To the Graduate Council:

I am submitting herewith a thesis written by Mary Haralson Buchanan entitled "A Survey of the Present Status of Resource Centers Housing Teacher-Developed Materials in Knox County Middle Schools." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Curriculum.

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A SURVEY OF THE PRESENT STATUS OF RESOURCE CENTERS HOUSING TEACHER-DEVELOPED MATERIALS IN KNOX COUNTY MIDDLE SCHOOLS

A Thesis

Presented for the

Master of Science

Degree

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Mary Haralson Buchanan

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ABSTRACT

The purpose of this investigation was to determine the present status of resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee.

Data for the investigation were obtained from the Principal Questionnaire and the Teacher Questionnaire which were developed by this researcher. A Principal Questionnaire was administered to all principals and a Teacher Questionnaire was administered to all teachers in the five Knox County Middle Schools.

It was found that: 1) principals and teachers verbalized a positive attitude towards the sharing of teacher-developed materials and towards resource centers housing teacher-developed materials; 2) one-fourth of the responding teachers had placed teacher-developed materials in at least twenty presently used resource center; 3) the most active encouragers of teachers to share teacher-developed materials were other teachers; 4) the principal exerted influence upon teachers to share teacher-developed materials; 5) one-third of the resource centers housing teacher-developed materials were set-up by direction of the principal, and one-third of the resource centers housing teacher-developed materials were set-up under the initiative of a

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teacher; 6) the availability of varied materials and what these materials allowed teachers to do for their students were factors important in making resource centers housing teacher-developed materials valuable; 7) one-third of the teachers felt that a resource center housing teacher-developed materials was valuable because it facilitated the sharing of ideas; and 8) a valuable resource center housing teacher-developed materials needed a large selection of varied materials, a central location, and a highly organized structure.

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CHAPTER I

INTRODUCTION

Historically, proponents of both junior high school and middle school philosophies have felt that their curricula must be committed to meeting the academic needs of all students. The rationales of both schools have been based upon a highly individualized curriculum geared to meeting the individual needs of students in the middle years. A look at junior high schools in the pre-middle-school days showed that relatively little individualization of instruction occurred. The call for a middle school as opposed to a junior high school has been a call for the actual implementation of the philosophy to which both schools subscribe.

Because of the switch in curriculum organization, teachers in some middle schools have been given the responsibility for organizing, directing, and evaluating a program for each student as dictated by the student's individual needs instead of teaching the same program at the same time for every student in the class. This increased responsibility has been further compounded by the fact that students in the middle years have been characterized by having a wide range of differences, both academically and emotionally.

Dr. Marian Franklin, a well known speaker and champion of individualized instruction, recently stated that while others worried about the effects of curriculum changes upon students, she worried about the increased pressures upon the teachers since it took at least five years to develop an individualized program.[1] Clearly, teachers in a middle school must have readily available to them a wide variety of classroom materials.

The present study was an attempt to determine if the creation of resource centers housing teacher-developed materials[2] could be one possible solution to the middle school teacher's pressing need for classroom materials. Conceivably there could be many different organizational patterns for resource centers housing teacher-developed materials. Resource centers could be organized around mathematics, language arts, social studies, science, and interdisciplinary courses. For example, a resource center housing teacher-developed mathematics material might include

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[1]Opinion expressed by Dr. Marian Franklin in an address ("Individualized Instruction") at Carter (Knoxville, Tennessee) Middle School, November 8, 1973.

[2]For purposes of this study, teacher-developed material was considered to be any device developed by the teacher with instructional content or function that could be used for teaching purposes.

such things as an individual teacher's mathematic programs (units, pretests, practice sheets, post-tests), enrichment units, remedial units, games, and models.

I. THE PROBLEM

Statement of the Problem

The present study was an examination of the status of resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee.

Questions Pertinent to the Problem

The following questions were of major concern in the investigation of the problem.

1. What is the frequency of occurrence of resource centers housing teacher-developed materials?

2. What is the present stage of development of individual resource centers housing teacher-developed materials?

3. Do principals actively encourage teachers to share teacher-developed materials?

4. Do teachers set up the sharing of teacher-developed materials by principal direction or by their own initiative?

5. What are the factors teachers believed caused existing resource centers housing teacher-developed materials

to be either valuable or not valuable?

6. What are principal and teacher attitudes toward the sharing of teacher-developed materials?

7. What are principal and teacher attitudes toward resource centers housing teacher-developed materials?

II. DEFINITION OF TERMS

The following terms have been used in this study in accordance with the following definition.

Curriculum. A general plan of the content or specific materials of instruction that a school should offer the student.[3]

Individualized Instruction. The organization of instructional materials in a manner that permits each student to progress in accord with his own abilities and interests; and the provision of instructional guidance and assistance to individual pupils in accord with their needs. Examples of types of individualized instruction include a) guided independent study, which would permit pupils at any grade level in any subject area to work on their own at their own pace under the guidance of a teacher;

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[3]Carter V. Good, Dictionary of Education (New York: McGraw-Hill Book Company, 1973), p. 85.

b) diversified-activity individualization, which would allow the pupil to repeat activities, using multiple materials or experiences until he could demonstrate adequate mastery; c) creative-activity individualization, which would permit the pupil to engage in choice-making in studying problems and to plan his own activities, choose between various areas.[4]

Instructional System Model. A method used to meet the teacher's need for classroom materials by the development of teaching units by outside specialists. These teaching units are usually arranged in a tightly organized program.[5]

Interdisciplinary Course. A course that attempts to utilize the findings and principles of more than one academic discipline; usually topic-centered.[6]

Junior High School. A school that enrolls pupils in grades seven, eight, and nine.[7]

Middle School. A school administrative unit between the primary unit and the high school unit in the school

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[4]Ibid., p. 305.

[5]George Mannello, "Resource Units versus Instructional System," Educational Forum, XXXV (November, 1973), 85-87.

[6]Good, op. cit., p. 150.

[7]Ibid., p. 322.

system; one form of organization included in one school children of approximate ages ten to fourteen and the conventional grades five to eight.[8]

Resource Center. A specifically designed space containing a wide range of supplies and equipment for the use of individual teachers.[9]

Resource Unit Model. Resource unit model meant a method used to meet the teacher's need for classroom materials through the development of teaching units by the teacher directly involved in a given learning situation.[10]

Resource Unit-Systems Model. An alternative method used to meet the teacher's need for classroom materials. In this model the teacher developed units but was provided with many specific aids from which he could select.[11]

Teacher-Developed Materials. Any device developed by the teacher with instructional content or function that could be used for teaching purposes.

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[8] Ibid., p. 366.

[9] Ibid., p. 85.

[10] Mannello, op. cit., pp. 83-85.

[11] Ibid., pp. 90-91.

Unit. An organization of various activities, experiences, and types of learning focused on a central problem or purpose.[12]

III. SIGNIFICANCE OF THE PROBLEM

Curriculum organization changes at the middle school level have caused an increased work load for the classroom teacher. The middle school teacher has been expected to have a program well developed enough to be able to meet the academic needs of all students. In order for such a program to be correctly executed, the teacher must have readily available a diverse collection of classroom materials. The development of classroom materials has always been a laborious task. A not uncommon comment by teachers has been that, "It took me two hours to create a unit that only took the students fifteen minutes to complete." Educators must have explored every possible avenue that would help teachers improve their curriculum.

Traditionally there have been two approaches to meeting the teacher's need for classroom materials. In one approach, each individual teacher was expected to develop

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[12]Good, op. cit., p. 629.

his own teaching units. A more recent method has been to expect the teacher to rigidly follow a highly organized program developed by outside specialists. The first method assumed that the teacher had the necessary time and ability to create all the teaching units he needed. The second approach reduced the teacher's role from a creator who was a vital, integral part of the classroom to a dispensable manager of a preprogrammed plan. Goerge Mannello and Ambrose Clegg have suggested a third approach. They felt that the teacher should remain the developer of his own teaching units but he should be provided with many aids from which he could readily select.[13, 14]

Middle school teachers have had a pressing need for classroom materials. Teachers needed to have available to them a myriad of resources from which they could select. The present study was of significance because it was an attempt to explore one possible organizational design for meeting the above needs.

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[13]Mannello, op. cit., pp. 90-91.

[14]Ambrose A. Clegg, "The Teacher as Manager of the Curriculum?" Educational Leadership, XXX (January, 1973), 308.

