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ABSTRACT

The Wabash Valley Supplementary Educational Center, the organization and activities of which are described in this report, is one of several multidistrict, multifunctional supplementary centers in the state of Indiana. Unique in that a university has contracted its operation, the Center has a two-fold purpose: (1) to provide educational services which cannot be provided by the schools individually, and (2) to provide for demonstration of exemplary programs to shorten the "innovation lag." Eight western Indiana countries and 20 school corporations enrolling more than 50,000 students are involved in this cooperative effort. Projects of the Center encompass a wide range of topics (music, history, pupil personnel, measurement and evaluation, elementary language arts, program evaluation, team teaching, and programed instruction) and a variety of activities (inservice workshops, demonstration classrooms, consultant services, specialized teaching materials, equipment, exhibits, and services, for example). Each of the projects of each administrative division is described here in terms of objectives, personnel involved, and evaluation of the effectiveness and extent of contribution to teacher education and improvement. Also included is a description of the general organization and development of the Center. (Author/ES)

[Wabash Valley Supplementary Educational Center]

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1969 ENTRY

INDIANA STATE UNIVERSITY

TERRE HAUTE

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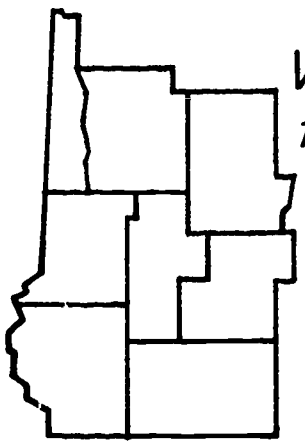

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II

CREATIVE CONSORTIUM

The Wabash Valley Supplementary Educational Center is one of several multi-district, multi-functional supplementary centers in the State of Indiana. It is unique in that a university has contracted its operation.

WVSEC is the medium through which Indiana State University personnel and elementary and secondary school personnel from 20 school corporations have launched a cooperative effort to provide for educational research and development activities. Within the structure of WVSEC, opportunity has been provided for university and public school collaborators to design and develop programs subject to the approval of the 20 school superintendents who serve on the Board of Directors. With federal funds, as these projects have materialized, the diffusion and adoption stages of the change process have been carried out with Indiana State University personnel serving as project directors and consultants. As a tool for making appropriate decisions toward institutionalizing these activities as functional parts of the participating schools program, special emphasis has been given to the project evaluation and its attendant collection of data.

In its role as a joint school-university enterprise to facilitate and implement educational change, WVSEC has conducted in-service workshops and specialized training, established demonstration classrooms, provided consultant services, arranged for and subsidized teaching tours, and provided specialized teaching materials, equipment, exhibits, and services. The

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impact of this program upon the 50,000 students and teachers in this geographic area has manifested itself in numerous observations and studies as vital and significant.

The sections which follow will broadly describe the development of the program and will briefly describe the several projects, setting forth objectives, personnel involved, and evaluation of the effectiveness and extent of contribution to teacher education and improvement. In other exhibits of newsletters and promotional materials special attention is invited to the pictorial content.

The project presently identified as the Wabash Valley Supplementary Educational Center was initiated through the efforts of Indiana State University School of Education faculty members. As the project developed, administrators and teachers from western Indiana schools cooperated with several ISU consultants in assessing needs, establishing priorities and designing programs.

South Vermillion School Corporation became the applicant agency, acting on behalf of the twenty school corporations concerned, and entered into a contract with Indiana State University School of Education for the operation of WVSEC. WVSEC offices are housed adjacent to the ISU campus.

The stated objectives of WVSEC are (1) to provide for the schools certain educational services which cannot be provided by the schools individually, and (2) to provide for a continuous demonstration of exemplary educational programs or services to shorten the "innovation lag."

The various activities of the center include projects in language arts, pupil personnel, team teaching, music, history, measurement and evaluation, and programmed instruction.

The Language Arts Division offers the opportunity for all first and second grade teachers in the WVSEC area to attend workshops on the language experience approach to teaching reading, to visit demonstration classrooms, and to receive follow-up consultative services. Tape recorders, cameras, slide and movie presentations and other audio-visual materials have been supplied to each demonstration classroom as well as reading aids, picture dictionaries and other library books. Specialized training and field trips view similar out-of-state projects have been provided for demonstration classroom teachers.

The Pupil Personnel Division has established demonstration centers at four high schools, enabling guidance workers and other school personnel to observe fully functioning secondary guidance programs. Several items of equipment, including audio-filmstrip projectors, bulletin boards, and literature racks, and a variety of books and sound filmstrips have been provided to each demonstration center. Indiana State University personnel, one serving as director of the project and three as consultants, have visited each high school desiring assistance. In addition to its particular, individual goals and interests, each demonstration center seeks to provide in its model program an individual inventory and pupil appraisal system, a testing program, career planning services, counseling services, group guidance activities, articulation with other school levels, school psychological services, in-service programs, survey and research program and community agency coordination. During 1968, all school counselors in the geographic area attended in-service workshops, received newsletters, shared common problems and visited demonstration projects.

The newest WVSEC project is the Team Teaching Division. Team teaching activities, under the direction of an ISU professor, have included workshops and visitations to plan for inaugurating team teaching demonstrations in 1968-69.

The History Division provides methods and materials to supplement and enrich the educational experiences of students in the study of Indiana and Midwestern History. All fourth and eighth grade teachers of Indiana history received teaching units, newsletters, lists of films and filmstrips, and the opportunity to implement circulating teaching exhibits. More than 5,000 students took teaching tours in 1968 to museums and historical points of local interest. The operation of the History Division involves the cooperation of numerous private individuals in loaning artifacts, historical societies from five counties, and state and private museums with public school and university personnel.

The Measurement and Evaluation Division was established to serve the general need for more reliable and valid achievement and aptitude test data. The correct use and interpretation of these instruments are stressed. The division conducts workshops and in-service training for school measurement specialists, provides testing materials for loan or sale, scoring services through a commercial service and through ISU scoring machines, and consultant services.

The Music Division seeks to widen the range of the normal listening habits of seventh grade students. A parallel objective is to broaden the knowledge of music teachers and to increase their abilities to provide vital and meaningful listening-study experiences. In 1968 all seventh grade general music teachers received teaching units, tape selections, lists of textbooks, filmstrips and recordings for general music classes. A string quartet visited nearly all seventh grade classes and gave live performances to over 4,000 students. In workshops and conferences teachers were given assistance in preparing integral pre-visit and post-visit activities to maximize the benefits of the personal visitations by the quartet. The string quartet serving WVSEC

is the resident string quartet at Indiana State University.

The Programmed Instruction Division operates five demonstration centers not only to offer opportunities for school personnel to become familiar with programmed instruction materials but also to conduct research studies in selected programmed instruction equipment. Workshop and consultant services are provided to further develop a climate for teacher change and growth.

The Program Development Division has been created to assist in implementing existing projects, to evaluate existing projects and to assist in planning and developing new projects. The functions of this division are performed by the ISU Bureau of School Administrative Services. Evaluation by this division has been continuous since the inception of the WVSEC project, and carried out by independent ISU professors and by personnel associated with initial planning and development. Evidence in evaluative studies confirms that dissemination of information has been successful and that the information, the workshop experiences and demonstration center experiences have affected teacher behavior toward stated desirable goals and objectives.

III

EXECUTIVE DIVISION

Description. This division has the primary purpose of coordinating all the activities of the center. The executive director is responsible to a steering committee composed of the executive officers of all participating school corporations.

At an annual meeting of the Board of Directors a steering committee is elected which meets regularly with center personnel.

The Executive Division of the WVSEC includes the executive director, a part-time communication specialist and a full-time secretary. The duties of the communication specialist include aiding the directors of each of the divisions in the development of the communication media which flow regularly from the center. The duties of the secretary include record keeping, filing, and typing.

All SEC personnel are housed near the ISU campus. The choice of the site is advantageous since the center requires specialists and services available from the University.

The South Vermillion School Corporation entered into a contract with the ISU School of Education for the operation of the SEC. Nevertheless, the center is administered in accordance with policy established by the Board of Directors.

Specific objectives. The activities of the multi-county center have two distinct objectives: (1) to provide for the schools certain educational services which cannot be provided by the schools individually, and (2) to provide for a continuous demonstration of exemplary educational programs or services to shorten the "innovation lag."

Activities. The various activities within the center include projects in language arts, music, history, guidance, team teaching, programmed instruction, and measurement and evaluation. A full description of each of the areas is found in the in the individual division reports.

In January, 1968, the Executive Division with the cooperation of all other divisions in the WVSEC prepared a report for each participating school corporation. This report made to the executive officer in each corporation primarily described the extent of teacher participation in the various activities carried on by the center. A summary of activities revealed the depth of involvement of teachers in advisory committees, demonstration classes, visitations, workshops, conferences, and evaluations.

Some of the highlights of this report revealed that:

All school counselors in the WVSEC area had attended in-service workshops, received newsletters, shared common problems, and visited demonstration projects.

All first and second grade teachers had the opportunity of attending workshops on the language experience approach to teaching reading. These teachers had the opportunity to visit demonstration classes and were given follow-up consultative services.

All fourth and eighth grade teachers of Indiana History received teaching units, newsletters, lists of films and filmstrips, and were extended the opportunity for "teaching tours." During 1966-67 more than 3,000 students were involved in the tour activity.

All seventh grade general music teachers received teaching units, tape selections, lists of textbooks, filmstrips, and recordings for general music classes. A string quartet visited nearly all seventh grade classes. General music teachers attended workshops and conferences held by this division.

Measurement and evaluation services were extended to all participants. These included the loan of test booklets and manuals, scoring services, and workshops for school measurement specialists. The participation of schools exceeded expectations and presented a challenge to this WVSEC service.

Programmed instruction services include demonstration programs in five schools. The first year emphasized orientation and training while the second year is providing opportunities for visitation, research, workshops, and consultant services.

Throughout the project teachers and administrators have been actively involved in advisory committees, constructing guidelines, and planning conferences.

Team teaching activities have included 37 teachers from seven schools who have participated in workshops and visitations to plan for inaugurating team teaching demonstrations in 1968-69.

Program development activities provided for continuous evaluation and modification of services. University consultants, school administrators, and teachers have taken active roles in this process. A broad base for decision making has resulted from this project activity.

IV

PROGRAM DEVELOPMENT DIVISION

The Program Development Division of the Wabash Valley Supplementary Educational Center has three basic functions; namely, (1) to assist in implementing existing projects, (2) to evaluate existing projects, and (3) to assist in planning and developing new projects. The functions of this division, formerly called the Planning and Evaluation Division, have been performed by the Indiana State University Bureau of School Administrative Services. This agency was initially responsible for the activities performed under the Title III Planning Grant which resulted in the establishment of the WVSEC.

Implementation of existing projects. Consultants who were concerned in the development of the History, Music, Pupil Personnel, and Measurement and Evaluation Projects have assisted the project directors during the past two years in the implementation of activities necessary to operationalize these divisions. For the past year consultants concerned in the development of the Team Teaching and Programmed Instruction Projects have assisted these project directors in the implementation of activities necessary to operationalize these divisions. Several of these consultants served as interim project directors until full-time directors could be found. These consultants have been extremely valuable in helping to translate the objectives of a division into functional activities.

Directors of all divisions were encouraged to develop advisory boards which would participate in assisting the directors and the consultants in determining activities necessary to implement the objectives of the respective projects. Such advisory boards have been established and are functioning in all projects of the WVSEC.

Evaluation of existing programs. During the first year of operation of the WVSEC, a series of discussions with consultants, division directors, advisory boards, the executive director, and other participants resulted in a general acceptance of the evaluation design model developed as a part of the original WVSEC operational grant proposal. This evaluation design model suggests that the change process in education follows four logical basic steps; namely, research, development, diffusion, and adoption. The first two steps--research and development--are primarily activities of Title III Planning Grants. The second two steps--diffusion and adoption--are basic functions of operational grants. The ultimate objective of Title III is to facilitate the change process in education, thereby institutionalizing the activities of a supplementary educational center as a part of the basic program of participating school districts.

Evaluation is seen as a tool for making appropriate decisions. Adequate data must be collected in order to assist advisory boards, division directors, the executive director, the steering committee, the board of directors, the State Title III Advisory Committee, and the U.S.O.E. in making appropriate decisions concerning each activity and service of a supplementary educational center. Data must be collected to evaluate the process as well as the product of programs or services offered by a center.

On the basis of the above rationale, the Program Development Division attempted to design, with the assistance of evaluation consultants, including both university and public school teachers, a series of data collection activities to assist each division in making decisions concerning their service or program. Evaluation consultants were identified to assist each project director in developing appropriate techniques for data collection and analysis. A series of meetings of all evaluation consultants, project directors, the executive director, and the director of the Program Development Division provided

opportunities for participants to share ideas in tailoring specific evaluation activities for each project.

Project directors and project evaluators were charged with the responsibility for developing an evaluation design for their project. Instrumentation was developed by the project evaluator with assistance and counsel from the project advisory board and the project director. Evaluation reports are presented in the section for each division in this document. These evaluation reports include a brief description of the nature of the project, a statement of the specific objectives to be accomplished, a narrative description of the activities performed, procedures of evaluation, the results of the evaluation, and pertinent conclusions and recommendations.

Planning and developing new programs. In order to avoid fossilizing the program of service and activities provided by the WVSEC, it is anticipated that existing programs should be phased out as they fulfill their objectives and that new programs be planned and developed as needs are identified by participating school districts. In order to provide a vehicle to evaluate and assign priorities to new ideas that hold promise for implementation as Title III projects, the steering committee appointed an advisory board to work with the executive director and the director of the Program Development Division. This advisory board, consisting of five participating school superintendents, held monthly meetings during the 1967-68 school year in which they reviewed existing projects and evaluated new ideas that have been generated by participants.

A number of significant proposals for projects have been brought to the attention of the Program Development Division advisory board. After review, the advisory board members suggested that all participating districts be asked to determine priorities for the development of these projects.

Procedures and results of evaluation. In the spring of 1968 a questionnaire was prepared by the Program Development Director and mailed to the 20 school superintendents participating in the WVSEC. This questionnaire consisted of two parts: (1) an evaluation of existing projects, and (2) an evaluation of proposed projects which might be implemented. Superintendents were asked to evaluate existing programs in terms of how they valued these projects in meeting the needs of their school corporations. Nineteen of twenty school corporations responded to the questionnaire. On the basis of the responses to this questionnaire, it was obvious that superintendents value service-type projects. There was also evidence to support the conclusion that exemplary projects should be continued in future activities. Assigning a numerical value of 1 for a low response, 2 for an average response, and 3 for a high response, existing projects ranked as follows:

(1) Measurement and Evaluation 48
(2) Junior High School Music 43
(3) Indiana/Midwestern History 42
(4) Elementary Language Arts 36
(5) Programmed Instruction 34
(6) Pupil Personnel 33
(7) Program Development 30
(8) Team Teaching 27
(9) Fine Art 22

Proposed projects were also rated on the low-average-high scale with the same numerical values. The proposed projects ranked as follows:

(1) Data Processing 47
(2) Secondary Mathematics 41
(3) Elementary Music & Literature 36
(4) Aero-space Education 27
(5) Elementary Industrial Arts 27

As a result of this survey the Program Development Division initiated discussions with the ISU Computer Center, IBM, RCA, and other computer specialists to plan a series of experiences to assist participating school districts in identifying the direction of shared data processing activities. With the cooperation of IBM and the ISU Computer Center, class scheduling and student accounting activities via data processing will be initiated as pilot activities during the 1968-69 school year. All participating school districts have an

opportunity to share in these experiences. Computer-assisted instruction activities are also being investigated for use by participating school corporations as a part of the Programmed Instruction Division of the WVSEC.

HISTORY DIVISION

Major Purpose. The History Division of the WVSEC developed as a result of a needs' survey conducted in the eight county area of Clay, Greene, Owen, Parke, Putnam, Sullivan, Vermillion, and Vigo during the spring of 1966. The survey revealed a felt need on the part of teachers for methods and materials to use in addition to the textbook in the study of Indiana and midwestern history. Inasmuch as the counties served by the Center have many children who might be classified as "culturally disadvantaged," the concrete experiences which are proposed will serve a very real need that largely has been neglected in the past. Heretofore, only a few of the school corporations have been able to finance special historical exhibits or field trips to museums and historical sites because funds were rarely budgeted for such activities. Consequently, it became the major purpose of this division "to supplement and enrich the educational experiences of students in the study of Indiana and midwestern history." Today's students can become more responsible citizens through an increased knowledge and understanding of their own state and country. Indiana History, properly taught, adds to the student's enlightenment and comprehension of America. It is felt that Indiana History merits additional and more effective study.

Specific Goals

1. The development and classroom use of the "teaching exhibits" -- using films and filmstrips, museum artifacts, slides, and published material.

2. Utilization of various cultural agencies which can provide specialized materials for educational improvement.

   a. Continuing the interest and development of "teaching tours" involving historic sites, homes, museums.

   b. Preparation of additional instructional materials designed to provide adequate preparatory information about "display exhibits."

3. Increase of supplementary material for use in the instructional program of the classroom.

4. Dissemination of information pertinent to the "History Project."

Activities and Projects

Goal #1. The development and classroom use of the "teaching exhibits."

During the summer of 1967 a one-week summer workshop was held for seventeen teachers representing both the intermediate and junior high grade levels and all eight counties served by the Center.

A. Activities of the workshop were designed, in part, to improve teacher preparation in Indiana and midwestern history. Among these were the distribution of materials offered by Hubert Hawkins, Director of the State of Indiana Historical Society; discussion of State of Indiana Curriculum Guide; evaluation of state adopted and supplementary textbooks; discussion of film, filmstrips, tapes, and records available on Indiana; a tour of the Wabash Valley Historical Museum and the Eugene V. Debs Home, both located in Terre Haute, and a discussion of possible sites for "teaching tours" for the students during the coming year.

B. During the workshop, members viewed items loaned by Clay, Parke and Vermillion County Historical Societies. In addition, interested individuals and workshop members themselves increased the number of items on display. Each level devised plans for utilizing such items in "teaching exhibits" to be used in their classrooms during the coming school year as a way of enriching the on-going instructional program. Those teachers of intermediate grades used the 1965 Elementary Curriculum Guide to Social Studies published by the Indiana Department of Public Instruction. The teaching units were designed to supplement the on-going program for teaching Indiana in a Regional and World Setting. Emphasis was given to Unit II -- How People Lived in Indiana in the Past. Specific examples were written for Roman Numeral III A. Food B. Clothing C. Shelter. Ensuing lessons also incorporated Roam Numeral VI A. Mechanization of Agriculture and industry B. Shift from home to commercial production C. Growth and development of transportation and communication. Those teachers of Indiana History in grade 8 used the Bulletin No. 245 published by the Indiana Department of Public Instruction in 1965. The teaching units were designed to supplement the on-going program for Chapter VI -- Hoosier Pioneers and Pioneer Life, with emphasis on point number 5, which is transportation. Seven sample teaching units were developed for using artifacts and other items in the classroom to develop an understanding of the evaluation of transporation in Indiana from its earliest beginning to the present day. The teaching units include teaching techniques, generalizations, objectives, understandings to be developed, vocabulary lists, suggested activities, suggested readings, films and filmstrips,

reflective questions and evaluation questions on the topic of transportation. The artifacts and other items to be used in setting up the exhibit and structured questions to be used when presenting the "teaching exhibit" are also included.

C. The "teaching exhibit" has been used in the classrooms of most of the workshop teachers. Many of them followed the suggestions outlined in the sample teaching units devised during the summer workshop of 1967. Other teachers have also implemented "teaching exhibits" using artifacts and other visual aids pertinent to the classroom situation. Teachers were encouraged to keep logs in which they gave an cccount of the artifacts, books, film, filmstrips, records, Indiana Historical Bureau leaflets, and other published materials used. In addition to describing the items used, report of the procedures used in presenting the "exhibits" have been kept. Mrs. Nasser, Director of the History Division was a guest in the classrooms of 14 of the workshop members and the classrooms of 4 other teachers, assisting them in using additional materials and in teaching Indiana and Midwestern history during the 1967-68 school year.

D. Information describing the workshop teacher' experiences with the "teaching exhibit" concept as well as information pertinent to the "teaching tours" and Indiana and Midwestern History were sent to approximately 400 teachers and 150 administrators via the History Division monthly newsletter. The WVSEC Spotlight was mailed monthly to administrators and interested individuals.

Goal #2. Utilization of various cultural agencies which can provide materials and services for educational improvement.

A. Each of the following community agencies have contributed to the success of the History Division during the 1967-68 school year.
   1. Wabash Valley Historical Museum
   2. Early Wheels Museum
   3. Clay County Historical Society
   4. Parke County Historical Society
   5. Putnam County Historical Society
   6. Vermillion County Historical Society
   7. Parke County Rural Electric Membership Corporation
   8. Indiana Historical Bureau
   9. Department of Natural Resources
   10. Numerous individuals (owners of artifacts)

B. "Teaching Tours"
   As a result of the influence and financial assistance offered by the WVSEC Hisotry Division a total of 162 classrooms, involving approximately 5,300 students, benefited from "teaching tours" during the 1967-68 school year. Another 25 classrooms, involving approximately 850 students were refused requests for bus transportation for "teaching tours" due to a lack of funds.
   1. During March, April, and May 1968, the Wabash Valley Historical Museum was toured by 50 classrooms, involving approximately 1587 students.

2. In the fall of 1967, 8 classrooms, involving approximately 256 students toured the Parke County Covered Bridge Festival. In the spring of 1968, two classrooms involving approximately 60 students toured the Parke County Maple Syrup Festival. Three classrooms involving approximately 90 students toured historical sites in Vigo County.
3. Spring Mill Village was the site of "teaching tours" for classrooms involving 1483 students.
4. "Teaching tours" to Vincennes was scheduled for 50 classrooms and approximately 1828 students.

C. Preparation and dissemination of previsitation material.
1. The 100-slides series has been shown to the 44 classrooms and approximately 1483 students taking the "teaching tour" to Spring Mill Village. In addition, the slide series has been used as a follow-up activity in some classrooms. Also, 6 classrooms used the slide series as a supplement to their regular classroom activities although they were unable to schedule a tour to Spring Mill Village due to a lack of funds. In addition, maps of the park, maps of the village a proposed time schedule for grouping and touring areas within the village, and a list of objectives, generalization and reflective questions are sent to each teacher. The objectives to be developed as a result of the Spring Mill Village tour are taken from the Elementary Guide to Social Studies published by the Indiana Department of Public Instruction and from Bulletin No. 245. A list of approximately 100 suggested follow-up questions pertaining to specific locations at Spring Mill Village was prepared by Mrs. Nasser, the director, as an additional aid to teachers. The slide series was also shown at the State Title III Directors Meeting held at Spring Mill Inn, June 4, 1968.
2. The 28 minutes color sound film title October In Indiana was shown to the eight classrooms and approximately 256 students who took a "teaching tour" of Parke County's Covered Bridge Festival.
3. The 11 minute color sound films Spinning and Weaving and The Village Blacksmith were shown to approximately 1587 students prior to their tour of the Wabash Valley Historical Museum. These films were chosen because they depict how many similar items displayed in the museum were made or used.

D. Dissemination of information regarding availability of tours. Information concerning the tours was described in the monthly newsletters that were mailed to approximately 400 teachers and 150 administrators throughout the 1967-68 school year. In addition, numerous phone calls were made, and postal cards and personal letters were written to principals, teachers, and community agencies.

Goal #2b. Utilization of various cultural agencies which can provide specialized materials for educational improvement--"display exhibits."

A. In the spring of 1967 two rooms at the Wabash Valley Historical Museum were refurnished to display the museum items to a better educational advantage to more than 3,500 school children who

participated; this part of museum was designated the "Hoosier History Center." Later in 1967 a third room was arranged to feature an exhibit of farm tools. This display adds much interest to a study of life in Indiana in the past. In the spring of 1968 a fourth room was opened and contains the atmosphere of a country store. These exhibits at the museum are designed to be useful on two levels: (1) the intermediate grades; and (2) the junior high school. In both instances the exhibits will supplement the general outline and recommendations contained in the State of Indiana Courses of Study. The junior high school teacher, however, seeks to develop advanced vocabulary, generalizations, and an awareness of more complex problems than the intermediate teachers. Even though the items of the "teaching exhibits" remain essentially the same, they are reconceptualized for teaching at the junior high level.

