This dissertation has been microfilmed exactly as received

McKINNEY, Lorella Almedia, 1925–
STAFF UTILIZATION PRACTICES IN THE PUBLIC SECONDARY SCHOOLS OF OHIO.

The Ohio State University, Ph.D., 1963
Education, general

University Microfilms, Inc., Ann Arbor, Michigan
STAFF UTILIZATION PRACTICES IN THE PUBLIC
SECONDARY SCHOOLS OF OHIO

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

by
Lorelia Almedia McKinney, B. S., M. A.

Approved by

Advisor
Department of Education
ACKNOWLEDGMENTS

The cooperation, assistance, and encouragement of many persons have aided the writer in bringing this research to its completion. To all those persons, the writer is sincerely grateful.

The wise counsel, patience, and understanding of Dr. C. B. Mendenhall, adviser, and of Dr. W. Frederick Staub, advisory committee member, are deeply appreciated, for they willingly and untiringly gave the writer their assistance during the completion of her doctoral program and the writing of this dissertation. The writer is deeply indebted to Dr. Hugh D. Laughlin for his kind assistance in serving on the reading committee.

Other persons to whom the writer is indebted include the respondents to the Questionnaire sent to public school superintendents of Ohio; the superintendents of the selected school districts who gave the writer permission for further study; and the administrators, teachers, and students who so kindly and willingly responded in interviews with the writer.

Finally, special acknowledgment goes to the writer's father, two brothers, their wives and children for their encouragement, sympathetic interest, and/or helpful assistance during the past three years.

L. A. M.
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td></td>
</tr>
<tr>
<td>TABLES</td>
<td></td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td></td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>1</td>
</tr>
<tr>
<td>Questions to be answered</td>
<td>2</td>
</tr>
<tr>
<td>Background of and Need for Study</td>
<td>3</td>
</tr>
<tr>
<td>Purposes of Study</td>
<td>9</td>
</tr>
<tr>
<td>Basic Assumptions and Definitions</td>
<td>9</td>
</tr>
<tr>
<td>Related Studies</td>
<td>12</td>
</tr>
<tr>
<td>Limitations of Study</td>
<td>17</td>
</tr>
<tr>
<td>Procedures and Sources of Data</td>
<td>18</td>
</tr>
<tr>
<td>Significance of Study</td>
<td>23</td>
</tr>
<tr>
<td>Preview of Succeeding Chapters</td>
<td>24</td>
</tr>
<tr>
<td>II. INTRODUCTION, DISCUSSION, AND FINDINGS OF OHIO</td>
<td></td>
</tr>
<tr>
<td>QUESTIONNAIRE DATA</td>
<td>25</td>
</tr>
<tr>
<td>Questionnaire</td>
<td>25</td>
</tr>
<tr>
<td>Per cent of questionnaires returned</td>
<td>26</td>
</tr>
<tr>
<td>Geographical distribution of return</td>
<td>27</td>
</tr>
<tr>
<td>Tabulation of responses</td>
<td>28</td>
</tr>
<tr>
<td>N.A.S.S.P. affiliation of Respondents</td>
<td>29</td>
</tr>
<tr>
<td>Analysis of Questionnaire Data</td>
<td>29</td>
</tr>
<tr>
<td>Team teaching</td>
<td>30</td>
</tr>
<tr>
<td>Student grouping for special purposes</td>
<td>35</td>
</tr>
<tr>
<td>Teacher aides</td>
<td>39</td>
</tr>
<tr>
<td>Schedule changes</td>
<td>43</td>
</tr>
<tr>
<td>Technological devices</td>
<td>47</td>
</tr>
<tr>
<td>Other procedures</td>
<td>52</td>
</tr>
<tr>
<td>Evaluation procedures</td>
<td>54</td>
</tr>
<tr>
<td>Findings for &quot;Questions to Be Answered&quot;</td>
<td>56</td>
</tr>
</tbody>
</table>
## CONTENTS (contd.)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>III. COMPARISON OF FINDINGS IN CHAPTER II WITH FINDINGS OF SIX-STATE SURVEY</td>
<td>69</td>
</tr>
<tr>
<td>Six-state Survey Questionnaire</td>
<td>69</td>
</tr>
<tr>
<td>Per cent of questionnaires returned in six-state survey</td>
<td>70</td>
</tr>
<tr>
<td>Tabulation of responses</td>
<td>70</td>
</tr>
<tr>
<td>Possible Limitations of Comparison of the Two Surveys</td>
<td>70</td>
</tr>
<tr>
<td>Comparative Analysis of Findings of Two Surveys</td>
<td>71</td>
</tr>
<tr>
<td>Team teaching compared</td>
<td>71</td>
</tr>
<tr>
<td>Student grouping for special purposes compared</td>
<td>74</td>
</tr>
<tr>
<td>Teacher aides compared</td>
<td>77</td>
</tr>
<tr>
<td>Schedule changes compared</td>
<td>79</td>
</tr>
<tr>
<td>Technological devices compared</td>
<td>81</td>
</tr>
<tr>
<td>Summary</td>
<td>85</td>
</tr>
<tr>
<td>IV. DEPTH STUDY OF PRACTICES IN TWELVE OHIO SCHOOL DISTRICTS</td>
<td>89</td>
</tr>
<tr>
<td>Existing and/or Contemplated Practices Described</td>
<td>91</td>
</tr>
<tr>
<td>Team teaching and other innovations in a county school</td>
<td>91</td>
</tr>
<tr>
<td>&quot;Basic concepts,&quot; a form of team teaching</td>
<td>115</td>
</tr>
<tr>
<td>Teaching ventures in the arts and in science</td>
<td>125</td>
</tr>
<tr>
<td>Team teaching, teacher aides, and technological devices</td>
<td>139</td>
</tr>
<tr>
<td>Three-year experiment with schedule changes</td>
<td>163</td>
</tr>
<tr>
<td>Tuition summer school, programmed learning, reading</td>
<td>171</td>
</tr>
<tr>
<td>Accelerator machines, and audio-visual equipment</td>
<td>171</td>
</tr>
<tr>
<td>The use of the language laboratory and a student training program in audio-visual aids</td>
<td>193</td>
</tr>
<tr>
<td>Some use of technological devices</td>
<td>203</td>
</tr>
<tr>
<td>An evaluation of &quot;airborne&quot; television</td>
<td>221</td>
</tr>
<tr>
<td>Relief from many clerical duties</td>
<td>235</td>
</tr>
<tr>
<td>Contemplated involvement with staff utilization practices</td>
<td>260</td>
</tr>
<tr>
<td>Brief Overview of Range of Practices Described</td>
<td>271</td>
</tr>
<tr>
<td>Team teaching</td>
<td>271</td>
</tr>
<tr>
<td>Student grouping for special purposes</td>
<td>272</td>
</tr>
</tbody>
</table>
## CONTENTS (contd.)

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher aides</td>
<td>273</td>
</tr>
<tr>
<td>Schedule changes</td>
<td>273</td>
</tr>
<tr>
<td>Technological devices</td>
<td>273</td>
</tr>
<tr>
<td>Analysis of Data with Reference to &quot;Questions to Be Answered&quot;</td>
<td>275</td>
</tr>
<tr>
<td>Team teaching</td>
<td>275</td>
</tr>
<tr>
<td>Student grouping for special purposes</td>
<td>281</td>
</tr>
<tr>
<td>Teacher aides</td>
<td>284</td>
</tr>
<tr>
<td>Schedule changes</td>
<td>287</td>
</tr>
<tr>
<td>Technological devices</td>
<td>290</td>
</tr>
<tr>
<td>Findings for &quot;Questions to Be Answered&quot;</td>
<td>295</td>
</tr>
<tr>
<td>V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS</td>
<td></td>
</tr>
<tr>
<td>Résumé</td>
<td>302</td>
</tr>
<tr>
<td>Overview of tasks completed</td>
<td>302</td>
</tr>
<tr>
<td>Data analyses procedures</td>
<td>303</td>
</tr>
<tr>
<td>Staff utilization practices</td>
<td>303</td>
</tr>
<tr>
<td>Two surveys compared</td>
<td>325</td>
</tr>
<tr>
<td>Conclusions</td>
<td>326</td>
</tr>
<tr>
<td>Recommendations</td>
<td>342</td>
</tr>
<tr>
<td>A final word to those contemplating involvement</td>
<td>345</td>
</tr>
<tr>
<td>APPENDIX</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>347</td>
</tr>
<tr>
<td>B</td>
<td>366</td>
</tr>
<tr>
<td>C</td>
<td>382</td>
</tr>
<tr>
<td>D</td>
<td>386</td>
</tr>
<tr>
<td>E</td>
<td>439</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>445</td>
</tr>
<tr>
<td>AUTOBIOGRAPHY</td>
<td>449</td>
</tr>
</tbody>
</table>

vi
# TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Per Cent of Responding Ohio School Districts</td>
<td>31</td>
</tr>
<tr>
<td>Indicating the Existence of and/or the Contemplation</td>
<td></td>
</tr>
<tr>
<td>of Involvement with Team Teaching as Public Secondary School</td>
<td></td>
</tr>
<tr>
<td>Practice as of June, 1962</td>
<td></td>
</tr>
<tr>
<td>2. The Per Cent of Responding Ohio School Districts</td>
<td>36</td>
</tr>
<tr>
<td>Indicating the Existence of and/or the Contemplation</td>
<td></td>
</tr>
<tr>
<td>of Involvement with Student Grouping for Special Purposes as Public</td>
<td></td>
</tr>
<tr>
<td>Secondary School Practice as of June, 1962</td>
<td></td>
</tr>
<tr>
<td>3. The Per Cent of Responding Ohio School Districts</td>
<td>40</td>
</tr>
<tr>
<td>Indicating the Existence of and/or the Contemplation</td>
<td></td>
</tr>
<tr>
<td>of Having Teacher Aides as Public Secondary School Practice as of</td>
<td></td>
</tr>
<tr>
<td>June, 1962</td>
<td></td>
</tr>
<tr>
<td>4. The Per Cent of Responding Ohio School Districts</td>
<td>44</td>
</tr>
<tr>
<td>Indicating the Existence of and/or the Contemplation</td>
<td></td>
</tr>
<tr>
<td>of Involvement with Schedule Changes as Public Secondary School</td>
<td></td>
</tr>
<tr>
<td>Practice as of June, 1962</td>
<td></td>
</tr>
<tr>
<td>5. The Per Cent of Responding Ohio School Districts</td>
<td>48</td>
</tr>
<tr>
<td>Indicating the Existence of and/or the Contemplation</td>
<td></td>
</tr>
<tr>
<td>of Use of Technological Devices as Public Secondary School Practice</td>
<td></td>
</tr>
<tr>
<td>as of June, 1962</td>
<td></td>
</tr>
</tbody>
</table>

Appendix Table

<table>
<thead>
<tr>
<th>Appendix Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. The Number of Responding Ohio School Districts Indicating</td>
<td>440</td>
</tr>
<tr>
<td>the Existence of and/or the Contemplation of</td>
<td></td>
</tr>
<tr>
<td>Involvement with Team Teaching as Public Secondary School Practice as of</td>
<td></td>
</tr>
<tr>
<td>June, 1962</td>
<td></td>
</tr>
<tr>
<td>II. The Number of Responding Ohio School Districts Indicating the</td>
<td>441</td>
</tr>
<tr>
<td>Existence of and/or the Contemplation of Involvement with Student Grouping</td>
<td></td>
</tr>
<tr>
<td>for Special Purposes as Public Secondary School Practice as of June, 1962</td>
<td></td>
</tr>
<tr>
<td>III. The Number of Responding Ohio School Districts Indicating the</td>
<td>442</td>
</tr>
<tr>
<td>Existence of and/or the Contemplation of Having Teacher Aides as Public</td>
<td></td>
</tr>
<tr>
<td>Secondary School Practice as of June, 1962</td>
<td></td>
</tr>
</tbody>
</table>
TABLES (contd.)

Appendix Table

| IV. The Number of Responding Ohio School Districts Indicating the Existence of and/or the Contemplation of Involvement with Schedule Changes as Public Secondary School Practice as of June, 1962 | 443 |
| V. The Number of Responding Ohio School Districts Indicating the Existence of and/or the Contemplation of Use of Technological Devices as Public Secondary School Practice as of June, 1962 | 444 |
CHAPTER I

INTRODUCTION

Statement of Problem

This study is a survey to determine what staff utilization practices exist and/or are contemplated in Ohio public secondary schools, to discover where practices are most extensive, and then to follow up in depth the practices in selected school districts. Through analysis of data collected from the literature, from questionnaires, correspondence, interviews, observations, and school records, it is hoped that insights into and understandings of problems and successes encountered by schools as these practices have been initiated and established may be identified.