IV. PROCEDURE

As a means of examining the status of resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee, a Principal Questionnaire was administered to all principals and a Teacher Questionnaire was administered to all teachers in the five Knox County Middle Schools.

Instrumentation

The following instruments were developed.

1. Principal Questionnaire. The Principal Questionnaire was designed by the author. The questionnaire attempted to 1) determine if principals actively encouraged teachers to share teacher-developed materials; 2) determine if principals directed teachers to set up resource centers housing teacher-developed materials; 3) determine principal attitudes toward the sharing of teacher-developed materials; and 4) determine principal attitudes toward resource centers housing teacher-developed materials.

The questionnaire was composed of five items. It was administered by mail and completed by the principal at his convenience.

2. Teacher Questionnaire. The Teacher Questionnaire

was designed by the author. The questionnaire attempted to 1) determine the frequency of occurrence of resource centers housing teacher-developed materials; 2) determine the present stage of development of individual resource centers housing teacher-developed materials; 3) determine if principals actively encouraged teachers to share teacher-developed materials; 4) determine if teachers set up the sharing of teacher-developed materials by principal direction or by own initiative; 5) determine the factors teachers believed responsible for making existing resource centers housing teacher-developed materials to be either valuable or not valuable; 6) determine teacher attitudes toward the sharing of teacher-developed materials; and 7) determine teacher attitudes toward resource centers housing teacher-developed materials. The questionnaire was administered through each school office on a Monday, completed by the teacher at his convience, and returned to the school office by Friday of that week. The questionnaire was composed of thirteen items. Twelve items involved the checking of an alternative, and one item was an open-ended question. Responses to the open-ended item were categorized. The open-ended item asked teachers to list the factors they believed caused existing resource centers housing teacher-

developed materials to be either valuable or not valuable.

Sample and Procedure

All five Knox County Middle Schools were asked to participate in this study. The organizational plan of four middle schools included children of the approximate ages of ten to fourteen and the conventional grades five to eight. One middle school's organization included children of approximate ages nine to fourteen and the conventional grades four to eight. All five principals expressed a desire to participate in the study. All 161 middle school teachers were surveyed.

All directions and instructions dealing with the questionnaire were handled directly by the researcher. Identical procedures were used in all middle schools surveyed.

V. SCOPE AND LIMITATIONS OF THE STUDY

The following factors in the research design were recognized as limiting the scope of the present investigation.

1. The design, validity and reliability of the questionnaires was limited since it was developed by the researcher.

2. The analysis of the questionnaires was limited by the beliefs and opinions of the researcher.

3. The data were limited by the truthfulness of the respondents.

VI. ORGANIZATION OF THE STUDY

The first chapter introduced and defined the problem of the present investigation, stated questions pertinent to the problem, defined terms to be used, emphasized the significance of the study, presented the instrument and procedures for collecting the data, described the sample to be studied, listed the limitations of the study and described the organization of the study.

The second chapter reviewed the literature related to the problem.

The third chapter discussed the instrument and procedures used for collecting the data.

The fourth chapter discussed the results of the investigation.

The fifth chapter summarized the findings, stated the conclusions, and discussed the implications and recommendations of the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of this chapter was to build a defensible rationale for the present study from existing literature. Both empirical and theoretical writings have been searched and cited to substantiate the focus of this descriptive investigation.

The review of the related literature having relevance for the present study was reported in two parts: 1) teacher-developed materials and resource centers housing teacher-developed materials, and 2) roles of principal and teacher in curriculum development.

I. TEACHER-DEVELOPED MATERIALS AND RESOURCE CENTERS HOUSING TEACHER-DEVELOPED MATERIALS

This researcher could not locate literature prior to 1969 on the terms "teacher-developed material" and "resource centers housing teacher-developed materials." It was not until 1969 that the debate on which approach should be used to meet the teacher's need for classroom materials began. Two authors, Mannello and Clegg, discussed the debate in great detail. Resource unit model and instructional system model were identified as the two methods currently used. In the resource unit model, teaching units are developed by the teacher directly involved in a given learning situation.

The teacher is the important decision maker who programs what is taught in the classroom. The resource unit model assumes that teacher has the ability and time needed to develop units. In the instructional system model, teaching units are developed by outside specialists and are characterized by a tightly organized program. Even though the materials developed in an instructional system model are considered sophisticated, and even though they make the teacher's job easier, they reduce the role of a teacher from a creative innerdirected person to a dispensable outer-directed person.[15, 16] The following were statements Clegg and Mannello made concerning the instructional system model.

> Teachers, however, often view the entire process as a manipulative approach that locks them irrevocably into a fixed program with little chance to exert a creative influence over it.[17]

> Without such teacher qualities as caring, commitment, responsibility, and creativity, no educational program, no matter how well organized, can succeed - not in the long run.[18]

As mentioned previously, the resource unit model assumes that a teacher has 1) the ability and 2) the time needed

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[15]Ambrose A. Clegg, "The Teacher as Manager of the Curriculum?" Educational Leadership, XXX (January, 1973), 307-309.

[16]George Mannello, "Resource Units Versus Instructional System," Educational Forum, XXXV (November, 1973), 83-96.

[17]Clegg, op. cit., p. 308.

[18]Mannello, op. cit., p. 88.

to develop units. These two assumptions were found to be the two main arguments for the instructional system model over the resource unit model. Clegg cites his experience with curriculum programs as proof that teachers have the ability to develop units that meet their students' interests and needs. Mannello feels that teachers would have the time needed to develop units if the school system felt it important enough to find ways to set up time blocks for the purpose of curriculum development. Both Clegg and Mannello propose instead a third method, called by Mannello the resource unit-systems model, that incorporates desirable features of both the models mentioned above. In the resource unit-systems model, the teacher develops units but is provided with many specific aids from which he can select. Neither Clegg nor Mannello propose an organizational design for a resource unit-systems model.[19, 20]

Other literature has been written to support Clegg and Mannello's call for a resource unit-systems model.

Johnson, in her article on accountability procedures, lists what teachers can do to improve curriculum. According to Johnson, a teacher can use a variety of material so that he can find the best material for a student; and a teacher can produce teacher-developed materials which can be

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[19]Clegg, op. cit., pp. 307-309.

[20]Mannello, op. cit., pp. 83-91.

reproduced and shared with other teachers who may test and modify the materials.[21]

The Commission on Secondary Schools Committee of the North Central Association of Colleges and Schools in its statement of standards for the approval of junior high and middle schools stated that the school should have an instructional materials center. The commission defined a junior high or middle school instructional materials center as follows:

> The instructional materials center is a resource center for the school's total educational program. Its function is to locate, gather, provide, organize, and coordinate the school's learning resources and devices and to motivate and assist teachers and students in the effective use of these resources.[22]

Clegg and Mannello's call for a resource unit-systems model has been supported in a study by Taylor. Taylor's study was designed to determine teachers' perceptions of the process of developing units, and to determine teachers' perceptions of a curriculum plan as a guide or as a mandatory statement. He utilized 261 secondary school teachers. Data were derived from a questionnaire. It was found that

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[21]Rita B. Johnson, "Objectives-Based Accountability Procedures for Classroom Use," Educational Technology, XI (June, 1971), 49-50.

[22]Commission on Secondary Schools, "Policies, Principles, and Standards for the Approval of Junior High/Middle Schools," North Central Association Quarterly, XLV (Summer, 1970), 204.

the aspects of planning a unit most highly valued by teachers were the purpose and philosophy behind it, the interests and attitudes of the pupils, and the expected results. It was found that the aspects of planning a unit least valued by teachers were use of teacher's time, teaching methods, ordering of subject matter, and evaluation of the unit. It was found that teachers preferred the curriculum plan that was a guide as opposed to a mandatory statement.[23]

Newport supported the instructional system model. He called for the creation of a national curriculum development center that would help elementary science teachers by having units available to them. His argument was that teachers should not be expected to develop curriculum materials because 1) teachers do not have enough time in the school day and thus curriculum development is a spare-time job; 2) elementary science teachers are weak in science skills and are not qualified to develop curriculum materials; and 3) elementary science teachers are not even qualified to select materials prepared by others. He concluded that the only role that an elementary science teacher can be expected to play is the role of curriculum implementer.[24]

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[23]P. H. Taylor, "An Exploratory Study of Teachers' Perceptions of the Process of Planning Courses," British Journal of Educational Psychology, XL (November, 1970), 253-260.

