many types of specialists will reduce the significance of basic certification.	II	3.33	.58
	III	3.50	1.00
13. Conflict between the state and the teacher associations over who should control the certification process in general.	II	2.00	1.00
	III	2.00	.00
14. Lack of support from the Michigan Education Association.	II	2.00	1.00
	III	3.25	.50

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