A state-wide survey has attempted (1) to determine what practices exist and/or are being contemplated; (2) to discover varieties of implementation; (3) to discover the effect of these practices in different areas of the curriculum; (4) to identify for selection those districts indicating marked activity existing and/or contemplated in order to get detail of promising individual projects; and (5) to identify and compare trends in Ohio practices with those of the six-state survey directed by J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.
Depth study in selected school districts has provided more detailed accounts of promising individual projects. Interviews, observations, and school records have afforded insights and understandings which are difficult to gain through questionnaires.

Questions to Be Answered

The following are questions to which answers were sought from state-wide questionnaire data:

1. What is the status of staff utilization practices existing in Ohio public secondary schools?

2. What is the status of staff utilization practices contemplated by Ohio public secondary schools?

3. What is the relationship, if any, of staff utilization practices to types of school districts or to curriculum areas?

4. What varieties of implementation of staff utilization practices are indicated in addition to those areas chosen for this study?

5. What are the status and nature of evaluation procedures used in relation to these practices?

6. What are the trends in staff utilization practices in Ohio public secondary schools?

From understandings and details gained through sources such as interviews, observations, and school records in selected school

---

1 Procedures for selection are given on pp. 20-21.
districts, further insights and answers were sought to the following questions:

1. For what purposes were the practices initiated? When were the practices initiated?

2. Is the extent of practices related to grade level?

3. What is the nature of the leadership and planning provided for establishing the practices?

4. Are there established communication lines for coordinating, understanding, and/or promoting practices?

5. What factors seem to inhibit experimentation in Ohio public secondary schools?

6. Did research and evaluation precede planning for the innovations or do they accompany the practices?

7. What problems and successes do staff and pupils identify in the initiation and establishment of staff utilization practices?

8. What direction do those in position of leadership expect these practices to take in their local schools?

**Background of and Need for Study**

Improvement of instruction had been generally recognized in theory if not in fact as a major concern of professionals in the field of education. J. Franklin Bobbitt, early in the 1900's, gave impetus to concern for general curriculum development and the importance of staff

---

2 "Extent" here refers to numbers of students experiencing these practices for given periods of time.
involvement in curriculum development to facilitate implementation of change.

Recently, action research has gained recognition as a means for curriculum improvement. Action research emphasis is that of in-service education as it contributes to educational improvement and change. Evidence does not indicate that merely requiring certain "subjects" modifies behavior. It is generally agreed, however, that experiences in the classroom under the guidance and direction of a skilled teacher do modify behavior. "The heart of the instructional improvement program is the fostering of teacher effectiveness in the classroom."^3

More recently, there has been concern for excellence in education as indicated in the Rockefeller Report on Education, and as discussed by Conant, Rickover, Adler, and others. It has often been maintained that a school is a good school if it has an efficient and well-qualified staff. "The staff and the way in which it functions is the primary requisite for a good school program."^4

Democracy demands both "quantity" and "quality" education. Concern for quality as well as quantity is not new, but it is becoming more and more crucial.

Revolutionary changes are occurring in American education of which even yet we are only dimly aware. The Nation has been propelled into a challenging new educational era since

---


World War II by the convergence of powerful forces—an explosion of knowledge and population, a burst of technological and economic advance, the outbreak of ideological conflict and the uprooting of old political and cultural patterns on a worldwide scale, and an unparalleled demand by Americans for more and better education. . . . The gap between this Nation's educational needs and its educational effort is widening ominously. 5

It is an inescapable fact that the quality of education in any part of our country affects every other part. "Educated men and women are America's most valuable resource; its people cannot fail to meet the cost of educational services for a greater proportion of youth and an improved quality of education for all boys and girls of high-school age." 6

A major problem to be faced in the wake of concern for "quality" education, then, is the need simultaneously to deal with "quantity" education as compulsory education and Child Labor laws have been enforced and as birthrates have increased. The current supply of qualified teachers does not meet the demand for teachers. Projected enrollments and teacher supply indicate that still greater needs are in the picture of future staffing of the schools. "The next decade may see enrollments double with no similar doubling of the number of qualified faculty." 7 Colleges also recognize the problem of increased college enrollments by 1970.


... It is high time all professors and administrators began seriously and systematically to consider new resources and better use of old resources, for if we do not we shall find ourselves unprepared when the time for decision comes—and, as has happened before in the history of education, have unwise and unwelcome adaptations and compromises forced upon us.

Attracting, selecting, and retaining highly qualified teachers is a formidable problem. "The shortage of personally well-adjusted, competent and well-educated teachers has been and will be the most critical problem of education in the foreseeable future."

Herein it is recognized that educators have for many years been faced with a complex of concerns: improvement of instruction, in-service education, resistance to change, "quantity" education, "quality" education, and the common thread to all of the before-mentioned concerns—supply of and demand for qualified teachers to educate all youth to their optimum development. The problem has become this: How can "quality" education be provided in spite of an acute shortage of teachers? As early as 1955, approximately 45,000 more teachers than were available were needed in our high schools.

Members of the National Association of Secondary-School Principals were concerned about the teacher shortage and about the danger of lowering the quality of education if emergency measures were not taken to meet the problem. As a result of this concern, the Association established the Commission on the Experimental Study of the Utilization of

---

8 Martin Ten Hoor, "Before Us, the Deluge!" Liberal Education, XLVII (October, 1961), p. 496.

9 Leadership for Improving Instruction, op. cit., p. 120.
the Staff in the Secondary Schools in January, 1956. The purpose of
this Commission was to implement "A Proposal Designed to Demonstrate How
Improved Teacher-Utilization Can Help to Solve the Problem of Teacher
Shortage in the High Schools of the United States." Further interest
in staff utilization practices was spurred by national distribution of
J. Lloyd Trump's publications, *Images of the Future*, *New Directions to
Quality Education*, and *New Horizons for Secondary School Teachers*.
Additional interest was stimulated through showing of the film, *And No
Bells Ring*. In 1961, Trump and Baynham published *Guide to Better
Schools* which is an effort to provide bases for decisions about change
that every school will make.

It is interesting to note that Archibald B. Shaw and John Lyon
Reid authored in 1956 a no-less-significant plan than that of Trump
known as the "Random Falls Idea," a hypothetical plan for taking a new
look at secondary education. Perhaps this plan did not gain widespread
recognition because it was not sponsored or financed experimentally by
an organization or a foundation. The general approach to drawing up
the plan for the "Random Falls Idea" significantly parallels the
approach of Trump in his proposal, namely, that these practices exist in
part, but not wholly, in many different schools.

Further studies in staff utilization will make a significant
contribution if the quality of education can be improved, even with
increased numbers of students.

The need is great for carefully conducted experiments in all
aspects of education. Care should be exerted locally and at state levels
to guard against expediency being substituted for sound educational
planning. Change for the sake of change is not sought by educators; however, the guise of "progress" dares not weaken but must strengthen the process of education. Progress is measured in terms of what happens to boys and girls while they are under school supervision. John Stuart Mill wrote in 1867 that "men are men before they are lawyers or physicians or manufacturers, and if you make them capable and sensible men they will make themselves capable and sensible lawyers and physicians."

"An appropriate organization of secondary education must be constructed and plans for administering these schools must be created that are wholly in keeping in form and spirit with the school's major role."

The schools can carry out the assignments of the people only to the extent that they have a staff with the necessary abilities organized in the most effective way. Use of personnel and their qualifications seem to be paramount as problems are faced dealing with "quality" and "quantity" education.

In this section is indicated a need for (1) increased experimentation and research at state and local levels to find improved ways to utilize most effectively and efficiently qualified staff members at secondary school level; and (2) sharing and disseminating as rapidly as possible procedures and practices that have proved useful.

A review of the literature does not reveal that a state-wide survey of staff utilization practices has yet been made in Ohio. A

---

conference with Glen A. Rich, Director of Elementary and Secondary Education, the State of Ohio Department of Education, confirmed this fact. Since there is no substantial evidence available as to the status of staff utilization practices in Ohio, it would seem feasible to make a survey of staff utilization practices in public secondary schools of Ohio to discover and analyze what practices exist and/or are contemplated.

Purposes of Study

One purpose of this study is to discover what staff utilization practices exist and/or are contemplated in Ohio public secondary schools. A state-wide survey should determine where practices are most extensive; depth study in selected schools should provide detailed description of representative and varied staff utilization practices in Ohio public secondary schools.

Findings of this survey will be compared to those of the six-state survey of the Commission on Experimental Study of the Utilization of the Staff in the Secondary Schools appointed by the National Association of Secondary-School Principals.

The over-all purpose of this study is to indicate focus, locus, and direction of change in staff utilization practices in Ohio public secondary schools.

Basic Assumptions and Definitions

In Ohio, public secondary schools are organized as six-year, four-year, or junior or senior high schools according to the grade levels enrolled. It is therefore assumed that Ohio school districts having
high schools chartered by the State Board of Education represent public secondary schools of Ohio and, in general, represent grade levels 7-12, since Ohio elementary schools are organized as K-6 or K-8. Grade levels seven and eight are considered not to be a part of public secondary schools in those instances in which the elementary schools are organized as K-8.

Since this study is a survey conducted to establish the nature of existing and/or contemplated staff utilization practices in Ohio public secondary schools, it is assumed that the study cannot be evaluative, nor is it intended to be exhaustive. Rather, it is considered to be representative of ways to utilize staff effectively.

This study considers organizational or administrative factors which alone do not guarantee "quality" education. Alone, it is assumed that they can provide at best an environment conducive to improved learning.

"Staff utilization practices" is a term which has been coined since the year 1956, approximately. As is frequently the case, the term is often used without its being defined. The term has only in recent years been used as a classification for periodical literature in the Education Index. For purposes of this study, staff utilization practices are the general way in which a staff is organized and deployed in the time, space, and program that can best be provided. The five elements to be representative of staff utilization practices herein are team teaching, student grouping for special purposes, teacher aides, flexible scheduling, and technological devices.
Team teaching is an arrangement whereby two or more teachers with or without teacher aides plan, instruct, and evaluate cooperatively one or more class groups during a given period or periods in order to take advantage of their respective special competencies. It is therefore any organizational procedure which allows two or more teachers to pool their knowledge and talents in the instruction of a larger number of pupils than an individual teacher would normally handle alone. This concept of team teaching does not include the resource teacher or person who occasionally assists a classroom teacher.

Student grouping for special purposes is the practice of varying the size and composition of classes to fit specific methods of instruction and content in order to improve student learning and utilize staff better. This grouping has as its purpose large-group instruction, small-group discussion, and independent study. It does not include homogeneous or ability grouping.

A teacher aide is any employed person working in the school or at home in order to assume some of the duties conventionally handled by teachers; for example, clerks, student aides, lay readers, laboratory assistants, and other non-certificated persons. The sources of these aides may be student teachers from teacher-training programs, college students who are non-teacher trainees, clerical workers, community adults who are college trained, or other adults who are not college trained or clerks.

Schedule changes signify the fact that schedules are more flexible because of modifications which affect the length and/or the number of periods, which lengthen the school year, or which provide for
new types of activities. In other words, schedule changes break away from the traditional rigid or lock-step scheduling. These changes may be for the purpose of providing flexibility for student or for teacher.

Technological devices are automated devices affecting instructional improvement and assisting the teacher to be effective. Technological devices have long been used to enrich instruction; they now accompany the development of teacher teams, the use of teacher aides, and the redeployment of students. Included are such aids as overhead projectors, tape recorders, television, teaching machines, programmed books, and the like.

The eight curriculum areas considered in this study are English, social studies, mathematics, science, foreign language, practical arts, fine arts, and physical education and health.

**Related Studies**

In 1956, the Commission on the Experimental Study of the Utilization of the Staff in the Secondary Schools, appointed by the Executive Committee of the National Association of Secondary-School Principals, began to conduct and evaluate studies to try to discover what might be done to improve and maintain the quality of education in the face of an inadequate supply of teachers. Staff utilization studies of the Commission were made in nearly one hundred junior and senior high schools in the United States. More than $1,000,000 expended on the Commission's four-year program was received by the National Association of Secondary-School Principals from the Fund for the Advancement of Education and the Ford Foundation. The record of the Commission's studies is significant, and accounts of the experiments sponsored by the

The January, 1958, issue gives reports of experimental studies sponsored by the Commission during its first year of existence, 1956-1957. Also included are statements indicating the interest of the National Association of Secondary-School Principals, Fund for the Advancement of Education, state departments and accrediting agencies, secondary education specialists, and higher education institutions in experimental staff utilization studies.

The January, 1959, issue presents reports of some fourteen, beginning, ongoing, or completed staff utilization studies, one of which is a state-wide effort involving fifteen school systems. There is also included a report of a research and development program in the South being conducted by the George Peabody College for Teachers. A wide variety of practices is reported herein; all represent creative efforts on the part of those involved. Both successes and failures are described with the expectation that professional judgment will need to determine what modifications may be needed to improve the practice if it were to be attempted in one's own school situation.

The January, 1960, issue reports major developments in staff utilization experimentation during the year 1959. The Commission became involved with additional projects just started and it continued cooperation with ongoing studies. It was during this year that ideas about the secondary school of the future evolved and different methods of reporting experimental ideas were utilized.
During these years the Commission maintained contact with studies sponsored by other groups but related to its purpose. Two of these were the Upper Catskill Project in Small School Design and the Rocky Mountain Area Project for Small High Schools.