[24]John F. Newport, "Should Teachers Be Expected to Develop Curriculum Materials?" Science Education, LIV (July-September, 1970), 243-245.

In an article on large-scale curriculum projects developed by people other than individual classroom teachers, King stated the following:

> Rarely in my experience have I encountered teachers who produced substantial amounts of original materials or who had any means of effectively disseminating their ideas or products to the profession at large.[25]

Three examples of resource centers housing teacher-developed materials (resource unit-systems model) were located. An example of a format designed specifically for providing a framework for describing teacher-developed materials was also found. The first example of a resource center housing teacher-developed materials was the Michigan State University Regional Instructional Materials Center for Handicapped.[26] A detailed description or study on the Michigan center was not found. However, the center has designed a DUB (Description, Use, Benefits) format to provide a simple vehicle for disseminating the ideas developed by teachers so that these ideas would not be restricted to local use. As the title of the format suggests, the teacher communicates information about his materials by including the following: structural details, directions for use, drawings, purpose, clients for

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[25]Arthur R. King, "Curriculum Projects: A Perspective," Educational Leadership, XXVI (February, 1969), 493-499.

[26]Kitty Keith and S. Joseph Levine, "DUB: A Format for Writing Descriptive Literature," (East Lansing: University of Michigan State Press, 1969), ED078064.

which it is designed, how used, and expected results. All DUB formats received by the Regional Instructional Materials Center are coded according to the particular subject area with which it deals; and then DUB formats can be requested by teachers according to their particular interest area.

The second example of a resource center housing teacher-developed materials is the CMC (Curriculum Materials Center) in Oregon.[27] The CMC was created by an Oregon school district under Title III of the Elementary and Secondary Education Act. The purpose of the CMC is to provide teachers with supplementary tools that allow them more time for individualized instruction. The CMC serves twenty-five elementary schools, five junior highs, and three high schools. The materials developed were placed on motion picture film. Both teachers and students are encouraged to make films that can be used directly in the classroom and to have them placed in the CMC. In support of the CMC, students and teachers frequently used the materials, and it is felt by the teachers that their work load is decreased. The attitudes of the teachers are found to be most favorable because the CMC allows them more time to individualize instruction and provides them with much needed classroom materials. One popular series of films developed by teachers deals with frog dissection. Any science teacher can check

[27]Paul Cuneo (ed.), "How a CMC Serves a District in Oregon," School Management, XVI (July, 1972), 19-21.

out the film through CMC. The frog dissection film series has been used in many different ways, including preview and review by large and small groups and individualized instruction.

The third example of a resource center housing teacher-developed materials is the learning center at Santa Anna College.[28] The third example is distinguished from the other two in that no provision is mentioned for the sharing of teacher-developed materials with other teachers. Instead the resource center houses teacher-developed materials and provides tutorial services to be used by students in a learning center. An evaluative study was made of the learning center. A questionnaire was sent to a random sample of 112 college students and twenty teachers who used the center. Both students and teachers felt that student's grades and understanding were improved. Nearly all instructors thought that supplementary materials should be available to students to use in independent study in learning centers. It was concluded that the learning center helped teachers teach by providing materials to be used by students outside the classroom.

The foregoing literature indicates that since 1969 there has been an ongoing debate over the method used to

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[28]Mary E. Jensen, "The Learning Center at Santa Anna College," (California: Santa Anna College Press, 1973), ED071656.

meet the teacher's need for classroom materials. It is generally accepted that the resource unit model is inadequate in meeting present demands upon classroom teachers. Literature concerning the instructional system model is polarized around those who feel that units must be 'teacher proofed' (pro-instructional system model) and those who feel that teachers have the ability to develop and select units (anti-instructional system model). Educators who are against the instructional system model propose instead the resource unit-systems model. The present study hoped to help resolve the debate by offering data related to implementation of the resource unit-systems model.

Defenses built to support the different models are centered around perceptions of the teacher's role in curriculum development. A school's curriculum is greatly influenced by the roles teachers and principals play in curriculum development. The purpose of the next section was to explore literature related to these roles.

II. PRINCIPAL AND TEACHER'S ROLE IN CURRICULUM DEVELOPMENT

The Commission on Secondary Schools Committee of the North Central Association of Colleges and Schools in its statement of standards for the approval of junior high and middle schools stated the following: "The junior high or middle school principal shall devote a major portion of his

time to the improvement of instruction.[29] A much more detailed account of the principal's role in curriculum development was found in Abbott and Eidell's article, "Administrative Implications of Curriculum Reform."[30] According to Abbott and Eidell, changes in curriculum either require or cause changes in the principal's role. The two authors feel that few curriculum innovations have as yet been institutionalized, and they feel that the curriculum of the future will be in the following direction:

> Serious attention to the needs of the individual student; his goals and aspirations; his social, cultural and educational background; and his interests and learning style demands that new materials, processes and arrangements be developed and implemented . . . . We contend that curriculum reformation in the decade ahead will consist primarily of the development of instructional materials, processes and arrangements that will both allow and encourage students to function largely as independent learners.[31]

The curriculum of the future will cause the following changes in the principal's role. First, the principal's role will have to become more a supportive role instead of a controlling role. In other words, the principal will

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[29]Commission on Secondary Schools, "Policies, Principles, and Standards for the Approval of Junior High/Middle Schools," North Central Association Quarterly, XLV (Summer, 1970), 197.

[30]Max G. Abbott and Terry L. Eidell, "Administrative Implications of Curriculum Reform," Educational Technology, X (May, 1970), 63.

[31]Ibid., 63.

be required to meet the demands of a rapidly changing curriculum by supplying the materials, personal resources, and climate needed. Second, the principal will have to decentralize his authority and responsibility. He will have to allow some decisions to be made by groups instead of by individuals. His task forces to solve a problem will have to be composed of persons with the specialized talents needed and not composed of persons chosen on the basis of traditional status.[32]

Telfer supported Abbott and Eidell's call for a principal who would be supportative instead of controlling. He cites the research of others and his personal experience as evidence that the role played by the principal in curriculum development directly influences the teacher's role. He concludes that supportive principals encourage teacher participation in curriculum planning and this results in teachers who participate more, who participate willingly, who feel better about their work, and who more readily accept curriculum change. He concluded that controlling principals discourage teacher participation in curriculum planning, and this results in teachers participating less and resisting curriculum change. Telfer further supported the call for a supportive principal in his study to determine role characteristics teachers felt desirable of principals. His

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[32] Ibid., 62-64.

study utilized seventy teachers enrolled in an education workshop at Wayne State University. Data were derived from a survey. The findings were that a principal should be a motivator of others, a delegator of responsibility, and a leader who did not dominate.[33]

According to Newport, teachers might be expected to play three major roles in curriculum development: "the role of curriculum developer, the role of curriculum selector, and the role of curriculum implementer."[34] Educators, like Clegg and Mannello, who supported the resource unit-systems model feel that teachers can and should play all three roles. For example, Clegg felt that the teacher's role should be that of curriculum designer, not merely manager of pre-packaged material.[35] On the other hand, those who support the instructional system model feel that teachers can only be expected to play the role of curriculum implementer.

Taylor briefly mentioned in his study that his research indicated teachers perceived curriculum planning as

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[33]Richard G. Telfer, "Staff Involvement: Key to Curriculum Improvement," Clearing House, XLIII (May, 1969), 539-542.

[34]John F. Newport, "Should Teachers Be Expected to Develop Curriculum Materials," Science Education, LIV (July-September, 1970), 224.

[35]Ambrose A. Clegg, "The Teacher as Manager of the Curriculum?" Educational Leadership, XXX (January, 1973), 309.

a legitimate component of their role as teacher.[36] Along the same line, Telfer designed a study to negate the hypothesis that teachers are not willing to participate in curriculum development. His study utilized seventy teachers enrolled in an education workshop at Wayne State University. Data were derived from a survey, which indicated that ninety-one per cent of the teachers surveyed were willing to participate and that seventy per cent were given the opportunity to participate. Of the thirty per cent who were not given the opportunity to participate, eighty-eight per cent were willing to participate.[37]

The foregoing literature has indicated the following about the principal's role in curriculum development: 1) development of curriculum should be a major role; 2) institutionalization of individualized instruction causes or requires the principal's role to become more supportive and decentralized; and 3) the role played by the principal influences the teacher's role. Evidence was presented indicating that the three major roles teachers play might be curriculum developer, curriculum selector, and curriculum

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[36]F. Musgrove and P. H. Taylor, Society and the Teacher's Role, (London: Routledge and Kegan Paul, 1969), cited by P. H. Taylor, "An Exploratory Study of Teachers' Perceptions of the Process of Planning Courses," British Journal of Educational Psychology, XL (November, 1970), 253.