Goal #3. Increase of supplementary material for use in the instructional program of the classroom.

A. Dissemination of lists of film and filmstrips available on Indiana or midwestern history through both I.U. and I.S.U. have been mailed to 400 teachers and 150 administrators. Most of these were previewed by the director and her opinion and recommendations are specified with an asterisk below the general information describing the contents of each film or filmstrip.

B. Available on request are lists of tapes on Indiana History from Purdue University. The History Division owns two tapes (containing 12 selections) which are available on request to any school. These two tapes serve as a sample of the materials available through Purdue University at a small cost. It is anticipated that many teachers will want to order their own selections.

C. Available on request are four films owned by the History Division of the WVSEC. These are titled:
1. Long Journey West - 22 min. - color - sound
2. The Village Blacksmith - 11 min. - color - sound
3. Spinning and Weaving - 11 min. - color - sound
4. Canals: Towpaths West - 22 min. - color - sound

These films are especially desirable in formulating concepts to be developed in the same areas as the "teaching exhibit," that of pioneer life in Indiana and transportation during the pioneer period. They have been used in 47 classrooms this past school year.

D. Collections of texts and supplementary books and pamphlets on Indiana History are available to interested persons. These are available as reference materials for any teacher, principal or librarian interested in seeing what is available on Indiana History.

Goal #4. Dissemination of information pertinent to the History Division.

The following communications and materials have been mailed to approximately 400 teachers and 150 administrators in the WVSEC area.

A. Monthly newsletter for September 1967 through May 1968.

B. Sample teaching units for utilizing the "teaching exhibit" concept for grade 4 and 7, devised during the 1967 summer workshop--mailed in September 1967.

C. A detailed plan for having a classroom exhibit of artifacts written by Mrs. Seville, President of the Parke County Historical Society and a fifth grade teacher at Rosedale School. A write-up of her pioneer exhibit has appeared in various newspapers in this area and also in the Indiana Teacher, NEA Journal and magazine of School Activities.

D. Mimeographed copies of the State of Indiana Curriculum Guide for Teaching Indiana History in grade 4 were mailed to the three teachers requesting them. In view of the fact that this guide should be brought to the attention of all fourth grade teachers, they will be distributed and discussed drring the one-day area workshops to be held during the 1968-69 school year.

E. Lists of free teaching material for Indiana History Classes from the Indiana Historical Bureau, plus information concerning the benefits that membership in the Indiana Historical Society provides.

F. Mrs. Nasser, the director, has personally visited the offices of the 19 superintendents of the 20 school districts served by the WVSEC. She has also visited the office of all 120 principals and visited briefly with many of the classroom teachers.

G. The director was a guest speaker of the following groups for the purpose of explaining the purpose and activities of the History Division.
   1. Faculty meeting at Thornton School
   2. Vermillion County Historical Society
   3. Principals and teachers of all the parochial schools in the eight county area except Clinton and Linton.
   4. State Title III Director's Meeting, Spring Mill, June 4 & 5, 1968.

H. Publicity for the History Division has been varied.
   1. Approximately 11 newspaper articles have mentioned the History Division of the WVSEC in addition to 6 pictures which appeared in the rotogrovure section of the Terre Haute Tribune Star. Local newspapers in the outlying counties have also ran articles pertaining to the division, but an accurate account is unavailable.
   2. A 15 minute interview with Mrs. Nasser, the Director; Dr. Herbert Rissler, Associate Professor of History, Consultant, and Dr. Robert Duncan, Associate Professor of Speech was taped and distributed to all the radio stations in the eight county area.
   3. Brief television coverage was given to the "teaching exhibit" and other activities on Indiana History in the classroom of Mrs. Julia Hosteter, 4th grade teacher at Prairieton School.
   4. The History Division war requested to present an exhibit at the conference for Supervising Teachers, March 8, 1968, in the Tirey Memorial Union Bldg. on the campus of Indiana State University.

5. An exhibit was presented at the meeting of the Indiana Association for Supervision and Curriculum Development held April 7, 1968 at Hulman Center at Indiana State University.
6. The History Division has had an article in each issue of the WVSEC publication, Spotlight. Eleven pictures were included in the Spotlight to give visual images of the activities.

I. The Advisory Board members are a direct and effective means of disseminating information. At the conclusion of last summer's workshop, nine member teachers were chosen to represent their county in an advisory capacity. This Advisory Board of teachers has met at scheduled times throughout the school year to share their experiences with the "teaching exhibit" concept and to give new direction to the program. Additionally, they have considered ways in which we might better reach each teacher. It was decided that a one-day area workshop, to be held in each county, would be an excellent way of reaching all the teachers of Indiana History. The workshops will be conducted, possibly on a Saturday, following a well organized schedule to acquaint the teachers with the materials, methods, and ideas for teaching Indiana History which the History Division has been developing.

Evaluation

The evaluation of the History Division was donducted by questionnaire. Five questionnaires were developed, each to be used with a different population, and each designed to evaluate the specific goals of the division.

The evaluation design involved: (1) a survey of all teachers who had taken their class on a "teaching tour" this school year prior to April 5, (2) a survey of all teachers who participated in the 1967 summer workshop, (3) a random sample of fourth grade teachers, fifth and seventh grade teachers, and eighth grade teachers.

All evaluation forms were mailed to the school corporation for distribution to the appropriate respondent on March 29, 1968. Return of all forms was requested by April 17, 1968. Follow-up letters and telephone calls were used to check on delinquent forms. The total return of all questionnaires is as follows:

Activity	Sent	Returned	Percentage
"Teaching tour"	44	32	72.7
Workshop	17	15	88.2
Fourth grade	98	73	74.5
Fifth and seventh grade	85	56	65.9
Eighth grade	40	26	65.0

Teaching Tour

During this school year 44 classes were involved in "teaching tours" to such sites as: Vincennes, Spring Mill State Park, Wabash Valley Historical Museum, Parke County Covered Bridge Festival, Swope Art Gallery. The 32 teachers who answered the questionnaire described the responses of their classes as enthusiastic (88.2%) or interested (11.8%). Teachers, in valuing the "teaching tour" as a learning experience for their classes, rated it as excellent (78.1%) or good to very good (21.9%).

The ways or areas in which teachers received assistance from the History Division regarding the "teaching tour" were ranked as follows:

notification of availability of site
arrangements (time, date, bus transportation, etc.)
supplying materials for teacher use in connection with the tour
assisting with previsitation classroom activities
assisting with follow-up classroom activities

When asked to what extent their teaching strategy had changed as a result of participation in the "teaching tour," they responded none to little (13.3%), some (40.0%), and considerably (46.7%). Those who felt that they had made changes in their teaching strategy indicated that those changes occurred in the following categories:

increase emphasis upon Indiana and/or Midwestern History
increase use of materials (pamphlets, books, maps, artifacts, pictures)
planning for additional or different field trips
increase use of audio-visual materials

increase in number of different activities used with children
change of content within the course

All of these teachers felt that this activity ought to be continued by the local school corporation if the History Division should phase out this service aspect of the program. However, they overwhemingly agreed that financial support would be the major problem encountered in the local school corporation.

Workshop

During the summer of 1967, seventeen teachers were brought to the campus of Indiana State University for a one week in-service workshop. The 15 workshop teachers who answered the questionnaire responded that there had been a change in their teaching strategy as a result of participation in the workshop. When asked to indicate specific ways in which their teaching strategy had changed, they responded in the following order:

use of additional materials
use of additional field trips
increase interaction between teacher and students, and among students
increase in number of different activities used with children
use of additional audio-visual material
increase emphasis in teaching Indiana and Midwestern History
increase integration with other subject areas
increase in preparation time
change of content within the course
use of different evaluative techniques and instruments

When asked to indicate the specific ways in which improvements have been made by their students as a group, they responded in the following rank-order:

more student participation
increased interest and enthusiasm
ability to make relationships between past and present
ability to deal with relationships between objects and ideas
increase use of printed materials
vocabulary development
ability to give conceptual responses
ability to develop generalizations
increase skill in organizing, selecting, and interpreting data
ability to plan a variety of roles in cooperation with others as they attack problems.

Eleven of these teachers reported that they had used the "teaching exhibit" concept in areas other than Indiana and midwestern history. All the workshop teachers who had colleagues reported having discussed their experiences in the workshop with other teachers and categorized the responses of these people as "interested in gaining ideas for their own use" or "interested to the point of adopting similar procedures."

When asked what additional materials they had received from their local school corporation for use with units in Indiana or midwestern history, they listed over one-half of the time the following materials: tours, reference material, library books, audio-visual aids, textbooks, maps.

Thirteen of these teachers reported that in their perceptions, their role as a classroom teacher had changed through the use of the "teaching exhibit" concept.

Fourth Grade

Indiana and midwestern hsstory was reported to be a part of the social studies program of most (79.4%) fourth grade teachers who answered the questionnaire.

Regarding utilization of information received from the History Division, a majority of the teachers (72.4%) indicated that they have tried or adopted some of the suggestions and ideas in their classes. Also, a majority of the teachers (78.3%) indicated that some change in teaching strategy had taken place as a result of receiving information and the "teaching exhibit" units. When asked for specific ways in which their teaching strategy had changed, they responded in the following rank-order:

use of additional materials
use of additional field trips
use of additional audio-visual materials
use of unit plan ("teaching exhibit" concept) supplied by the Division
increase in number of different activities used with children
increase emphasis in teaching Indiana and midwestern history

MEASUREMENT AND EVALUATION DIVISION

A description of the nature of the project. The Measurement and Evaluation Division of the WVSEC was established to serve the general need for more reliable and valid achievement and aptitude test data for the twenty participating school units. The need was identified through the reactions to a questionnaire (A Survey of Guidance Practices), observations, and interview data that was compiled during April of 1966. It was found that many of these school corporations lacked leadership both within and outside the system to assist in the collection and utilization of information of maximum reliability and validity for use in wise decision-making by pupils, parents, teachers, counselors, and administrators.

Schools refrained from seeking needed information about student achievements and aptitudes because the appropriate instrumentation was unknown to them or beyond their local budget. Weak instrumentation was widespread. Many schools were using achievement tests which were published nearly a decade ago and academic aptitude tests that were two decades old. There was some evidence of over-tesing and lack of coordination in the overall testing program.

A time gap existed tetween the time that data was collected and reported back. Much valuable counselor and teacher time was spent hand-scoring and recording test results. An information gap existed between the information needed to correctly interpret test scores and the test data information available in the students cumulative folder.

No school corporation reported any attempts to increase the competence of teachers in measurement by in-service training activities. No school corporation surveyed and visited during 1966 reported any organized

Eighth Grade

Indiana and midwestern history was reported to be a part of the social studies program of most (96.1%) eighth grade teachers who answered the questionnaire.

Regarding utilization of information received from the History Division, a majority of the teachers (65.4%) indicated they had tried out some of the suggestions and ideas in their classes. Also, a majority of the teachers (78.2%) indicated that some change in teaching strategy had taken place as a result of receiving information and the "teaching exhibit" units. When asked to indicate specific ways in which their teaching strategy had changed, they responded in the following rank-order:

use of additional materials
use of additional field trips
use of additional audio-visual materials
use of unit plan ("teaching exhbit" concept) supplied by Division
increase in number of different activities used with children

When asked to evaluate the unit plan they received from the History Division, a majority of these teachers (76.2%) responded that they were interested enough to try out some of the suggestions and ideas in classes.

Twelve of the teachers have used or requested the service of the division.

Summary, conclusions, recommendations

The results of the evaluation of the History Division provide clear evidence that this innovative project is accomplishing its major purpose of supplementing and enriching the educational experiences of students in the study of Indiana dnd midwestern history. Both the quantitative and qualitative data have shown increased student growth and development in this area of the instructional program. Such evidence leads to the conclusion that the on-going program of the History Division is effective in bringing about curriculum change.

Regarding the specific goal of "the development and classroom use of the 'teaching exhibits'" the summer workshops have proved to be successful in helping to accomplish this goal. Workshop teachers have not only perceived a change in their role as a classroom teacher but also have changed in specific ways their teaching strategy. Additionally, they have begun to develop and use the "teaching exhibit" concept in other related areas as well as in other subject fields. Through the use of this concept these teachers reported that specific improvements had been made by their students. The evidence found as a consequence of this evaluation leads to the conclusion that the experimental phase of this project has been relatively successful.

Both the quantitative and qualitative evidence regarding the second specific goal--"Utilization of various cultural agencies which can provide specialized materials for educational purposes"--has proven clearly that the History Division in this service function met a need of the teachers within the local school corporations. Not only did this activity enrich the educational experiences of students, but in the teacher's opinions it was valued as an excellent learning experience. The "teaching tour" also had the effect of changing the teaching strategies used by these teachers in specific ways. The conclusion made evident by the results of the evaluation is that the History Division has been highly successful in accomplishing this goal.

The goal of "increasing the supplementary material for use in the instructional program of the classroom" has taken several forms. Evidence of steps taken toward the accomplishment of this goal can be seen in the materials supplied by the History Division for use in the classroom. A second evidence of the influence of the History Division is shown by the data collected in this evaluation. The increased use of materials

both printed and audio-visual appeared high in all rank-ordered lists.

The accomplishment of the goal of "dissemination of information pertinent to the History Project" has already been quantitatively demonstrated. However, the evaluation of this goal was conducted from the standpoint of the effectiveness of this information and the use being made of it. A majority of the teachers in each group sampled reported that they had tried some of the suggestions and ideas in their classes and further had made specific changes in their teaching strategy as a result of receiving information and "teaching exhibit" units from the History Division. The evidence in this area leads to the conclusion that not only has dissemination of information been successful but that the information has effected teacher behavior.

Recommendations

1. That the WVSEC begin immediately to develop a cooperative plan of operation with the twenty school corporations on a shared cost basis with the objective of eventually phasing out this service activity in such a manner that it is continued as a part of the on-going educational program of local school corporations.
2. That the workshop held in the summer of 1968 have as its purpose and be thusly structured in such a manner as to prepare the 20 teachers for leadership roles within their local school corporation.
3. That in the fall of school year 1968-69 local in-service workshops be held in each school corporation under the coordination of the director of the History Division with the local workshop teacher taking the leading role in explaining and demonstrating the "teaching exhibit" concept.
4. That more emphasis be placed upon the instructional programs

in the fourth and eighth grades where the evidence indicates Indiana History is being taught in most schools.

5. That the History Division increase its informational activities by supplying more bibliographies and lists of available materials and that the History Division offer its aid and assistance to school corporations planning adoptions of new 4th or 8th grade social studies textbooks.

MEASUREMENT AND EVALUATION DIVISION

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Schools refrained from seeking needed information about student achievements and aptitudes because the appropriate instrumentation was unknown to them or beyond their local budget. Weak instrumentation was widespread. Many schools were using achievement tests which were published nearly a decade ago and academic aptitude tests that were two decades old. There was some evidence of over-tesing and lack of coordination in the overall testing program.

A time gap existed tetween the time that data was collected and reported back. Much valuable counselor and teacher time was spent hand-scoring and recording test results. An information gap existed between the information needed to correctly interpret test scores and the test data information available in the students cumulative folder.

No school corporation reported any attempts to increase the competence of teachers in measurement by in-service training activities. No school corporation surveyed and visited during 1966 reported any organized

effort to meet with parents to communicate the meaning of test results or their implications.

Almost universally, little actual use was made by school corporations with the test results. This included non-use by administrators, counselors, teachers, parents, and the students themselves.

A statement of specific objectives to be accomplished. The overall objective of the Measurement and Evaluation Division is to assist participating school systems to obtain and utilize information of maximum reliability and validity for use in wise decision-making by pupils, parents, teachers, counselors, and administrators. In order to accomplish this overall objective, and objectives of Title III projects in general, the following operational objectives have been created:

1) to provide quality instrumentation to assist in wise educational and vocational decision-making

2) to develop within each of these twenty separate school units one person who has a high level of competence in Measurement and Evaluation and who will provide leadership within that corporation with measurement and evaluation problems. (This person will be called the local Measurement and Evaluation Specialist or M & E Specialist.)

3) to provide assistance to each of the local corporation Measurement and Evaluation Specialists in conducting inservice programs and meetings for the corporation's professional staff, and/or parents and students, on such topics as test administration, uses of test results, test interpretation, and the school testing program

4) to develop a data bank at M & E Division office for use in developing local norms, conducting comparative studies and other types of research and other types of reports that the different school corporations may find useful

5) to close the time and inforamtion gaps that presently exist with the standarized testing programs of many of the participating school corporations

6) to disseminate information dealing with the problems and successes of setting up and operating this project within the eight county area and to other educational agencies.

Proposed activities for accomplishment of the numbered objectives are:

1. Provide test services
   a) The M & E Division will purchase, store, maintain and lend standardized tests to schools.
   b) The M & E Division will purchase, store, and resell consumable supplies at the lowest possible cost.
   c) The M & E Division will provide scoring services for the tests.

2. Develop a competent testing specialist for each district.
   a) The Division will organize and conduct summer workshop activities.
   b) The Division will hire the local Measurement Specialist for one extra month (two weeks workshop and two weeks in the local school district in planning activities related to local problems and programs in measurement).

3. Provide consultants
   a) The Division will provide consultant services by testing specialists to participating school systems at their request.

4. Develop local norms
   a) The Division will contract for and supervise scoring of all answer sheets, and the computer preparation of local, area, and national group comparisons
   b) The Division will handle the processing of data from non-test sources, such as that from follow-up studies, surveys of occupational and educational plans, community surveys, etc.

5. Close time gap
   a) The Division will contract for and supervise scoring of all answer sheets.

Activities for the current year. During the summer of 1966, pre-operational planning was conducted by two Indiana State University consultants. These two men conducted meetings with personnel of the participating schools for their consideration, possible utilization, and further planning of a division of the WVSEC. The division started operation in early 1967 without a director. However, by the end of the school year, many things had been done. These included the purchasing of standardized test booklets and their loan to local school corporations, the scoring of many IBM 1230 answer sheets with Indiana State University scoring services, and the start of a library of specimen test sets.

July 1, 1967, a director for the project started to work. During two weeks in July, all of the local corporation Measurement and Evaluation

Specialists attended a two week workshop that was conducted by the new division director at Indiana State University. Much emphasis was placed upon the fundamentals of standardized testing, administration, scoring, reporting of results, and interpretation.

The division advisory board, the two ISU consultants, and the division director cooperatively developed a supplementary testing program that coudd be used by all the participating school corporations within this eight-county area. It was stressed that this could be a supplementary service rather than a supplanting service.

During August all of the local Measurement and Evaluation Specialists (except one) that attended the 1967 summer workshop did two additional weeks work in their home corporation. This time was spent attacking local problems related to their testing program. One product of particular not that was produced by one of the Meausrement and Evaluation Specialists was a 16-page booklet outline for the corporation on its general testing procedures, score interpretation, reporting to parents, referrals procedures for special testing, an outline of the standardized testing program, and an outline of the objectives of each part of the standardized testing program. A great variety of activities were reported being done during this period.

During August the division director developed a catalog from information that he gathered from a variety of sources on each school and school corporation. This informatinn was used to make an educated guess as to how many test booklets, etc., should be ordered so they would be available for testing during this coming academic year. The needed materials were ordered. August 31,1967, a 45 minute presentation on test interpretation was made by the division director to the Clay county Teachers at their opening teachers' meeting.

During September a trip was made by the division director to Oakland County Schools, Livonia Public Schools, and the Bureau of Public Services at the University of Michigan to study their testing services and see how they solve some of the problems that seem to be inherent in this type of operation.

Shipping boxes that could be used to take the test booklets back and forth were purchased for future use. The first shipment of test booklets from the M & E Division office to local school personnel for the 1967-68 academic year was made in September.

A one-day workshop was held September 16 for the four M & E Specialists that did not attend the summer workshop. Three of the four people participated and also did one day's work in their home corporation working on their district's testing program.

During October the requests for test booklets and other testing materials increased. During this time the division director spoke to the Vigo County School counselors and deans about methods of selecting a standardized test. Also some calls were made on some M & E Specialists in the schools. A usable request blank was developed and distributed for general use during this month to assist M & E Specialists in ordering testing materials.

The demand for testing materials was heavy during November. The shipment of Lorge-Thorndike and Differential Aptitude Test booklets started in November. A Title III directors' meeting in Upland, Indiana, dealing with evaluation was attended during this month by the division director. A functional and practical method for keeping the inventory was developed and put into practice. Visits to schools were made during this time.

December was a black month. Three thousand five hundred Iowa answer

sheets had to be shipped to MRC for scoring. Many of these answer sheets were in extremely poor condition for scoring. Anything and everything had been used to mark the answer sheets. The extremely discouraging job of cleaning up these answer sheets was undertaken by the division director, his wife, and the division secretary. An advisory board meeting was held December 12 to discuss this major problem and to evaluate and project the division's activities. William Lewis from the South Central Title III project visited the M & E project. It was decided at this meeting that fast service on the return of test results were more important to local school people than were local norms printed on each child's gum labels.

The Iowa results were received during January. A workshop for all M & E Specialists was immediately organized and held. Practical problems relating to test administration were stressed. Answer sheets that were in such poor condition as to render them unscorable and answer sheets that had been used incorrectly were returned. This proved to be one of the most useful workshops. The M & E Specialists were faced with problems that result when little direction and guidance is exercised over the people that actually administer the tests.

Mr. Paul Anderson, M & E Specialist from Northeast School Corporation of Sullivan County, Mr. Wilburn Rowe, M & E Specialist from Worthington-Jefferson School Corporation, Dr. William Osmon, consultant to the M & E Division, and Gerald Noblitt, division director, conducted two programs related to the M & E division at the Indiana Personnel and Guidance Association Convention, February 2 and 3 at French Lick, Indiana. The following weekend the director attended the American Educational Research Association Convention and the National Council on Measurement in Education Convention in Chicago. This was a good opportunity to listen to

what others were doing in the testing area. During the latter part of the month a trip was made to Jeffersonville to attend a Title III directors' meeting. The results from the DAT and Lorge-Thorndike were being returned to schools within two weeks of their receipt at the Center. However, in a few cases the Center was still receiving answer sheets for scoring that were rather old.

March 6 the division director attended the Michigan School Testing Conference at the University of Michigan. A workshop was also held this month. The division director delivered a speech to the Brazil Kiwanis Club on the topic of the measurement of intelligence. A proposed budget for the coming year's work was planned and submitted to Superintendent Wells. The shipping of testing materials and the return of test results were well.

April 5 the division director reported about the M & E Division to Title III directors at Hammond, Indiana. However, there were problems this month. First the orders for IBM 1230 answer sheets for use with the Stanford Achievement Tests were not shipped by Harcourt, Brace, and World, as requested by the division. Five trips were made to Greene County to correct the error and organize the testing. On April 8, Mr. Wilburn Rowe, M & E specialist for Worthington-Jefferson, Mr. Fred Brooks, M & E Specialist for Greencastle Community Schools, Dr. Lawrence Beymer, consultant and planner of the M & E Division, and Gerald Noblitt, division director in Detroit, Michigan, made a presentation on the nature and services of the Measurement and Evaluation Division. Four people wrote to request more information about the M & E Division project. Mr. Cox from the South Central Title III project visited the M & E Division.

Mr. Lawrence Low, Mr. Daniel Agnew, and Mr. Gerald Dudley from

South Bend Community School Corporation spent a day visiting the M & E division project during May. An Indiana State Department of Public Instruction workshop held at Ball State University was attended by the division director by invitation of Mr. Hamrick who organized the workshop, and an evaluation of the workshop was submitted to Mr. Hamrick. Also during May a special report was prepared for Dr. McDaniel of Indiana State University to support application for a grant to improve the training of selected secondary teachers in reading. The IBM cards were organized from the data bank and this information used to create the local norms and information needed by Dr. McDaniel to strengthen her application.