An evaluation of the first two years of the Commission program was conducted by Beryl Dillman for doctoral dissertation purposes. This study indicates that, although completed work of the Commission is yet to be evaluated, the Commission's four-year project will likely take its place among other outstanding efforts aimed to improve education. The Commission's work is likened to that of the Eight-Year Study by Dillman, for each was given freedom in selecting the nature of the experimentation, yet no project was approved until studies were clearly outlined and certain criteria were met.

The January, 1961, issue of the Bulletin of the National Association of Secondary-School Principals is the fourth and final annual report of studies conducted over a four-year period by the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, appointed in 1956. This issue continues to report on experimental studies completed in 1960 and the seven studies completed in previous years. An announcement of the appointment of a new Committee on Staff Utilization, and of the receipt of a financial grant from the Fund for the Advancement of Education is included in the report; thus the National Association of Secondary-School Principals made it known that it can continue its services to schools interested in improving staff utilization. The purpose of the Committee has been to disseminate information to secondary schools interested in experiments which had
been sponsored by the four-year Commission and to assist in a limited fashion schools wishing to learn about and to initiate varied staff utilization procedures.

Perhaps the most significant study completed to date by the Committee is that reported in the January, 1962, Bulletin of the National Association of Secondary-School Principals. The Committee undertook and completed a six-state survey of staff utilization practices in the secondary schools of California, Colorado, Illinois, Georgia, Michigan, and New York, the home states of members of the Committee. The purposes of the survey were to determine the extent of the practices, to discover varieties of implementation, to discover the effect of these practices upon different areas of the curriculum, and to follow up those districts recording marked activity so that detailed accounts of promising individual projects might be made. The Committee wanted to learn about schools not sponsored by the 1956-1960 Commission as well as about those that were. This fact accounts for the reports in the January, 1962, Bulletin of some 100 schools experimenting with staff utilization practices which were not among the Commission's original 100 junior and senior high schools.

It would seem that there is no question but that the achievements of the Commission and the recent efforts of the Committee have made a contribution to the end that all must constantly strive for the accomplishment of the goals of secondary education even though they may never be achieved in toto. The National Association of Secondary-School Principals encourages all schools involved to any degree with staff
utilization practices to keep the Association informed of local and/or state practices that exist and of experimentation underway.

Progress requires change. If there is to be significant improvement in education, schools must make effective and imaginative use of all their resources—time, space, program, staff, as well as money.11

In a recent letter, J. Lloyd Trump, Secretary of the Committee on Staff Utilization, indicated that a staff associate of the Committee on Staff Utilization, William Ramstad, is attempting to determine the extent to which community-junior colleges have adopted staff utilization practices similar to those studied by the Committee in its six-state survey of secondary schools. In the cover letter of his questionnaire, Ramstad indicates that "all public junior colleges in the United States are being surveyed..." He further states that colleges will not be identified in the published report of his findings; however, the results will be made available to participating institutions.

One can readily see from findings of related studies that many schools and leaders in the field of education are interested in trying new ideas, modifications of new ideas and innovations; there is evidence that many school people are looking for new ways and means for improving the quality of instruction while faced with increased numbers of youth to be educated and an inadequate supply of trained staff.

Limitations of Study

This study is not concerned with an evaluation of staff utilization practices, but instead is a survey of five elements of practices, namely, team teaching, student grouping for special purposes, teacher aides, schedule changes, and technological devices—all of which are representative of ways to utilize staff effectively. The elements selected for this study are limited to those of the six-state survey of the Committee of Staff Utilization completed in 1961, for purposes of comparing Ohio data with that of the six-state survey.

The initial state-wide survey of practices in Ohio public secondary schools is limited to questionnaires distributed to city superintendents, county superintendents, and exempted village superintendents of schools. The follow-up in selected schools having or contemplating marked activity in one or more of the five elements of staff utilization practices is limited to interviews with administrators, supervisors, teachers, and students in the district who in the judgment of the district's superintendent have been involved with the staff utilization practices.

Limitation of responses in the initial survey to administrative personnel is recognized as possibly giving a somewhat biased view of what exists, since the classroom teacher who actually implements change could assist in clarifying expressed views. The classroom teacher is, however, among those interviewed in selected schools for depth study.

This study is limited to organizational or administrative factors which alone do not guarantee "quality" education. They can provide at best an environment conducive to improved instruction.
Finally the survey is limited to determining the nature of what exists. "The survey does not aspire to develop an organized body of scientific laws but provides information useful in the solution of local problems."\textsuperscript{12} Findings from follow-up interviews in selected schools should enhance the usefulness of the findings in the initial survey.

**Procedures and Sources of Data**

Data for this study were collected from questionnaires, a study of current literature, school records, correspondence, observations, and interviews. The design of the study is descriptive-survey.

Initial questionnaires were distributed to the superintendent of each city, county, and exempted-village school district in Ohio. See Appendix A, pages 347-365, for samples of the questionnaires. The total number of questionnaires distributed were 307-151 to city school district superintendents, 88 to county school district superintendents, and 68 to exempted-village school district superintendents. Questionnaires were identified to assure a representative sample in return. A different color of paper was used for questionnaires distributed to superintendents of the three types of school districts—white paper for questionnaires to city school superintendents; blue paper for questionnaires to county school superintendents; and pink paper for questionnaires to exempted-village school superintendents.

Data secured from the questionnaires (state-wide) included

(1) identification of school district; (2) affiliation with N.A.S.S.P.;

---

(3) the nature of experimentation or practice existing (classification of one or more of the five elements of staff utilization practices); (4) the nature of practices contemplated; (5) the location of practices by curriculum area and by grade level; (6) the extent of the practice indicated, whether set up as a pilot or control group, for a grade level, for an entire building, or for the entire school district; (7) evaluation procedures used for the practice; (8) communication practices accompanying the experimentation; and (9) the time at which the practice was initiated.

An attempt to pursue in depth answers to concerns in the above areas was made in selected school situations through the interview technique. Follow-up interviews in selected school districts, after state-wide data had been processed, were made with administrators, supervisors, teachers, and students in the local situation. The superintendent designated the responsibility of follow-up responses to those local educational leaders who in his judgment were most knowledgeable of the practice or practices. A few students were selected at random by the classroom teacher for interview purposes.

Data from interviews with administrators, supervisors, teachers, and students in the selected schools included (1) the purpose(s) of the innovation(s); (2) the background for the practice(s)—including the school setting (staff and students) and the nature of the community (parents and citizens); how initiated, including the leadership and planning involved; evidence of communication practices; evidence of evaluation and research; (3) a complete description of plans and procedures; and (4) identification of problems and successes experienced. See
Appendix C, pages 382-385, for lists of open-ended questions and for a
copy of the check list of inhibiting factors to experimentation used in
interviews in selected schools.

The composite of schools was selected for depth study in terms of
the following factors:

1. to be representative of the five elements of staff
   utilization practices chosen for this study: team teaching,
   grouping for special purposes, teacher aides, schedule
   changes, and technological devices.

2. to be representative of varied practices existing and con­
templated in any one of the five elements of staff utiliza­
tion practices listed above.

3. to be representative of unique experimentation. (Unique is
defined for purposes of this study as being without a like
or equal, relative to data reported in returned questionnaires
by Ohio school superintendents.)

4. to be representative of the evaluation procedures being
   utilized and developed.

5. to be representative of types of school districts.

6. to be representative of the length of time the innovations
   have been practiced.

7. to be geographically distributed throughout the state of Ohio.

Sorting of questionnaires in terms of the selection factors
listed was done in the order of the factors as they are listed above.

For example, questionnaires were pulled first for those school districts
which were involved in, or contemplated involvement in, all five of the elements of practices. Second, remaining questionnaires were sorted in terms of degree of involvement existing or contemplated in any one of the five elements of practices considered herein. Third, questionnaires remaining were then pulled in terms of factors of uniqueness, evaluation procedures, types of school districts, length of time involved in the practice, and geographical distribution, in that order. Further sorting of pulled questionnaires was then done in order to eliminate duplication and large numbers of schools, yet to retain an over-all selection representative of the seven factors for selection. Situations in twelve school districts were finally selected for depth study, through the procedures outlined.

Letters were sent to the superintendents of each of the twelve school districts represented by the twelve situations selected, requesting permission for visitation and depth study. See copies of those letters in Appendix B, pages 366-381. Shortly, phone calls were made to those superintendents to make final arrangements for visitation and interviews.

Personnel and a few students involved with the various practices in the selected school situations were then interviewed. These practices were also observed in the classroom when possible. Pertinent mimeographed materials and school records were collected and/or reviewed.

Verification of data collected in interviews and by observations was made by personnel involved with the practices in their respective situations prior to the writing herein of descriptive reports of the practices.
Every effort was made to disseminate the information collected in the selected school systems for purposes of sharing insights and understandings gained in selected local situations with others who may wish to study these practices or who may contemplate experimenting with them. It is hoped that assistance and encouragement will thus be given to anyone interested in any effort in the improvement of education—in Ohio or elsewhere—through concern for effective utilization of staff.

Ira J. Singer, School of Education, New York University, New York, was contacted by letter to request details of the six-state survey of staff utilization practices, referred to previously in this chapter. J. Lloyd Trump was contacted to see if any proposals for experimentation had been submitted to him from any Ohio schools for Ford Foundation support.

Mrs. Dorsey Eaynham, professional writer who assisted Trump in the reporting of the six-state staff utilization survey, and Lloyd S. Michael, Chairman of the Committee on Staff Utilization, were contacted by phone to fill in gaps in procedural reports of the Committee's survey.

From data collected by questionnaire, by interview, by observation, and from the literature, records, and correspondence; trends, answers, and conclusions with regard to questions stated in the early part of this chapter, were sought. An attempt has been made to pinpoint emphasis of change, location of change, and direction of change relevant to these practices in Ohio. An effort was also made to compare findings of the Ohio survey with those of the six-state survey.

The preceding indicates the procedures followed in the gathering of data and clarifies the sources of data.
Significance of Study

The National Association of Secondary-School Principals has made a concerted effort to study, to experiment with, and to disseminate information about staff utilization practices in the United States since 1956. It encourages local and state initiative to appraise practices and to share successes and problems encountered in experimentation. It is hoped that analysis of state-wide data will make it possible to contribute on behalf of Ohio practices to the staff utilization report of N.A.S.S.P. in 1963.

It is believed that this survey can serve as a source book for existing practices in Ohio and may prove valuable to local school districts in the sharing of experimental findings.

It is possible that this report may prove a valuable record and resource to the State Department of Education as it looks ahead to future plans and innovations in Ohio education.

Although the purpose of this study is not to evaluate practices, it is possible that findings of studies to follow may, through measurement of change, be compared with findings of existing practices as reported in this study.

Since educational change is inevitable in our changing society, it is hoped that this survey may help to give direction to quality education for all Ohio youth.
Preview of Succeeding Chapters

Succeeding chapters will be titled as follows: Chapter II—Introduction, Discussion, and Findings of Ohio Questionnaire Data; Chapter III—Comparison of Findings in Chapter II with Findings of Six-state Survey; Chapter IV—Depth Study of Practices in Twelve Ohio School Districts; Chapter V—Summary, Conclusions, and Recommendations.
CHAPTER II

INTRODUCTION, DISCUSSION, AND FINDINGS OF OHIO QUESTIONNAIRE DATA

This state-wide survey of staff utilization practices in Ohio public secondary schools was conducted by distribution of questionnaires to school district (city, county, and exempted village) superintendents in June, 1962. The purpose of the survey was to determine what practices exist and/or are contemplated, to discover varieties of implementation of the practices, and to discover the effect of these practices in different areas of the curriculum. Superintendents were assured that no school or school district would be singled out in the reporting of questionnaire data.

Questionnaire

The first six sections of the questionnaire are designed similarly to those of the questionnaire of the Committee on Staff Utilization of the National Association of Secondary-School Principals, December 19, 1960. The similarity of design and of questions on the Ohio questionnaire to design and questions of the N.A.S.S.P. questionnaire is intentional for purposes of comparing findings of the Ohio survey to those of

---

1The procedure for distribution of questionnaires is described on p. 18. See samples of the questionnaires in Appendix A, pp. 347-365.
a six-state survey described in the Bulletin of the National Association of Secondary-School Principals, January, 1962. Sections VII and VIII are designed to assist the writer in pinpointing (1) practices within school districts and (2) significant evaluation procedures relative to existing practices, respectively. In each section of the questionnaire, definitions of terms and/or illustrations are given to assist the respondent.

In each of the first five sections of the questionnaire—team teaching, student grouping for special purposes, teacher aides, schedule changes, and technological devices—a series of staff utilization practices is listed. For each section, listed practices are structured to range from simple approaches to those progressively more sophisticated. Next to each practice, spaces are provided for the respondent to indicate status of the practice with an A (now operating) or a B (now being contemplated) in any of the eight given subject areas of this study. Space is provided at the end of each section for amplification or clarification of responses to listed practices or for indicating unusual or unique approaches not listed.