[37]Telfer, op. cit., pp. 541-542.

implementer; teachers perceive curriculum planning as an integral part of their teacher's role; and teachers are willing to participate in curriculum planning.

III. SUMMARY

This chapter presented a review of the theoretical and empirical literature pertinent to the problem of the present investigation. The foregoing literature indicated that the resource unit model and the instructional system model have been two methods used to develop materials for teachers. No support was found for the resource unit model. Newport and King supported the instructional system model. Clegg and Mannello felt that teachers had the ability to develop and to select units, and they proposed the adoption of a resource unit-systems model. Support for the resource unit-systems model was found in the works of Johnson, Commission on Secondary Schools of the North Central Association of Colleges and Schools, and Taylor. Three examples of resource centers housing teacher-developed materials (resource unit-systems model) were reviewed. One example of a format designed specifically for providing a framework for describing teacher-developed materials was reviewed.

The principal's role in curriculum development was seen by the Commission on Secondary Schools Committee as a major one. Evidence was presented by Abbott, Eidell, and Telfer that the institutionalization of individualized instruction

would cause the following two major changes in the principal's role in curriculum development: 1) the principal's role would have to become more a supportive role instead of a controlling one and 2) the principal would have to decentralize his authority. Telfer saw the principal's role as influencing the teacher's role. The supportive principal role was considered desirable and resulted in increased teacher participation and acceptance of change.

Newport saw the teacher as playing three major roles in curriculum development: 1) curriculum developer, 2) curriculum selector, and 3) curriculum implementer. Taylor indicated that teachers perceived curriculum planning as an integral part of their role. Telfer's study presented evidence that teachers were willing to participate in curriculum planning.

CHAPTER III

DESIGN AND PROCEDURES FOR DATA COLLECTION

The problem of this study was the examination of the status or resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee. The purpose of this chapter was to: 1) present the research design, 2) discuss the selection and use of the instruments, 3) describe the selection of the sample, and 4) discuss the procedures followed in collecting the data.

I. DESIGN OF THE STUDY

This investigation was designed to: 1) determine the frequency of occurrence of resource centers housing teacher-developed materials; 2) determine the present stage of development of individual resource centers housing teacher-developed materials; 3) determine if principals actively encouraged teachers to share teacher-developed materials; 4) determine if teachers set up the sharing of teacher-developed materials by principal direction or by own initiative; 5) determine the factors teachers believed caused existing resource centers housing teacher-developed materials to be either valuable or not valuable; 6) determine

principal and teacher attitudes toward the sharing of teacher-developed materials; and 7) determine principal and teacher attitudes toward resource centers.

II. INSTRUMENTS USED

Both the Principal Questionnaire and the Teacher Questionnaire were developed by the author to measure principal and teacher behaviors and attitudes, and the development of resource centers housing teacher-developed materials.

Principal Questionnaire

An instrument was needed that would: 1) determine if principals actively encouraged teachers to share teacher-developed materials; 2) determine if principals directed teachers to set-up resource centers housing teacher-developed materials; 3) determine principal attitudes toward the sharing of teacher-developed materials; and 4) determine principal attitudes toward resource centers housing teacher-developed materials. To satisfy all of these criteria, the Principal Questionnaire was developed. An example of the Principal Questionnaire was presented in Figure 1.

Question one and question two on the Principal Questionnaire were used to determine principal involvement in

1. Do you as an administrator actively encourage your faculty to share teacher-developed materials:

☐ Yes

☐ No

2. Have you as an administrator directed teacher(s) to set up a resource center housing teacher-developed materials?

☐ Yes

☐ No

3. Do you feel that there is a need for teacher-developed materials to be shared?

☐ Yes

☐ No

4. Do you feel that if teacher-developed materials are shared, a teacher is being allowed to be lazy?

☐ Yes

☐ No

5. Do you feel that a resource center housing teacher-developed materials would appreciably improve your curriculum?

☐ Yes

☐ No

Figure 1. Principal Questionnaire

faculty sharing of teacher-developed materials and to determine principal involvement in the setting up of resource centers housing teacher-developed materials. Two parallel questions corresponding to question one and question two were included in the Teacher Questionnaire. The parallel question corresponding to question one asked all teachers who had actively encouraged them to share materials they had developed. The parallel question corresponding to question two asked teachers who had organized a resource center housing teacher-developed materials under whose direction they had set-up the resource center.

Question three and question four served to record principal attitudes toward the sharing of teacher-developed materials.

Question five was designed to measure principal attitudes toward resource centers housing teacher-developed materials.

Teacher Questionnaire

An instrument was needed that would: 1) determine the frequency of occurrence of resource centers housing teacher-developed materials; 2) determine the present stage of development of individual resource centers housing teacher-developed materials; 3) determine if principals actively

encouraged teachers to share teacher-developed materials; 4) determine if teachers established the sharing of teacher-developed materials by principal direction or by own initiative; 5) determine the factors teachers believed responsible for making existing resource centers housing teacher-developed materials to be either valuable or not valuable; 6) determine teacher attitudes toward the sharing of teacher-developed materials; and 7) determine teacher attitudes toward resource centers housing teacher-developed materials. To satisfy all of these criteria, the Teacher Questionnaire was developed. An example of the Teacher Questionnaire was presented in Figure 2.

Questions one, two, and three on the Teacher Questionnaire were used to determine the frequency of occurrence of resource centers housing teacher-developed materials.

Question four served to record the present stage of development of individual resource centers housing teacher-developed materials.

Question eight had two purposes. First, it was used to determine who was directing teachers to organize resource centers housing teacher-developed materials. Secondly, it was used as a parallel question to question two on the Principal Questionnaire.

1. While employed at a Knox County Middle School have you ever placed materials that you have developed in a resource center which other teachers may use?

☐ Yes

☐ No

IF YOUR ANSWER TO QUESTION ONE WAS NO, PLEASE SKIP TO QUESTION EIGHT.

2. I have placed teacher-developed materials in a resource center that:

☐ presently is in existence.

☐ is no longer in existence.

☐ both of the above.

3. How would you label the content area of the resource center?

☐ language arts ☐ social studies

☐ sciences ☐ math

☐ other (specify) _____

4. If you currently participate in a resource center housing teacher-developed materials:

☐ (a) does not apply

(b) How long has the resource center been in existence:

Figure 2. Teacher Questionnaire.

☐ less than 6 months ☐ 2 to 3 years

☐ 6 months to 1 year ☐ more than 3 years

☐ 1 to 2 years

(c) What stage of development is the resource center in?

☐ planning stage - resource center not yet in existence

☐ beginning stage - resource center in existence but not well organized

☐ middle stage - resource center developed and organized but still needs further improvement

☐ advanced stage - development advanced and highly organized

5. If you set up the sharing of teacher-developed materials by organizing a resource center, did you do so

☐ by principal direction

☐ by own initiative

☐ by direction of _____

☐ does not apply

Figure 2 (continued).

6. If you are or have been involved with a resource center housing teacher-developed materials:

(a) How valuable do you feel it is or was?

- ☐ not valuable
- ☐ somewhat valuable
- ☐ valuable
- ☐ very valuable
- ☐ extremely valuable

(b) List the factors you believed caused the resource center to be valuable (use back, if necessary).

_____

_____

_____

_____

_____

_____

(c) List factors you believed caused the resource center to be not valuable (use back, if necessary).

_____

_____

_____

_____

_____

Figure 2 (continued).