Also during the month of May, a letter was received from the University Testing Office assuring the M & E Divisoon office of seven-day turn around on IBM 1230 asswer sheets submitted for scoring. The final one-day workshop for the school year was held on May 18, 1968, and stressed the school-wide testing program.

A one week workshop for all M & E Specialists is planned for the latter part of June. Three people from the South Central Title III Project at Bedford, Indiana, are planning to attend this workshop. July and August will be spent preparing the materials that will be needed by local M & E Specialists to help them do a better job of helping children through better testing practices.

Procedures of evaluation. The evaluation of the M & E division is based on the premise that evaluation is an ongoing process that provides information for making wise decisions. The basic design as presented in the original grant proposal was followed to provide feedback to the director of the Center and to the M & E division director. In addition, the advisory board met with the director and evaluator throughout the year

and provided a sounding board to indicate proper future direction for project activities.

Although the division has as its main focus achievement and aptitude testing, its function goes beyond the service of providing test booklets and test scoring. The measure of impact within the eight county area will be in regard to how the services are used by the several schools and the change in testing practices and utilization of the results.

Product evaluation. The effectiveness of the project is reflected by relating the outcomes to the objectives. How well did the activities of the project serve the stated objectives and in turn the needs of the eight county area? Information has been collected for each of the six stated objectives and is reported by the appropriate number.

1) Test services

USE OF SERVICES*

Name of Test	Time of Year	Students Tested
Iowa Tests of Basic Skills	Fall	3600
Iowa Tests of Basic Skills	Spring	1000
Lorge-Thorndike	School year	4000
Differential Aptitude Tests	Winter	1700
Tests of Academic Progress	Spring	1100
Stanford Achievement Tests	Spring	900
Metropolitan Achievement Tests	Spring	100
Item Analysis for ITBS	Fall & Spring	5500

*Based on scoring services provided.

As the above table indicates, the demand for services was heavy throughout the school year. Specifically, twenty-one of twenty-three schools requested services during the school year. Vigo County Schools (about one-half of the student population of the eight county area) requested only the item analysis for the ITBS. Since this is a large

school district the testing program is more fully developed and this district owns its own booklets and provides for scoring of the tests. The services of the M & E division have served mainly the smaller districts that have found it difficult to conduct a high level testing program for their pupils.

A typical statement for participating schools was made by the M & E Specialist for the smallest school district (about 465 students, 1-12) served by the Center.

> ". . . one of the reasons we have it (WVSEC) is because we are in an area that has a large number of small schools. It gives us a chance to be a big school . . . This doesn't give us much of an opportunity for a good testing program in terms of norms, etc. Before the Center, we didn't have much of a testing program. When the Center came into effect, we established what we thought was a sound testing program along the lines of the Supplementary Center's service."

In addition to providing supplementary services, the Division also provides recommended testing times for each of the tests. At the present time a number of helps in the way of new materials are being developed and a new reporting of test results with an easily interpreted profile is in the latter stages of development.

2) M and E Specialist

A major thrust throughout this year has been toward developing a testing specialist for each school district. The two week summer workshop (1967) was designed to develop within the individual specialists a knowledge of standardized testing and use of scores and norms. With this knowledge the specialists were able to work effectively in developing more contemporary testing programs within their individual districts. This is evidenced by a comparison of testing programs now being used with previous programs. Generally, the testing programs are more appropriate and provide more useful information than before. There appears to be a high

relationship between the level of competence of the specialist, and the testing program and uses made of the scores.

The one-day workshops held throughout the year also contributed to developing the competence as well as providing help in making decisions at the local level. Consultants were utilized to focus on problem areas as they developed through the school year.

As the year progressed the importance of the local specialist became more apparent to those working closely with the project. Continued emphasis will be given to this important area.

3) Assistance to local educational agency

For the present year this assistance has been primarily through the specialists; however, the director and consultants have been available when requested by the LEA. Since the director has limited time and budget for direct aid at the local level, the summer workshop (1968) and subsequent workshops will be geared to developing extensive in-service programs at the local level by the M & E specialist with consultant help at the in-service sessions.

This is one area where more should be done but operationally the total program can become a reality only by development stages. It appears that the program is ready to focus on this aspect as the specialist progresses.

4) Data bank

Throughout the year information from test answer sheets has been collected and organized through the scoring service. Norms are available for classes, school districts, and the eight county area for comparison with national norms and as additional information for comparison of year to year changes. The data bank now includes in addition to this year's test scores those scores from last year.

School personnel have used these results to study areas of strength and weakness as a basis for curriculum development, organizing instructional groups, guidance in course selection in the secondary school, and vocational guidance. One ISU professor used the data bank to provide information of the reading skills and comprehension level of area students for a grant proposal for federal funds to raise the reading level of secondary students.

5) Closing the time gap

The time efficiency of reportnng results to schools is greatly increased over last year. During the spring of 1967 a backlog of test answer sheets built up and test results were not reported to the schools until the summer. This resulted from unforeseen difficulties in scoring, problems with unscorable answer sheets due to poor marking, and developing within the center an efficient turn-around system.

Emphasis on answer sheet preparation and reorganization of scoring procedures has resulted in a turn-around of one to three weeks depending on the test being scored and the test scoring service being used. This is considered to be a minimum and reflects much work by the center staff.

6) Information dissemination

Information about the project has been made available to the participaing schools through the one-day workshops, advisory board meetings, and the WVSEC publication, Spotlight.

Two presentations were made at the oonvention of the Indiana Personnel and Guidance Association held in February at French Lick, Indiana. A reporting of projects operations, problems encountered, and implications for others was made by project personnel to provide information to assist others interested in developing like projects in other areas. Similar

presentations were made at the convention of the American Personnel and Guidance Association in April, 1968. Also in April the director reported on division activities to Title III directors at Hammond, Indiana.

Numerous inquiries for further information and visits of interested persons to the Center resulted from these meetings.

Conclusions and Recommendations. By relating the outcomes to project objectives the M & E division finds itself in a very favorable position. The first full year of operation has resulted in an efficient internal operation with enthusiastic support from participating schools. A survey of school superintendents in the eight counties reflects the significance of the M & E division. Existing projects were rated by school superintendents with the following results for the M & E division:

Low -- 1, Average -- 4, High -- 13.

With this high level of support for the division it is hoped that the level of local committment, both financially and more assigned time for a testing specialist, will be increased.

The focus for next year should be at the local level. It is now most important to build understanding of the total testing program for all teachers, and to develop within each teacher competence in the interpretation and use of data supplied by the testing. With this in mind it is recommended that the summer workshop and one day workshops throughout the school year be devoted to development of in-service education for the school district. The M & E Specialist should develop a series of programs tailored to the unique situation for his school district, using the assistance and guidance of the consultants provided by the M & E division. The major product of the workshop should be an operationally sound plan for a series of in-service meetings for the school year 1968-69 and should include all teachers for the district.

Continued development of the data bank and dissemination of information of ways to use this information should be another major thrust for the coming year. This bank should become more valuable as more information is included and the school people of the district become aware of its existence, and as they become more conscious of ways to utilize the information for making decisions at the local level.

Other aspects of the project should continue with no major changes but should remain flexible enough to meet new situations requiring new directions. The flexibility of the M & E division has contributed heavily to the success of the operation to this point and must remain to allow for yet unseen developments within the eight county area.

The position of Research Associate should be filled for the next year. School visitations and help for in-service programs will be extensive as the project focuses on the local level. The asoociate should be qualified to serve in a professional capacity as well as to perform other duties required for this position.

VII

TEAM TEACHING

Description of the project. An interest in team teaching for schools in the Wabash Valley grew out of a request of the superintendents of school corporations served by the Wabash Valley Supplementary Educational Center at a meeting in April, 1967. Dr. Pabst was selected as the director of the project because of his background and interest in team teaching.

During the spring of 1967, a survey questionnaire was sent to the principals of each of the elementary, junior high schools, and senior high schools in the area to find out if they were interested and willing to adapt team teaching as an innovative practice in their schools. Twenty-three high schools, twenty-seven elementary schools, and six junior high schools returned the initial questionnaire.

The Team Teaching Project became operational in September, 1967, when the Director of the project sent to all schools in the eight-county area served by the Wabash Valley Supplementary Educational Center a follow-up questionnaire to determine sustained interest of the administration and faculty in team teaching. After all questionnaires had been returned and processed, personal visits by the director were made to each school to interview administrators and staff and to evaluate facilities necessary to team teaching innovation.

After all schools had been visited, seven were selected according to specific criteria, such as willingness of the teaching staff to adopt team teaching, adequacy of necessary instructional space, provision of numbers of pupils required for team teaching, possibilities for flexible scheduling, and availability of teachers to attend in-service education workshops; and the administrators indicated the staff, grade level, and subject areas to

be served by team teaching. Twenty-seven teachers representing three high schools, two junior high schools, and two elementary schools began a series of eight in-service workshops in January, 1968, continuing to meet one Stturday each month for a whole day until the eight sessions were completed.

The in-service workshops constitute the first phase of the project in a three-phase program.

Phase two is scheduled to begin in September, 1968, when the team teaching programs begin in the seven schools. These participating schools will serve as demonstration centers to be visited, beginning in November, 1968, by teachers and administrators from other schools interested in developing teaching teams (innovative practices) of their own.

Phase three is designed as a phasing out stage in which the participating schools are expected to carry on and further develop and improve existing team teaching programs. In addition, assistance by the project director and by participating teachers who will serve as consultants will be available for developing and establishing team teaching programs in other schools in the 1969-1970 school year.

Specific objectives. The primary objective of team teaching is to improve the quality of instruction and learning by utilizing faculty and staff as efficiently as possible.

It was the purpose of the in-service education workshop series to work together on operational plans for adopting team teaching approaches in their respective schools. More specifically, the workshops served the following purposes:

1. Assisted participating teachers to become familiar with the concepts, elements, and the essentials of team teaching.

2. Developed in participating teachers new concepts of teacher role and function.
3. Assisted teachers and administrators to adopt the kind of team teaching program best suited to their own school, situation, facilities, students, and needs.
4. Helped teachers to identify and acquire resources - human, natural, and community.
5. Familiarized teachers, through instruction and demonstration, with better and more efficient use of audio-visual and other instructional materials.
6. Helped teachers to identify through interaction and team planning of instructional units their individual areas of special interests, knowledges, skills, and abilities.

Activities provided. The Director of the Team Teaching Project had visited schools throughout the country during 1966 for the purpose of studying first-hand curricular and instructional innovations. One of the best and most advanced programs in team teaching is that in our own state of Indiana at Munster. Since team teaching has been in effect there since 1962, in the elementary, junior high school and in the senior high school, it was decided to use as consultants for the workshop the administrators and faculty from that system.

The first session of the series of in-service workshops was most fortunate to have as the consultant Mr. Frank Hammond, Superintendent of the Munster Schools, who worked very closely with the workshop participants in giving a demonstrated, pictorial, oral presentation of how the participating teachers might gain ideas and practices adaptable to their unique situations in their own schools. Both parts of the NASSP -Ford Foundation

sponsored movie depicting experimental programs in team teaching were viewed by the participants, followed by a discussion and question-and-answer session directed to specific problems faced by the participating schools.

The following sessions one each in February, March, and April, were devoted to specific interests of the individual teams in the in-service program. Each team was served in its subject area or grade level by an experienced team teacher from Munster who worked with team members by giving assistance with pupil grouping, teacher interaction and cooperation, unit planning, utilization of instructional media and resources, and organizational and operational program in team teaching.

The third meeting in March was devoted to the development of instructional and learning resource centers with special emphasis on the utilization, preparation, and sources of audio-visual and instructional materials. Both directors of the Munster instructional resource centers demonstrated the various media which improve teacher effectiveness, and representatives of the 3-M Company demonstrated hardware and materials needed for more efficient presentation of teaching-learning instruction. The participants were given ample opportunity to experiment with all of the various media exhibited, to inspect catalogs of materials available in their teaching areas, and to prepare some materials for actual use in the classroom.

In the April session, also attended by the principals of the participating schools, systems of flexible scheduling were presented by two consultants from Munster. This session showed the various ways in which students might be arranged in large-groups, seminar-groups, and independent study groups in a flexible schedule. In addition, the team-teaching project evaluator discussed with the participants several ideas pertinent

to the evaluation of the outcomes of team teaching as they result from their own programs.

The remaining four in-service sessions will be devoted to the infividual teams working idependently in developing the specific program to be adapted in their school in September, 1968. One session on June 1 will be held at Munster when actual demonstrations of team teaching will be given as well as panel discussions by pupils and teachers in the Munster schools who have been exposed to and participated in team teaching for the past six years.

Procedures and results of evaluation. At the beginning of the very first workshop session a survey questionnaire relative to concepts, practices, beliefs, and characteristics of team teaching was given to all participants. The same survey is being conducted following the end of the workshop sessions to determine what changes in perception have occurred among the participating teachers as a result of the in-service education program.

Each participant must also write an evaluative summary of the effects of the workshop series as well as a description of the type of team teaching program to be adopted for his particular school. Problems encountered, plans to overcome them, specific needs, organization, and implementation plans are to be included in these written reports.

Table I is presented to show some characteristics of the team teaching participants. Included are such characteristics as grade level taught, age, teaching experience (total and in present school), and team teaching experience.

Table I shows that of the 26 participants, 13 teach at the senior high school level, nine at the junior high school level, and four at the elementary

school level. The mean age of the group was 36, with the 14 men averaging 34 and the 12 women, 39.

The 14 men have taught an average of nine years, while the 12 women have taught 11.5 years. The average number of years of teaching experience for the total group was ten years. The male teachers had taught an average of six years in their present school compared with six and one-half years for the female teachers. The men had an average of two and one-half years of experience in team teaching. The women had less than one year, on the average, in team teaching.

The analysis of responses of the participants in the in-service group to the first Team Teaching Opinionnaire revealed some interesting information. Specifically, most of the teachers thought that they could accept criticism by fellow team teaching members. Half of the respondents believed they would be as effective in team teaching as they could be in individual classroom situations. Only nine people believed that they could be more effective as individual classroom teachers. Two-thirds of these were female teachers. In spite of this almost all of the respondents thought that they could reach individual students just as well through team teaching as in the traditional classroom.

All participants except one thought that they would be comfortable in large group instruction and that small group seminars would be neither tedious nor boring.

Concerning the effect of team teaching upon the student, participants felt that there would be no detrimental effects relative to the growth and development of pupils; rather, they felt that the team teaching approach would enhance the pupils' effectiveness in learning.

Conclusions and recommendations. Feedback through discussion and follow-up written summaries after each in-service session have served to point up some of the strengths, weaknesses, and problems felt by the workshop participants.

Strengths. All of the participants have indicated that the workshop sessions have been interesting, informative, and most helpful.

The consultants have been rated most highly and have been most helpful with suggestions, problem-solving, and information.

Participating teachers report that they have the full, enthusiastic support of their administration for the team teaching program.

The greatest strength of the program as experienced by the director is the tremendous interest, hard work, and cooperation among the public school teachers themselves. Constant effort was made that this program should reflect the needs of the participating teachers from the public schools rather than have the program imposed upon the schools by an outside agency. According to the responses of the participants, the program was their own, flexibly aranged to fit the special talents of the teachers and unique facilities in each school.

Weaknesses. Teachers participating in the program are full-time faculty in the participating schools; consequently, they indicated that they experienced some difficulty in finding the necessary time to work together on plans for team teaching for next year.

Despite enlisting the aid of consultants experienced in each subject area or at each grade level of teaching of the participants, occasionally presentations to the entire group fitted either a particular subject or a particular level more so than others. Most of the present team teaching programs in operation in Indiana are at the high school level with a few at the junior high school level.

A lack of knowledge of the future status of the program proved a handicap because positive assurance could not be given as to whether the program would be continued for the following stages. Nevertheless, participants made tentative plans on the assumption that the program would be continued.

Recommendations. (1) In-service education sessions should be held for a more homogeneous group rather than mixing elementary, secondary, and junior high school teachers in the same group.

(2) Commitment to the program should be made for the period of the program rather than for the first year only. Participants indicated some frustration because they did not know whether the program or the budget for necessary equipment and supplies would be approved for continuation of the project in succeeding years.

MEAN YEARS OF VARIABLES OF SOME CHARACTERISTICS OF PARTICIPANTS IN THE TEAM TEACHING PROJECT

Grade Level	Age			Teaching Experience			Teaching Experience In Present School System			Team Teaching Experience		
	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both
Senior High School	36.22 N=9	38.75 N=4	37.00 N=13	10.44 N=9	14.50 N=4	11.69 N=13	6.28 N=9	12.25 N=4	8.12 N=13	2.75 N=8	0.50 N=1	2.50 N=9
Junior High School	31.75 N=4	36.20 N=5	34.22 N=9	6.75 N=4	8.80 N=5	7.89 N=9	6.00 N=4	1.80 N=5	3.67 N=9	1.00 N=1	1.00 N=1	1.00 N=2
Elementary School	24.00 N=1	44.00 N=3	39.00 N=4	3.00 N=1	12.33 N=3	10.00 N=4	3.00 N=1	6.67 N=3	8.25 N=4	2.0 N=1	0 N=0	2.0 N=1
Overall	34.071 N=14	39.000 N=12	36.346 N=26	8.857 N=14	11.583 N=12	10.115 N=26	5.964 N=14	6.500 N=12	6.212 N=26	2.5 N=10	.75 N=2	2.203 N=12

VIII

PROGRAMMED INSTRUCTION DIVISION

Description. The purpose of this project is to provide teachers, staff personnel and administrators in the elementary and secondary schools in the eight-county area with opportunities to become familiar with significant programmed instructional materials and their use by making available selected programs as adjuncts to and/or supplements to the teaching/learning situation. Five demonstration centers have been established and are being staffed and organized with personnel familiar with the existing programs and routine initiated in last year's project. Beyond a continuation of last year's visitation, demonstration, observation and workshop/conference participation by teachers, staff and administrators, research studies are being carried out with Sullivan Associate Materials in Reading at Carlisle, research at Sullivan with the Craig Reader and AutoTutor, research with the Craig Reader in social studies at Garfield, research with the algebra program at Woodrow Wilson and computer-assisted instruction (CAI) at the ISU Laboratory School.

Justification. The justification for the Programmed Instruction Division project began with the steering committee for the WVSEC. The committee is made up of three superintendents from a group of 20 school corporation directors. The suggestion for programmed instruction was then given to the WVSEC Program Development Division. After due consideration Dr. James Rentschler and Dr. Russell Hamm, from the School of Education, ISU were appointed to conduct a study of programmed instruction in the eight-county area.

A great amount of controversy was discovered about PI. Some teachers went so far as to suggest that their jobs might be in jeopardy. For if programmed instruction were established in the schools by "those teaching

machines," there would be a need for fewer teachers. Many schools were interested in PI but many schools also felt that they did not have a budget to experiment with untried materials. Other schools felt that any amount of programmed instruction might handicap a child if PI proved to be a failure. Still other administrators adopted an attitude, "Let's wait and see what happens to PI."

Fifty-nine principals out of sixty questioned said that they and their teachers were interested in programmed instruction and would like to see PI demonstration centers. Programmed instruction was established as a division of the Wabash Valley Supplementary Educational Center and Nathan Z. Bridwell was appointed director in the fall of 1967 after the proposal written by Dr. Rentschler and Dr. Hamm had been approved in Washington.

On the original PI survey the principals were asked if their school district were to be reimbursed for a substitute teacher, if their teacher would take advantage of an opportunity to visit PI demonstration centers. Fifty-nine answered "yes" and one answered "no." Forty-three principals said that their teachers had expressed an interest in PI for their school. Twenty-five answered that no one in their school had had any experience with PI. Only 32 of the 60 principals had observed programmed instruction in other schools.

Of the 27 principals who had used programmed instruction, the survey found 25 currently using some type.

Dr. Rentschler and Dr. Hamm found a definite need for the PI demonstration centers. The principals further suggested that the following programs would be helpful:

28 Mathematics	8 Social Studies	27 English

1 Business	21 Reading	1 Special Education
15 Science	1 Spelling	

Principals also indicated that they felt that programmed instruction could best be used as a

17 Remedial Tool	12 Enrichment	8 Developmental

The administrators also specified the following preferences as to grade level.

4 -- 4, 5, 6	36 -- 1, 2, 3,	11 -- 10, 11, 12

Dr. Rentschler and Dr. Hamm conducted an extensive search for programmed instruction materials in many different formats. The programs finally selected were chosen because of the quality, diversification and needs as pointed up in the survey.

After the division was established there was a need to order, receive, and mark equipment and materials. We were then ready to choose our advisors. Organization and selection of center personnel followed. Next in the sequence came training sessions and workshops. The centers were ready for visitation the second week of the second semester in February, 1968.

Justification for continuing our present centers rather than expanding to other locations has reached these conclusions:

1. The budget is limited.

   a. We were short in materials at each center this year (67-68). We plan to purchase these additional needed materials this year. If we continue our programs at the present sites these materials plus replacements leave little money left for new centers.

   b. If we establish new centers, it is quite likely that all centers, new and old, will be short in equipment and materials. No center would be able to do an adequate job.

2. New centers would mean recruiting, organizing, and retraining. This would place us on about the same schedule which we have had this year. There would be little time for visitation, and little time for research. Our emphases the first year in the demonstration centers were orientation, training, utilization, and visitation.

> Our emphases the second year will be visitation, research, and assistance in the establishment of programmed instruction in interested school corporations throughout the Wabash Valley Supplementary Educational Center sphere of influence.

Since the program had a good beginning the director, advisors, consultants and evaluator suggested that the division of programmed instruction be continued through the 1968-69 school year to complete visitations, research and experimentation with minor additions as suggested concerning a CAI program.

Objectives. The objectives of the project continue in the second year as follows:

1. To foster attitudes which will be conducive to innovation and change especially in the area of programmed learning.
2. To develop, by use of the laboratory demonstration approach, skills in the use of methods and materials of programmed instruction for remedial, developmental, or enrichment purposes.
3. To develop a greater understanding of the philosophy, psychology and methodology of programmed instruction.
4. To provide information regarding the wide range and variety of programmed materials available.
5. To provide a laboratory for testing and evaluating the effectiveness of programmed instruction in an educational environment.
6. To develop a climate for teacher change and growth by involving teachers in the very process of instructional-curricular dynamics.

New programs. In certain areas of technology, the rapidity of technical and scientific advances has become so great that it is literally impossible to create curricula for student instruction which are not obsolete by the time that they are taught in the schools. Severe shortages of curriculum experts and teaching personnel have bean a traditional problem throughout the country. Therefore we planned to include a new, imaginative system for presenting programmed instruction and information in our eight-county area: programmed instruction by computer. Facilities currently being developed at Indiana State University are being utilized. Professors experienced with computer

programming have volunteered help. The purpose of this additional program, recommended by our advisory board, is to prepare PI course material for students and to test this material through presentation to students currently enrolled in the Laboratory School. Materials are presented to students by a typewriter terminal with an audiovisual display unit controlled by a computer.

Responses by the student are evaluated against anticipated answers stored in the memory of the computer. Since the student cannot look up these answers, he cannot proceed in the program until he demonstrates that he understands the programmed materials. The student is required to construct his own responses. When answers are correct they are accepted, providing encouragement to the student. New instruction is provided after encouragement is given.

When the student gives an incorrect answer, the computer presents a diagnostic comment and branches the student to remedial instruction.

Computer-assisted instruction, a more highly sophisticated programmed instruction than most teaching machines, provides greater flexibility in the presentation of material, utilizing audio-visual techniques, evaluating responses, keeping detailed records of progress, tailoring instruction for each individual. The computer can be programmed to present material on the basis of the student's response scores on achievement time, error rate, amount of time spent on instruction or combinations of these variables.

The Didactor is an individualized instructional device which presents programmed learning materials to the student in much the same manner as a computer. The Didactor offers both memory, and timing features. To its basic visual technique may be added peripheral devices allowing a multi

media approach to programmed instruction. The additional equipment which could be controlled includes:

1. Linear or random access sound
2. 8mm super or standard single concept movies
3. 16mm reel or 8mm reel projectors
4. Sequential 35mm slides
5. Filmstrips
6. Full access typewriter keyboard and printout for constructed responses.