Per Cent of Questionnaires Returned

A questionnaire return of 57.3 per cent was realized from the state survey of Ohio superintendents—176 superintendents responded out of a possible 307.

By types of school districts, the per cents and the numbers of returns were as follows: (1) in city school districts, a 58.3 per cent return (88 superintendents responded out of a possible 151); (2) in county school districts, a 55.7 per cent return (49 superintendents
responded out of a possible 88; and (3) in exempted village school districts, a 57.4 per cent return (39 superintendents responded out of a possible 68).

The direct-mail questionnaire method of distribution was used; return postage and self-addressed envelopes for return were enclosed. Only the initial contact of Ohio superintendents was made to reach the 57.3 per cent return; further contacts were not made, since the 57.3 per cent return was considered quite satisfactory, for "only rarely does it [direct-mail questionnaire return] reach the 40 per cent level" with considerable follow-up.

Geographical Distribution of Return

A further check on the adequacy of the 57.3 per cent return of questionnaires was made in terms of geographical distribution of the respondents by Ohio counties. Out of eighty-eight counties in Ohio, there were fourteen from which there was no response from superintendents; these fourteen counties were widely scattered throughout Ohio, except for a cluster of four at the southernmost tip of Ohio.

There was some expected concentration of responses in metropolitan areas, such as Cleveland, Cincinnati, Columbus, and Dayton.

Since the per cents of returns by types of school districts were quite similar, since approximately 85 per cent of widely scattered Ohio

---

2Travers, op. cit., p. 248.

3There are four types of school districts in existence in Ohio: city school districts, county school districts, exempted village school districts, and local school districts. A fifth type may be formed—joint
counties were represented geographically, and since depth study in
selected schools was contemplated, follow-up of questionnaires dis-
tributed was considered not necessary for purposes of this study.

Tabulation of Responses

Tabulation procedure was set up to tally responses by state,
school district, and curriculum area for each element of staff utiliza-
tion practices considered in this study.

vocational school districts; however, none presently exist in Ohio.

A city school district is "the territory within the corporate
limits of each city, excluding the territory detached therefrom for
school purposes and including the territory attached thereto for
school purposes. . . ." (3311.01)*

A county school district is "the territory within the territorial
limits of a county, exclusive of the territory embraced in any city
school district, and excluding the territory detached therefrom for
school purposes and including the territory attached thereto for school
purposes. . . ." (3311.05)*

An exempted village school district is either "all the territory
lying within the corporate limits of a village having a population of
three thousand or more according to the last federal census" or "all
the territory lying within the corporate limits of a village having a
population of 2000 or more according to the last federal census and a
population outside the corporate limits of said village, . . . suffi-
cient to make the total population of such district 3000 or more. . . ."
(3311.08)* In 1954, legislation became effective which does not permit
creation of additional exempted village school districts in Ohio—
districts formed must become local or city or joint vocational school
districts.

City and exempted village school districts within each county are
independent of the county board of education's supervision. Each local
school district in a given county is within the jurisdiction of its
local board of education and the county board of education.

Through distribution of questionnaires to all city, county, and
exempted village school superintendents in Ohio, each existing school
district in Ohio was represented in the survey.

*See Baldwin's Ohio School Laws Annotated. Revised by Dr. William
B. Edwards and Dr. Paul E. Spayde (Cleveland, Ohio: Banks-Baldwin Law
Tables showing numbers of responses for each practice and each curriculum area are found in Appendix E, pages 439-444. From tallied responses and from records kept of open-ended responses to the questionnaire, patterns and relationships are discernible.

N.A.S.S.P. Affiliation of Respondents

Although it is not necessarily expected that superintendents be members of the National Association of Secondary-School Principals, it is interesting that 66 superintendents out of 176 respondents indicated membership in N.A.S.S.P.; 80, indicated no affiliation; and 30, did not check this question.

Analysis of Questionnaire Data

Analysis of data, including responses to open-ended portions of each section for clarification or for amplification, will follow for each of the five elements of staff utilization practices under study. The chapter will be concluded with over-all findings and answers to questions in the state study.

Tables 1-5, included in this section, indicate the per cent of responding Ohio school districts now involved or contemplating involvement with the various practices listed. All per cents were converted from responses shown in corresponding Tables I-V, Appendix E, pages 439-444; each per cent was rounded off to the nearest one per cent. In all cases, per cents represent per cents of responding school districts and not per cents of all Ohio school districts. Per cents of questionnaires returned are explained in a previous section, pages 26-27. Bases
for conversion from numbers of responses to per cents are given at the bottoms of Tables 1-5.

Team Teaching (Table 1, p. 31)

Highlights

The fact that teachers sometimes team with others to instruct one or more classes in half the curriculum areas in 15 to 18 per cent of the districts responding is indicative that at least 10 per cent of the public secondary schools of Ohio show some interest in the tentative step toward team teaching. See per cent responses for practice #1 (item #1), Table 1. The four areas in which most activity in this practice occurs are English, social studies, science, and physical education and health; least activity occurs in foreign language and fine arts. School districts contemplating this practice look to the areas of social studies, English, and mathematics as most promising for this practice. Some variance from the pattern of activity just described for all districts reporting is present in county and exempted village school districts: (1) In exempted village school districts, most activity is found in English and science; least activity is found in social studies, foreign language, and fine arts. (2) County school districts contemplate greatest activity in English, social studies, and science; exempted village school districts contemplate social studies to be the curriculum area showing most promise for the practice.

In regard to systematic, regularly scheduled team teaching (practice #2), considerably less activity is evident than in practice #1.
## Table 1

The per cent of responding Ohio School Districts indicating the existence of and/or the contemplation of involvement with team teaching as public secondary school practice as of June, 1968

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area (A—Operating; B—Contemplated)</th>
<th>Districts Reporting</th>
<th>English</th>
<th>Social Studies</th>
<th>Mathematics</th>
<th>Science</th>
<th>Foreign Language</th>
<th>Practical Arts</th>
<th>Fine Arts</th>
<th>Physical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defining: An arrangement whereby two or more teachers with or without teacher aide plan, instruct, and evaluate cooperatively one or more class groups during a given period (in order to take advantage of their respective special competencies).</td>
<td>Districts Reporting</td>
<td>City</td>
<td>19</td>
<td>10</td>
<td>26</td>
<td>16</td>
<td>7</td>
<td>10</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>20</td>
<td>9</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>12</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>13</td>
<td>3</td>
<td>0</td>
<td>12</td>
<td>3</td>
<td>5</td>
<td>18</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>18</td>
<td>6</td>
<td>17</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2. There is a systematic arrangement whereby teams of teachers and/or aides teach large groups of students.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>13</td>
<td>0</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>8</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>7</td>
<td>7</td>
<td>11</td>
<td>13</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Where the team structure exists, the most experienced or able teacher is designated as team leader.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>5</td>
<td>4</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4. Some financial incentive plan exists to give the team leader extra pay.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5. Team members teach fewer than the usual hours per week.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>6. If more than one teaching team exists, someone is assigned to coordinate the activities of these teams.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>7. Opportunity is provided within the schedule for team members to meet together during a common free time.</td>
<td>Districts Reporting</td>
<td>City</td>
<td>9</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>County</td>
<td>8</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
<td>8</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>All</td>
<td>9</td>
<td>0</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

*Per cents for this table were calculated using the following bases: number of city districts responding, 58; number of county districts responding, 19; number of exempted village districts responding, 19; and all districts reporting, 176.*
Most of the activity that exists in all districts is in the areas of English and social studies. Except for exempted village districts which have most activity in this practice occurring in science, the city and county districts have greatest team teaching activity in the areas of English and social studies. That present activity will increase is likely, in view of the per cent of districts contemplating regular team teaching in English and social studies.

Designation of a team leader (practice #3) is not a widespread practice among responding districts of Ohio. Designated team leaders exist most often in the area of English. There is indication that a small per cent of responding school districts contemplate designation of team leaders; most of this contemplation exists in city districts—some exists in exempted village districts.

Extra pay for team leaders (practice #4) is the exception rather than the rule. Only one county district reported increments for team leaders; little contemplated interest in payment of team leaders is evident.

In only two subject areas (English and science) do team members teach fewer than the usual hours a week (practice #5) and the practice occurs rarely in those areas. The practice is contemplated in all subject areas to about the same degree that it exists in English and science.

A few more schools designate coordinators of teaching teams in areas where multiple teams exist (practice #6) than provide extra pay for team leaders. Coordinators of teams are assigned most often in the English area. Only a few of the schools anticipating systematic
large-group instruction by teams of teachers contemplate assignment of coordinators of teams in curriculum areas.

Approximately the same number of schools having systematic, regularly scheduled team teaching provide common free time for team members to meet for planning purposes (practice #7). Most activity for this practice occurs in English and social studies; most activity contemplated is in English, social studies, and science. The greater portion of the existing and contemplated practice is in city school districts.

Written comments of superintendents

Crossing of subject-matter lines relative to team teaching was indicated by comments of several superintendents in each type of school district. One school district reported the purchase of an eighty-acre farm to be used as a learning laboratory for potential dropouts; the experiment will be organized and operated by a team of teachers. Superintendents' comments pointed to variations of team teaching in English, mathematics, science, social studies, art, and music.

General conclusions

Some general conclusions may be made from questionnaire data:

1. The practice of team teaching in Ohio has had its beginning since 1958. Greatest activity has been demonstrated during the years 1960-1962.
2. Activity reported\(^4\) is more marked in high schools\(^5\) than in junior high schools.\(^6\)

3. Largest per cents of activity with team teaching are found in the curriculum areas of English, social studies, science, and physical education and health; moderate activity is found in mathematics and practical arts; least activity is found in foreign languages and fine arts.

4. Although several of the school districts where team structure exists designate a team leader, only one of the school districts reports giving extra pay to the team leader.

5. In only two subject areas, English and science, do team members teach fewer than the usual hours a week—even then the practice occurs in only 2 per cent and in 1 per cent of the school districts responding in the respective curriculum areas.

6. In nearly all instances of systematic, regularly scheduled team teaching, common planning time is provided for team members.

7. The degree of activity in team teaching varies; however, characteristics of it are found in all subject areas and on any secondary level of instruction.

8. A consistent pattern of relationship of team teaching practices to types of school districts is not discernible; activity vacillates

---

\(^4\)This information is compiled from responses in Section VII of the questionnaires; see Section VII, Appendix A, pp. 347-365.

\(^5\)High schools refer to buildings organized for grades 7-12 or for grades 9-12.

\(^6\)Junior high schools refer to buildings organized for grades 7-8 or for grades 7-9.
among the types of school districts for various aspects of this element of staff utilization practices.

There is some evidence of experimentation with flexible class size. Table 2 indicates the scope and variety of class organization to fit purpose and content of the instructional program rather than to adhere to conventional and rigid organization and scheduling.

Student Grouping for Special Purposes (Table 2)

Highlights

Approximately one-fifth to one-fourth of responding school districts in English, social studies, and science bring together in school assemblies large groups of students for informative purposes—and sometimes for class instruction (practices #1 and #2). In the other curriculum areas, from 5 to 15 per cent of responding districts reported these practices existing.

In comparison to the involvement with practices #1 and #2, few schools are active in regularly scheduling classes of fifty or more as part of the instructional program (practice #3). Greatest activity is in the area of physical education and health; least activity is in the foreign languages. Contemplation of becoming involved with classes of fifty or more is anticipated by only 3 per cent or less of the responding school districts.

Activity is greater in all subject areas except practical arts, fine arts, and physical education and health for small-group discussion within regular classes (practice #4) than for large-group instruction. Very little activity with this practice is contemplated.
## Table 2

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area</th>
<th>Operating</th>
<th>Considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-Group Instruction:</td>
<td>City</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>1. Does school assembly program include relatively large groups?</td>
<td>Yes</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Yes &amp; large groups are definitely planned to bring information to students</td>
<td>411</td>
<td>59</td>
<td>2</td>
</tr>
<tr>
<td>Small-Group Discussion:</td>
<td>City</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>4. Students quite regularly are organized in small groups of 15 or less for purposes of discussion and exchange of ideas.</td>
<td>Yes</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Yes &amp; groups of 15 or less are organized for purposes of discussion &amp; exchange of ideas.</td>
<td>411</td>
<td>59</td>
<td>2</td>
</tr>
<tr>
<td>Independent Study (to be done on projects in addition to regular instruction):</td>
<td>City</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>6. Most students are assigned specifically for independent study.</td>
<td>Yes</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>No</td>
<td>26</td>
<td>6</td>
<td>26</td>
</tr>
<tr>
<td>Yes &amp; students are assigned specifically to study in other places and in regular classrooms (e.g., in the library, laboratory, shop, and in other facilities).</td>
<td>411</td>
<td>59</td>
<td>2</td>
</tr>
</tbody>
</table>

*Percent for this table were calculated using the following bases: Number of city districts responding, 95; number of county districts responding, 49; number of exempted village districts responding, 66; and all districts reporting, 159.*
Little activity exists or is contemplated in the practice of having separate classes of fifteen or fewer for small-group discussion to accompany large-group instruction as part of a regular pattern (practice #5). Range of involvement is from 5 per cent in social studies to 3 per cent in English to no involvement in practical arts and fine arts. About 69 to 74 per cent of the school districts responding indicate no small-group activity of any type in English and social studies; similarly, 73 to 78 per cent of responding school districts do not have information-type assembly programs in the same subject areas. Even higher percentages of responding school districts record no activity in the remaining subject areas, except science which falls within the given range for English and social studies.