7. How many times have you used the teacher-developed materials housed in the resource center?

- ☐ less than 5 times
- ☐ 5 to 15 times
- ☐ 15 to 25 times
- ☐ more than 25 times

8. Who has actively encouraged you to share your own materials with others? You may check as many boxes as you need to.

- ☐ no one
- ☐ other teacher
- ☐ your principal
- ☐ a supervisor

9. Do you feel that if you share materials you have developed, you are allowing a teacher to be lazy?

- ☐ Yes
- ☐ No

10. Do you feel that there is a need for teacher-developed materials to be shared?

- ☐ Yes
- ☐ No

11. Do you at times feel frustrated because of a lack of classroom materials?

- ☐ Yes
- ☐ No

Figure 2 (continued).

12. Do you feel that a resource center housing teacher-developed materials would appreciably improve your curriculum?

☐ Yes

☐ No

13. If you have never participated in a resource center housing teacher-developed materials, do you regularly share your materials with other teachers?

☐ No

☐ Yes (specify content area(s) you share with)_____

Figure 2 (continued).

Question five had two purposes. First, it was used to determine who was directing teachers to organize resource centers housing teacher-developed materials. Secondly, it was used as a parallel question to question two on the Principal Questionnaire.

Part b and part c of question six provided the teachers an opportunity to list the factors they believed responsible for making existing resource centers housing teacher-developed materials to be valuable or without value.

Questions nine, ten, eleven, and thirteen were designed to measure teacher attitudes toward the sharing of teacher-developed materials.

Questions six part a, seven, and twelve served to record teacher attitudes toward resource centers housing teacher-developed materials.

Introduction to Questionnaires

The decision was made that the terms "teacher-developed materials" and "resource center" needed explanation. Immediately prior to completing both the Principal Questionnaire and the Teacher Questionnaire, all participants read the following:

> In this questionnaire the term "teacher-developed materials" means any device developed by the teacher with instructional content or function that could be

used for teaching purposes. The term "resource center" means a specifically designed space containing a wide range of supplies and equipment for the use of individual teachers.[38]

Thank you for your cooperation in this study.

III. SELECTION OF A SAMPLE

Personnel in all five middle schools in Knox County were asked to participate in this study. The decision to select all the schools was made for two reasons: 1) the sample was a small one that could be easily managed, and 2) the sample chosen would give optimum representation of the status of resource centers housing teacher-developed materials in Knox County.

All five Knox County Middle School principals were asked to participate in the study. The request for participation was made through a letter and followed up by a telephone call. All five principals expressed a desire to participate in the study. They were asked to complete at their convenience the Principal Questionnaire. From the five participating principals, five returned the Principal Questionnaire.

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[38]Carter V. Good, Dictionary of Education (New York: McGraw-Hill Book Company, 1973), p. 85.

All teachers with homerooms in the five schools were asked to participate in the study. These homeroom teachers were responsible for teaching one or more subjects from the following traditional content areas: language arts, science, social studies, and mathematics. In addition to homeroom teachers, all teachers of special areas were asked to participate in the study. These special area teachers were responsible for teaching one of the following areas: art, music, and physical education. The request for participation was made in the form of a letter distributed through the principal's office. The teachers were asked to complete at their convenience the Teacher Questionnaire. Of 161 teachers in the five schools 130 completed and returned the Teacher Questionnaire.

From this sample of schools, principals, and teachers, the data should suggest the present status of resource centers housing teacher-developed materials in Knox County Middle Schools.

IV. PROCEDURES FOR DATA COLLECTION

All five schools were contacted at the same time. The five principals received a package on Monday, May 20, 1974. The package included the following: 1) a letter asking them

to participate in the study; 2) procedures to follow in distributing and collecting the Teacher Questionnaires; 3) a Principal Questionnaire; and 4) one Teacher Questionnaire for every teacher.

The principals were then contacted by telephone and asked if they had any questions. In their package instructions, the principals were asked to distribute the Teacher Questionnaires the first of that week (May 20-21) and collect them by Friday, May 24, 1974. Questionnaires were then mailed by the principals to this investigator. Data from the questionnaires were transferred to tables and then analized by this researcher.

V. SUMMARY

This study was designed to examine the status of resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee.

Principal behaviors and attitudes were measured by the Principal Questionnaire. Teacher and principal behaviors, teacher attitudes, and the development of resource centers housing teacher-developed materials were measured by the use of the Teacher Questionnaire.

One hundred thirty-seven regular classroom teachers,

twenty-four special area teachers, and five principals were asked to participate in this study. All five Knox County Middle Schools were selected to study. Data were collected in all five schools over a period of one week.

CHAPTER IV

PRESENTATION AND ANALYSIS OF DATA

This study was designed to examine the status of resource centers housing teacher-developed materials in the Knox County Middle Schools, Knoxville, Tennessee.

The following questions were of major concern in the investigation of the problem.

1. What is the frequency of occurrence of resource centers housing teacher-developed materials?

2. What is the present stage of development of individual resource centers housing teacher-developed materials?

3. Do principals actively encourage teachers to share teacher-developed materials?

4. Do teachers set up the sharing of teacher-developed materials by principal direction or by their own initiative?

5. What are the factors teachers believed caused existing resource centers housing teacher-developed materials to be either valuable or not valuable?

6. What are principal and teacher attitudes toward the sharing of teacher-developed materials?

7. What are principal and teacher attitudes toward resource centers housing teacher-developed materials?

This chapter presented the data collected and the findings of the study.

I. DATA COLLECTED

Two instruments were used for the collection of the data reported in this chapter:

1. The Principal Questionnaire was used to measure principal behaviors and attitudes.

2. The Teacher Questionnaire was used to measure teacher and principal behaviors, teacher attitudes, and the development of resource centers housing teacher-developed materials.

II. FINDINGS OF THE STUDY

Resource Centers

Question one, question two, and question three on the Teacher Questionnaire were used to determine the frequency of occurrence of resource centers housing teacher-developed materials. Respondents to these three questions were teachers who had placed materials in a resource center housing teacher-developed materials. Data from question one was

displayed in Table 1. Thirty-three of the teachers (25.38 per cent) who responded to the questionnaire had placed materials in a resource center.

Data from question two was displayed in Table 2. Of the thirty-three teachers who had participated in a resource center housing teacher-developed materials, 66.66 per cent had placed materials in a center currently in existence, 21.21 per cent had placed materials in a center no longer in existence, and 12.12 per cent had placed materials in both resource centers in current use and resource centers no longer used.

Data from question three was displayed in Table 3 and in Table 4. Presently in use, there were at least five math resource centers, three language arts resource centers, three science resource centers, three social studies resource centers, one resource center which combined language arts and social studies, one resource center which combined language arts and science, two interdisciplinary resource centers, one reading resource center, and one art resource center. Of the resource centers no longer in existence, there were at least two language arts resource centers, two science resource centers, one social studies resource center, one interdisciplinary resource center, and one music resource

TABLE 1

Number of Teachers Who Placed Materials

in a Resource Center Housing Teacher-Developed Materials

School	Total	Percentages
A	2	6.06%
B	11	33.33%
C	4	12.12%
D	7	21.21%
E	9	27.27%
Total	33	

TABLE 2

Teachers Who Placed

Teacher-Developed Materials in Resource Centers

that Were: 1)in Existence, 2)Not in Existence, or 3)Both

School	In Existence	Not In Existence	Both
A	0	0	2
B	8	3	0
C	2	1	1
D	5	1	1
E	7	2	0
Percentage of Total	66.66%	21.21%	12.12%

TABLE 3

Content Area of Resource Centers Currently in Existence

	School A	School B	School C	School D	School E	Total
Mathematics	1	1	1	1	1	5
Language Arts	0	1	0	1	1	3
Science	0	1	1	1	0	3
Language Arts-Social Science Combination	0	0	0	1	0	1
Language Arts-Science Combination	0	0	0	1	0	1
Interdisciplinary	0	0	1	0	1	2
Reading	0	1	0	0	0	1
Art	0	1	0	0	0	1

TABLE 4

Content Area of Resource Centers No Longer in Existence

	School A	School B	School C	School D	School E	Total
Language Arts	0	0	0	1	1	2
Science	0	0	0	1	1	2
Social Studies	0	1	0	0	0	1
Inter-disci-plinary	0	1	0	0	0	1
Music	0	0	1	0	0	1

center. The data demonstrate that approximately one-fourth of the responding teachers had participated in a resource center housing teacher-developed materials, and that there were at least twenty resource centers currently in use.