A Didactor is a self-contained portable model, weighing about 14 pounds. The purchase price is $533.50. It is a psuedo-computer doing the same work for a fraction of the cost of a regular computer. We will compare results of a computer and a Didactor.

Operational Steps. The director called on the principals in early fall to plan reorganization of each center. The director submitted a list of proposed PI programs for each principal's school which were suggested by advisors, consultants and evaluator. Any changes in these plans were worked out at this initial meeting by the principal and the director.

The advisory board, consultants and evaluator met to reorganize for the year's work after the early fall visit. Each center's research plans was reviewed as presented by the center's coordinator.

Visitation for each center began in the second week in November.

A progress report with experienced leader teachers and consultants will be held for all participating teachers. A spring conference will be held at ISU to review the work of the Programmed Instruction Division. From this conference will come procedures to be used for future planning.

News disseminated will continue through the SPOTLIGHT, newsletters, radio, TV, conferences, slides, tapes, workshops, letters, visits and newspapers.

Evaluation will be accomplished by using a structured interview developed by the evaluator. Study results will also be made available for general circulation. Information will be disseminated through the SPOTLIGHT.

Procedures for evaluation. The purpose of an evaluation is to point out ways of improving the program. Evaluation specialists, such as Stufflebeam, recommend that projects be evaluated on the basis of what they accomplish, rather than attempting to set up controlled experiments. The projects must be allowed to accomplish their desired aims, rather than be weakened through controlled experimentation.

Therefore, although the evaluation of the Programmed Instruction Division has been continuous, it was not considered appropriate or advisable to use research methodology for the evaluation. There were no attempts made to "reject the null hypothesis." Rather, an attempt was made to determine quantitatively and qualitatively the results of the Supplementary Educational Center's activities in programmed instruction.

This analysis has consisted of examining changes in practices, counting activities, obtaining reactions and suggestions from those involved in the program and analyzing scores obtained during instructional exercises and achievement tests.

An attempt was made to conduct a comprehensive evaluation of each aspect of the Programmed Instruction Division. The division is a broad one with five schools utilizing several instructional programs and several teaching machines in a variety of subject matter areas. Therefore, a

comprehensive evaluation design is necessarily complex. The evaluation design may be represented as

Division Activities	x Centers	x Units Served	x Criteria
Administration	Sullivan	Administrators	Learning
Program	Carlisle	Parents	Attitudes
Consultants	Wilson	Students	Quantity
Conferences	Garfield	Staff	Quality
	Davis Park	Visitors	Involvement.

Each of these elements must be investigated in terms of the objectives of the programmed instruction division. These objectives may be summarized as

1. To develop attitudes for innovation
2. To develop skills in the use of programmed instruction
3. To develop an understanding of programmed instruction theory
4. To disseminate program information
5. To maintain a functioning laboratory
6. To involve teachers in curricular change

The following procedures were implemented in order to obtain a continuous evaluation, rather than an evaluation of the program at a single point in time.

During the early part of the school year, the evaluator accompanied the division director on a visit to each of the five centers. The purposes of the initial visits were to become acquainted with the personnel involved in the project, to observe the facilities at each of the centers, and to observe the centers in operation. During the school year, additional visits were made to the laboratories by the evaluator and suggestions were made based one these observations.

An attitude survey was designed and validated and questions for a structured interview were constructed. The attitude surveys were distributed to a random sample of the students involved in the program and the interview was conducted with a sample of teachers participating in the program.

Parents of students participating in the program were interviewed during school open houses and special parent-teacher meetings devoted to programmed instruction. Quantitative data was obtained from student materials, pretests, posttests, and relevant tests administered by the school.

During the final part of the school year, the structured interviews were conducted on samples of students, administrators, parents, and teachers involved in activities at the centers.

In addition, a close liaison was maintained between the evaluator, the division director, and the personnel at the various centers.

Results of the evaluation. The role of an evaluator is to analyze and make suggestions for the improvement of the program being evaluated. In a program as broad as that of the Programmed Instruction Division, there are many areas in which suggestions for improvement are appropriate. However, it should be pointed out initially that it is the opinion of the evaluator that the Programmed Instruction Division of the Wabash Valley Supplementary Educational Center represents an outstanding example of the proper use of programmed instruction in American education. With certain improvements the programmed instruction centers could serve as a model for programmed instruction projects in elementary and secondary schools.

The program of the division is well conceived and rather remarkable in its operation since so many schools and areas of instruction are involved. The support and hard work of its capable director, Mr. Nathan Bridwell have combined with the enthusiasm of the school personnel at the centers to make the complex program workable.

There are several areas in the operation of the program that are in need of improvement. Perhaps the most serious weakness of the program is the lack of a well planned series of tests to measure achievement of students

studying programmed materials. Although several programs have accompanying tests, and although a variety of standardized tests in the various subject matter areas are available, it is the exception rather than the rule when a teacher using programmed instruction has utilized a pretest-posttest arrangement.

Another area in need of improvement is the obtaining of materials to replace used materials and the maintenance of teaching machines. Several principals reported that they had experienced difficulties in receiving materials to replace used programmed texts. Also, there has been some difficulty in the repairing of malfunctioning teaching machines. Better planning and communication will eliminate these difficulties.

The materials that have been selected are appropriate to the needs of the participating schools. Most administrators indicated that their most serious instructional problems were in the areas of reading, English, and mathematics. Reading was considered to be the greatest problem and this area has received the primary focus of the division's activities. English and mathematics programs are also used at the centers. Several teachers stated that they need other mathematics programs in addition to the ones being used at the centers and more enrichment materials in the sciences.

The teachers and administrators generally stated that the program had been very helpful to the school's program. Many also said that they felt that using programmed materials helped reduce discipline problems since it helped problem students understand concepts, created greater interest, and initiated a game-like atmosphere into the learning situation. Many teachers indicated that they felt the programmed materials had been particularly valuable for remedial and enrichment purposes, and that the programmed learning division had promoted individual instruction. They felt that students benefited from the teacher-student program interaction.

One serious difficulty in the administration of the division's activities has been the uncertainty involved in the future of the program. This has been due to (1) an uncertainty on the part of the center administration and the teachers involved in the program as to whether funding would be continued in subsequent years, and (2) the arrangement for determining allocation of funds within the center.

Several teachers indicated during interviews that they did not know whether they would continue programmed instruction because they had heard that the center and/or the programmed instruction division would not be funded during the subsequent school year. Because of the uncertainty as to the availability of support, the teachers were reluctant to plan to use materials that might not be available.

Consultants. Those interviewed felt that the consultants had given excellent service during the planning phases of the project. However, several expressed a need to have the consultants visit the centers more frequently now that the project is underway.

Workshops and conferences. All of the persons interviewed felt that the two conferences this year were interesting and worthwhile. In spite of the bad weather conditions, both conferences were well attended. Many teachers stated that they would prefer some type of workshop activity for future conferences, and some felt that it would be wise for teachers using the same programs to meet together to discuss problems and ways to better utilize the materials. Several teachers indicated that they would be interested in taking a graduate course in programmed instruction if one were offered by Indiana State University.

Programmed Instruction Demonstration Centers

Carlisle Elementary and Junior High School. The programmed learning

activities at Carlisle have received enthusiastic endorsements from the school principals, the teachers, and the reading specialist. The principal focus of the programmed learning activities has been to assist in the school's all-out attack on reading problems. Programmed learning has contributed to improvement of the reading ability of students at the school with most classes reading above their grade level. Even kindergarten children have used programmed reading materials and many have learned to read.

Seventy-eight percent of the school's students have participated in programmed learning experiences. A special room has been provided for the teaching machines. It is carefully supervised by the programmed instruction technician. Careful records are maintained by the technician and detailed records are maintained by the school principal. This program has been reported in several articles in local newspapers, open houses have been held at the center, and two special meetings devoted to programmed instruction have been held by the parent-teacher organization. The Carlisle center has been visited by teachers from several school districts and visitors are cordially received.

Sullivan Junior High and High School. In terms of diversity of activities, the Sullivan Center is noteworthy, since programmed instruction is being used there in most subject matter areas. There is a well-equipped, carpeted, supervised room for the teaching machines and these machines are constantly in use by students. A large percentage of the teachers in the school use programmed materials and most students at Sullivan have received programmed instruction. Open houses have been held at the center and parents are aware of the purpose of programmed instruction. One serious difficulty in the Sullivan Center is that few records are maintained to measure

student progress and little testing is done to determine how well students learn by programmed materials.

Visiting arrangements are uncomplicated at Sullivan and the visitor's register indicates that one hundred persons visited the center between November and April 1968.

Woodrow Wilson Junior High School. Because of a severe space problem, Woodrow Wilson has not been able to devote a room to programmed learning activities. The programmed reading materials are used in the school cafeteria by a team of reading specialists in an attempt to reduce the number of students in the school (approximately one-third of the entering seventh grade) who read below grade level. The principal of the school stated that most of the parents are largely unaware of the programmed learning activities their children participate in since these activities are largely supplemental to regular classroom activities.

In addition to the reading program, a few teachers use programmed instruction in their classrooms. The teaching machines are stored in a classroom and consequently are used by only one teacher. As a result, the teaching machines are in use only part of the school day. The school administration at Woodrow Wilson feels that it is inappropriate to use the technician to supervise students studying programmed materials. However, several teachers at Woodrow Wilson expressed an opinion that they felt it would be acceptable to them to have the technician supervise groups of students studying programmed materials.

Garfield High School. The Garfield Center has been able to utilize programmed instruction in several areas. The Garfield center is particularly enthusiastic about the Autotutor English programs and the Craig Readers. A room has been made available for students to study programmed

materials and it is staffed by the technician and student help. The administration and the teachers are enthusiastic about the program and its future activities. Some have expressed the need for a portable laboratory arrangement, so that they can take teaching machines into classrooms.

Davis Park Elementary School. Davis Park also has a space problem. The Davis Park School has not had many visitors, and visitors may be reluctant to observe programmed instruction activities in the classroom. There is no special room for programmed instruction activities. The primary use of programmed materials at Davis Park is in reading and the reading program at Davis Park is showing good results. Several teachers use programmed materials in the classroom. All teaching machines are located in one classroom which makes it difficult for teachers other than the teacher of that classroom to use the machines. The technician at Davis Park is utilized as a teacher-aide and participates in many phases of the school activities. Forty-five percent of the students in the school have participated in classes utilizing the center's materials.

Programs

Sullivan Associates Reading Materials. The Sullivan materials are essentially phonics. Teachers using the programs felt these materials were good for below-average students, but too elementary for above-average students. The materials have been used in kindergarten classrooms at Carlisle with apparent success and many teachers feel that using the materials also helps students who have spelling problems. Some teachers indicated that the materials should contain more work on vowels. The materials are being used by junior high school students, but the material is geared to the interest of elementary students.

Table 1 shows the results of the reading program at Carlisle Elementary School.

Table 1

Reading Ability and Grade Level of Students
Using Sullivan Reading Materials as a
Part of their Reading Programs

Grade	1	2	3	4
Grade Level	1.75	2.75	3.75	4.75
Mean Reading Grade Level	2.5	3.55	4.85	5.51

The first grade class was reading at an average grade level of 2.5. The second grade class read at an average grade level of 3.55, the third grade class at an average level of 4.85, and the fourth grade class at an average level of 5.51.

Welch Autotutor. The English teachers indicated that they felt the Autotutor programs were excellent, but the mathematics teachers at Garfield felt that the mathematics program was 90% verbal material and thus not adequate to proved the quantitative material their students needed. One teacher complained that the slant of the machine was too high for people with glasses to read the messages on the Autotutor screen. The Autotutors are rather fragile, and maintenance has been a problem. A better testing program is needed to accompany the instruction material.

Harcourt Brace and World English 2600 and English 3200. These materials seem to work best as enrichment exercises for students who are average in ability. Several teachers reported that the materials did not produce satisfactory results with low level students. These programs are unusual in that they were not recommended for uses as remedial or enrichment exercises.

In an attitude survey conducted by a teacher at Garfield, only one student in two classes totaling 46 students felt that the 2600 materials had not helped them. However, several students at Sullivan expressed dissatisfaction with the English 3200 materials.

Data Processing. Only one teacher used these materials, but he felt that these materials, designed for industry, were very good for his instructional needs. He indicated that they would be better utilized when combined with other instruction than when used alone.

Craig Reader. There was general satisfaction with the reading materials and the program provided with the Craig Readers. Many students made significant gains in both reading comprehension and reading speed. Most students indicated that they were quite favorably impressed by their progress. Students using Craig readers averaged a reading speed gain of 180 words per minute when paced by the reader and an average gain of 140 words per minute when they were not paced.

SRA Power Builder Reading Materials. These materials were felt to be best for increasing reading speed and comprehension, rather than as a remedial reading technique. In many cases, teachers combined these materials with the Sullivan materials to create a more effective reading program. At Davis Park, two teachers reported mean gains in reading comprehension of 1.3 years during a period of 9 months instruction.

Temac Calculus. The teacher using the Temac Calculus program felt that the materials provided a valuable supplement but also expressed an opinion that the program left little work for the student to do and that nothing was left for student investigation.

Units Served

Administration. All of the principals interviewed spoke well of the center's activities, but emphasized that it would not be possible to continue the program without the aid of the paraprofessional technicians. They further indicated that it would be unlikely that their school districts would be able to furnish funds to pay the salaries of the technicians.

Parents. The parents interviewed at conferences or parent-teacher meetings either approved of the program or knew little of it. In the Terre Haute schools, (Garfield, Woodrow Wilson, and Davis Park) it is possible that more needs to be done to inform the public of the activities.

Students. The results of a questionnaire administered to a random sample of students who received programmed instruction indicated students were generally pleased with their programmed instruction experience. In addition to the bipolar Likert-scale questions, a space was also provided for free comments. Students also indicated generally favorable reactions to programmed instruction in the free comment section.

Staff. Throughout the evaluation interviews, it was evident that perhaps the greatest difficulty in the center operation was the determination of the roles of the paraprofessional technicians in the center activities. While most teachers and administrators indicated that they "couldn't get along without their aides," there were several instances of serious role conflicts between technicians and teachers or school secretaries. Some teachers felt the technicians were doing their work (teaching). In some instances, technicians were asked to do school clerical work not related to center activities.

There was agreement among all teachers and students interviewed that the technicians could supervise students, but some principals did not feel that it was appropriate to have technicians supervise instruction.

A thorough education of teachers, administrators, and technicians is necessary in order that these misunderstandings do not recur.

Visitors. Although there were several visitors to the Sullivan and Carlisle centers, visitation to the Terre Haute Schools were infrequent. In the Davis Park and Woodrow Wilson schools, the lack of a special room

for programmed instruction made visitation more difficult than it would have been had the special room been available.

Teachers. The reactions of teachers to the various programs is reported in previous paragraphs of this evaluation. Many teachers expressed a desire to learn more about the principals and theory of programmed instruction through workshops and university graduate classes. They especially would like to know more about new developments in teaching machines and to learn about programs in their fields.

Recommendations.

1. Testing and records. A program of pretests and posttests should be initiated to measure student progress and to evaluate programmed materials. These tests should be, where possible, standard achievement tests in order that student progress can be compared against national norms. The measurement and evaluation division of the WVSEC can provide valuable assistance in establishing a testing program. Detailed records of student progress through the programs and test scores should be maintained by the technician.

2. Technicians. The role of the paraprofessional technicians needs to be defined and communicated to teachers, administrators, and the technicians themselves. The role of the technician should not be teaching, nor should it be that of an additional school secretary or teacher aid. The technician should supervise activities of students receiving programmed instruction, maintain detailed records of student progress, and schedule and coordinate the use of the center facilities.

3. Conferences. Future conferences should be conducted as workshops rather than as lectures. Those conducting the conferences should be educators, rather than sales persons. The teachers need to be informed

concerning principles and new developments in programmed learning and instructional technology. A course in programmed learning should be offered to the teachers involved in the center programs.

4. Replacement of materials. Part of the budget should be earmarked for purchase of replacement materials and repair of machinery. These funds should be expended only when the need arises and materials should be replaced promptly as they are needed.

5. Consultants. The principals at the center schools recommended that the consultants should visit each center a minimum of once per semester to confer with teachers and to make recommendations for improving the program.

6. Machine utilization. In order to provide effective utilization of teaching machines, a separate area should be provided. The operation of the machines can be supervised by the technician. If this is not possible, a mobile laboratory should be provided to move a group of the machines from one classroom to another. A special purpose room would not only provide more flexible use of the machines, but would also make visitation more convenient.

IX

PUPIL PERSONNEL DEMONSTRATION DIVISION

Description. The purpose of this division has been to establish four demonstration pupil personnel programs at four high schools in the area served by the Wabash Valley Supplementary Educational Center. The centers have been established to offer three basic services to all of the school systems involved:

First, they serve as demonstration centers, enabling guidance workers and other school personnel to observe the development and operation of four fully functioning secondary guidance programs;

Second, the centers provide the nucleus for intensive in-service training programs for school personnel in the area served; and

Third, the leaders of the project provide consultation services to all schools requesting the service.

The demonstration centers have been established at Clinton High School of the South Vermillion Community School Corporation, Greencastle High School of the Greencastle Community Schools, Sullivan High School of the Southwest Sullivan County Community School Corporation, and West Vigo High School of the Vigo County School Corporation. These high schools are of representative size (570-850) and are geographically distributed throughout the eight-county area. Each school had a basic guidance program in operation prior to the start of this project and therefore provided a foundation to build upon. In addition each of the four high schools expressed a willingness to serve as a demonstration center.

A survey taken in 1966 as part of the planning grant activities identified the following seven needs in the guidance area as most pressing:

1. need for a comprehensive individual inventory and pupil appraisal system from k to 12;

2. need for complete counseling services, offering help to students who are faced with making educational, vocational, and personal-social decisions;

3. need for an effective system for disseminating valid information of all types, e.g., vocational, educational, personal and social development, military obligations, etc. to students and their parents;

4. need for school psychological services;

5. need for increased faculty participation in the work of the guidance program;

6. need for greater coordination and cooperation among the several community agencies in their work with young people and their families; and

7. need for community surveys and research programs designed to provide information which might be of help in improving the guidance program, and ultimately, the total school program.

The original proposal set up ten minimum services to be established at each demonstration center:

1. individual inventory and pupil appraisal system,
2. testing program,
3. career planning service,
4. counseling services,
5. group guidance activities,
6. better articulation with elementary and junior high schools,
7. school psychological services,
8. in-service training programs,
9. survey and research programs, and
10. community agency coordination.

The areas of new activities to be stressed at the demonstration centers were identified in the project proposal as:

1. more comprehensive informational services,
2. counseling with parents,
3. more time for counseling by counselors,
4. increased attention to personal-social problems,
5. increased attention to non-college bound students and to drop-outs, and
6. the use of test scoring and test analysis services.

During the first year of operation (1966-67) the establishment of the

four centers as demonstration guidance programs was undertaken with the major emphasis placed upon the development of the career information (educational and occupational) services.

Activities that were carried out by the division during the first year and continued during the second year (1967-68) are:

1. The preparation of various materials -
   a. guidance newsletters
   b. bulletin board displays concentrating on occupation choice
   c. short one-page descriptions of various jobs--called occupational fliers - to be given to individual students
   d. lists of films, filmstrips, and other materials available for use at little or no charge.

2. The purchase and distribution of several items of equipment for the four centers -
   a. audio-filmstrip projectors
   b. sound filmstrips dealing with occupational choice
   c. bulletin boards
   d. literature racks
   e. professional reference books
   f. SRA Occupational Roles Kit
   g. Chronicle College View-Deck
   h. Institute of Research Career Monograph sets and
   i. the sponsoring of several in-service training workshops.

Recognizing that it would be very difficult, if not impossible, to work on all ten minimum service areas at each demonstration center simultaneously, special areas of concern were identified for each demonstration center during the summer of 1967 in consultation with the administrators and counselors of the schools involved. Each center continued to work in the area of information dissemination (both occupational and educational) as well as having a special project area during the 1967-68 year. The special project area of each center is given below:

Clinton - organization of work-experience program to increase the holding power of the high school,

Greencastle - intensified student counseling to identify potential problem areas along with a planned program of conferences with the parents of all freshman and sophomore students,

Sullivan - a district-wide (K-12) study of the pupil appraisal system in order to develop a new pupil record system (cumulative record system)

West Vigo - group counseling with the emphasis on orientation to high school and educational and occupational planning by a system of guidance classes for freshman students

The selection of the organization of a work-experience program as the special project area for the Clinton demonstration center was made jointly by the WVSEC staff, ISU consultants, and the administrative staff of the South Vermillion Community School Corporation and Clinton High School. The selection of this project was influenced by the lack of a vocational curriculum at Clinton High School even though well over one-half of its graduates do not go on to college.

The model used for the work-experience program was a similar program developed by the J. I. Case Company in Racine, Wisconsin. This program utilized work-experience for high school credit as a means to introduce the student to the world of work and to increase the holding power of the high school. The student has no specific related class work while he is participating in the program although he carries three normal classes; supervision for the program is provided by both the school and the "big brother" from the participating industry.

The intensified counseling project for Greencastle High School was identified in the same manner as the special projects for the other three demonstration centers. Since Greencastle High School was shifting from a three-year to a four-year high school for 1967-68, there would be two new classes in the high school (over one-half of the student body); therefore the need for effective orientation and educational planning would be great. Moreover, in the past counselors had not scheduled interviews with each student.

The special project then was to have the counselors schedule interviews with each 9th and 10th grade pupil to be followed with a conference with the parents of these students. Prior to the parent conference each teacher who had the child in class was to be asked to fill out a short questionnaire indicating his success in class both in achievement and adjustment. The results of the questionnaire and the child's grades in school were used by the counselor to semi-structure the parent conference. Time was to be provided for the parent conferences to be held during the evening hours and on Saturday.

The special project for the Sullivan High School of the Southwest Sullivan County School Corporation was to be the reappraisal of its pupil inventory and cumulative record system for grades K-12. A system wide committee to be appointed by the superintendent was to conduct this reappraisal with the goal being the development of a revised or new record system. The committee was to be representative of all grade levels and buildings in the corporation.

The group guidance project for West Vigo High School was selected by the WVSEC staff, ISU consultants, and the West Vigo High School administrative staff to fill a felt need at the high school. Freshman boys and girls would meet separately for the guidance class, during the semester that they were not enrolled in physical education. The instructors for these guidance classes were to develop a syllabus for the course with the assistance of the supplementary materials provided by the WVSEC. The suggested areas to be covered in the course were orientation to school, educational planning, vocational planning, and personal-social problems.

A follow-up survey instrument was prepared under the direction of the division during the summer of 1967 by the participating school counselors.

This instrument has been used by several of the demonstration centers in order to refine it so that it may be made available for general use by the schools in the eight county area. Hopefully the use of this instrument will yield results which will be of assistance in strenthening the guidance departments and curriculums of the schools.

Three of the four demonstration centers have secretaries employed in the guidance office who are paid by the WVSEC. The employment of the secretaries was provided so that the counselors could be freed from routine clerical work in order to devote more time to their counseling duties and to work on the special project areas in conjunction with the WVSEC. The fourth demonstration center indicated that additional secretarial help was not needed.

A display showing the activities of the WVSEC Pupil Personnel Demonstration Division was set up at the annual convention of the Indiana Personnel and Guidance Association held at French Lick during February, 1968.

Interested people from the schools of the WVSEC area have been invited and encouraged to visit any or all of the demonstration centers. In addition periodic conferences and workshops have been held for all the counselors in the eight county area.

Meetings of the Guidance Directors of the four demonstration centers were held throughout the year as well as numerous visits to these centers by the division director, evaluator, and consultants.

A large part of an in-service workshop held on the campus of Indiana State University during May of 1968 was devoted to an explanation of the Katherine Hamilton Area Mental Health Center by the people planning the program for this center. The area mental health center is to be built adjacent to Union Hospital in Terre Haute and will serve approximately the same area served by the WVSEC.