A fairly uniform distribution across subject area lines is indicated by school districts scheduling students for independent study in special facilities (practice #6); involvement ranges from only 5 per cent of responding districts in physical education and health to 20 per cent in science.

Consistently larger numbers of districts (in comparison to those for practice #6) in all subject areas are making learning facilities available to students for independent study beyond regular school hours (practice #7). Again, greatest activity (36 per cent) is in the science area and the low (17 per cent) is in fine arts.

Written comments of superintendents

One school district contemplated scheduling of independent study in lieu of study halls at junior high school level. Other comments were directed toward large-group instruction, small-group discussion, and
independent study without reference to particular grade levels of high school work.

General conclusions

Several general conclusions may be drawn from questionnaire data:

1. Most of the activity in student grouping for special purposes has occurred in the 1950's and 1960's.

2. About 70 per cent of the schools reporting activity with this practice are high schools; 30 per cent are junior high schools.  

3. Activity in large-group instruction is greatest in the areas of English, social studies, science, physical education and health; activity in small-group discussion is most pronounced in the areas of English, social studies, and science; activity in independent study is fairly uniformly distributed in all curriculum areas. Least activity in student grouping for special purposes is in separate classes of fifteen or fewer for small-group instruction accompanying large-group instruction as part of a regular pattern.

4. Contemplation of involvement with large-group instruction, small-group discussion, and independent study is relatively small compared to existing practices. Contemplation of these practices ranges from 5 per cent to zero per cent of those districts responding.

5. Variation in activity of student grouping practices is not related to given types of school districts. Activity is erratic with relation to various aspects of student grouping for special purposes, to curriculum areas, and to types of school districts.

7 See footnotes 4, 5, and 6, p. 34.
Teacher Aides (Table 3)

The literature reveals that some educators have turned to the employment of non-certificated personnel (teacher aides) to assume responsibility for many non-teaching tasks normally carried out by teachers. Table 3 provides a picture of teacher aide activity in Ohio.

Highlights

The use of student teachers from teacher-training programs (practice #1a) is the most common type of teacher aide in use in Ohio public secondary schools. Per cents would be even higher than Table 3 indicates if the definition of teacher aide were not restricted to include only employed non-certificated personnel. The use of student teachers is uniformly distributed in curriculum areas and in types of school districts. It is interesting to note that school districts not involved did not report contemplation of employing student teachers.8

Other kinds of teacher aides with which there is some activity are college-trained adults from the community and clerical workers (practices #1d and #1c). Activity with college-trained, community adults is limited to city and county school districts; most existing activity is in English, social studies, and science. Contemplation of involvement is in the same three curriculum areas.

There is very little use of college students not enrolled in teacher-training programs (practice #1b); activity is limited to city

---

8 A number of reasons may account for lack of contemplation of use of student teachers: (1) School districts may not have finances to employ such persons or (2) the proximity of a teacher-training program to a school district may hinder involvement.
TABLE 3

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area (A-Operating, B-Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>English</strong></td>
</tr>
<tr>
<td><strong>Districts Reporting</strong></td>
<td></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td></td>
</tr>
<tr>
<td><strong>B</strong></td>
<td></td>
</tr>
</tbody>
</table>

1. Those staff of aides are employed (please mark separately):
(a) Student teachers from teacher-training programs
   - City: x 0 0 0 17 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 19 0 16 0 15 0 0 0 0 0 0 0 0 0 0
   - All: 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(b) College students (non teacher-trainers)
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(c) Clerical Workers
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(d) College-trained adults from the community
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(e) Other adults (not college-trained or clerical)
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

7. Those aides (mark as please mark separately):
(a) Laboratory supervisors
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(b) Lay readers of some written work
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(c) Objective test graders
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(d) Teachers for main-up or remedial work by individuals or small groups
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(e) Hall or playground supervisors
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(f) Study hall supervisors
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(g) Library Assistants
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(h) Shop supervisors
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

(i) Clerical
   - City: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - County: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - Entire School District: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
   - All: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

*Per cent for this table were calculated using the following bases: number of city districts responding, 56; number of county districts responding, 67; number of spurred school districts responding, 37; and all districts reporting, 176.
school districts and the curriculum areas of physical education and health, English, social studies, and mathematics.

No activity was reported of use of other adults who are not college trained or not clerks (practice #1e). Only one exempted village school district indicated contemplation of use of this type of teacher aide in all curriculum areas.

Existing teacher aides function in a number of ways: There is some activity in all curriculum areas and in each type of school district; aides may function as study hall supervisors and library assistants (practices #2f and #2g). There is slight involvement of lay readers of some written work in English and social studies only (practice #2b). Teacher aides as objective test graders (practice #2c), clerks (practice #2i), teachers for make-up or remedial work by individuals or small groups (practice #2d), and hall or playground supervisors (practice #2e) function infrequently. Objective test graders are most active in the areas of English, social studies, mathematics, and science. Use of teacher aides as shop or laboratory supervisors (practices #2h and #2a) is quite rare except in the area of science. There is slight contemplation of use of objective test graders in all curriculum areas except practical arts, fine arts, and physical education and health. Use of study hall supervisors is contemplated in but a few schools.

Written comments of superintendents

City superintendents reported hourly wages of teacher aides ranging from $.77 to $2.80. One city district pays lay readers twenty-five cents for each 500-word paper and ten cents for each
re-written paper. The same district pays $1.50 an hour for conferences by the lay reader. Another district (city) pays non-degree persons from $2.00 to $2.30 an hour and degree persons from $2.50 to $2.80 an hour. Still another district contemplates employment of assistant study hall teachers at $1.25 an hour.

County superintendents indicated that teacher aides are paid from $1.00 to $1.50 an hour. One county school district pays lay readers a rate equal to that for its substitute teachers.

Exempted village superintendents reported the following practices:
(1) Payment of $2.00 an hour is contemplated for college-trained adults in the English department. (2) Non-certificated adults (clerical workers and the attendance officer) are frequently used to relieve teachers in study halls. (3) For one district, the clerical salary schedule ranges from $2700 to $4325 in fifteen years.

No other information relative to non-certificated personnel wages was given.

General conclusions

Conclusions that can be made about teacher aides are as follows:
1. Existing teacher aide involvement in Ohio has gained impetus during the 1950's and 1960's. A few schools reported initiation of the practice as early as the 1930's and 1940's.

2. The majority of schools reporting involvement with teacher aides is high schools rather than junior high schools.9

---

9See footnotes 4, 5, and 6, p. 34.
3. It is found that teacher aide activity is greatest in the area of English; moderate in the areas of science, social studies, physical education and health, mathematics and practical arts; and least active in foreign language and fine arts.

4. Except for rather uniform activity of student teachers in all curriculum areas, there is relatively little activity (7 per cent or less of responding schools) for other teacher aide functions in any given curriculum area.

5. There is very little contemplation of use of teacher aides in the Ohio public secondary school districts responding.

6. In consideration of all curriculum areas, teacher aide functions are most frequently those of library assistants, objective test graders, study hall supervisors, and clerks, in that order.

7. A wide range of hourly compensation for teacher aides is found, from $0.77 to $2.80. Payment of $1.00 to $1.50 an hour is common.

8. Teacher aide involvement is not identified with any one type of school district.

Schedule Changes (Table 4)

Table 4 reflects scheduling patterns of the school districts responding. Of the elements of staff utilization practices chosen for this study, schedule changes appear to be least active.

Highlights

Conventional scheduling seems to predominate in most school districts responding. There is very slight deviation from the conventional in practices #1 through #3. Most of the quite limited activity
<table>
<thead>
<tr>
<th>Questionnaire Items</th>
<th>Subject Area (A—Operating; B—Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English</td>
</tr>
<tr>
<td>1. Classes are scheduled</td>
<td>City</td>
</tr>
<tr>
<td>for longer than normal periods, but for fewer times per week.</td>
<td>County</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>3 3</td>
</tr>
<tr>
<td>All</td>
<td>2 2</td>
</tr>
<tr>
<td>2. Extra periods for specialized large-group instruction have been created.</td>
<td>City</td>
</tr>
<tr>
<td>County</td>
<td>4 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>1 1</td>
</tr>
<tr>
<td>3. The school day is divided into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules).</td>
<td>City</td>
</tr>
<tr>
<td>County</td>
<td>0 2</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>1 1</td>
</tr>
<tr>
<td>4. The regular schedule may be changed for an individual student on any given day.</td>
<td>City</td>
</tr>
<tr>
<td>County</td>
<td>4 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>5 0</td>
</tr>
<tr>
<td>All</td>
<td>5 0</td>
</tr>
<tr>
<td>5. A summer school is operated to provide special opportunities for all students who wish to attend.</td>
<td>City</td>
</tr>
<tr>
<td>County</td>
<td>18 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>15 3</td>
</tr>
<tr>
<td>All</td>
<td>37 2</td>
</tr>
</tbody>
</table>

*Per cents for this table were calculated using the following bases: number of city districts responding, 88; number of county districts responding, 49; number of exempted village districts responding, 39; and all districts reporting, 176.
in flexible scheduling is that of double or extended periods (practice #1); this activity centers in the areas of English, social studies, science, and practical arts. Slightly fewer school districts are involved with extra periods for specialized large-group instruction (practice #2) in English, social studies, and science. But one school district reporting is now involved with modules of time (practice #3)—this type of schedule occurs for English, social studies, and fine arts. Relatively slight involvement is contemplated by responding school districts in any curriculum area.

Considerably more interest is shown in schedule changes to meet needs of individual students (practice #4) than in practices #1 through #3. Involvement in this practice is quite uniform for all curriculum areas. Again, very little activity is contemplated by those districts presently inactive.

Summer schools (practice #5) are the most widespread aspect of practices within the element of schedule changes; summer schools available to all students provide marked activity in the areas of English, social studies, mathematics, and science. Summer school activity occurs in all curriculum areas, with a high in English of 37 per cent of the responding school districts and with a low in physical education and health of 6 per cent. Of the types of school districts in Ohio, city districts register high activity with summer schools in the areas of English, mathematics, and social studies. Relatively few school districts without summer school operations contemplate becoming involved.

Forty-nine school districts responding indicated that summer school tuition is charged; twenty-five indicated that no tuition is charged. The breakdown by types of school districts where tuition is
charged is as follows: city, forty school districts; county, six school districts; and exempted village, three school districts. Tuition is not charged for summer school as follows: city, sixteen school districts; county, three school districts; and exempted village, six school districts.

Written comments of superintendents

There were the following significant comments of superintendents: (1) to report experimentation with two lengths of periods for all courses and (2) to relate trial with double periods for problems of democracy classes.

General conclusions

Certain general conclusions may be drawn from the questionnaire data:

1. Most schedule change activity has occurred in the 1950's and 1960's. Eight city school districts reported activity prior to 1950.

2. Within those districts reporting involvement with schedule changes, approximately 83 per cent were high schools and 17 per cent were junior high schools.\(^{10}\)

3. Marked activity for summer school instruction is noted in the area of schedule changes. English, mathematics, social studies, and science are the curriculum areas in which summer school activity is greatest; physical education and health is the area in which summer school activity is least. Variations in scheduling such as longer than normal periods, extra periods for large-group instruction, and modules of time are quite rare among school districts responding; there is

\(^{10}\) See footnotes 4, 5, and 6, p. 34.
slight evidence of these with most activity in English, social studies, and science. Changing of the regular schedule to meet needs of individual students is fairly active and is consistent for all curriculum areas.

4. Contemplation of activity with schedule changes is quite low among inactive districts.

5. No wide difference in degree of activity among types of school districts is evidenced except for summer school activity where city districts are most active, county districts are moderately active, and exempted village districts are least active.

6. Of the five elements of staff utilization practices chosen for this study, schedule changes are least active as reported in the 57.3 per cent return of questionnaire data. Conventional scheduling is predominant among districts responding.

Technological Devices (Table 5)

The use of technological devices as integral parts of instruction is the most widespread of the five elements of staff utilization practices included in this survey. Table 5 gives a profile of the activity existing and contemplated in this area.

Highlights

ETV programs (practice #1) are received in all curriculum areas; however, greatest activity occurs in science and social studies. Considerable ETV involvement exists also in foreign language, mathematics, and English. In most curriculum areas, even more school districts have facilities available to receive "airborne" telecasts (practice #2).
Several school districts contemplate receiving ETV programs and "airborne" telecasts.