Question four on the Teacher Questionnaire served to record the present stage of development of individual resource centers housing teacher-developed materials. Table 5 displays data on age of resource centers housing teacher-developed materials. The following was found concerning the age of the resource centers: thirty per cent had been in existence less than six months; thirty-five per cent were from six months to one year old; thirty per cent had been in existence from one year to two years; one or five per cent was from two to three years old, and none were over three years old. These facts suggested that resource centers appeared in Knox County recently. Approximately one-third of the resource centers were started in the school year 1972-1973 while approximately two-thirds of the resource centers were started in the school year 1973-1974.

Table 6 displays data from question four related to developmental stage of resource centers housing teacher-developed materials.

The teachers rated the stage of development of their

TABLE 5

Age of Resource Centers

Housing Teacher-Developed Materials

	Total	Percentage
Less than 6 mo.	6	30%
6 mo. to 1 yr.	7	35%
1 yr. to 2 yr.	6	30%
2 yr. to 3 yr.	1	5%
More than 3 yr.	0	0%

TABLE 6

Developmental Stage of Resource

Centers Housing Teacher-Developed Materials

	Total	Percentage
Planning	1	5%
Beginning	12	60%
Middle	7	35%
Advanced	0	0%

resource center as follows: only one or five per cent of the resource centers was considered to be in the planning stage; sixty per cent were classified as beginning stage; thirty-five per cent were rated as middle stage; and none were considered as in the advanced stage. Thus, four of every five resource centers were in existence but not well organized while one-third (thirty-five per cent) were developed and organized but still in need of further improvement.

Additional findings were drawn from an analysis of Table 7 which shows the relationships between the factors: type of resource center, time in existence, and stage of development. Eighty-three and thirty-three hundredths per cent of the resource centers in the beginning stage were less than one year old. Fifty-seven and fourteen hundredths per cent of all middle stage resource centers were from one year to two years old. This indicated that the time necessary for a resource center to develop to the middle stage was approximately one to two years.

Principal and Teacher Behavior

Table 8 displays data from teachers when asked who had actively encouraged them to share their teacher-developed materials. When the total sample of teachers were asked who had actively encouraged them to share their materials,

TABLE 7

Matrix for Resource Center's

Type, Age, and Development Stage

Center Type	Developmental Stages				
	0mo-6mo	6mo-1yr	1yr-2yr	2yr-3yr	3yr-
Mathematics	Beginning* Beginning	Beginning	Beginning Middle		
Language Arts	Beginning Planning	Beginning		Middle	
Science	Beginning	Beginning	Beginning		
Social Studies		Beginning	Middle		
Reading	Beginning				
Art		Middle			
Inter-disciplinary		Beginning	Middle		
Language Arts Social Studies			Middle		
Language Arts Science		Middle			

*The terms "planning," "beginning," "middle," and "advanced" refer to developmental stages as defined in Chapter I.

TABLE 8

Active Encouragers of Teachers

to Share Teacher-Developed Materials

	No One	Other Teacher	Principal	Supervisor
Responses from Total Sample of Teachers	26.55%	36.15%	19.2 %	18.07%
Responses from Participators in a Resource Center	6 %	48 %	26 %	20 %
Responses from Non-Participators in a Resource Center	34.64%	31.49%	16.53%	17.32%

one-fourth (26.55 per cent) responded "no one"; 36.15 per cent responded "other teacher"; 19.20 per cent responded "principal"; and 18.07 per cent responded "supervisor". Additional support that the most active group in solicitating the sharing of teacher-developed materials was other teachers was noted when responses from teachers who had participated in a resource center were separated from the responses from teachers who had never participated in a resource center. Of the participators, six per cent responded "no one"; forty-eight per cent responded "other teacher"; twenty-six per cent responded "principal"; and twenty per cent responded "supervisor". Of the non-participators, 34.64 per cent responded "no one"; 31.49 per cent responded "other teacher"; 16.53 per cent responded "principal"; and 17.32 per cent responded "supervisor". Approximately one-half of the participators and approximately one-third of the non-participators had been actively encouraged by other teachers to share teacher-developed materials. A marked difference was noted between participators (six per cent) in a resource center and non-participators (34.64 per cent) who stated that no one had asked them to share their materials. These findings give evidence that a higher percentage of people were requesting participators in a resource center to share their

materials than were people requesting non-participators to share their materials. The most active group was other teachers, but the principal was exerting influence.

An analysis of Table 9 reveals further information concerning the influence exerted by principals on teachers to share their materials. The verbal response from principals was that four out of five (eighty per cent) actively encouraged their faculty to share teacher-developed materials. Approximately twenty per cent of the total sample of teachers stated that their principal had exerted influence to encourage them to share materials. Two principals exerted very little influence (0 per cent and 5.88 per cent) while three principals exerted some active encouragement (22.44 per cent, 24.24 per cent, and 27.08 per cent).

Table 10 displays data on influencers of teachers to set-up resource centers housing teacher-developed materials. Thirty-two and twenty-five hundredths per cent of the teachers who had organized a resource center did so by direction of their principal and 35.48 per cent did so by their own initiative. Others who had influenced teachers to set-up a resource center were as follows: university professor (9.67 per cent), supervisor (9.67 per cent), other content area teachers (6.45 per cent), other teacher (3.22

TABLE 9

Principal Encouragement of their

Faculty to Share Teacher-Developed Materials

		Total	Percentage
Principal Verbal Response	Yes	4	80 %
	No	1	20 %
Principal Behavior	School A	0	0 %
	School B	11	22.44%
	School C	8	24.24%
	School D	2	5.88%
	School E	13	27.08%

TABLE 10

Influencers of Teachers to Set-Up

Resource Centers Housing Teacher-Developed Materials

	Total	Percentage
Their Own Initiative	11	35.48%
Principal	10	32.35%
University Professor	3	9.67%
Supervisor	3	9.67%
Other Content Area Teacher	2	6.45%
Other Teacher	1	3.22%
Team Effort	1	3.22%

per cent), and team effort (3.22 per cent). The findings showed that the principal exerted influence in the organizing of resource centers. Approximately one-third of the resource centers were set-up by the direction of the principal and approximately one-third were started by a teacher under his own initiative. An analysis of Table 11 reveals further information concerning the amount of influence exerted by principals on their faculty to organize resource centers housing teacher-developed materials. The verbal response from principals was that two out of five (forty per cent) had directed a member of their faculty to organize a resource center. Teachers in two schools reported that their principal had not directed them to organize a resource center. Three principals had directed teachers to establish a resource center. These three principals exerted influence on their faculty in the following per cent of cases: ten per cent, sixty per cent, and 62.5 per cent.

Table 12 displays data gathered on supervisor encouragement of teachers to organize resource centers housing teacher-developed materials. Supervisor influence resulted in the establishment of two or three language arts resource centers in two different schools.

TABLE 11

Principal Encouragement of their Faculty

To Organize Resource Centers Housing Teacher-Developed Materials

		Total	Percentage
Principal Verbal Response	Yes	2	40 %
	No	3	60 %
Principal Behavior	School A	0	0 %
	School B	1	10 %
	School C	3	60 %
	School D	0	0 %
	School E	5	62.5%

TABLE 12

Supervisor Encouragement of Teachers to Organize Resource Centers Housing Teacher-Developed Materials

Language Arts	Total	Percentage
School A	0	100%
School B	1	10%
School C	0	0%
School D	0	0%
School E	2	25%

Factors Effecting Resource Centers

Table 13 displays factors teachers believed caused their resource center housing teacher-developed materials to be valuable. Forty-five and forty-five hundredths per cent of the teachers stated that the resource center made available a large selection of teacher-tested materials. Thirty-three and thirty-three hundredths per cent stated that the resource center provided materials that allowed teachers to do the following: individualize, vary activities and materials, consider a wide range of ability levels, use interdisciplinary approaches, and correlate background work for students in later grades. The resource center facilitated the sharing of ideas (30.30 per cent). The resource center allowed more efficient use of materials which resulted in giving teachers more "teaching time" (18.18 per cent). Materials were readily available when the teacher needed them (12.12 per cent). Having access to materials greatly helped in planning units (6.06 per cent). The resource center was well organized (6.06 per cent). The teachers kept the materials in excellent condition (6.06 per cent). The resource center allowed one to see how other teachers were using materials (6.06 per cent). Teaching units were perfected over time (3.03 per cent). Because

TABLE 13

Factors Teachers Believed Caused a Resource Center Housing Teacher-Developed Materials to Be Valuable

	Percentage
Large Selection of Teacher-Tested Materials Made Available	45.45%
Materials Allowed Teachers to: Individualize, Vary Activities and Materials, Consider Wide Range of Ability Levels, Use Interdisciplinary Approaches, Correlate Background Work	33.33%
Facilitated Sharing of Ideas	30.30%
More Efficient Use of Materials Resulting in More "Teaching Time"	18.18%
Materials Readily Available	12.12%
Location Easily Accessible	9.09%
Facilitated Planning Units	6.06%
Good Organization	6.06%
Materials in Excellent Condition	6.06%
"Advertized" Other Teacher's Methods	6.06%
Perfection of Teaching Units Over Time	3.03%
Shared Ideas Resulted in Development of New Ideas	3.03%
Teacher's Styles Influenced	3.03%
Interest of Other Teachers	3.03%

ideas were shared, new ideas were developed (3.03 per cent). The resource center allowed new ideas and outlooks to influence teachers' styles (3.03 per cent). A factor which made the resource center valuable was the interest of other teachers to make sure it worked (3.03 per cent).