An examination of the activities carried on by the demonstration centers indicates that most of the seven needs identified in the 1966 planning grant survey have been at least partially fulfilled. Increased and continued effort will be made to meet these needs (objectives) throughout the remainder of the project period.

Evaluation

Clinton High School Project. During the summer of 1967 a meeting of the South Vermillion Community School Corporation officials and WVSEC staff and consultants identified a special project area for the Clinton High School demonstration center. It was decided to develop a work-experience program to increase the holding power of the high school since no vocational program is offered at Clinton High School even though the majority of its students do not go to college.

The work-experience program to be developed at Clinton High School was patterned after the J. I. Case Company program at Racine, Wisconsin. In October of 1967, Richard Newport, Superintendent of the South Vermillion Community School Corporation; Paul Holbert, Principal of Clinton High School; Dorothy Schelsky, Guidance Director of Clinton High School; and Richard Schelsky, Director of WVSEC Pupil Personnel Demonstration Division, met with Leo Chapman, Manager of Industrial Relations for the Terre Haute plant of the J. I. Case Company. Mr. Chapman explained the Case work-experience program showed a film on the program, and answered questions concerning the program. Additional information and sample forms (application, rating, grade reports, letter to parents, etc.) were obtained from the Racine, Wisconsin public schools and the home office of the J. I. Case Company.

During the late fall of 1967 the personnel of the South Vermillion

School Corporation prepared their proposal for their work-experience program to present to the Department of Public Instruction of the state of Indiana. In December of 1967 Mr. Newport, Mr. Holbert, and Mrs. Schelsky went to Indianapolis to present their proposal to the Department of Public Instruction. They were cordially received and told that the proposed work-experience program would have to be studied by the staffs of the vocational and curriculum departments.

After a long period during which no word was received from Indianapolis, Dr. Carr of the Department of Public Instruction agreed to come to Clinton to further discuss the proposed work-experience program. During April of 1968 Dr. Carr and Mr. Vietti of the Department of Public Instruction met with Mr. Newport, Mr. Holbert, Mrs. Schelsky, and Mr. Schelsky at Clinton High School. Dr. Carr indicated that although he was reluctant to give a definite negative answer to the proposal, he felt that the objectives of the work-experience program could be met by following the state vocational plan and that this would be desirable. Superintendent Newport indicated that he and his school board were willing to do this if sufficient funds and adequate staff could be found. Dr. Carr stated that a new request for approval of the proposed work-experience program should be made if it became impossible for the South Vermillion Community School Corporation to implement the approved state vocational plan.

At this time the South Vermillion Community School Corporation is attempting to secure the necessary staff and funding to set up a vocational program along the lines of the approved state plan.

If one takes as the over-all objective of this special project to be the inclusion of a vocational course of study in the Clinton High

School curriculum, it can be said that the objective seems to be in the process of being met. However, if one takes as the objective the organization of a work-experience program patterned after the J. I. Case program, it appears that the objective has not and will not be met.

By taking the broad view of the objective of this special project, it can be fairly said that the project has been of value since a high school with a high percentage of its students not going on to college has decided to add a vocational course of study to its curriculum. Although the addition of vocational courses to a high school curriculum could hardly be called innovative, the value of such courses would probably not be questioned by anyone.

It is recommended that continued efforts be made to provide vocational training opportunities especially for youth who will not continue their formal education beyond high school. It is further recommended that the staff initiate a new project in a different area, based upon consideration of the most pressing needs of the students.

Greencastle High School Project. The parent-counselor conference project at Greencastle High School was evaluated through a form filled out by parents immediately following their conference, or by mailing in a similar form several weeks after their conference. In addition, informal discussions with the counseling staff were helpful in gaining insights into the problems and processes involved in the project.

Examination of the data reported by the parents showed that fathers had filled out only 23 per cent as many of the evaluation forms as had the mothers, with the predominant pattern for the conferences being for the mother to attend without the father. Item 8 of the evaluation form revealed that most parents responding made favorable comments about

conference scheduling or made no comment at all. However, a sufficient number made comments about night meetings for it seem reasonable to predict that more fathers, as well as working mothers, would attend conferences held at night. Ninety-four per cent of the responses regarding the length of the conferences were in the "about right" category, with 4% and 2% indicating that conferences were too short and too long, respectively. Apparently, there was general satisfaction with the length of the conferences. Forty-one per cent of the responses recommended parent-counselor conferences be held twice a year, and 36% recommended that they be held once each year. Only 2% recommended that they not be held at all. These results represent strong support for continuation of the conferences, at least by those parents who attended them.

The helpfulness of the conferences to the parents in understanding several areas related to their children are shown in Tables 1 and 2. One hundred respondents were obtained from the 184 conferences held. Seventy-six per cent of the families contacted took part in the conferences. Although a detailed discussion will not be undertaken here, it can be seen that most of the responses indicated that the conferences were seen as "quite helpful" or "very helpful." Although not shown in the tables, parents of ninth-graders were more favorable in their evaluations than were parents of tenth-graders.

The following conclusions regarding the Greencastle project were drawn:

1. That the project has been viewed by the parents as generally helpful and desirable

2. The staff felt that the project was successful and contributed to their growth as counselors

3. The project has been successful in contributing to the goal of counseling with parents, as stated in the projects proposal

TABLE 1

PARENTS' EVALUATIONS OF HELPFULNESS OF PARENT-COUNSELOR CONFERENCES
(by parents of boys)

N=55

Statement	Ratings (per cents)*					
	Omitted	0	1	2	3	4
In understanding your child's progress in school work	4	4	5	9	31	47
In understanding your child's ability	4	4	4	11	25	53
In understanding your child's study habits	7	9	9	18	29	27
In the area of your child's career planning	7	4	4	20	20	45
In planning for education beyond high school	9	2	5	22	11	51
In understanding your child's personal or social adjustment	9	7	4	15	22	44
In other areas	84	-	-	-	2	15
as a whole (overall evaluation)	7	2	4	7	15	65

*KEY: 0=not covered
1=of little or no help
2=somewhat helpful
3=quite helpful
4=very helpful

TABLE 2

PARENTS' EVALUATIONS OF HELPFULNESS OF PARENT-COUNSELOR CONFERENCES
(by parents of girls)

N=46

Statement	Ratings (per cents)*					
	Omitted	0	1	2	3	4
In understanding your child's progress in school work	-	2	2	24	41	30
In understanding your child's ability	-	-	4	20	48	28
In understanding your child's study habits	2	13	9	28	35	13
In the area of your child's career planning	2	7	4	24	22	41
In planning for education beyond high school	4	13	7	15	24	37
In understanding your child's personal or social adjustment	2	13	4	26	28	26
In other areas	91	-	2	-	4	2
as a whole (overall evaluation)	-	-	2	15	35	48

*KEY: 0=not covered
1=of little or no help
2=somewhat helpful
3=quite helpful
4=very helpful

for the 1967-68 year, and the goal of career planning services as stated in the original proposal;

4. although less directly related to the project, the following needs mentioned in the proposal for the 1967-68 year were also served: more comprehensive informational services; increased attention to non-college bound students and to (potential) dropouts.

It is recommended:

1. that the parent-counselor conferences be continued, whether or not supported by the Wabash Valley Supplementary Educational Center. Greater utilization of evening hours for conferences is a recommended change for the purpose of getting more fathers and working mothers to participate,

2. that an attempt be made to have counselors and other personnel from schools who might be interested in planning similar projects consult with the Greencastle staff to utilize its "demonstration center" potentialities. This demonstration potential has not been utilized to an appreciable extent except through called meetings,

3. that future scheduling of conferences be initiated earlier in the school year, be limited to fewer conferences per day, and extend into the summer, especially for parents not seen during the school year, as suggested by the counseling staff,

4. that efforts be made to better acquaint both other school personnel and the community at large with the nature and importance of the parent-counselor conferences, as suggested by the counseling staff, and

5. that the effectiveness of the conferences be evaluated continually by the counseling staff, formally and informally, so as to provide the optimal service to the students and to the community.

Sullivan High School Project. The project undertaken by Sullivan High School was the construction of a new cumulative record system. The final record had not been printed so evaluation of the final product was not possible.

Evaluation was carried out by examining the tentative forms upon which the final record would be based, and by discussing the process of devising the form with the personnel concerned.

A large number of sample materials were obtained from school systems throughout the country in order to consider a great variety of formats.

The results of the evaluation included the finding that the project was not completed by the end of the school year; this makes evaluation less meaningful. However, the form will be completed during the summer, thus making utilization in some grades possible for the next school year.

The record will consist of a folder into which fit a series of cards with identificction tabs on them, thus making it possible for the user or person entering information to locate and work with only that card needed. Information has been so arranged on the cards that requests for information from colleges and from other sources can be fulfilled by reproducing only one or two surfaces. For example, all high school grades will be on one side of a card.

The planning of the record was carried out through consultation of the Guidance Director with school principals, teachers, secretaries, and the school nurse. Teachers were involved only to a limited degree.

The following conclusions were drawn regarding the Sullivan High School project:

1. the cumulative record tentatively devised seems to meet the needs of various school personnel, including counselors, teachers, health personnel, and administrators, and clerical personnel in carrying out their duties involving records in an effective manner.

2. the goal pertaining to the individual inventory and pupil appraisal set forth in the original proposal has been met more adequately as a result of the project.

3. greater involvement on the part of teachers might have been helpful in devising the record, as well as in obtaining a better understanding of the individual inventory service by the teachers.

It is recommended that a new project be undertaken by Sullivan High School, since the objective has been essentially attained. It is further recommended that every effort be made to capitalize on the demonstration values inherent in the project, not only in terms of the final product but also in terms of the process of devising the record system.

West Vigo High School Project. The project undertaken at West Vigo High School was that of organizing a series of guidance classes for all ninth grade students. Since ninth-grade students were new to the school, an orientation function was undertaken, especially for students enrolled in the one-semester course during the first semester. Topics selected were those expectd to be of interest and value to the students. The exact coverage was determined in part by student interest. The areas rated in the evaluation form coincided closely with the proposed curriculum.

The method of evaluation employed was that of having each student participating in the first semester program fill out the evaluation form near the end of the second semester, giving his estimation of the usefulness to him of various topics covered in the course. It was expected that a somewhat more realistic viewpoint toward usefulness would be elicited after direct involvement in the course was terminated and after mastery of material could be expected to have decreased in relative importance compared with applications.

Tables 3 and 4 show percentages of boys and girls indicating varying degrees of helpfulness of the guidance classes in several areas. For both boys and girls the most apparent trend appears to be that all three of the top ratings--somewhat helpful, quite helpful, and very helpful--were used extensively. It is generally agreed that early adolescence is a period of time in which there is difficulty in a number of areas and that pressures for changes in the self-concept are great. In the light of these facts, as well as recognition that adjustment is a dynamic process, it nonetheless appears desirable that continued efforts be made to revise the content and classroom dynamics so as to assist the students to the greatest possible degree. A number of both boys and girls commented

TABLE 3

AN EVALUATION OF THE HELPFULNESS OF A GUIDANCE CLASS BY THIRTY-EIGHT NINTH-GRADE BOYS AT WEST VIGO HIGH SCHOOL

Area	Rating (per cents)*				
	0	1	2	3	4
Orientation to school	3	21	39	24	13
Study habits and methods	-	16	45	32	8
Wise use of time	-	11	24	45	21
Understanding your emotions	-	24	32	32	13
Smoking and drinking	-	8	18	34	39
How to act in social situations	-	3	29	39	29
Grooming and dress	-	3	34	47	16
Courtesy	-	11	42	34	13
Boy-girl relationships	-	5	11	32	53
Vocational exploration and choice	5	8	39	24	24
**In other areas	3	-	-	3	26
As a whole (overall evaluation)	-	-	11	45	45

*KEY: See key on Table 1

**68% Omitted response

TABLE 4

AN EVALUATION OF THE HELPFULNESS OF A GUIDANCE CLASS BY FIFTY-TWO NINTH-GRADE GIRLS AT WEST VIGO HIGH SCHOOL

Area	Rating (per cents)*				
	0	1	2	3	4
Orientation to school	4	-	40	44	12
Study habits and methods	-	6	13	44	37
Wise use of time	-	4	25	35	37
Understanding your emotions	15	4	35	31	15
Smoking and drinking	37	10	13	13	27
How to act in social situations	6	2	12	50	31
Grooming and dress	4	2	12	35	48
Courtesy	2	4	21	38	35
Boy-girl relationships	8	13	21	33	25
Vocational exploration and choice	4	10	21	37	29
**In other areas	-	-	4	4	23
***As a whole (overall evaluation)	2	6	6	37	38

*KEY: Set key on Table 1

**69% Omitted response

***12% Omitted response

that more time should be spent in the areas of boy-girl relationships and understanding one's emotions. This suggests the need not only for the consideration of spending more time in these areas but also the need for continuing feedback regarding the helpfulness and meaningfulness of discussions in these areas.

It was concluded that many of these ninth-graders were aware of areas in which their guidance class had been of limited help and in which their needs were unmet or only partially met. It is conjectured in this regard that for some individuals, the guidance class may have been helpful in certain areas, while also producing an increased awareness of needs, thereby producing a cancellation of effects, as measured by ratings.

The overall evaluation of helpfulness was much higher than the evaluation of most of the specific areas, indicating a favorable reaction of the students toward the course.

It was concluded that the West Vigo High School project has met to an appreciable degree the need stated in the original proposal for group guidance services. In addition, there have been contributions toward the following areas stressed in the proposal for the 1967-68 year: more comprehensive informational services; and increased attention to non-college bound students and to (potential) dropouts.

The following recommendations are made regarding the West Vigo High School project:

1. that the guidance classes be continued next year, whether or not supported by the WVSEC.

2. that consideration be given to include elsewhere in the curriculum "problems-oriented" content, either as separate courses, or in connection with currently offered courses.

3. that every effort be made to provide and make the students aware of individual counseling services and other guidance services, e.g., occupational information.

4. that personnel in other schools be encouraged to utilize the demonstration potential of the project.

Summary

The three basic services to be provided by the demonstration centers have only been partially established; and therefore these goals of the Pupil Personnel Demonstration Division have not been met.

The first service - that of enabling guidance workers and other school personnel to observe the development and operation of four fully functioning secondary guidance programs - has not been completely provided since only certain of the original ten minimum service areas have been developed at each of the four demonstration centers. All four centers have increased and strengthened their activities in the career planning service area, the survey and research program area, the counseling services area, and the testing program area through the WVSEC Measurement and Evaluation Division. In addition the Sullivan center has emphasized the development of the individual inventory and pupil appraisal system service area; the West Vigo center has emphasized the group guidance activities service area; the Greencastle center has emphasized to larger extent than the other centers the counseling services area; and the Clinton center has emphasized developing the school curriculum to meet the needs of the students.

It should be pointed out that all counselors, deans, principals, superintendents, and other school personnel have been invited to visit the demonstration centers at their convenience throughout the 1968-69 school year and that the month of April in particular was stressed to be a period of time set aside for visitations to the demonstration centers. However very few schools took advantage of the opportunity to visit the demonstration centers.

The second service - that of providing the nucleus for intensive in

service training programs for school personnel in the surrounding area--also has only been partially utilized. Some area meetings and workshops have been held, but an intensive program has not yet been established.

The third service--that of the leaders of the project(s) providing consultation services to all schools requesting the service--has been made available. However few schools have requested this service which may be due to the lack of knowledge that it is available or to the inability of the schools to recognize its value to their guidance programs or to the fact that the schools see no need for outside consultant help for their guidance departments.

An examination of the list of seven most pressing needs in the guidance area identified in the 1966 survey shows that several of the need areas have been at least partially fulfilled (1. need for a comprehensive individual inventory and pupil appraisal system from K to 12; 2. need for complete counseling services offering help to students who are faced with making educational, vocational, and personal-social decisions; 3. need for an effective system for disseminating valid information of all types, e.g., vocational, educational, personal and social development, military obligations, etc., to students and their parents; and 4. need for community surveys and research programs designed to provide information which might be of help in improving the guidance program and ultimately, the total school program).

Meeting the need for school psychological services has been held in abeyance until the Katherine Hamilton Area Mental Health Center is constructed and begins operation since the individual schools are of insufficient size to support this service individually and competent trained personnel are extremely difficult to employ. Meeting the need for greater coordination among the several community agencies in their work with young people is also closely tied in with the development of the area mental health center.

however, progress has been made and less active direction from the center should be needed in the future. It has been recognized from the beginning that the actual work toward meeting the objectives of the division would largely have to be done by the local school personnel. Since this work has now begun at the local level, it would seem that the center's function should now be one of periodic encouragement and assistance when called for by the local school personnel.

The need for increased faculty participation in the work of the guidance program still has to be met. Emphasis on this need area should be considered for the next school year. The involvement of all school personnel in the guidance program would greatly strengthen the programs now in existence in the eight county area.

Each individual dem nstration center will hopefully inc›rporate its special project for the l 67-68 school year into its nɔrmal guidance program. Additionally each center should identify a new special project area for the l°68-6° school year to which special emphasis will be given.

The development of a follow-up survey instrument that can be scored and analyzed by data processing should be continued. The present instrument should be refined after its use on a trial basis in the spring of 1968. The instrument also needs to be adapted to the requirements of a mechanically scored answer sheet. The impact that such an instrument could have on the guidance program and the entire school program of the schools in the area could be very valuable.

One of the important outcomes of the activity of the Pupil Personnel Demonstration Division has been the increased awareness by the guidance personnel in the eight county area of their identification as a professional group with common problems and goals. The help and assistance that the various counselors have received through communicating with fellow workers in other school systems is difficult to measure, but this undoubtedly has been one of the major contributions of the WVSEC to the improvement of the pupil personnel services in the area.

The organizational and administrative plan of operation for the division has now become set and is somewhat routine in nature. The original goals and/or objectives of the division have not yet been completely achieved;

X

LANGUAGE ARTS DIVISION

The Language Arts Division of the Wabash Valley Supplementary Educational Center was organized during the summer of 1966, the original planning grant period of the Center. The rationale of the Language Experience approach from a pupil's perspective is as follows:

> What I can think about, I can talk about.
> What I can say, I can write.
> What I can write, I can read.
> I can read what I write and what other people can write for me to read.

The objectives of the project were (a) to develop and maintain an exemplary instructional program, (b) to diffuse of such a program in the geographic area, and (c) to institutionalize the program practices in the local schools. The Language Arts Division was organized to meet these general objectives as well as the following specific objectives:

1. To comprehend the principles, methods, and materials which constitute an adequate reading and Language Arts program.

2. To develop with the use of the Language Experience approach, principles, methods, and materials which effectively meet the needs of all children, including the culturally disadvantaged.

3. To increase understanding of the learning processes, especially the specific processes which are associated with language, vocabulary, and concept development.

4. To foster attitudes that are conducive to innovation and change in the curriculum of reading and Language Arts.

5. To develop competence in the use of diagnostic tools to meet the individual needs of elementary school children.

6. To develop a workable knowledge of the interrelationships among listening, speaking, reading, and writing as vehicles for the improvement of language competency of school children.

During the school year 1966-67 the Language Arts Division operated three elementary school classrooms (first grades) in order to demonstrate the use of an approach to teaching elementary Language Arts characterized by the term "language-experience." The selection of language experience as a model was made because of the fusion of the elements of language which is unique to this approach. Early experiences with this approach in the schools of San Diego, California, showed that there was no loss in achievement in language when it was used, and that when compared with certain other methods, language-experience had some specific advantages. The integration of Language Arts what occurs tends to provide children with an opportunity to view language as a unity rather than as separated subjects. Also skills tend to be used in context use rather than in isolation. For these reasons this approach seemed promising.

A survey was made in the eight county area being served by the Center. Elementary school teachers, principals, and superintendents were asked questions to determine what areas of Language Arts seemed to be most in need of revision. Reading and problems associated with teaching reading were high on the list of concerns. When information was collected to determine whether that innovations were being used in this area, very little evidence of techniques unique to language-experience was found. The lack of recent innovative experiments in Language Arts made this a fruitful field for study. Because there was also a widespread concern over how reading and other areas of the Language Arts should be taught, the Center agreed to demonstrate this approach.

During the planning stages teachers in the eight-county area were interviewed. About 80 percent of the first grade teachers responded to a value questionnaire. This questionnaire was designed to help locate teachers to demonstrate Language-Experience in first grade. On the basis of data from this instrument, supplemented by interviews with high-scoring teachers, three demonstration centers were chosen which were strategically located through the Wabash Valley area.

During the summer of 1966 a workshop was held at Indiana State University at which the demonstration teachers were thoroughly trained in the use of the Language-Experience approach in first grade. The audio-visual equipment to be used in these centers was explained. The basic theories of instruction unique to this approach were interviewed. Relevant research was studied. The teachers developed their own ideas for the implementation of Language Experiences in their classrooms.

A three-month period was allowed during the beginning of the school term to permit the demonstration teachers to become familiar with the techniques they would use in their classrooms. During this time the co-directors made weekly visits to each demonstration center to provide the teachers with additional ideas, to react to their plans, and to facilitate planning for the time when school teachers from the eight-county area would be visiting the centers. A record of the work and activities of the children in these beginning stages was made on 35mm slides. In addition, Super-Eight color movies were made of appropriate activities, and color snaps of the children and their activities were made. Later a tape recording was developed to accompany the visuals, making it possible for a teacher visiting the demonstration center to see not only current work, but a history of the work of the classroom and each child's work over a period of several weeks.

Because the project called for children to be involved in printing and making their own books, a half-time teacher aid was provided in two of the classrooms. Among other duties, the aids helped to reproduce in quantity the pages of books that were written by the children, preparing original art work for reproduction, photographing various activities that went on, editing some of the copy that went into the books, transcribing works on the Language Master, and mixing paints for posters and other art work in connection with the books. Visitors to the classrooms were impressed with the work of the aids. Some teachers felt that they could not use Language Experience as demonstrated without the use of additional help. One class was maintained without an aid, although this teacher had a student teacher from Indiana State University for a large portion of each semester.

In January of 1967 the demonstration centers were opened for visiting teachers. The program was so arranged that the Language Experience took place in the morning. The Center encouraged teachers to visit these demonstration centers by offering to pay a stipend of twenty dollars to defray the cost of a substitute teacher while the visiting teacher was away from her classroom. The inability to find qualified substitute teachers prevented some teachers who were otherwise interested from visiting ~~visiting~~ the demonstration centers. In some cases teachers had to draw lots to see who could go to visit the demonstration center.

Visitors to the demonstration classrooms were encouraged to remain with the classes for a full school day. In this way, the teacher could view Language Experience not only when directly taught, but also during other times when it was integrated with other curricular content. Also during a portion of the afternoon teachers could view longitudinally the

work of the children as they saw the slides and heard accompanying tapes. A visiting teacher typically saw the teaching activities accompanying a Language Experience approach during the morning. During lunch she could talk individually with the demonstration teacher. In the afternoon she watched a slide presentation, and could also view other activities to see how the Language Experience of the children affected these activities.

The procedures for visiting the centers were so organized as to provide a maximum of feedback. Notice of the operations of the centers was given widely through written announcements to the schools, newsletters periodically sent to the superintendents, word-of-mouth from teachers who had visited the centers, and finally, through questionnaires sent at various times to elementary school teachers in the area served by the centers. Teachers were given forms which, when returned, set in motion the machinery for visitation. After a teacher had visited the center, she was given an evaluation form. This evaluation was designed to gather data regarding the visiting teacher's perceptions of what she saw at the demonstration center and to provide information regarding the nature of her own language arts program. In this way a comparision of the values of a teacher could be made regarding the effect of her visit upon her perceptions and the influence of her own experiences with teaching language arts within a different framework than "Language-Experience." Thirty days after a teacher had visited the demonstration classroom, a follow-up survey was sent which was similar in composition to the original instrument sent to each teacher during the planning grant period. In the case of those teachers who had completed the original survey, this instrument was designed to provide data regarding changes in perception about teaching language arts as a result of a visit.