The use of the overhead projector (practice #3) is widespread among school districts responding. More than 40 per cent of the responding districts use the overhead projector in science classes; its use in mathematics, social studies, and English classes is also quite common. Fourteen to 17 per cent of the responding districts use the overhead projector in the remaining curriculum areas.

Thirty-six per cent of all school districts responding report use of reading accelerator machines in English classes (practice #4). There is only slight use of these machines in other curriculum areas.

Language laboratories (practice #5) are found in 34 per cent of the school districts; about 7 per cent of the districts contemplate getting a language laboratory.

Closed circuit TV used for large-group instruction (practice #6) has "caught on" in very few school districts; however, several other districts contemplate use of closed circuit TV.

Considerable interest is evidenced in the use of "teaching machines" as self-teaching devices in independent study or regular classroom instruction (practice #7), particularly in mathematics and English. Their use is contemplated in mathematics, English, and science to some degree.

Use of tape recorders (practice #8) tops activity in all other staff utilization practices. Over 60 per cent of all districts reporting use tape recorders in English and foreign language areas. Significant
use of them takes place in the other curriculum areas. Few inactive
districts contemplate involvement with tape recorders for instructional
use.

Data processing equipment for preparing student class schedules
(practice #9) is beginning to make its mark among the many technological
devices. About 15 per cent of the school districts responding use data
processing equipment in the preparation of student reports, such as
'cumulative records, attendance reports, and report cards (practice #10). A
number of superintendents indicated present use of card-punch systems
not completely automated until complete automation procedures can be
arranged. That data processing will make further gains in the instruc-
tional field is supported by the fact that a number of school districts
now inactive contemplate use of it.

Written comments of superintendents

Most comments were amplifications of responses relative to pro-
grammed learning, teaching machines, and data processing uses. Several
references were made to Royal McBee Keysort punched-card, sorting
techniques used for educational purposes such as scheduling, attendance
reporting, and grade reporting. These comments are indicative of the
interest in these innovations.

General conclusions

A great variety of technological devices is in use in Ohio public
secondary schools. A number of general conclusions may be drawn from
survey data.
1. Most involvement with technological devices has spread during the late 1950's and early 1960's. Three city districts reported involvement with some devices as early as 1940.

2. Activity with technological devices reported is much more in evidence among high schools than among junior high schools.  

3. The use of technological devices is most marked in the academic subject areas: greatest activity is found in the areas of English and foreign language; moderate activity is found in social studies, science, and mathematics; least activity falls in the areas of fine arts, practical arts, and physical education and health.

4. The use of data processing equipment is uniform for all curriculum areas.

5. Except for practices involving use of data processing equipment, contemplated activity with technological devices is more marked in the academic than in the non-academic areas.

6. The tape recorder is the giant in use among technological devices under study; there is a well-established foothold for devices such as reading accelerator machines, overhead projectors, "airborne" television, data processing equipment, educational television, and teaching machines and programmed learning. Electronically equipped laboratories have made their mark in the area of foreign language only. The use of closed circuit TV is least marked; however, contemplated use of this device is higher than existing use of it.

7. No significant distinction can be made among types of school districts in relation to their involvement with technological devices.

---

11See footnotes 4, 5, and 6, p. 34.
8. From questionnaire evidence available, greatest impact in Ohio of staff utilization practices has occurred with technological devices.

Other Procedures

Superintendents were asked in Section VI of the questionnaire to describe any other ways developed in their school districts to make better use of the professional competencies, time, and energies of their teachers. The following local procedures were briefly described:

1. Reduction of teacher-assigned load in the English and science areas to provide teacher time to develop seminar groups for advanced students in these areas.

2. Contemplated honor study halls to relieve teachers from one type of supervisory assignment.

3. Saturday seminar classes in biology, physics, chemistry, and social science.

4. Employment of teachers through the summer months.

5. In-service programs for teachers for specific purposes, such as techniques for teaching of junior high reading and of junior high science.

6. Simplification of procedures requiring clerical work for the teacher; for example, machine scoring rather than manual scoring of tests.

7. Ability grouping of students in English, extensive programs for the able, and special services for the slow learner.

9. Elimination of sponsorship of most clubs and organizations from teacher assignment.

10. Limitations placed on teacher load and class sizes.

11. Blocks of time at seventh and eighth grade levels to reduce pupil load of teacher.

12. A sharing of supervisory responsibilities by three administrative staff members at building level.

13. Division of responsibility through establishment of committees for curriculum development.

14. Released time and salary increments for department heads to assist teachers in the department and to supervise teaching improvement.

15. Development and adoption of courses of study for the county (local schools).

16. Horizontally and vertically organized teachers' meetings to consider certain problems and subject area studies on a county-wide basis.

17. Free periods provided teachers to work with students.

18. Increased secretarial assistance at county central office level to relieve teachers of some clerical duties.

19. The use of Royal McBee Keysort procedures by clerks in administrative offices for attendance reporting and pupil accounting to relieve teachers of routine tasks.

20. Elimination of lunchroom and detention duties of teachers.

General conclusions

Ohio administrators and teachers are keeping vigil for effective ways of improving instruction, as evidenced by the varied procedures
tried locally to use professional competencies, time, and energies of staff to best advantage. In general, these local efforts lie in a number of categories:

1. Reduction of teacher load through relief from supervision of extra duties, through relief from clerical duties, through released time for special duties, through limiting of class size, and through reduction of pupil loads.

2. Extension of the school week to include Saturday seminars and of the school year for teacher employment.

3. Establishment of in-service programs to improve teaching techniques and to share responsibility in curriculum planning and development of curriculum materials.

4. Division of responsibility among teachers and administrators for supervision of instruction.

Evaluation Procedures

Section VIII of the questionnaire provided opportunity to school district superintendents to describe evaluation procedures used to evaluate staff utilization practices existing in their school districts. Ninety-three superintendents responded (approximately 53 per cent of those returning questionnaires) to this matter.

Almost without exception, evaluation procedures reported are the conventional, subjective, and informal approaches to evaluation. One district attempted to make an objective measure of the worth of MPATI (Midwest Program on Airborne Television Instruction) after one year of experimentation.\textsuperscript{12} It should be pointed out that procedures used for

\textsuperscript{12}A description of procedures used is found on pp. 221-235.
this evaluation were established at the end of the year's trial rather than prior to the beginning of experimentation; in other words, control groups were not established initially nor were evaluation procedures built into the experiment.

The following conventional procedures are typical of the responses of superintendents:

1. Subjective reports (direct observation) of department consultants, building principals, curriculum director, superintendent, executive head, curriculum council, and instructional supervisors.

2. Meetings for purposes of discussion and evaluation comprised of teachers; teachers and principal; staff and curriculum coordinator; curriculum committees and administrators; heads of departments and principal; principals of district; and district supervisors, principals, and superintendent.

3. Workshops, conferences, and visitation provided by supervisors and administrators for teachers.

4. Follow-up of graduates (a comparison of the success of graduates before and after the initiation of new procedures).

5. Opinions of students, teachers, parents, and administrators of program.

6. Criticisms by teacher-training institutions of graduates' successes in college.

7. Standardized test results to evaluate program.

8. Periodical evaluation of teacher (written and oral) by self, by supervisor, by principal—an over-all staff evaluation program.
9. General program and staff checks to meet minimum standards of the North Central Association, the Evaluative Criteria, or the State Department of Education.

General conclusions

Most evaluation procedures described by superintendents are informal and general. Except for few instances, they are procedures that are used to evaluate program and staff generally rather than to evaluate specific aspects of the instructional program such as staff utilization practices.

A concern for evaluating specific practices was voiced by superintendents; however, in some instances excuses were made for carrying on in the conventional manner. Lack of establishment of criteria, lack of "know-how" relative to evaluation, lack of instruments developed for measurement, lack of time, space, and money—all were stated or implied by superintendents to limit progress in evaluating staff utilization practices.

Findings for "Questions to Be Answered"

The preceding analysis of questionnaire data will now be considered as a whole to provide answers to the questions outlined in Chapter I, page 2. Questions and findings follow.

1. What is the status of staff utilization practices existing in Ohio public secondary schools?

Many Ohio public secondary school districts are quite actively engaged with the staff utilization practices under study; still other districts are contemplating their use. Although a few districts reported
a reluctance to become involved with many of the innovations, it cannot be said that Ohio public school districts are complacent in this matter; rather, questionnaire data reveal that there is much enthusiasm for trial of many of the practices and that there is everywhere in the state concern for providing quality instruction effectively.

Existing practices have developed in Ohio schools during the 1950's and early 1960's, particularly student grouping for special purposes, teacher aides, and schedule changes. Any team teaching tried has occurred since 1958 and widespread use of technological devices has occurred in the late 1950's and early 1960's.

A quite high percentage of schools, reported by school district superintendents and involved with staff utilization practices, was high schools rather than junior high schools. It should be pointed out that high schools in Ohio may be comprised of grades 9-12 or grades 7-12; an organization of grades 10-12 is designated a senior high school. As a result of this variety of organizational patterns for high schools and junior high schools, it is presumptuous to suggest on the basis of questionnaire data that practices are more prevalent at certain secondary grade levels in Ohio than at others.

Of the five elements of staff utilization practices considered in this study, activity is most pronounced in the element of technological devices. Specifically among technological devices, use of tape recorders is far ahead of the use of other devices; the use of several devices such as reading accelerator machines, overhead projectors, "airborne" telecasts, educational TV programs, foreign language laboratories, and
data processing equipment is firmly established. Closed circuit television has not yet gained a firm position among the devices.

Except for summer school activity, complacency nearly prevails in activity with schedule changes. Very little interest is shown in flexible scheduling. Conventional schedule practices are almost "the rule"; there is some concern for adjusting the regular schedule on any given day to meet needs of an individual student. Summer school activity is well established for instruction in the academic areas; activity is fairly well established in non-academic areas.

Relatively little activity exists in Ohio in the element of teacher aides as a staff utilization practice. There is expected involvement with student teachers from teacher-training programs; however, there is limited involvement of clerical workers and college-trained adults from the community as teacher aides. Functions of existing use of teacher aides are for the most part limited to those of lay readers of some written work, library assistants, objective test graders, and clerks. Only very rarely do they function as study hall supervisors, laboratory supervisors, teachers for make-up or remedial work, hall or playground supervisors, and shop supervisors. Aides are commonly paid at the rate of $1.00 to $1.50 an hour.

Ranking second to technological devices in activity is student grouping for special purposes. Although scheduling of fifty or more students regularly in a class occurs infrequently, large-group instruction is firmly established through school assembly programs definitely planned to bring information to large groups of students and through two or more conventional classes sometimes combined for purposes of
instruction. Small-group discussion is frequently organized as an intra-class grouping arrangement for discussion and exchange of ideas; however, very rarely does small-group discussion exist through separate organization of classes of fifteen or fewer students for small-group work to accompany large-group instruction as part of a regular pattern. That independent study has gained "firm footing" is indicated by the ready availability of learning facilities to students doing independent study beyond regular school hours and by the fact that students scheduled specifically for independent study do so in laboratories, shops, and the library rather than just in study halls or in regular classrooms.

Team teaching has gained much interest among administrators in Ohio; in fact, its modest beginning is somewhat significant in terms of its short life (less than five years in Ohio) and in terms of the activity shown in some curriculum areas through teachers sometimes teaming with others to instruct one or more classes. In the few school districts where systematic, regularly scheduled team teaching exists, common planning time for team members is consistently provided. Several of the school districts where team structure exists designate a team leader; only one of these districts reports giving extra pay to the team leader. Very rarely, in English and science only, do team members teach fewer than the usual hours a week. Very few districts (where more than one teaching team exists) have a coordinator of these teams. It is readily seen that degree of activity varies greatly among the many characteristics of team teaching; however, team teaching is found in all curriculum areas and on any secondary grade level.
2. What is the status of staff utilization practices contemplated by Ohio public secondary schools?

Considerable complacency is evident among inactive school districts responding in regard to contemplation of involvement with many of the staff utilization practices included in this study. The preceding fact is deduced from the fact that so small a per cent of anticipated involvement was registered by superintendents compared to the per cent of existing involvement with many of the practices.

Contemplation of involvement with team teaching varies with practices and with curriculum areas from some contemplated activity to very little contemplated activity. Significant per cents of inactive school districts contemplate having teachers *sometimes* team with others to instruct one or more classes in the areas of social studies, English, and mathematics. Also, present activity with systematic, regularly scheduled team teaching is expected to increase in social studies and English in view of the per cents of inactive districts now contemplating activity in these areas. Few schools contemplate designation of a team leader; rarely is it expected that team leaders shall be paid, that team members shall teach fewer than the usual hours each week, or that someone will coordinate the teams where more than one team exists. Some school districts which contemplate having team teaching do plan to have common free planning time for team members.