Table 14 displays factors teachers believed caused their resource center housing teacher-developed materials not to be valuable. Fifteen and fifteen hundredths per cent listed that the resource center needed better organization. Fifteen and fifteen hundredths per cent stated that not enough teachers participated by contributing and checking out materials. The resource center needed more materials (12.12 per cent). The resource center was not centrally located (6.06 per cent). Teachers needed more time to research the material available in the resource center (3.03 per cent). The resource center was not publicized (3.03 per cent). And 3.03 per cent stated that the materials were not durable enough.

Two of every three (68.85 per cent) of the factors listed were factors which caused the resource center to be valuable. Three-fourths (78.78 per cent) of the teachers listed as making the resource center valuable the materials, and what these materials allowed them to do for their

TABLE 14

Factors Teachers Believed Caused a Resource Center Housing Teacher-Developed Materials Not to Be Valuable

	Percentage
Needs Better Organization	15.15%
Lacks Adequate Participation	15.15%
Needs More Materials	12.12%
Location not Central	6.06%
Inadequate Time to Use Resource Center	3.03%
Resource Center not Publicized	3.03%
Materials not Durable	3.03%

students. From the data collected, a resource center needed the following: a large selection of varied materials, a central location, and a highly organized structure.

Principal and Teacher Attitudes

Data were collected to determine principal and teacher verbal attitudes toward the sharing of teacher-developed materials. Table 15 displays principal verbal attitudes toward teacher-developed materials. Table 16 displays teachers' felt need for teacher-developed materials to be shared.

All principals and 92.96 per cent of the teachers felt that there was a need for teacher-developed materials to be shared. Table 17 displays teacher verbal attitudes towards sharing materials allowing other teachers to be lazy. Only 5.37 per cent of the teachers felt that if they shared teacher-developed materials, they were allowing a teacher to be lazy.

The teachers were asked if at times they felt frustrated because of a lack of classroom materials. The data is shown in Table 18. There was little difference in felt frustration between participators in a resource center and non-participators. Percentages of felt frustration were: 71.09 per cent of the total sample, 78.12 per cent of

TABLE 15

Principal Verbal Attitudes

Toward Teacher-Developed Materials

	Total	Percentage
Positive	5	100%
Negative	0	0%

TABLE 16

Teachers Felt Need for

Teacher-Developed Materials to Be Shared

	Yes	No
Responses from Total Sample of Teachers	92.96%	7.03%
Responses from Participators in a Resource Center	100 %	0 %
Responses from Non-Participators in a Resource Center	09.62%	9.36%

TABLE 17

Teacher Verbal Attitudes Towards Sharing Materials Allowing Other Teachers to Be Lazy

	Yes	No
Responses from Total Sample of Teachers	5.37%	95.03%
Responses from Participators in a Resource Center	3.22%	96.77%
Responses from Non-Participators in a Resource Center	4.12%	95.87%

TABLE 18

Teachers Felt Frustration

Because of a Lack of Classroom Materials

	Yes	No
Responses from Total Sample of Teachers	71.09%	28.9 %
Responses from Participators in a Resource Center	78.12%	21.87%
Responses from Non-Participators in a Resource Center	68.75%	31.25%

participators, and 68.75 per cent of non-participators. Non-participators were asked if they regularly shared their materials with other teachers. The results were that seventy-five per cent regularly shared their materials. The findings showed that teachers and principals had a positive attitude towards the sharing of teacher-developed materials.

Data were collected to determine principal and teacher verbal attitudes towards resource centers housing teacher-developed materials.

Table 19 displays principal verbal attitudes and Table 20 displays teacher verbal attitudes towards resource centers housing teacher-developed materials. All principals, 85.48 per cent of the total sample of teachers, 80.85 per cent of non-participating teachers in a resource center, and all teachers who had participated in a resource center felt that a resource center would appreciably improve their curriculum. The findings show that teachers and principals had a positive verbal attitude towards resource centers housing teacher-developed materials.

Data on attitudes were collected from teachers who had participated in a resource center housing teacher-developed

TABLE 19

Principal Verbal Attitudes Towards

Resource Centers Housing Teacher-Developed Materials

	Total	Percentage
Positive	5	100%
Negative	0	0%

TABLE 20

Teachers Verbal Attitudes Towards

Resource Centers Housing Teacher-Developed Materials

	Positive	Negative
Responses from Total Sample of Teachers	85.48%	14.01%
Responses from Participators in a Resource Center	100 %	0 %
Responses from Non-Participators in a Resource Center	80.85%	19.14%

materials concerning how valuable they felt the resource center was, and how many times they used it. Table 21 displays considered degree of value of resource centers housing teacher-developed materials. Table 22 shows number of times resource center housing teacher-developed materials was used. Results on how valuable was the resource center were as follows: not valuable (zero per cent), somewhat valuable (34.48 per cent), valuable (27.58 per cent), very valuable (24.13 per cent), and extremely valuable (13.79 per cent). Results on the number of times each teacher had used the resource center were as follows: less than five times (24.13 per cent), five to fifteen times (37.93 per cent), fifteen to twenty-five times (10.34 per cent), more than twenty-five times (27.58 per cent). Findings from the above results can be seen better through an analysis of Table 23, Table 24, and Table 25.

Table 23 shows the relationship between the resource center's stage of development and how valuable it was considered by respondents. Sixty per cent of resource centers in the beginning stage were considered as somewhat valuable while ninety per cent of resource centers in the middle stage were considered valuable to extremely valuable, and one-half of the resource centers in the middle stage

TABLE 21

Considered Degree of Value of Resource Centers Housing Teacher-Developed Materials

	Total	Percentage
Not Valuable	0	0 %
Somewhat Valuable	10	34.48%
Valuable	8	27.58%
Very Valuable	7	24.13%
Extremely Valuable	4	13.79%

TABLE 22

Number of Times Resource Center

Housing Teacher-Developed Materials Used

	Total	Percentage
Less than 5 Times	7	24.13%
5-15 Times	11	37.93%
15-25 Times	3	10.34%
More than 25 Times	8	27.58%

TABLE 23

Resource Centers Classified by Stage of Development and Considered Degree of Value

	Planning	Beginning	Middle	Advanced
Not Valuable	0	0	0	0
Somewhat Valuable	0	9	1	0
Valuable	0	4	4	0
Very Valuable	0	2	3	0
Extremely Valuable	0	0	2	0

TABLE 24

Resource Centers Classified

by Stage of Development and Number of Times Used

	Planning	Beginning	Middle	Advanced
Less than 5 Times	0	8	0	0
5-15 Times	0	7	4	0
15-25 Times	0	0	2	0
More than 25 Times	0	1	4	0

TABLE 25

Resource Centers Classified by Number of Times Used and Considered Degree of Value

	Less than 5	5-15	15-25	25 or More
Not Valuable	0	0	0	0
Somewhat Valuable	7	4	0	0
Valuable	0	6	2	0
Very Valuable	0	2	1	4
Extremely Valuable	0	0	0	4

were considered very valuable to extremely valuable. The findings from Table 23 indicated that the more developed and organized a resource center is, the more valuable it is considered.