Perhaps the most effective feedback was provided during the second year of operation. At this time a consultant visited each of twenty-five teachers on a regular basis, about once every three weeks, to provide support and reinforce ideas. During the summer of 1967 a workshop was held for those teachers who had indicated they would like additional help in implementing the ideas of Language Experience. Thirty teachers were given in intensive three-day experience, and these teachers formed the core of a group throughout the eight county area using many of the innovative ideas expressed in the demonstration centers. An additional workshop was held in the fall of 1967, and a final workshop in the spring of 1968.

Classroom operations. The operation of a classroom is dependent upon a variety of factors, and it would be impossible to control all of these so as to provide identical experiences for children. This summary of activities is suggestive of the great variety of things done, but does not adequately describe any particular demonstration center. It is, rather, an attempt to describe what generally was done in each of the three demonstration centers, recognizing that individual variation occurred and that each teacher taught with her own personal style. With minor exceptions, the equipment provided by the Wabash Valley Supplementary Educational Center was the same for each classroom.

Children in each of the demonstration classrooms were introduced to the Language-Experience approach in first grade. The earliest activities consisted of having children talk about their experiences which were recorded on a tape recorder. In some cases the children were asked to draw a picture of themselves, while in others the teacher took a color photograph of each child. (In one instance a child was amazed at the photograph because he had never seen a picture of himself.) In addition to

talking about themselves, and experiences with which individual children might be familiar, the children were taken on short field trips near the school. A visit to the furnace room, a walk to a fire station, a recess on the playground--these activities provided some common understandings and experiences about which to talk and write. Whatever a child spoke into the recorder was written by the teacher aid in his exact language. The reproductions were made on experience charts, or, in some cases, large lined paper. The children would read their own statements, and, through repetition, they would read each other's statements. One teacher kept a daily chart made out each morning dealing with news, the weather, what the class planned to do that day, and other information of interest. This chart was printed and preserved, so that during the year the children could go back to any day and review many things, including words they had spoken and written.

In addition to the children's own writing and speaking, the teachers read many stories to the children. These came from trade books, and basal-like materials. The letters of the alphabet were taught, and the S.R.A. Games Laboratory was used to introduce certain phonics skills. The introductory processes were similiar in each classroom but variations soon developed because of the nature of the Language-Experience approach. In one demonstration center, the children expressd an interest in writing their own stories and books after about two months. In this classroom children wrote individual stories, and they kept these stories together in their own individual books. In another classroom, the teacher combined many stories written by many children into a single "monthly" book which was reproduced in quantity and used for reading in small groups. In the third center the stories were taken home as written, after a photographic

record of each story had been made. Thus variations in the application of of this approach appeared in our classrooms very early.

The children illustrated their stories using crayons or paints. The earliest stories were written on large papers and after a story was written, a drawing could be made and affixed to the top of the story. The children would then put many of these stories having the same theme into "units." Reading skills were taught as children read their own stories and the stories other children had written. A "dictionary" was made using all of the words appearing in the stories. If a child was writing a story needed to spell a word, his first inquiry was to the "dictionary." Stories that were reproduced for use by many or all of the children had to be edited for spelling, grammar, and punctuation. In time, this editing was a task shared by children and teacher alike, although at first the teacher did most of this. Children learned to spell well because they realized that others must read their stories and that to misspell a word makes this task more difficult. Teaching the skills followed a progressive pattern as children became more secure in their writing, as well as when children developed greater competency with experience. We used a "Language Master" as a talking dictionary. Thus if a child did not know how to say a word he could find it in the card file, he could hear the word pronounced on the Language Master for indentification. As the experiences of children broadened, so did the content areas represented in their stories.

A characteristic period in Language Experience, just as in basal reading, would reveal children doing a variety of things at various levels. At times the teacher could teach specific language skills to a whole group of children. Frequently in the beginning stages of writing the teacher could discuss ideas with groups of children. At holidays, for example,

the whole class might write about the same general theme. Other occasions are more personal, and individual children might be writing about many different things. As the children completed their stories, they were "published." Periodically the children would form small groups and read their own stories to one another. At the same time, a child might express interest in reading someone else's stories. Thus practice was provided in building vocabulary, oral reading, comprehension, listening, discussing a story, and, if under a teacher's direction, phonics and other word attack skills. The language lesson would vary from perhaps half an hour to, in some cases, the whole morning.

Analysis and Results. Two of three general purposes were considered in the evaluation of the Language Arts Program during the 1966-67 school year: (a) the development and maintenance of the exemplary instructional program at the demonstration center, and (b) the diffusion of the program within the eight-county area served by the Wabash Valley Supplementary Educational Center. The degree to which the Language Experience approach to the teaching of reading was incorporated and institutionalized into the Language Arts program of schools in the area, the third purpose, was not evaluated because a reasonable period of time had not passed.

While the primary concern of evaluation centered upon pupil behaviors, appraisals were also made of behaviors and attitudes of teachers and administrators. Data of various types were gathered in this regard through the use of commercial and specially constructed instruments. The following paragraphs summarize information under the headings of principals, teachers, and pupils. Each section contains information about materials and instruments used to gather data, the analysis to which the data were subjected, results of the analysis, and conclusions drawn from the analysis. Subsequent

sections consider in a less formal fashion the specific objectives stated in the introductory paragraphs of this report. Also, teachers comments are reported.

Principals. An attitude inventory was constructed and administered to the principals of the schools in the eight-county area in the spring of 1966. The inventory included items reflecting attitudes about the adequacy of teaching reading, namely, the Language-Experience approach, the individual approach, and the basal-reader approach. The number of items specifically related to the Language-Experience approach was twenty-two, and it was these items that were examined in an attempt to measure the degree of acceptance on the part of the principals of this specific approach. The items were graded on a 2-point scale reflecting the degree of agreement with Language-Experience principles. Scores ranged from seven to thirty-eight, indicating a wide range of acceptance of Language-Experience principles..

Of the fifty-six principals who responded, eighteen sent one or more teachers to the three demonstration centers during the 1966-67 school year. Twenty-one other principals who had not responded also sent one or more teachers. A total of seventy-five visits were made representing a total of thirty-nine schools. The largest number of visits from any one school was seven.

An attempt was made to validate the attitude scale by correlating the scores of respondents with the number of teachers from the schools visiting demonstration centers. This correlation was .07. If the correlation had been high, it would have indicated that principals who were already accepting the Language-Experience concept sent teachers to the demonstration Center. Because of correlation was low and non-significant,

it suggested that principals sent teachers to secure new information and to be exposed to new ideas, the purpose for which the project was intended.

Teachers. An inventory reflecting the attitudes of teachers toward the Language-Experience approach had been prepared and administered to teachers visiting the demonstration centers prior to and subsequent to the visits. Thirteen identical items in the pre- and post-measures related specifically to the Language-Experience approach. These were scored using a 5-point scale reflecting the degree of acceptance by the teachers of Language-Experience principles of teaching.

The initial analysis of teachers' responses to these pre- and post-attitude inventories reflected on the average across all three demonstration centers that there was a slight but not statistically significant decrease in the acceptance of Language-Experience principles after the teachers had visited the center. Because of the possibliity that differences among the three centers might have counterbalanced each other, a separate analysis reflecting possible differences among centers was undertaken. Such an analysis revealed that there were not statistically significant changes in the attitudes of teachers toward the principles of the Language-Experience approach to teaching reading.

A third instrument had been constructed and administered to teachers immediately upon the completion of their visit. This instrument was designed to determine the adequacy of the demonstration centers in implementing Language-Experience procedures. Thirteen items reflecting such matters as giving children the opportunity to express their thinking through oral language and observing children's independence in writing were included and also evaluated using a 5-point scale. Scores ranged up to sixty-four out of sixty-five. An analysis of variance was performed

TABLE I

Five ANOVA'S of Student Achievement Scores (Stanford Achievement Test Battery)

Cloverdale Demonstration Center and Two Control Groups

		Word Reading		Vocabulary		Paragraph Meaning		Word Study Skills		Spelling	
SOURCE	df	MS	F	MS	F	MS	F	MS	F	MS	F
Among Schools	2	126.062	1.464	39.718	.638	63.964	.656	214.140	1.460	25.445	.393
S within School	69	86.085		63.157		97.409		146.644		64.706	
Between Tests	1	793.359	79.774	232.570	20.068	1606.672	49.658	1144.687	70.158	413.445	72.682
School X Tests	2	34.214	3.440	3.140	.270	136.175	4.208	1.265	.077	14.527	2.553
S within Schools X Tests	69	9.945		11.589		32.354		16.315		5.688	

Table 2

Cloverdale School Demonstration Center,

Mean Scores and Duncan's Range for Analysis of Word Reading

Classroom	Pre-Test	Post-Test	Duncan's Range
Demonstration Teaching	17.917	23.667	2.0593
Control Teaching I	16.75	19.5	
Control Teaching II	14.79	19.958	

In analysis of word study skills a statistically significant difference was found between the pre- and post-measure, thus indicating an improvement among all classes. No other significant effects were noted in this analysis. This same improvement was noted in the spelling and vocabulary analyses as well, and here, too, no other effects were significant. In the analysis of the paragraph meaning data, however, the interaction of groups by measure was again significant. Table 3 reports the means and the multiple range of these differences. Here again, as was the case in the word reading test, the demonstration group out performed the two control classrooms on the post-measure, while it had not been significantly different from them at the outset.

Table 4 reports five analyses of variance of the data gathered at Greenwood. As in the Cloveraale analyses, all groups improved significantly from the pre- to post-measures in each of the five subjects. In Greenwood only one control classroom had been identified. Table 5 indicates that the demonstration class improved more rapidly than the control during the course of the instruction in the area of word study skills. No other effects were statistically significantly different.

In addition to achievement, the attitudes of students in the demonstration and control classrooms were compared. A twenty-five scale Inventory of Reading Attitude was administered to all students at the conclusion of their participation in the project during 1966-67. A Kuder-Richardson reliability was computed on subjects' test scores and was found to be .75. The same control classrooms were used for the attitude measures as had been used for the achievement data. Separate analyses of variance were computed for each demonstration center and its respective control. Table 6 summarizes the analysis of variance of those

scores for the Cloverdale center and its controls. Two statistically significant effects were found. First, the girls were found to have better attitudes toward reading than did the boys, and secondly, the classroom by sex showed interaction that was also significant. Table 7 presents the mean scores and Duncan's Range of this sex by classroom interaction. It can be been that the first control class produced the significant interaction, in that the males in control group 1 reflected significantly less desirable attitudes toward reading than did the females from any of the other groups, and that the females from the class showed significantly improved attitudes to any of the males and also to the females in the demonstration center. It is likely that this interaction resulted because of characteristics of the control classroom rather than reflecting characteristics of the demonstration center. Table 8 summarizes the analysis of variance of pupils' scores on the inventory of reading attitude for the Greenwood demonstration center and its controls. None of the statistical tests were significant.

Specific objectives to be accomplished. The specific objectives of this project were not changed over the two years of funded operation, and were originally stated in the application for federal funds following the planning grant period. The first objective was to comprehend the principals, methods, and materials which constitute an adequate reading and Language Arts program. In one sense, all the activities of this project have some relation to meeting this objective, although certain specific activities were better oriented to meeting it than others. Some specific efforts were made to meet this objective such as (a) the publication of a bibliography of all the trade books available in our classrooms, (b) the publication of An Annotated Bibliography of the Language Experience Approach to Reading Instruction (prepared by Catherine Haynes, a doctoral fellow

at I.S.U.), (c) the purchase and use of An Introduction ot a Language-Experience Program (Roach VanAllen, Claryce Allen, Encyclopedia Britannica Press, 1966), Levels I. II, III, and (d) the dissemination of several mimeographed papers dealing with characteristics of Language-Experience, units developed in the classrooms, and the like. The survey forms and evaluation forms used in this project attempted to determine to what extent teachers did change their ideas regarding the teaching of Language Arts as a result of visits to our demonstration classrooms.

The second objective was to develop with the use of the Language-Experience approach, principles, methods, and materials which effectively meet the needs of all children, including the culturally disadvantaged. The very nature of a Language-Experience approach insures that this objective would be met if the approach is properly applied to the classroom. Children in these classrooms wrote many stories, using their own natural language patterns as models. The content of their stories was related to their direct experiences both in and out of the classroom. Evidence of this is abundantly apparent when one reads the stories written by these children, which included such titles as "My School," "My Brother's Shell," "Our Little Guppies," "My Bike," "We Went to Town," "My Airplane Ride," and even "My Strep Throat." In addition to individual units and stories, the teachers organized field trips and group experiences to provide common experiences for shared stories. The extensive use of audio-visual equipment to record these experiences provided organizing centers for the stories the children then wrote. At given points the language patterns, spelling, and grammar, usage, punctuation skills were introduced to clarify the writing process. Individual differences become a matter of record as the children's stories were preserved and, from time to time, reread or rewritten.

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Table

Cloverdale School Demonstration Center,

Mean Scores and Duncan's Range for Analysis of Meaning

Classroom	Pre-Test	Post-Test	Duncan's Range
Demonstration Teaching	12.917	23.33	3.71552
Control Teaching I	14.5	18.375	
Control Teaching II	13.042	18.792	

TABLE 4

Five ANOVA'S of Student Achievement Scores (Stanford Achievement Test Battery)

Greenwood Demonstration Center

		Word Reading		Vocabulary		Paragraph Meaning		Word Study Skills		Spelling	
SOURCE	df	MS	F	MS	F	MS	F	MS	F	MS	F
Among Schools	1	25.599	.837	2.500	.099	7.224	.231	46.226	.785	2.025	.086
S within Schools	18	30.550		25.227		31.202		58.836		23.513	
Between Tests	1	302.500	34.926	193.601	13.649	70.224	4.595	70.226	5.015	70.225	7.566
School X Tests	1	3.599	.415	.099	.007	.225	.014	46.222	3.300	1.224	.131
S within Schools X Tests	18	8.661		14.183		15.280		14.002		9.280	

Table 5

Greenwood School Demonstration Center,

Mean Scores and Duncan's Range Analysis of Word Study Skills

Classroom	Pre-Test	Post-Test	Duncan's Range
Demonstration Teaching	24.1	28.9	3.7984
Control Teaching	24.1	24.6	

Table 6

ANOVA of Pupils' Scores on an Inventory of Reading Attitude,

Cloverdale Deomonstration Center and Control Classrooms

Source	df	MS	F
Classroom (c)	2	11.1336	
Sex (s)	1	227.0297	15.142
C x S	2	130.4014	8.6976
S/w Classroom	78	14.9927	

Table 7

Mean Scores and Duncan's Range of the Significant Sex by Classroom Interaction, Cloverdale, Inventory of Reading Attitude Test

Classroom	Boys	Girls	Duncan's Range
Cloverdale Demonstration Center Teaching	16.62	18.49	
First Control Class I	13.91	21.99	3.49
Second Control Class II	18.86	18.71	

Table 8

ANOVA of Pupils' Scores on an Inventory of Reading Attitude, Greenwood Demonstration Center and Control Classroom

Source	df	MS	F
Classroom (C)	1	44.027	2.74
Sex (S)	1	12.339	-
C x S	1	.017	-
S/w Classroom	35	16.062	

The third objective was to increase understanding of the learning processes, especially the specific processes which are associated with language, vocabulary, and concept development. Teachers visiting the centers had the opportunity to view changes in children's work over time. By the end of our second year of operation, we have data on some of these children for two full years of school under this approach. Evidence of change in many areas of language is to be noted. Studying the first written stories with later stories has provided information about growth in (a) story content, (b) tools of English, such as grammar, spelling, usage, punctuation, and syntax, (c) the relation of art work to the content of the story, (d) the length of stories, (e) the vocabulary used in stories, (f) the number of stories written in a given period of time, and (g) the variety of experiences reflecting concept development and awareness of environmental factors. As one example of the kind of data gathered, in one classroom a "dictionary" appears at the back of each book. In this "dictionary" are listed all of the words used by the children in that book. A comparision of the vocabulary used by children in their writing, as compared with the typical vocabulary load of a basal reader at this level, provides some interesting information regarding the concept of "limited" vocabulary. It is obvious from even a cursory study of these data that children are quite capable of using the writing many more words than are typically contained in a basal program.

The fourth objective was to foster attitudes that are conducive to innovation and change in the curriculum of reading and Language Arts. These attitudes are primarily the concern of elementary school principals and elementary school teachers. The responses of teachers visiting our demonstration classrooms seem to show highly favorable comments with respect.

to the operation of the centers, and some inclination to try out some of the ideas. But even though the demonstration center is a special classroom, equipped with many special audio-visual devices, a teacher aid, and the services of college and university trained contultants, the typical classroom teacher did view herself as able to reproduce such activities in her classroom. This is fine. We have provided visits to teachers who are interested in innovative ideas, especially those relating to our centers, and there is much evidence that we have directly influenced the classroom practices of a majority of the teachers visiting the centers. We have also allowed encouraged teachers to visit more than one center, or to visit the same center more than once, if the teacher felt this would be worthwhile. During our workshops teachers have said that many of the ideas they were using had been new to them until they had visited a center. Fostering attitudes conducive to change ought to include, we have found, awareness on the part of both teacher and principals, and even parents. In some cases we have evidence that teachers were not able to implement ideas from our centers because of lack of interest on the part of their administrators. We recommend that future projects take this into consideration this problem.

The fifth objective was to develop competence in the use of diagnostic tools to meet the needs of elementary school children. There was little evidence that the visiting teacher's behavior was influenced in this respect, although the demonstration classroom teachers themselves have had much experience in gathering and using data about their pupils. A teacher using a Language-Experience approach would have longitudinal evidence of growth if she kept copies of the books written by her children. The demonstration teachers gained their experiences primarily because we used control classrooms

gave standardized tests, made out periodic reports, and subjected the pupils to a variety of measures for various purposes.

The sixth objective was to develop a workable knowledge of the interrelationships among listening, speaking, reading, and writing as vehicles for the improvement of the language competency of school children. The Language-Experience approach demands that this be done. When properly taught, one cannot help but develop this knowledge of interrelationships of the Language Arts. Children begin by speaking; their words are written down; they may be read by the children themselves; or others; and finally, children learn to read what others write. In the process of writing they bring to bear the skills of language in a manner that "puts things together." (Written by Dr. David Waterman and Dr. Glen Tagatz.)

Role and observations of the reading consultant. A reading consultant, Peggy Davis, visited thirty teachers on a regular appointment basis. The objectives of the consultant on each of these visits were (1) to enhance the climate for favorable teaching change with principal and superintendent, (2) to provide encouragement to the classroom teacher, and (3) to act as a sounding board for her ideas and make suggestions as requested. Other than the making and keeping of appointments, no attempt was made by the consultant to impose a particular teaching program or force the use of specific teaching techniques. This aspect of the consultant's role (avoiding imposition of a system) combined with genuine interest was of great importance at the beginning in forming an interpersonal base with teachers and administration upon which future visits might build.

Visits were scheduled with each teacher every four weeks for the first four months and every five weeks during the last four months. The nature of each visit varied videly from time to time and teacher and teacher. Some took the form of a conference, others that of pupil and work observation.

The length of the visits averaged thirty minutes. Twenty-nine teachers from twenty-one different schools in the eight-county area received this service. Of this number, two wished to remain in contact with the program but were unable to personally implement Language-Experience techniques after the first semester due to sickness in one instance, and an administrative change to a departmentalized approach in another.

In the consultant's judgment, twenty of the twenty-seven on whom records were kept demonstrated consistently high or increasingly greater involvement in Language-Experience from the beginning to the end of the year, as measured by evidence of pupil writing. The presence or absence of paraprofessional in-classroom help appeared irrelevant to the consultant in this regard, as the percentage of those who improved or remained consistently high without help was about the same as the percentage of those who improved or remained consistently high with help (between 70% and 75% in both cases). It is impossible to measure the degree of involvement that might have been achieved by those who improved without help, had the situation been different. It is interesting, however, that of the eleven teachers whose year's improvement or involvement was judged by the consultant to be in the "consistently high" area, only one had full-time help, and two had part-time help. Also important to note is the fact that in no instance were pupil-produced writings duplicated in sufficient frequency to assume basal test importance. Primary usages were as high interest notivation in communication skills development and in providing for individual differences in interest and growth, thus encouraging independence in reading and writing.

Two factors which from the consultant's observations appeared to be of particular significance in influencing utilization of Language-Experience techniques in the classrooms visited were (1) the teacher's expressed

appreciation of pupil-produced materials (this does not mean evaluation) and (2) the child's assurance of the teacher's confidence in his ability. Secondary to these was judged to be provision of a block of time sufficiently unstructured by the teacher to allow freedom for experimentation in various modes of self-expresseion. Children in the classroom regularly visited consistently wrote more stories of greater length on subjects of their own choosing.

Other conditions and practices that appeared to enhance usage of Language Experience in the classroom included an easily accessible supply of varied art media, display of child-produced materials, presence in the classroom of word lists or word categories with which they could easily refer, a place designed in the classroom to keep stories for free reading if help was not available to correct and duplicate them all for class use, and a variety of supplementary learning activities.

Some of the supplementary activities utilized in the classrooms visited included parties (many for people and events, one for the birds after a big snow); preparation and serving of foods (butter, maple syrup, applesauce); and meals (a Texas Barbeque and a Hawaiian Luau); visits from various school personnel and other professional persons; vistits to zoos, factories, hospitials, post offices, etc; care of classroom pets (hamsters, parakeets, turtles, fish, an inclubator for duck eggs); window gardens; production of class newspapers and original plays; murals, choral readings, letter writing science experiments; utilization of pupils of filmstrip projectors, recorders, and oblique projectors in presentation of individual research. There were many others.

Administrators in general, were tolerant to helpful in working with teachers interested in using new approaches. Of the two showing antagonism

in the year's beginning, a change was made to tolerance by one, and enthusiasm by another. The consultant's viewpoint after conversing with all involved administrators was that teachers in most instances have more leeway to pursue challenging avenue to learning than they are willing to accept or utilize.

Physical limitations in the classroom environment seemed to be generally less inhibiting to Language-Experience utilization than were such factors as the teacher's concept of her role in the classroom, and her perception of administative control. The teacher's age and years of experience appeared to have no relation to her interest in and willingness to try various Language-Experience techniques. In fact, three teachers near retirement age voiced sentiments similar to this: "I think is is wonderful to still find exciting ways to teaching after all these years." Another frankly stated that she had gone into the program not expecting to get anything from it, but that it had "really helped her a lot." This same teacher had during the first conference with the consultant pointed out the many advantages of the teaching situation in the one-room, eight-grade school where she had once taught. At the final conference, she was concerned over having been assigned a split grade for the coming year, as she felt it would curtail her effectiveness in meeting individual needs.

In her role as agent toward change, observation of seemingly small alterations of teacher viewpoint was often as rewarding to the consultant as participating in a teacher's consistently high level of involvement. One teacher, for example, told why she found story-writing period the worst time of the week for her first grade class. "We talk about Frisky and Flip and I put up pictures of them. Then I say, "Write three statements about Frisky and Flip." Nothing! It's like pulling teeth! They don't realize

that Frisky and Flip are that important. Another time I said for everyone to try to write a funny story, but that seemed to be too hard. Last time I let them write about what they did on the weekend, and for the first time we saw some interest."

Another first grade teacher, in her first conference, expressed great disapproval of allowing a child to write a word he was not certain was spelled properly, and of accepting an assignment paper with imperfect writing. Her children's first stories told about their Christmas presents. They were all perfectly spelled, neatly printed, and except for the names of the toys were uniform in content. It wook two weeks to get them into the final "acceptable" form. Fortunately in the next group of stories developed, "My Family," the consultant was able to find one child who had included a totally original remark which she could admire. Things progressed from this point until at the final conference the teacher was proudly showing unedited original compositions with phonetic spelling and less than model writing, but exhibiting independent thought and reflecting personal interests.

Irrespective of comparative test results using demonstration and control groups, participating teachers as a group expressed the conviction that their usage of Experience techniques had broadened their students' capacities for handling standardized tests of reading and spelling as well as improving nontest performances. Several stated that their achievement test scores were higher this year than last and attributed this to the creative writing the children had done.

Two tangential developments of interest were (1) increasing interest among participating teachers' co-workers stimulated by observation of their work, and (2) the effect of teachers served by this program on Language Arts

book adoptions being made in several school systems this year. In several instances, recommendations to adopt two or three "basal" readers in sets of ten or fifteen were accepted.