Relatively little activity compared to existing activity is contemplated for student grouping for special purposes. Eight or fewer school districts responding contemplate activity in occasional large-group instruction in social studies, English, mathematics, and science;
very little activity is contemplated in the other subject areas. Regular classes of fifty or more students are contemplated in social studies and in physical education and health classes to the extent of 3 per cent and 2 per cent of responding districts, respectively. Small-group discussion in groups of fifteen or fewer students within regular classes is contemplated in very few school districts; still fewer districts contemplate having separate classes of fifteen or fewer students to accompany large-group instruction. Slight involvement with independent study is contemplated in the academic areas; very little, if any, involvement with independent study is contemplated in each of the non-academic subject areas.

There is dim hope for the use of teacher aides in Ohio as presently contemplated, for very little interest in their use is implied in the responses of superintendents among inactive school districts.

Very slight involvement with schedule changes is contemplated as might be expected in terms of the quite slight involvement with existing schedule changes. The very limited contemplation of summer school activity is in striking contrast to the rather widespread summer school activity existing.

Although contemplation of the use of technological devices is fairly uniform for and consistent among types of districts and curriculum areas, the per cents of districts contemplating involvement are comparatively less than the per cents of districts using the various devices.

3. What is the relationship, if any, of staff utilization practices to types of school districts or to curriculum areas?

There is no consistent relationship of over-all staff utilization practices to types of school districts. Variation in activity is
discernible in each of the elements of staff utilization practices under study; there is vacillation of activity of practices in relation to various aspects of the practices, to curriculum areas, and to types of school districts. There is consistency in activity of the practice of data processing as it relates to types of school districts. Summer school activity is almost identifiable with types of school districts; otherwise, activity of practices is erratic in nature and district patterns cannot be distinguished.

Specifically, in regard to relationships of types of districts to summer school and data processing activities, the following relationships are in evidence: (1) Except for the curriculum areas of practical arts and fine arts, greatest summer school activity occurs in city districts, moderate activity occurs in county districts, and least activity occurs in exempted village districts. (2) Data processing for preparation of student class schedules shows greatest activity in exempted village school districts whereas its use for preparation of student reports (report cards, attendance reports, and the like) shows greatest activity in city school districts. In the former case, least activity occurs in city districts and in the latter case, least activity is shown in exempted village districts. County districts (among the three types of school districts) rank second in data processing activity in both cases.

Although activity of staff utilization practices in their varied aspects is found to some degree in all curriculum areas, there are some distinct relationships of certain elements of the practices to curriculum areas.
The practice of occasional team instruction occurs most frequently in English, social studies, science, and physical education and health. Systematic, regular team instruction shows greatest activity in the areas of English and social studies.

Activities in large-group instruction on an occasional basis and small-group discussion organized within regular classes are most marked in the curriculum areas of social studies, English, and science; independent study is most pronounced in the science and English areas.

Except for student teacher involvement in all curriculum areas, the limited teacher aide activity existing in Ohio school districts occurs most frequently in the area of English.

English, mathematics, social studies, and science are areas of instruction frequently included in summer school operations.

Activity with technological devices is most marked in the academic curriculum areas. Comparatively low activity in the use of ETV programs, reading accelerator machines, electronically equipped laboratories, closed circuit TV, and teaching machines exists in practical arts, fine arts, and physical education and health. Greatest activity for reading accelerator machines is in English and for the electronic laboratory is in foreign languages. Teaching machines are identified predominantly with mathematics and English. Considerable activity for "airborne" telecasts, overhead projectors, tape recorders, and data processing equipment occurs in all curriculum areas.

4. What varieties of implementation of staff utilization practices are indicated in addition to those areas chosen for this study?
Varied ways of making use of professional competencies, time, and energies of teachers were reported by superintendents in addition to the five elements of staff utilization practices considered in this study. These varieties of implementation of practices locally divide responsibilities among several persons to relieve teachers, place additional responsibility on students, provide local means for developing special skills in teachers, and limit teacher load and class size.

It is recognized that some of the practices mentioned could rightfully fit into one of the five elements of practices chosen for this study; however, they were not specifically considered in this study. Among additional practices listed were the following:

(1) elimination of supervisory duties of teachers (for example, lunchroom, detention, and sponsorship of extracurricular activities) to free them for responsibilities of classroom instruction, (2) honor study halls for students (teacher supervision not needed), (3) machine scoring of tests (sometimes done manually by teachers), (4) use of Royal McBee Keysort procedures by clerks for pupil accounting, (5) increased secretarial assistance at the county level to relieve teachers of local school districts from excessive clerical duties, (6) employment of teachers for Saturday seminars and during summer months, (7) use of blocks of time at seventh and eighth grades to reduce teacher load, (8) ability grouping of students, (9) in-service programs such as staff and committee meetings and conferences to develop and improve skills of teachers for special purposes, (10) teacher committees to share responsibility of developing curriculum and curriculum materials, (11) sharing of responsibility of supervision of instruction by building
administrators to meet adequately staff needs, and (12) released time and salary increments for teachers to hold student conferences and for department heads to supervise instruction.

5. What are the status and nature of evaluation procedures used in relation to these practices?

Formal evaluation procedures accompanying experimentation with staff utilization practices are practically non-existent in terms of procedures reported by school district superintendents. Most procedures reported are informal, conventional, and subjective in nature. That the need for sound evaluation procedures to accompany trial of many of the staff utilization practices is recognized by administrators is apparent from requests of several superintendents to be informed of any helpful procedures that might be gleaned from contacts made in this study.

Limitations of the use of effective evaluation procedures were readily pointed out by respondents—lack of "know how" by staff about evaluation, lack of agreement on criteria for evaluation, lack of objective instruments for measurement, lack of time, space, and finances.

Most of the evaluation procedures reported are those used generally for evaluating program and staff; they are not designed specifically to evaluate a given staff utilization practice. The following evaluation procedures are typical of those reported: (1) direct observation and follow-up reports of department consultants, building principals, curriculum director, superintendent, executive head, curriculum council, and instructional supervisors; (2) meetings, conferences, workshops, and visitation for purposes of discussion and evaluation (all personnel are involved at various times as needs arise, such as teachers, teachers and
principal, staff and curriculum coordinator, curriculum committees and administrators, heads of departments and principal, district principals, district supervisors and administrators); (3) opinions of program by parents, students, teachers, and administrators; (4) criticisms of high school graduate success in college by teacher-training institutions; (5) program evaluation through analysis of standardized test results; (6) staff evaluation program; and (7) periodical program and staff checks made to meet minimum standards of the State Department of Education, the North Central Association, and the like.

One district was reported to have completed an evaluation of MPATI at the end of one year of involvement. Although procedures used did not involve establishment of control measures initially, an attempt to measure objectively the worth of the practice was made at the end of the year. Significance of this experience lies in the fact that a school district locally carried out an attempt to evaluate a specific practice in an objective manner.

Another district indicated that a follow-up study of graduates had been begun. This study is designed to compare the success of graduates before and after initiation of new practices.

6. What are the trends in staff utilization practices in Ohio public secondary schools?

Public secondary education in Ohio is experiencing slowly some change from adherence to quite rigid and conventional educational practices to a willingness on the part of many teachers and administrators to try new and exciting practices locally. At the same time that there seem to be a growing interest in and an enthusiasm for experimentation
with the many staff utilization practices, a note of complacency is registered simultaneously inasmuch as contemplation of involvement with the practices is comparatively less than existing involvement. Nonetheless, questionnaire responses indicate that educators are on the "look out" for new, exciting, and practical but effective ways of dealing with "quality" and "quantity."

That many staff utilization practices have spread and will continue to spread in Ohio is evidenced by the amount of activity in many areas that has been established and in some instances the very recent activity that has occurred. Technological devices have made their mark in Ohio and will continue to spread further. Student grouping for special purposes and team teaching will likely continue to be of interest in the academic areas particularly; however, trends are obscured somewhat by the sporadic activity reported among aspects of each of the elements of the practices. Since there seems to be little interest in the use of teacher aides and in flexible scheduling (exception, summer school), either existing or contemplated, it is likely that only very limited involvement in these practices will occur in the near future.

It is possible that activity in the use of teacher aides and in schedule changes may be spurred on as team teaching and its many aspects are developed effectively in Ohio.

Since little summer school activity is reported as contemplated it is possible that continued growth in activity may be dependent upon the consolidation of districts or a school size to warrant an extensive curriculum which in turn might justify establishment of a summer school program.
There is a growing consciousness of needs in evaluation procedures among administrators; however, practice is much behind recognition of needs in this area. It is unlikely that there will be any rapid change in the evaluation picture as long as administrators face shortages of staff trained for this responsibility or as long as there are lacks of time and money for this purpose.

Interest in seminar instruction seems to be gaining popularity; it is likely that some continued growth in seminar activity will be experienced in Ohio.

An effort will be made in the next chapter to compare findings of this state survey to those of a survey of six other states.

Conclusions drawn from findings herein will be included in Chapter V along with those for the entire study.
CHAPTER III

COMPARISON OF FINDINGS IN CHAPTER II WITH FINDINGS OF SIX-STATE SURVEY

The purpose herein shall be to compare questionnaire data of the Ohio survey described in Chapter II with those of the December, 1960, six-state survey\(^1\) conducted by the Committee on Staff Utilization appointed by the National Association of Secondary-School Principals.

The six states surveyed were the home states of members of the Committee; these states included California, Colorado, Georgia, Illinois, Michigan, and New York. Purposes of the six-state survey are disclosed on page 15; purposes of the Ohio survey are found on pages 9 and 25.

**Six-state Survey Questionnaire**

The December, 1960, questionnaire relative to staff utilization practices in the six states previously mentioned was distributed to junior and senior high school principals.

The five sections (with their corresponding listing of staff utilization practices, definitions, and examples) into which the questionnaire is divided—team teaching, student grouping for special

purposes, teacher aides, schedule changes, and technological devices—and its sixth section for describing other procedures are identical to the first six sections of the Ohio survey questionnaire except that practice #10 in Section V is added to the Ohio questionnaire. The cover letter and the census information on the 1960 questionnaire differ from those used on the Ohio questionnaire.

Per Cent of Questionnaires Returned in Six-state Survey

A 40 per cent return on the questionnaire distributed to junior and senior high school principals was realized in the six-state survey. The surveyed states represent wide geographical distribution and sectional differences; however, emerging patterns of practices are apparent from the questionnaire responses.

Tabulation of Responses

Tabulation procedure was set up in order to analyze responses by state, grade level, school size, and curriculum area. Tables and interpretations are limited to the six-state totals of three secondary school levels—junior high schools, senior high schools, and junior-senior high schools.

Possible Limitations of Comparison of the Two Surveys

The six-state survey findings used herein for comparative purposes are limited to those briefly reported by Ira J. Singer in the January, 1960 edition of "School and Society".

---

2 See samples of the Ohio questionnaire, Appendix A, pp. 347-365; also see clarification of questionnaire items on p. 26.
1962, Bulletin of the National Association of Secondary-School Principals; further survey details were requested from the author but he replied that he had none to send.

Whereas secondary school principals were respondents for each secondary school in the six-state survey responses, Ohio school district superintendents were respondents for all secondary schools (as a composite group) within the respective school districts in the Ohio survey responses. A look into each school district's composite response was provided, however, in the district profile chart, Section VII of the Ohio questionnaire.

It is believed that the above concerns will not limit significantly a comparison of the general conclusions made in the two surveys.

It should be kept in mind that the Ohio survey data were collected one and one-half years after data for the six-state survey were gathered.

**Comparative Analysis of Findings of Two Surveys**

Comparison by discussion and interpretation of findings of the Ohio survey with those of the six-state survey follows for each of the five elements of staff utilization practices considered in this study.

**Team Teaching Compared**

The Ohio survey findings reveal agreement in part with the six-state survey findings in regard to curriculum areas where activity is

---

3 See footnote 1, p. 69.
greatest and least in the practice of teachers sometimes teaming with others to instruct one or more classes. The Ohio survey indicates high activity in science as well as English, social studies, and physical education and health, the areas of greatest activity in the six-state survey. Whereas foreign language is the area of least activity for the practice in the six-state survey, fine arts and foreign language are the areas of least activity for the practice in the Ohio survey. In the six-state survey, four curriculum areas are contemplated as most promising for the above practice—English, science, social studies, and mathematics; the Ohio survey does not include science among the most promising for contemplation of the practice.

In both surveys, there is considerably less activity existing for systematic, regularly scheduled team teaching of large groups of students than for occasional teaming of teachers to instruct one or more classes. Increased activity is expected in systematic, regularly scheduled team teaching in view of the activity contemplated in the areas of English and social studies in both surveys. High activity in the regular team teaching is also anticipated in the area of science in the six-state survey but not in the Ohio survey.

Unlike the six-state survey findings which indicate designation of a team leader as a widespread practice, Ohio survey findings show that the practice is not widespread in Ohio school districts.