Table 24 shows the relationship between the resource center's stage of development and the number of times each teacher used it. Ninety-three and thirty-three hundredths per cent of the resource centers in the beginning stage were used less than fifteen times. Sixty per cent of resource centers in the middle stage were used over fifteen times while forty per cent of the same resource centers were used over twenty-five times. The findings from Table 24 indicate that the more developed and organized a resource center is, the more times it is used.

Table 25 shows the relationship between how valuable the resource center was considered and the number of times it has been used. An analysis of the table indicated the following: all resource centers used less than five times were considered somewhat valuable, 81.81 per cent of resource centers used five to fifteen times were considered somewhat valuable to valuable, all resource centers used fifteen times to twenty-five times were considered valuable to very valuable, and all resource centers used more than twenty-five

times were considered very valuable to extremely valuable. The findings from Table 25 indicated that the more times a resource center is used the more valuable it is considered. Conversely, the more valuable a resource center is considered the more it is used.

In summary, principals and teachers had a positive attitude towards the sharing of teacher-developed materials and towards resource centers housing teacher-developed materials. Attitudes of teachers towards resource centers they had used changed depending upon which stage of development the resource center was in. The more developed and organized the resource center was, the more valuable it was considered, and the more it was used. Also, the more a center was used the more it was considered as valuable.

III. SUMMARY

Data were collected in five schools through the measurement of teacher and principal behaviors, teacher and principal attitudes, and the development of resource centers housing teacher-developed materials.

The data suggest that: 1) at least twenty resource centers were in current use, 2) the majority of resource centers were in the beginning or middle stage and were from

zero to two years old, 3) principals were active in exerting some influence upon teachers to share teacher-developed materials, 4) teachers were the most active group in influencing teachers to share their materials, 5) both teachers and principals were instrumental in organizing resource centers, 6) the most important advantage in having a resource center was the varied materials it made available and what these materials allowed the teachers to do for their students, 7) factors essential in making a resource center valuable were: a large selection of varied materials, a central location, and a highly organized structure, and 8) teachers and principals held positive attitudes towards the sharing of teacher-developed materials and towards resource centers housing teacher-developed materials. Implications of the findings were examined in Chapter V.

CHAPTER V

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this chapter is to summarize the study, review the findings, state the conclusions, discuss the implications of the study, and make the recommendations for further related research.

I. SUMMARY OF THE STUDY

The objectives of this investigation were: 1) to determine the frequency of occurrence of resource centers housing teacher-developed materials; 2) to determine the present stage of development of individual resource centers housing teacher-developed materials; 3) to determine if principals actively encouraged teachers to share teacher-developed materials; 4) to determine if teachers set-up the sharing of teacher-developed materials by principal direction or by own initiative; 5) to determine the factors teachers believed caused existing resource centers housing teacher-developed materials to be either valuable or not valuable; 6) to determine principal and teacher attitudes towards the sharing of teacher-developed materials; and 7) to determine principal and teacher attitudes toward

resource centers housing teacher-developed materials.

The Principal Questionnaire was developed by the investigator to measure principal behaviors and attitudes. The Teacher Questionnaire was also developed by the investigator to measure teacher and principal behaviors, teacher attitudes, and the development of resource centers housing teacher-developed materials.

All five existing Knox County Middle Schools were selected to participate in the study. All five principals were asked to complete the Principal Questionnaire. All 161 middle school teachers were asked to complete the Teacher Questionnaire. Five principals and 130 teachers participated in the study.

II. REVIEW OF THE FINDINGS

The data resulted in findings which can be summarized as follows:

1. One-fourth of the responding teachers had placed their materials in at least twenty presently used resource centers housing teacher-developed materials.

2. Almost all (ninety-five per cent) resource centers were either in the beginning or middle stage of development; and almost all (ninety-five per cent) resource centers were

from zero to two years old.

3. The principal exerted some influence upon teachers (one of every five teachers from the total sample, one of every four teachers who participated in a resource center, and one of every five non-participators in a resource center) to share teacher-developed materials. Other teachers were more active than principals in influencing teachers (one of every three teachers from the total sample, one of every two teachers who participated in a resource center, and one of every three non-participators in a resource center) to share teacher-developed materials.

4. Principals were directing teachers to organize resource centers. One-third of the resource centers were set-up by direction of the principal; and one-third were set-up by teachers under their own initiative.

5. The most important factor (eighty per cent) causing resource centers housing teacher-developed materials to be valuable concerned the large selection of materials which were made available, and what these materials allowed the teachers to do for their students. Thirty per cent of the teachers felt that a factor making the resource center valuable was that it facilitated the sharing of ideas.

6. Principals (100 per cent) and teachers (ninety-three

per cent) felt that there was a need for teacher-developed materials to be shared. Less than six per cent of the teachers felt that sharing teacher-developed materials allowed other teachers to be lazy. Three of every four teachers were at times frustrated because of a lack of classroom materials. Three of every four teachers not participating in a resource center regularly shared their materials with other teachers.

7. Principals (100 per cent) and teachers (ninety-three per cent) held a positive attitude towards the sharing of teacher-developed materials.

8. All principals, all teachers who participated in a resource center, and three of every four teachers who were not participators in a resource center felt that a resource center would appreciably improve their curriculum. The more developed and organized a resource center was, the more valuable it was considered, and the more it was used. The more times a resource center was used the more valuable it was considered.

The findings and conclusions of this study must be interpreted and valued in relation to the limitations indicated in Chapter I. Especially it should be pointed out that some respondents to the questionnaires may have

responded the way they felt they were expected to answer.

III. CONCLUSIONS FROM THE STUDY

As a result of this study it can be concluded that:

1. Teachers in Knox County Middle Schools are currently participating in various resource centers housing teacher-developed materials.

2. Resource centers housing teacher-developed materials are a recent innovation in Knox County with none reported as being over three years old.

3. The majority of the resource centers housing teacher-developed materials are in the beginning stage. The time necessary for resource centers to develop to the middle stage is approximately one to two years.

4. The most active encouragers of teachers to share teacher-developed materials are other teachers. The principal exerted some influence upon teachers to share their materials.

5. Resource centers are established by direction of the principal and by teachers under their own initiative.

6. The most important factor making a resource center valuable is the large selection of teacher-tested materials it makes available, and what these materials allow teachers

to do for their students. A significant factor making resource centers valuable is that the resource center facilitated the sharing of ideas. A valuable resource center needed a large selection of varied materials, a central location, and a highly organized structure.

7. Principals and teachers in Knox County Middle Schools have a positive attitude towards resource centers housing teacher-developed materials.

From these conclusions, some important implications and recommendations for further study are suggested.

IV. IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

This study has provided some new information regarding the use of resource centers housing teacher-developed materials as an organizational design for meeting the middle school teacher's need for classroom materials in Knox County. A major implication and area of recommendation concerns further development, refinement, and use of the design. This study examined resource centers located in five middle schools. The findings indicated at this school level that an effective resource center housing teacher-developed materials needed to be highly organized. The responsibility for organizing and directing resource centers fell upon the

classroom teacher. This task can only be done in the classroom teacher's spare time. A director on the local or state level would be able to concentrate his efforts on improvement and use of the design. The use of resource centers need not be restricted to use in individual schools. Much benefit could be derived from the sharing of materials, ideas, and programs at the local, state, regional, and national levels.

The findings implied that teachers in the Knox County Middle Schools felt a need for resource centers housing teacher-developed materials. Several implications and recommendations for further research have been generated by these findings. Further research would be needed to indicate if middle school teachers in other areas felt a need for a resource center. If so, was this need restricted only to middle school teachers? Further research would be needed to determine if a need for resource centers applied to teachers who were expected to individualize and/or to other teachers who were interested in improving their curriculum. Additional research would be needed to determine a correlation between the recent advent of resource centers and the recent commitment to middle school philosophy in Knox County. Other areas of research would be needed to

determine if resource centers were fulfilling the teacher's need for materials and appreciably improving the participating teacher's curriculum. Highly organized and well equipped experimental resource centers might be established, and then their effects noted.

If educators are to build upon the experiences of classroom teachers, some provision for the sharing and recording of good workable materials, activities, ideas, and programs need to be organized. Too often progress is stalled by excellent ideas being restricted to certain locales. Far too much duplicate work is done because ideas have to be rediscovered. It requires large amounts of time to develop these ideas to even the beginning stage. The sharing of materials and ideas will result in the refinement, adaptation to new situations, and the overall development of curriculum. The result can only be progress.

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