Also gratifying were expressions by many teachers of appreciation of the consultant service offered by the Center, and teacher comments on ways they felt conferences had broadened their understandings or increased their utilization of Language-Experience techniques above which would have been accomplished through the workshops and visitation of the demonstration rooms alone.

Projected activities. The Language Arts Division will establish one demonstration classroom at the intermediate grade level (fourth, fifth, or sixth grades, singly or in combination) to permit the application of a program of reading characterized by the trrm "individualized reading." This program is described in detail in Jeanette Veatch's book, Reading in the Elementary School (The Ronald Press, 1966). A logical sequence to the already established demonstration centers using a "language-experience" approach is "individualized reading."

The demonstration center would function primarily as a place where a teacher could view an individualized reading program in action. Samples of children's work, test records, reading lists, time schedules, projects and units would be discussed. A summary of the progress to-date would be used to show how such a program is operated over time. Forms will be developed to aid the teacher's understanding of this technique for teaching reading.

The demonstration center concept serves as a vehicle to permit teachers to view a successful innovation. (We propose to have a visiting consultant follow up the teacher's visits.) This will provide stimulation to try the ideas viewed in the demonstration centers. Consultant visits will permit

a further exploration of the values derived from the viists to the demonstration centers, and lend teachers a helping hand in implementing many of the ideas inherent in individualized reading. Our experiences with the demonstration centers during the past two years show that unless there are specific follow-up activities for teachers, the ideas presented do not materialize or make significant differences in their teaching. (Workshops will also be offered for teachers who wive expressed interest in using the techniques shown in the demonstration centers.)

The demonstration center will be located within the eight-county area served by the WVSEC, and in a manner making it possible for teachers to visit ~~the centers~~ without excessively long travel being involved. The demonstration center should be open for visitors before Christmas of 1968, and will continue to operate for the balance of that year. To facilitate gathering of test data, a control classroom, using more traditional methods, will be identified and testtd with the same instruments as the experimental (demonstration) classroom. The primary purpose of data gathering is to demonstrate progress using individualized reading.

Our experience with the present functions of the Language Arts Division leads us to believe that there is a vital need for new methods and techniques for teaching language arts in the area served by the WVSEC. We believe we have established a high degree of rapport with the school corporations involved. It makes good sense to continue to provide a service that is welcome and needed. Evidence of our impact on the communities involved is found in our reports from the previous years.

MUSIC DIVISION

Description. The Music Project directly attacks the problem of listening at the Junior High level since this is probably the last possible place students may be required to have music instruction. The over-riding objective is to influence significantly the musical attitudes and tastes of pupils. A parallel objective is to broaden the knowledge of music teachers and to increase in a positive degree their abilities to provide broad, vital, and meaningful listening-study experiences for younger secondary school children.

In order to accomplish these objectives, the music project centers its activities around the utilization of live performances in the classrooms by a professional string quartet. It is the listening experiences before, during and after the quartet's visitation to the classroom that is the unique approach on the listening habits of students. This may be formulated in four steps:

1. In service training of teachers.
2. Teacher's preparation of students for quartet's visitation.
3. Impact of informal - live performance by quartet in the classroom.
4. Follow up instruction given students after quartet's visitation to the classroom.

These four steps constitute the innovative experimental aspect of the Music Project.

The music division provides the following services to the general music teacher to initiate the operation of the listening project--one service offered is the conducting of workshops for teachers. The workshops inform teachers how to prepare their students before, during, and after the quartet visits their classrooms. Group discussions take place in which teachers have the opportunity to share ideas and techniques in improving listening study experiences for the student. Consultants

from both the public school and the university discuss problems and possible solutions in regard to the operation of the project. Materials such as books, films, filmstrips, recordings, tapes, and unit outlines are displayed for examination and discussion during the workshop. Ultimately, the workshops provide teachers with insights that broaden their knowledge about general music so that they may provide more meaningful listening-study experiences for their students.

A second service of the center is the providing of materials for the teacher's use. Each teacher receives a series of units which have been prepared by the division office and developed by consultants of the university and the public school. The units are vital in the preparation of students for the Quartet's visitation to the classroom. Tapes of the music the quartet will perform are distributed to each participating school. Recordings, books, films, and visual aides are on circulation for review by mail. Newsletters as well as lists of the latest materials about general music are sent to all participating teachers.

The third service of the center is providing a professional string quartet to all general music classrooms in the project area. Their presentation is informal under conditions of intimacy of which music is a central part of the classroom activity both before and after the appearance of the quartet. It is not a formal concert-type of presentation. The informal live performance given by the quartet gives the student a chance to become more actively involved with music. He will see the performer, perhaps see the score turn into music, identify with the performer, and even recognize the decisions made by the group. Perhaps mutual involvement best describes the psychological and physical meeting of students and quartet. From this experience, he may be able to more actively listen to recorded music and be motivated to listen to the same and different

compositions on his own. The string quartet was selected as the instrument of live performances for many reasons. First of all, the string sound is the heart of orchestral sound. It has the flexability of playing arrangements if necessary since many transcribed materials are available. In addition, a vast amount of quartets have been written by great composers from Haydn to the present. Certainly, the sounds of strings provide a fresh tone quality when compared with that which the school child has experienced from the bands and choirs in his environment. Live strings may in itself add vividness and intensification to the listening experience.

A fourth service of the center is the setting up and guidance of a teacher advisory committee who represent teachers from the different counties in the project area. The committee discusses current problems and suggests possible solutions in the operation of the project. In addition they assist the director in developing supplementary materials made by the committee regarding workshops, units, scheduling of quartet, quartet's presentations, evaluation procedures, consultants, and long range activities for research. The committee has suggested the following changes for the 1968-69 operation of the music project:

1. Eighth grade general music classes should be serviced as well as the seventh grade classes by the center.
2. Additional units should be made for next year to include a two year sequence.
3. The units should not try and prejudice the child to anyone style of music. Let the child make his own decisions.
4. Music literacy should include living music.
5. Goals of instrumental and vocal classes should include emphasis in developing music listeners.

The fifth service of the center is providing consultants for the project. Their services are used in the workshops, in developing units, assisting in the advisory group meetings, visiting teachers, and assisting the director in making decisions. Consultants are from the public schools

and Universities of this area.

The music project director coordinates the whole of the music project. His broad obligation is to encourage and to exercise leadership in the upgrading and enrichment of all general music programs in the project area. Specific activities of the director are:

1. Securing qualified musicians to make up a string quartet. This involves writing and contacting applicants from any instutions over the country.
2. Orientation of the quartet to the goals of the project.
3. Setting up general policies for the quartet to follow regarding practice schedules, schedules in the schools, meetings with the director, transportation to schools, workshops, and music stores.
4. Securing qualified substitutes for the quartet in case of emergencies.
5. Obtaining music scores for the quartet which sometimes involves arranging music for their use in the classroom.
6. To counsel the quartet in problems that impaire their functioning as a group.
7. To plan and set up workshops for teachers: This entails the securing of consultants, planning the format of the workshop with the teacher advisory board, obtaining the physical facilities for the workshop, writing articles to the newspaper, as television and radio stations, developing demonstrations for the workshop using the string quartet, correspondance to all general music teachers in regard to the date and content of the workshop.
8. Encourage schools to participate in the music project by correspondence and personal visits to the music teacher, principal, and Superintendent.
9. Obtaining data from teachers concerning their schedules and sections of general music.
10. Scheduling the quartet at the best possible time for the general music class and at the same time utilizing the services of the quartet to nearby schools so that four presentations may be given during the school day.
11. Setting up communications to the music teacher, principal, and Superintendent of the quartet's schedule.
12. Plan supplementary materials for teachers and students, such as tapes, recordings, units for instruction and lists of latest materials on general music.
13. Serve as a resource person in procedures and materials for participating teachers.
14. Visiting all schools in the project area during the year.
15. Setting up and developing Evaluative Instruments.
16. Help teachers to become research orientated.
17. Setting and keeping files up to date of all events that have taken place since the operation of the project.
18. Speaking to various organizations about the music project.
19. Writing articles about the music project for dissemination.
20. Challenge the deficient schools to meet the state minimum requirements in general music.

Since the Music Project has been in full operation, from September, 1967 through May, 1968, many events have occured that justify the purpose of the project--mainly the enrichment of Jr. High General Music through live performance. In order to realize the magnitude of the events that are later described in this report, let us reflect on music education in three dimensions; its past, present, and future.

Looking back, music education slipped in the public school curriculum by the side door in 1836. It was only after Lowell Mason made a proposition to the Boston school board that he be allowed to teach music in the public schools for two years without pay, that music became a part of the public school curriculum. As music spread in the public schools, music departments in colleges and universities as well as conservatories of music were being formed to train future music teachers. Also, symphony orchestras were developing in major cities from the influence of public school music. Actually, the public school was responsible for shaping the music culture of our society in the latter half of the 19th and 20th centuries.

Today, the outstanding achievement of public school music is the phenomenal development of performance groups. However, it is more apparent today that emphasis on performance has obscured the real role that justifies music in the curriculum if we consider the present day philosopy of general education, as the American Association of School Administrators noted in their resolution of 1959.

> It is important that pupils, as a part of general education, learn to appreciate, to understand, and to create, and to criticize with discrimination those products of the mind, the voice, the hand, and the body which give dignity to the person and exalt the spirit of man. [1]

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[1]Resolution on the Creative Arts adopted by the American Association of School Administrators at the Atlantic City convention, February 15, 1959.

Public school music violates this concept since the music curriculum favors performance groups made up of select students in most cases. In addition, the students who are participating in the vocal and instrumental programs may not be exposed to listening to music since most of their time is spent on acquiring technical skills. This concern has been expressed in the preface of the MENC publication, Music In General Education:

> Graduate students and other thoughtful music educators began to evaluate the out-come of music education, and they expressed increasing concern with the fact that in spite of the high standards of performance in many schools, the large marjority of high school students had no formal contact with music during any of their high school years. They also noted that even those students who were active in performance groups, though technically well trained, were frequently deficient in understanding music as an art.[2]

The last grade level that the majority of students have formal training in music is in junior high school. In many cases, the activities that make up general music are poorly organized and unrelated. Teachers are not equipped to teach the course in many instances because Universities and Conservatories concentrate on the area of performance. Even textbooks do not greatly aid the teacher in giving content to the course since the bulk of materials center around vocal music. Also students enter the Jr. High General music class from the elementary school with varied backgrounds in music, making it difficult for the teacher to structure the course.

In the elementary school, students may never receive sufficient quality of instruction that give them an appreciation for music. At this level, music is taught by the classroom teacher who is not equipped for the task. In some cases when a music teacher is available, instruction

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[2]Music Educators National Conference, Music in General Education. (Washington: MENC, 1965.) p. v.

at this level may still consist of singing songs.

Having reflected on music education in the past and present, it is apparent that the activity of listening has been neglected in all areas of public school music, and that the area of general music in the secondary school is a problem of concern today by both national representative groups of Music Teachers and Administrators. It is not difficult to understand why administrators and music teachers in the project area describe general music in the Jr. High level as the area in need of most help, and that the activity known as listening should be of concern as it is often poorly organized by teachers, badly equipped by the schools, and as a result, far too often produces a small effect on students. A student who does not have the opportunity to develop listening skills, can seldom become aware of music as an art and as something to be desired for the enrichment of his life.

The music project of the Wabash Valley Supplementary Educational Center offers a solution to the major problems confronting music education at both local and national levels. It can serve as an example for other schools to follow. Thurber H. Madison, chairman of the graduate division of Music Education at Indiana University as well as a member of the editorial board of the Music Educators Journal, stated:

> It is my belief that this kind of musical project needs to be continued, improved each year as the teachers in the field develop more effective ideas on how best to teach the general music class in their respective communities. I also feel sure that with good reporting on the success of this project in professional Journals, the idea of live musical performance by artists of professional stature in the general music classrooms could catch on throughout the schools of the nation.[3]

Indications for the future, based on the experiences from this project, may be that University music departments as well as public

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[3]Thurber H. Madison, an evaluation report submitted to the Music Division of the Wabash Valley Supplementary Educational Center.

school music teachers and administrators may work closer together in revising, experimenting and improving the music curriculum at all levels so that future generations will participate and appreciate better the art of music.

Specific Objectives

1. To encourage schools in the Wabash Valley Supplementary Educational Center area to participate in the Music Project.
2. To help teachers see the need for music form and to aid them in developing techniques of musical analysis.
3. To develop specific instruction on units of study that best meets the needs in the project area to serve as examples to teach and to tie in with the quartet.
4. To develop directions based on consensus and in part judgements of resource people.
5. To implement the project by teaching - learning structures as vehicles for the classroom.
6. The development of evaluative instruments for measuring the effect of the project on student attitudes and tastes.
7. To encourage schools (superintendents, principals, and teachers) to adapt General Music in the curriculum based on the following premises:
   a. General Music must be designed for all seventh and eighth grade students.
   b. General Music must always emphasize the needs of the potential music listener. (listening skills required for appreciative and intelligent consumption)
   c. General Music should give students some of the skills and understandings needed to pursue future musical wishes.
   d. General Music should provide a favorable atmosphere for the development of attitudes and tastes.
   e. General Music should help the student see what place music may have in his life.
   f. To encourage teachers to obtain necessary materials such as recordings, books, audio equipment, etc., to enrich the classroom experiences of students.

Activities

Goal 1. To encourage schools in the WVSEC area to participate in the Music Project. By visitations made to schools as well as through correspondence, 98% of the schools participated in the Music Project. The quartet has been heard by 5504 students and 61 steachers have been involved.

Goal 2. To help teachers see the need for music form and to aid them in developing techniques of musical analysis.

Meetings were held with the teacher advisory board to discuss units from several meetings held in December and January, the teachers developed a unit on form which was demonstrated at a workshop on January 16, 1968.

Goal 3. To develop specific instruction on units of study that best meets the needs in the project area to serve as examples to teach and to tie in with the quartet.

A meeting was held with teachers and members of the quartet to develop a unit on the periods of music which the committee felt necessary to meet the needs of the teacher.

Goal 4. To develop directions based on teacher consenus and in part judgments of resource people. The teacher advisory committee made the following suggestions:

1. Eighth grade general music classes would be also serviced by the center.
2. Future units should be developed in greater detail with emphasis placed on "living music" as much as possible.
3. Materials in the division library should be circulated by mail.
4. The quartet should speak with the teacher at least five minutes before the class begins.

Goal 5. To implement the project by teaching-learning structures as vehicles for the classroom. Two workshops were held during the months of September and January in which live demonstrations were given to teachers to aid in preparing their classrooms for the quartet. Teachers received series of units to structure their classes during the year. Tapes of the music the quartet will perform were distributed at the workshop.

Recordings, books, films, and visual aides were also circulated for their examination during the workshop. Teachers had the opportunity to check out these materials for their use for a limited time.

Goal 6. The development of evaluative instruments for measuring the effect of the project on students attitudes and tastes.

A Music Attituinal Profile Test was made to evaluate the change of behavior in students toward specific selections of music. During the past summer the board met to discuss the format of the test. It was agreed that the test should contain 50% of the selections out of the units and the remaining selections to include similar pieces that would indicate a transfer and broadening of musical tastes. The test has been to 75% of the schools in the project.

Goal 7. To encourage schools to adapt General Music in the curriculum.

Seventy percent of the parochial schools are now teaching general music as compared to thirty percent of last year. Also, two schools have now adopted general music in the curriculum for this year. Eight schools who offered general music as an elective are now making it required for this coming year.

Additional Projects

As a result from the music project, directly or indirectly, several activities have taken place that were not anticipated at the beginning of the year.

1. ISU will be offering a minor in the area of General Music. New courses will be offered next semester at both the undergraduate and graduate levels.
2. The Terre Haute Symphony offered a youth concert for all general music classes outside of Vigo County. Thirteen hundred students attended the concert representing the counties of Parke, Vermillion, Clay, Greene and Putnam.
3. The string quartet was used in a choral concert at Rockville, Indiana. The principal reported, "It was the most thrilling concert our choir has given. We feel that performing with a professional string quartet was a unique and valuable experience for the members of our choir."
4. A film is being produced, in cooperation with the Vigo Public schools and Indiana State University, to help teachers develop profitable lessons on the units of "Form in Music".
5. The string quartet gave two concerts open to the general public.

Evaluation. The stated basic purpose of the Music Project was to provide meaningful listening-study experiences for children in the 7th grade of selected junior high schools. Parallel objectives included the development of supplementary materials and services for teachers of general music with the ultimate goal being that of influencing signigicantly the attitudes and tastes of pupils.

The purpose of the evaluation project, then, was to assess the impact of the music project and thus provide guidance for the future direction of music project activities. This was accomplished by focusing the evaluation on the extent to which the stated objectives were being attained.

Procedures. The first step was to clarify the objectives and to attempt to describe them in behavioral terms which were assumed to be manifestations of changes in attitudes, beliefs, and values of the end product, the child. However, since the project is in its first complete year of operation, it was felt by Center staff members that the full impact had not yet reached the child to the extent that changes in the child could be measured directly to an accurate degree. Thus, the decision was made to supplement measurements of the participating classes of children with evaluations of teacher and administrator attitudes and beliefs toward the project and to directly measure the impact of the project on the school and community.

The evaluation was comprised of several types of measurements, both direct and indirect. These measurements were designed to answer specific questions relative to the effectiveness of the music project in meeting its goals.

The evaluation activities consisted of the following:

I. Attitudes of teachers, school principals, and superintendents

were measured through the use of an attitude inventory written by the project evaluator. Reliability and validity were established and are reported in the section devoted to results. The instrument was designed to measure:

A. General reactions toward the project by general music teachers and administrators.
B. Attitudes by general music teachers toward the three major activities of the project: music units, workshops, and the use of the quartet.
C. Beliefs of administrators toward effects of the project on pupils and schools.
D. The overall impact of the project on children, teachers, and the school.
E. Finally, opportunities for both music teachers and administrators to express beliefs concerning strengths and weaknesses of the project were made available.

The instrument was developed into two forms: Form I for Teachers of General Music and Form II for School Administrators. The forms were mailed to personnel of all participating schools with information concerning the purposes of the evaluation and instructions relative to procedures for completing and returning the inventory. Assurances were given that all respondents would remain anonymous. Statistical tests of hypotheses and correlations were computed on the data obtained from the instrument. Items were ranked to indicate preferences and attitudes. Results of data analyses are located in the Analysis and Results Section of this report.

II. A test was devised to attempt to measure changes in pupil attitudes toward music. This test consisted of a tape recording with parts of thirty musical selections ranging from popular to classical types. Pupils were asked to indicate (on a five point scale) whether they liked or disliked each piece.

With the class being the experimental units, fourteen classes not participating in the music project were selected to serve as a control

group. An attempt was made to select schools and classes as similar as possible to those participating in the project. The experimental group was obtained by randomly selecting fourteen classes from all those participating in the Project. Statistical comparisons were then made on the obtained data.

III. Observed changes in activities of schools and attitudes of participating personnel were noted and are reported herein as a part of a qualitative as well as quantitative assessment. A summary of these changes are reported in the Analysis and Results Section of this report.

IV. Comparisons were made of findings of this year with those from the evaluation made a year ago when the Project was in its early stages. A summary of these comparisons are located in the Analysis and Results Section of this report.

Analysis and Results. Sixty-one instruments were mailed out to teachers of general music of which thirty-four were subsequently returned for a fifty-six per cent response. Forty-nine instruments were mailed to administrators of participating schools of which thirty were returned for sixty-two per cent response. In some instances, the respondents did not complete the entire instrument; therefore, the number of responses for each of the parts of the inventories varied.

Repeated measures analysis of variance was conducted with the data. Respondents were treated as a random effect nested within groups, and groups and items were considered to be fixed effects. The data were computed on an IBM 1130 Computer at the Computer Center, Indiana State University, Terre Haute, Indiana. Because of unequal group sizes, least-squares procedures were used.

I. Parts A of both inventories (teachers and administrators) were designed to obtain value judgments concerning the overall effectiveness

of the general efforts of the Music Project. Respondents were asked to rate on a five point scale the extent to which they agreed or disagreed to each of twenty-three statements.

Preliminary tests of homogeneity on the Within Group variances through the use of the F-max test led to the rejection of the hypothesis of homogeneity of the B X Subjects Within Groups interaction term. Since this term is used to test the effects of the correlated measures, heterogeneity of variance will generally result in a positive bias of the usual F test. Thus, the data were normalized by transforming the raw scores to logarithms which were then alalyzed. The analysis of Part A is summarized in Table 1 below. In order to avoid the assumption of equal covariances in the pooled variance-covariance matrix, the conservative test was applied to the computed F values of the correlated measures.

The F-test Between Groups failed to reject the null hypothesis of no fifference in mean responses over items in each group. Stated more simply, the groups expressed the same level of agreement to the items. The mean response by teachers is 3.58 and by administrators is 3.63. Thus, generally favorable reactions seem to have been expressed, although there is indication that they feel some change of direction by the project is merited. In addition, the ratings of Items Between Groups, in terms of mean ranks, were checked by estimating the degree of association using the rank-order coefficient of correlation technique.[1] This was calculated to be .719. This value was tested for significance using a t-test and found to be significantly different from zero, ($P > .995$). This indicates that administrators and teachers are generally agreed in their beliefs toward most of the items.

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[1] Allen L. Edwards, Statistical Analysis, New York: Holt, Rinehart, and Winston, 1958, pp. 165-167.

Table 1

Analysis of Variance of Responses to Part A of an Attitude Inventory Concerning General Reactions of Respondents to Effectiveness of the Music Project

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Square	F
Between Subjects	60	7.931		
Respondent Groups	1	.092	.092	.695
S's Within Groups	59	7.838	.132	
Within Subjects	1,342	29.257		
Items	22	5.906	.268	15.329**
Items by Groups	22	.616	.028	1.599
Items by S's Within Groups	1,298	22.734	.017	
TOTAL	1,402	37.188		

**F (1,^{co}; .01) = 3.84

The Between Items F-test was highly significant (P > .99). This indicates that respondents did not judge all items to be equal in terms of effectiveness. Means over groups and the total rankings in Table 2 reflect the significance of the test.

The Items by Groups interaction terms was tested and found to be not significantly different from zero. This substantiates the correlation ratio described above which indicates the groups tended to rate items in the same manner.

An internal consistency coefficient of reliability was calculated using the technique of computing the Kuder Richardson Formula 20 defined by Feldt. The coefficient associated with Part A of both forms of the instrument which contained twenty-three items when computed with the raw scores was .82, and the 95 per cent confidence interval for the coefficient

Table 2

Mean Ratings and Rankings of Responses to Part A Items by Various Respondent Groups

ITEM	Teachers	Rank	Admin.	Rank	Total	Rank
1	3.32	16.3	3.72	10.5	3.51	15
2	4.53	1	4.41	1	4.48	1
3	3.50	12.5	3.89	7	3.69	10
4	3.31	16.3	3.86	8	3.57	12.5
5	4.03	4	3.48	17	3.77	7
6	3.81	6.5	3.52	14.3	3.67	11
7	4.41	2.5	4.31	2	4.36	2
8	3.81	6.5	4.00	4.5	3.9	4.5
9	3.47	14	3.69	12	3.57	12.5
10	3.56	11	3.96	6	3.75	8
11	4.41	2.5	4.21	3	4.31	3
12	3.03	22	3.07	21	3.05	22
13	3.96	5	3.83	9	3.9	4.5
14	3.59	10	3.52	14.3	3.56	14
15	3.75	8.5	4.00	4.5	3.86	6
16	3.50	12.5	3.38	18	3.44	17
17	3.75	8.5	3.72	10.5	3.74	9
18	3.41	15	3.52	14.3	3.46	16
19	3.31	16.3	2.97	22	3.15	21
20	2.44	23	2.41	23	2.43	23
21	3.25	20	3.56	13	3.39	18
22	3.28	19	3.24	20	3.26	19
23	3.06	21	3.34	19	3.20	20
MEAN	3.58		3.63		3.61	

was .60-.91. However, because of the heterogeneity of variance problem discussed above, the reliability coefficient was recalculated on the transformed scores and found to be .88 with a 95 per cent confidence interval of .73-.94. This was of sufficient size as to indicate a marked degree of face validity. Further substance was added to this belief by comparing selected items of Part A with Part D (administrators) and Part E (teachers) discussed below. Meanings drawn from the data are discussed in the section of this report devoted to Conclusions and Recommendations.

II. As a further attempt to establish construct validity, Part D of the form completed by administrators and Part E of the teachers' form were compared with selected items of Part A of the instrument. These selected items were of such nature that the ratings should be consistent with the assessments given in Parts D and E. All items were concerned with the overall worth of the Music Project. Those items selected in Part A were items 2, 4, 5, 7, and 17. The rated scores for these items were summed for each person and a mean calculated for the combination of five items. The means for each person were compared with their corresponding ratings on Sections D or E. Then the results were analyzed using the repeated measures analysis described above. Again, preliminary tests on the error terms led to rejection of the hypotheses of homogeneity of variances. Thus, the data were again transformed into logarithms which were subsequently analyzed. The analysis of Part A with Parts D and E are shown in Table 3 below.

The F-test Between Groups failed to reject the null hypothesis of no difference in mean responses over parts in each group. This indicated no difference in the overall beliefs of teachers and administrators concerning the worth of the Music Project. The mean response by teachers

was 3.98 and by administrators was 4.03. Thus, there is general agreement that the Music Project of the WVSEC is most worthwhile.

The null hypothesis of no difference between parts also was not rejected. The mean score of Part A was 4.003 while that for Parts D and E was 4.000. This indicated a high degree of consistency on the part of the respondents toward the worth of the project. Correlation coefficients were calculated on the raw score ratings Between Parts using the Pearson's Product-Moment method. The coefficient of correlation between inventory parts for teachers was .711 and for administrators was .908. The lower coefficient among teachers was deemed to be due to the hererogeneity of variance of scores discovered in the analyses discussed above. However, both coefficients were tested using a t-test and found to be significant ($P > .99$). Also the hypothesis of $r_1 = r_2$ was tested as shown in Walker and Lev.[2] The Z-value was computed to be 2.4609 which is beyond the .99 level of probability of chance occurence. This would tend to substantiate the theory of diversity of opinion among teachers concerning the worth of various aspects of the project although the mean difference overall was not significant. A brief discussion of this interesting phenomenon is presented in the Conclusions and Recommendations Section.

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[2]Helen Walker and Joseph Lev, Statistical Influence, New York: Holt, Rinehart, and Winston, 1953, pp. 244-245 and 255-256.

Table 3

Analysis of Variance of Transformed Response Ratings to Parts A and Parts D (Administrators) and E (Teachers) Concerning the Evaluation of the Overall General Worth of the Music Project

Sources of Variation	Degrees of Freedom	Sums of Squares	Mean Square	F
Between Subjects	58	1.680		
Respondent Groups	1	.007	.007	.265
S's Within Groups	57	1.672	.029	
Within Subjects	59	.291		
Parts	1	.004	.004	.932
Parts by Groups	1	.011	.011	2.34
Parts by S's Within Groups	57	.275	.004	
TOTAL	117	1.971		

F(1.57;.05) = 4.01

The respondents rated the item: MY GENERAL EVALUATION OF THE MUSIC PROJECT OF THE NVSEC IS THAT IT IS MOST WORTHWHILE SEPARATELY. Response frequencies were:

Strongly Agree	- 22
Agree	- 28
Undecided	- 4
Disagree	- 5
Strongly Disagree	- 2

III. Parts B, C, and D of Form I (teachers) dealt with beliefs of teachers concerning the three major activities of the Music Project. Again, the teachers were asked to rate on a five point scale the extent to which they agreed or disagreed to positive statements about the activities. Part B contained six statements relative to the activity of

[2]Helen Walker and Joseph Lev, Statistical Inference, New York: Holt, Rinehart, and Winston, 1953, pp. 244-245 and 255-256.

developing teaching units to be used in general music. The teachers were requested to rate them on the basis that they believed the units to be useful and adequate.

Several workshops were designed and conducted as a second activity of the project. The objectives of the workshops included opportunities to exchange information among teachers of general music, development of teaching units, development of supplementary materials, and presentatives concerning effective utilization of Music Project Activities. Part C of the inventory contained seven statements concerning these workshops.

The third major undertaking by the project was that of organizing a string quartet in order to offer live performance music to seventh grade children. The performances were intended to aid in the development of unit objectives in coordination with the classroom teachers. Part D was made up of fourteen statements relative to this activity in order to obtain an estimate of the impact of the quartet on children and the extent to which the quartet was serving its purpose.

The analysis of Parts D, C, and D of the teachers' form is summarized in Tables 4 through 7 below. Preliminary tests of homogeneity of variances were not significant at the .05 level. Therefore, the analysis was conducted with the raw scores. The data were analyzed using a single factor repeated measures analysis of variance technique.[3] Respondents were treated as a random effect and Parts B, C, and D were considered to be a fixed effect.

The Between Teachers effect was significant ($P > .99$). This indicated that the teachers responded to the items differentially according to their own preferences and beliefs. This finding should add to the construct

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[3]Winer, loc. cit., pp. 105-116

validity of the inventory as well as substantiate the finding of heterogeneity of variance in the Part A analysis because of a large variance among teachers.

Table 4

Analysis of Variance of Responses to Parts B, C, and D of Form I (Teachers) by Teachers Concerning Thier Beliefs About the Usefulness and Adequacy of the Project Activities

Source of Variance	Degrees of Freedom	Sums of Squares	Mean Square	F
Between Teachers	30	45.4055	1.5135	8.3250**
Within Teachers	62	11.2738	1.818	
Parts	2	.1967	.983	.2662
Residual	60	11.0771	.3692	
TOTAL	92	56.6793		

**F (30, 62; .01) = 2.03
F (2, 60; .05) = 3.15

The F-test Between Parts Within Teachers was not significant which indicates that the teachers did not show preference for any activity over any other. Inspection of mean scor s of the various parts indicated a moderate degree of agreement concerning the value of the activities but with suggestions of desired modifications as a result of some discontent in each. The mean score of each activity is:

Activity	Mean Rating	Ranking
Workshops	3.6036	1
Music Units	3.5000	2
The Quartet	3.4675	
Overall Mean	3.5237	

Means over items of each part of the instrument and ranking of items in Table 6-8 reflect the results of the statistical tests. An internal

consistency reliability coefficient on responses to items in Parts B, C, and D by the teachers was calculated. The composite coefficient was .756 with a 95 per cent confidence interval for its reliability being .534-.882. This is supportive of the significant difference of response results calculated and shown in Table 4. Even with this relatively low value, however, the coefficient was significantly different from zero ($P < .99$).[4]

Table 5

Frequency of Item Category Responses and Mean Item Responses to Part B Concerned with Adequacy and Usefulness of Music Units

ITEM	Response (N = 32) S A (5)	A (4)	U (3)	D (2)	S D (1)	MEAN RESPONSE	RANK
1	4	17	9	2	0	3.719	3
2	3	12	9	6	2	3.250	5
3	4	3	17	5	3	3.000	6
4	3	16	6	6	1	3.438	4
5	3	22	5	0	2	3.750	2
6	10	13	6	0	3	3.844	1
Σ	27	83	52	19	11	3.500	

[4]Walker and Lev, loc. cit., pp. 244-245.

Table 6

Frequency of Item Category Responses and Mean Item Responses to Part C Concerned With the Effectiveness and Use of the Music Project Workshops

ITEM	Response (N = 31)					MEAN RESPONSE	RANK
	S A (5)	A (4)	U (3)	D (2)	S D (1)		
1	6	14	5	4	2	3.581	4
2	7	13	5	4	2	3.613	2.5
3	8	16	4	3	0	3.935	1
4	8	14	1	5	3	3.613	2.5
5	5	14	5	6	1	3.516	5.5
6	5	13	7	3	3	3.452	7
7	10	5	9	5	2	3.516	5.5
Σ	49	89	36	30	13	3.604	

Table 7

Frequency of Item Category Responses and Mean Item Responses to Part D Concerned with the Extent to Which the Quartet Is Serving Its Purpose

ITEM	Response (N = 32) S A (5)	A (4)	U (3)	D (2)	S D (1)	MEAN RESPONSE	RANK
1	17	10	0	2	3	4.125	1
2	7	11	8	3	3	3.500	8
3	18	6	3	2	3	4.063	2
4	12	10	4	4	2	3.813	3
5	4	14	5	6	3	3.313	11
6	8	16	3	1	4	3.719	4
7	4	9	7	4	8	2.906	12
8	7	14	4	7	0	3.656	5
9	4	13	9	5	1	3.436	10
10	3	14	12	2	1	3.500	8
11	2	7	8	9	6	2.686	13
12	6	11	10	3	1	3.581	7
13	4	2	9	12	5	2.625	14
14	9	10	6	6	1	3.625	6
Σ	105	147	88	66	41	3.469	

IV. Part B of Form II (Administrator) contained eight statements concerning activities related to teaching general music. The respondents were asked to indicate whether any or all have undergone change which they believed to be due to the influence of the Music Project. There were to reflect the extent of change by rating each item on a five point scale ranging from substantially increased to substantially decreased. Responses to Part B are summarized in Table 9. The mean

response for the section was 3.276, even though reverse scoring was more appropriate for item 7. The exclusion of item 7 resulted in a mean score of 3.325. The standard error of the mean was .232. This may be interpreted as indicating some change toward increased activities resulting from the influence of the Music Project.

Table 8

Frequency of Item Category Responses and Mean Item Responses to Part B Concerned With Increase and Decrease of Activities Related to Teaching General Music Due to the Influence of the Music Project

ITEM	Response (N = 29) S I (5)	I (4)	N C (3)	D (2)	S D (1)	MEAN RESPONSE	RANK
1	0	2	27	0	0	3.069	7
2	0	14	15	0	0	3.483	1.5
3	0	4	25	0	0	3.138	6
4	0	11	18	0	0	3.379	5
5	1	10	18	0	0	3.414	3.5
6	2	8	19	0	0	3.414	3.5
7	0	2	23	4	0	2.931	8
8	1	10	17	0	0	3.483	1.5
Σ	5	61	162	4	0	3.276	

Part C of Form II (Administrator) was made up of four statements concerning indicators which may be used to gauge the overall impact of the Music Project in the school and on school children. The administrators were asked to indicate the extent of the impact using a three point scale ranging from substantial to none. Responses to Part C are summarized in Table 9.

The responses in this section are very important to the Project in that they are concerned with evaluating the Project "product." If the

impact were found to be very weak or non-existent and these findings were consistent with the remainder of the results of the evaluation, the effectiveness and worth of the entire Music Project might be open to question.

The mean of the responses for this section is 1.7758 with a standard error of .329. Thus, one may interpret that the project is having an impact ranging from some to substantial. Verification to these findings are located in subsequent analyses.

Table 9

Frequency of Item Category Responses and Mean Item Responses to Part C Concerned with Assessment of Impact of Music Project Activities on the School and on School Children

ITEM	Responses (N = 29) SUBSTANTIAL (1)	SOME (2)	NONE (3)	MEAN RESPONSE	RANK
1	13	15	1	1.586	2
2	3	19	7	2.138	4
3	16	10	3	1.552	1
4	9	16	4	1.828	3
	41	60	15	1.7758	

V. One of the stated goals of the Music Project was to develop a positive attitude of children toward music. This was to be accomplished through the general music teachers' utilization of the activities of the Project. An attempt to measure the change in attitudes of pupils was made by use of a tape test. Thirty musical passages were placed on a tape and children were provided answer sheets and asked to respond to each passage indicating their dislike or like for it by rating it on a five point scale.

Since the Project activities reached the children as a part of class instruction, the class was considered, for analysis purposes, to be the experimental unit. A t-test was made comparing the mean score of fourteen classes randomly selected from all classes participating in the Music Project with fourteen classes within the area who are not participating. The calculated t value was not significant at the .05 level. An examination of sample variance also showed no significant difference. However, failure to reject the null hypothesis may be due to lack of power because of the small number of samples obtained. A check on power resulted in a value of .5, which is rather low.[5] A second factor which might have accounted for no significance was the lack of standardization of the instrument. Thus, the results of the tape test are rather inconclusive.

VI. The remaining sections of the inventory sent to teachers and administrators solicited comments regarding strengths and weaknesses of the Music Project. The statements are summarized below:

A. Administrators

1. Strengths - The overriding belief of the merit of the workshops for the music teachers seems to prevail among the administrators. They further feel that the quartet provides a fine experience for the children and would like to see similar activities incorporated into the Project.

2. Areas Needing Modification - The major complaint dealt with scheduling the quartet. They feel that it would be better used if it could be scheduled to more closely coincide with development of unit objectives. Many administrators would also like to have the quartet perform for other grade levels of children, particularly for younger children. Finally, they feel a need to be made more aware of the purposes and goals as well as the activities of the Project.

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[5] Winer, loc. cit., pp. 104 and 657.

B. Teachers

1. Strengths - There was major endorsement of the idea of live performance in the classroom as a form of educational media. Satisfaction was also expressed with the idea of developing teaching units in general music.

2. Areas Needing Modification - There was considerable discontent with use of the quartet concerning three areas: (1) Scheduling of the quartet was not based on teacher need and/or convenience resulting in lack of effective use, (2) the presentation of the quartet did not coincide with the units being taught resulting from lack of prior coordination between the quartet and the teacher, and (3) the musical selections presented were not suitable to the level of the children.

   The teachers also would like to see further units developed but extended so that they are more comprehensive and incorporate and integrate more activities than presently done.

C. Teachers were asked to enumerate any changes in their patterns or techniques of teaching general music which were influenced directly or indirectly by the Music Project. Below are listed a representative sampling of direct quotations which they made:

"I used the Project as a supplementary cultural activity for my singing classes; it was a broadening experience for teachers and pupils."

"I have added the three teaching units to my curriculum in the 7th grade general music classes."

"I think I did more 'directed' listening after my work with the Music Project."

"Personally, I have been able to teach a more logical and orderly approach to better listening."

"After the quartet has come and played a unit, it is much easier to talk about it...I have been able to get them (the students) to listen to music in a deeper way and they are willing to analyze it more completely."

D. The final part of the inventory asked the teachers to list any curricular modifications or changes in administrative practices which were directly or indirectly influenced by the Music Project. For the most part there were none, which is consistent with the findings in Part C of the Administrators' Form. However, a few changes were made and are indicated below:

"This year our general music classes were scheduled to meet twice a week instead of once a week as was the case last year."

"We are trying to integrate the (Project) units with those of our basic text and supplmentary materials."

"Our instrumental classes are having a better exposure to general music (which they have previously been called in name but not in practice)."

"...more time scheduled for general music classes."

VII. A survey was conducted both formally and informally among the various schools participating in the Music Project in an attempt to ascertain what, if any, changes have occurred among or within the schools since the Project started. These changes are assumed to have been brought about either directly or indirectly as a result of the influence of the Music Project.

A. Ninety-eight per cent of the students are participating in the Music Project as compared with sixty per cent last year.

B. Over 5,240 children have heard the quartet this year as compared to 1,700 children of last year.

C. Sixty-one teachers are involved in the Project this year as compared with thirty-two last year.

D. Approximately seventy per cent of the participating parochial schools are now teaching general music as compared to thirty per cent last year.

E. Four participating public schools are offering general music that did not offer it last year.

F. The general music concept of emphasis on listening has been incorporated in instrumental and vocal classes outside the general music classes in three public schools.

G. The Teacher Advisory Board has taken a more active role in setting up future directions of the project as compared with last year.

H. Teachers are requesting more materials from the WVSEC library of music materials for review than last year.

I. A high percentage of participating teachers attended the workshops, even in instances of inclement weather.

There are many other minor indications of the success of the Music Project which, along with the above items, lead to the logical conclusion that the Project is gaining some momentum in meeting the needs and wants of teachers of general music and their administrators.

Conclusions and Recommendations

One unexpected result of the data analysis was the difference in variance between the administrators' scores and those of the teachers. Examination of the ratings led to the discovery that the variability of scores among teachers was significantly larger than those of the administrators, even though the mean scores of the two groups were essentially identical. In searching for an explanation for this phenomenon, this researcher concluded that the cause might be found in the theoretical reasoning proposed by Spindler.[6] He has hypothesized that the American culture is undergoing a radical transformation in terms of a shift in values. Education and educators are adapting to the shifts as the conditions of life. The trend of the shifts is to move from "traditional" values to "emergent" values.

Spindler conceives the various members of the American Society as lying somewhere on a continuum between the two extreme ends. He sees school administrators, older, and younger teachers placed at varying points on the emergent half of the transformation line. They were so placed because of his belief that "the professional education...that they have acquired in the schools and colleges of education has a clear bias towards an emergent-oriented ethos."[7] However, there is still a wide range among these groups. He concludes that administrators and older teachers will tend toward the traditionalistic value system while younger teachers have attached themselves to emergent values. This is brought about by the differences in the American culture during the periods of their childhood, education, etc.[8]

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[6]George D. Spindler, "Education in a Transforming American Culture," Howard Educational Review, Vol, XXV, No. 3, Summer, 1955, pp. 145-156.

[7]Ibid., p. 152.

[8]Ibid., pp.152-153.

Although the analysis of data from this evaluation can in no way determine the location of the various groups in the value continuum, it certainly lends empirical evidence to the theory of greater divergence among teachers. Since the instrument was designed to measure the constructs of beliefs and attitudes of the two groups, administrators and teachers, the ratings given should reflect the values which they hold.

If indeed the above reasoning is true, the implications to education and to a project such as the WVSEC are enormous. For example, one implication is that we must be aware that no single approach or service will be felt to be of worth by all members of the educational profession. The various schools will, in terms of educational philosophy which is value-based, reflect the values of the community in which it is located. Obviously, these will be greatly diverse from school to school. What does this mean to educators who are attempting to serve the schools? It means that in order to effectively assist the schools in educating children, the teachers themselves with the administrators must concentrate their efforts toward developing sound, measurable, attainable, behaviorally defined objectives for their courses of study. The characteristic of soundness should be determined by knowledge about the psychological development of children, the structure and nature of the various disciplines, and dominant values of the American culture, recognizing the transientness of the values. If we attempt to base our objectives on any of these areas in isolation of the others, we will surely flounder. Therefore, the implication to this specific evaluation is that it is recommended that the participating members of this project give first and foremost attention and effort to the development of educational objectives for the General Music Curriculum. It is further recommended that the

criteria in formulating objectives follow those listed by Sorenson[11] and by Mager[12], and that the Taxonomy of Educational Objectives prepared by Bloom, Krathwohl and others[13] be used as guides. This step is a necessary prelude to all other recommendations listed below.

I. Examination of the results in Part A lead to the following recommendations:

A. The general reaction to the overall value of the Music Project is positive. There is also general agreement that some modifications in the direction of the Project is desirable.

B. An examination of ranking of items indicates a strong feeling for a need for the services offered by the Music Project and the desirability for its continuation next year.

C. The development of listening skills is perceived to be of importance as a focal point for the Project.

D. Teachers and administrators also agree that the media distributed by the Project Center is helpful and that the services result in better teaching by the teachers of general music.

E. Modifications which are deemed to be desirable as evidenced from the ratings include:

1. Expansion of the activities beyond the 7th grade only.

2. The number of contacts by the Project staff with the teachers and administrators should be increased.

3. Consultants should be more readily available to the schools.

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[9]Garth Sorenson, "A New Role in Education: The Evaluator," Evaluation Comment, Center for the Sudy of Evaluation of Instructional Programs, University of California, Los Angeles, Vol. 1, No. 1, January, 1968, pp. 1-4.

[10]Robert F. Mager, Preparing Instructional Objectives, Palo Alto, California, Fearon Publishers, 1962.

[11]Taxonomy of Educational Objectives, Handbook I: Cognitive Domain, Benjamin S. Bloom, ed., New York: David McKay Co., Inc., 1956.

Taxonomy of Educational Objectives, Handbook II: Affective Domain, David R. Krathwohl, et.al., New York: David McKay Co., Inc., 1964.

4. The Advisory Board should make themselves more aware of needs and interests of the schools they serve.

F. Greatest differences of opinion between teachers and administrators lie in the following areas:

1. The adequacy of the approach followed by the Project in providing assistance to the schools. The teachers were less contented than the administrators.

2. Whether services like those offered by the Project should be provided all schools in Indiana. The teachers felt strongly that they should be.

3. The administrators feel much less adequately aware and informed of the purposes of the Music Project than do the teachers.

4. Although ranked low by both groups, the teachers feel even more strongly than the administrators that more time needs to be allowed for planning purposes prior to implementing project activities. This is particularly true concerning the utilization of the quartet.

II. The evaluation of Part D of the Administrators Form and Part E of the Teachers Form with Part A leads to the conclusion that both groups very strongly feel that the Music Project is most worthwhile; an examination of the frequencies in the response categories of Parts D and E lend substance to this conclusion.

III. An examination of Parts B, C, and D of the Teachers' Forms led to the conclusion that the taachers feel that the activities serve about the same degree of usefulness to the General Music Program. In all instances, however, the ratings were only moderate in the extent to which the teachers were satisfied with the manner in which they are functioning.

A. Part B

1. Apparently teachers feel the need for the Music Units in that their greatest area of agreement was that more units should be developed. At the same time, however, they are undecided about whether the units would be useful to all teachers of general music.

2. There is some discontent among teachers concerning the organization of the units. This was also reflected in the remarks section where it was suggested that an effort be made to make the units more inclusive of other subject areas and types of activities.

B. Part C

1. The teachers felt that the time devoted to the workshops was well spent. They feel that the workshops were most valuable to them and that opportunity to exchange ideas with other teachers was also of value.

2. The ratings indicate some preference for a change in organization and structure of the workshops, but do not specify what this should be. This preference, however, is very moderate indicating general satisfaction.

C. Part D

1. The visits by the quartet were deemed to be very helpful in the promotion of the General Music goals. Particularly, they aided in the development of listening skills in the children. The teachers also believe that presenting the music in a classroom setting aided in the accomplishment of their purposes.

2. More time for planning and coordinating the efforts of the quartet with the teacher seems to be needed in order to provide more meaningful learning experiences for the children. Further, the teachers would like to have the quartet visit their classes more frequently. Finally, they would like to have more materials and assistance for implementing the quartet into the teaching units.

IV. The Project has been effective in making the music teachers more aware of the need for the development and utilization of educational media and for professional enhancement. The effects are being felt also by pupils. Increased numbers of music-related activities and by increased selections in music-related materials within the school library were noted by administrators. Further, the administrators indicated a decrease in disciplinary problems arising in general music. This might be due to greater interest on the part of the children toward the general music program. The changes in children's attitudes toward music have been even noticed by parents who have commented about these changes to school personnel.

Although there are few changes in the amount of time scheduled for general music, administrators and teachers have noted the occurrence of

significant modifications in the curricular offerings in general music relative to course content and structure.

Summary

The purpose of this evaluation was to try to estimate the extent to which the Music Project of the Wabash Valley Supplementary Educational Center was meeting its goals and to provide a base for decision making for future directions of the Project. The evaluation was a multi-facet program designed to gain the above information through examining school administrators, teachers, and children. Additional qualitative information about activities of the participating schools was used to supplement the instrumentation aspect of the study.

The results of the evaluation leads to the conclusion that the Project seems to be attaining its goals to a noticeable degree and that it is perceived to be very worthwhile by public school personnel. The belief in the importance and worthiness of the Project was reflected in all aspects of the evaluation to a consistently strong extent. Some changes of direction and procedures are evidently desired by participating schools in terms of clarification of goals, better communication between public school personnel and Project staff members, and restructure of some of the project activities, but general satisfaction with the Project was evident.

Finally, it appears that the Project is having an additional desired, though unstated, effect on the public schools. This effect is that general music teachers and university personnel are taking a closer look at the course entitled "General Music." What are the objectives of such a course and how best can they be reached? Possibly the influence causing this reexamination may be the most far-reaching contribution of the Project.