---

Ira J. Singer, author of the six-state survey findings, points out that the apparent increase in team leaders over structured teams may be due to the interpretation by some principals that department and area
Extra pay for team leaders exists in but one school district responding in Ohio whereas extra compensation for team leaders exists in about 25 per cent of the regular team teaching schools in the six states. There is little indication of a change of thinking relative to contemplation of this practice by responding administrators.

Very rarely do team members teach fewer than the usual hours a week; considerably greater activity in this practice exists in the six states surveyed than in Ohio.

Only a few school districts in Ohio designate coordinators of teaching teams in areas where multiple teams exist whereas from 50 per cent to 75 per cent of team teaching schools in the six-state survey employ a coordinator in curriculum areas where multiple teams exist.

Findings in both surveys indicate that schools where team teaching exists provide common planning time for team members within the schedule.

General conclusions

1. The spread of the team teaching technique in Ohio since 1958 has followed that in the six states by at least two years.\(^6\)

\(^6\)The fact that the practice of team teaching did not "catch on" so quickly in Ohio as in the six other states previously surveyed may be explained in part by the fact that none of the original one hundred schools' experimental projects in staff utilization practices sponsored by the N.A.S.S.P. Commission were located in Ohio.
2. The Ohio team teaching pattern relative to curriculum areas varies in part from that of the six states: (1) For areas of greatest activity, Ohio adds science to those of greatest activity in the six states (English, social studies, physical education and health). (2) Least activity is found in foreign languages in both surveys—the Ohio survey ranks fine arts least active along with foreign language.

3. Agreement prevails between the survey findings in the matter of extra compensation for able teachers who serve as team leaders—the practice is rare.

4. Designation of team leaders is a common practice in the six states while it occurs occasionally in Ohio.

5. Most teams have been arranged within conventional time schedules; consequently, relatively few team members teach fewer than the usual hours a week as shown in both surveys.

6. Employment of coordinators in curriculum areas where multiple teams exist is much less common in Ohio than in the six states surveyed by the N.A.S.S.P. Commission.

7. Both surveys indicate that common planning time for team members within the schedule is provided where team teaching exists.

Student Grouping for Special Purposes Compared

From approximately 5 per cent to 25 per cent of responding school districts in Ohio reported bringing large groups of students together for informative assembly programs and occasional class instruction in all curriculum areas; schools responding in the six-state survey reported 10 per cent to 30 per cent of the schools with these practices operating in all areas. In both surveys, few schools are engaged in regularly
scheduling classes of fifty or more as part of the instructional program. The trend for increased activity (all subject areas except fine arts and physical education show a potential increase of from 50 to more than 100 per cent in the area of large-group instruction) noted in the number of schools contemplating regularly scheduling classes of fifty or more in the six states surveyed is not discernible in the Ohio survey; contemplation in Ohio of regularly scheduled large-group instruction is expected by only 3 per cent or less of the responding school districts.

Except for practical arts, fine arts, and physical education and health in the Ohio survey findings and except for science and physical education in the six-state survey findings, activity is greater in providing for small-group discussions than for large-group instruction. Whereas about one-fifth of the responding schools in the six-state survey provide for the small groups to accompany large-group instruction as part of a regular pattern, only 5 per cent or less of the responding school districts in the Ohio survey provide for this practice.

In the Ohio survey and in the six-state survey, a fairly uniform distribution across subject area lines is indicated by school districts and by schools respectively, which schedule students for independent study in special facilities. There is agreement between the two survey results relative to the area of lowest activity—physical education and health; however, in Ohio greatest involvement in this practice is in the area of science while in the six states greatest activity in this practice occurs in social studies. Consistently larger numbers of school districts in Ohio (in comparison to those for independent study in special facilities) in all subject areas are making learning
facilities available to students for independent study beyond regular school hours; the same relationship exists in the six-state survey for schools except for the area of foreign language which shows particularly low activity. In Ohio greatest activity for this practice is in science—lowest is in fine arts; however, in the six states surveyed in 1960, greatest activity is in English, social studies, and science—lowest is in foreign language.

General conclusions

1. Slightly greater activity in bringing large groups of students together for informative assembly programs and occasional class instruction in all curriculum areas was reported by schools of the six-state survey than was reported by school districts of the Ohio survey.

2. There is agreement in the two surveys that few schools are engaged in regularly scheduling classes of fifty or more as part of the instructional program. Contemplation of involvement with this practice is indicated to be much less in the Ohio survey than in the six-state survey.

3. Except for the non-academic curriculum areas in Ohio and for science and physical education in the six states studied, activity is greater in both surveys in providing for small-group discussion than for large-group instruction.

4. Much less activity exists in the provision for small groups to accompany large-group instruction as part of a regular pattern in Ohio than in the six states surveyed.

5. Scheduling students for independent study in special facilities is fairly uniformly distributed across subject area lines in both
surveys. There is agreement between the surveys relative to the area of lowest activity for this practice—physical education and health—but disagreement relative to the areas of greatest activity—science or social studies.

6. The use of special learning facilities for independent study beyond the regular school hours is a practice even more common than is the use of these facilities for independent study during the school day in both surveys. There is little agreement in the two surveys on curriculum areas of highest and lowest activities for this practice.

Teacher Aides Compared

Very little statistical information relative to teacher aide activity is included in the six-state survey report; therefore, comparison for this element of staff utilization practices will of necessity be limited.

The use of student teachers and of college students is considered common practice in the six-state survey whereas the use of only student teachers is considered so in the Ohio survey.

The six-state survey report indicates that a growing number of schools have employed college trained adults from the local community; only some activity is evidenced in Ohio for college trained adults from the community and for clerical workers. Of existing activity for college trained adults, involvement in both surveys is concentrated in the curriculum areas of English, science, and social studies.

There is almost complete agreement in the two surveys in regard to which teacher aide functions are most common (exception: the six-state survey includes lay readers), namely, library assistants, objective
test graders, study hall supervisors, and clerks, in that order in Ohio; however, the ordering of the functions (from most frequent to least frequent) in the six-state survey is quite different—that is, lay readers, clerks, objective test graders, library assistants, and study hall supervisors—an almost inverse relationship in terms of frequency of existence.

A wide range of hourly compensation for teacher aides is found in both surveys. General agreement is found for the common wage range, from $1.00 to $1.50 an hour.

General conclusions

1. Except for the use of student teachers as common practice in both studies, in general the use of teacher aides is less marked in Ohio than in the six other states surveyed previously.

2. Much less activity for college trained adults from the community is evidenced in Ohio than in the six states surveyed; however, there is agreement between the two surveys in regard to curriculum areas experiencing greatest involvement with the practice.

3. There is significant accord relative to the functions of teacher aides in the two surveys; however, there is wide variance between findings of the two studies in relation to the ordering of these functions in terms of frequency of existence.

4. A wide range of compensation for teacher aides is reflected in both surveys; the most common wage range found in both studies is $1.00 to $1.50 an hour.
Schedule Changes Compared

Of the elements of staff utilization practices chosen for these surveys, schedule change appears to be least active.

Only slight deviation from conventional scheduling practices is found in either survey for practices such as classes scheduled for longer than normal periods but for fewer times a week, extra periods for specialized large-group instruction, and division of the school day into modules of time with classes scheduled for different numbers of time units.

Both surveys show some evidence of existing double or extended periods; greatest activity in this practice in the surveys occurs in English, social studies, and science (in Ohio, practical arts is also included). A few schools are planning to attempt to create extra periods for specialized large-group instruction in the same curriculum areas. Activity with modules of time for class scheduling is quite light in the six states surveyed and very light in Ohio (only one school district reported involvement with the practice). Contemplating schools outnumber operational schools for this practice in most curriculum areas in the six-state survey while in Ohio, relatively slight involvement is contemplated for the practice in any curriculum area.

Considerably more interest is shown in both surveys in schedule changes to meet needs of individual students than is indicated in any of the schedule change practices previously discussed. Involvement with schedule changes to meet needs of individual students is quite uniform for all curriculum areas in each survey. Both studies show little
contemplation of activity in the practice by those schools and school districts inactive at the time of each survey.

In both surveys, summer schools are the most widespread aspect of practices within the element, schedule changes. It is shown in both studies that summer school activity is most marked in the areas of English, social studies, mathematics, and science; highest activity occurs in English in both surveys. Relatively few summer school operations are contemplated by the inactive groups.

General conclusions

1. Conventional scheduling is predominant among the respondents in the six-state survey and in the Ohio survey.

2. Of the five elements of staff utilization practices chosen for both studies, schedule changes are least active.

3. Ohio survey findings are in agreement with the six-state survey findings relative to some existing double or extended periods in the curriculum areas of English, social studies, and science—practical arts is also included in this grouping in Ohio.

4. Some effort is made in Ohio and in the six states to create extra periods for specialized large-group instruction; however, activity with this practice is less marked in Ohio than it is in the six states surveyed.

5. Very little was reported in either survey in the way of experimentation with modules of time for class scheduling. Contemplation of this practice of flexible scheduling is significant in the six states but only slight in Ohio.
6. Individual schedules are beginning to be considered less rigid and more flexible than they once were—this fact is verified by the numbers of schools and school districts interested in providing schedule changes to meet needs of individual students. Little contemplation is indicated, however, for this practice.

7. The growing number of summer schools available to all students is an encouraging sign that flexibility in scheduling is breaking through; at the same time, however, few schools or school districts among the inactive groups contemplate establishment of summer schools.

Technological Devices Compared

Both staff utilization surveys indicate the spread and variety of technological devices in use in public secondary schools. The use of technological devices is the most widespread of the five elements of staff utilization practices selected for the surveys.

That ETV programs are received in all curriculum areas is indicated in both surveys; however, greatest activity for ETV programs is in the academic areas.

Whereas in Ohio, more school districts have facilities available to receive "airborne" telecasts than are receiving ETV programs, in the six states studied, about half of the schools receiving ETV programs are equipped to receive "airborne" telecasts.7 Responses in both surveys

---

7This inverse relationship is possibly explained by the fact that during the past year and one-half, regional research with MPATI telecasts has been greatly emphasized throughout much of Ohio and much of the remainder of the Midwest.
indicate significant contemplation of use of both ETV programs and "airborne" telecasts.

Widespread use of the overhead projector is shown by findings in the two surveys. More than 20 per cent of the schools responding in the six-state survey use the overhead projector in science classes; more than 40 per cent of the school districts responding in Ohio use the projector in science classes. The use of the overhead projector is quite common in the remaining academic areas; its use is moderate in the non-academic areas.

In Ohio, 36 per cent of all school districts responding report use of reading accelerator machines in English classes; in the six-state survey, about 20 per cent of the schools responding use these machines in English classes.

In Ohio and in the six other states surveyed, language laboratories are found in 34 per cent of the responding school districts and in 15 per cent of the schools respectively. Less activity for acquiring language laboratories by the inactive groups is expected in Ohio than in the six other states under study.

Closed circuit TV for large-group instruction has "caught on" slightly in Ohio but significantly in the six other states surveyed. In all subject areas in both surveys, schools or school districts contemplating closed circuit TV outnumber those where such facilities are operational.

Considerable interest and involvement is evidenced in the two surveys in the use of "teaching machines" as self-teaching devices in independent study or regular classroom instruction. Some growth in
teaching machine activity is anticipated in the surveys, particularly in mathematics, English, and science.

Tape recorder use tops activity in all other staff utilization practices in both surveys. About 50 per cent of the responding schools in the six-state survey and over 60 per cent of all districts reporting in Ohio use tape recorders in the English and foreign language areas. Significant use of recorders takes place in all other curriculum areas. Few among the inactive groups in either survey contemplate involvement with tape recorder use.

The two surveys indicate that data processing equipment for preparing student class schedules is making its mark as one of the many technological devices in use in education. About 6 per cent of the schools responding in the six-state survey and over 13 per cent of the school districts responding in Ohio employ some type of machine system for scheduling. Significant interest is shown in both surveys in contemplation of use of data processing equipment to prepare class schedules such that further gains in its use are anticipated.

General conclusions

1. It is found in both surveys that greatest activity among the five elements of staff utilization practices included for these studies occurs in the use of technological devices.

2. There is agreement between the surveys that ETV programs are received in all curriculum areas with greatest activity in the academic areas.

3. Inverse relationships exist in the two surveys relative to ETV programs and "airborne" telecasts: Ohio has more "airborne"
telecast facilities than it has equipment for receiving ETV programs, whereas in the six other states surveyed, only about half as many schools are equipped to receive "airborne" telecasts as are equipped to receive ETV programs.

4. There is some contemplation of use of ETV programs, "airborne" telecasts, and closed circuit TV for large-group instruction in both surveys.

5. The use of the overhead projector is found to be common in all academic areas and moderate in non-academic areas; the two surveys concur in its greatest use in the science area.

6. Activity in Ohio surpasses that in the six other states surveyed in the use of reading accelerator machines in English classes, language laboratories, tape recorders in English and foreign language, and data processing equipment for preparing class schedules.

7. Less activity is contemplated in Ohio than in the six-state survey for acquiring language laboratories; less activity exists in Ohio than in the six other states for closed circuit TV.

8. There is agreement between the surveys that considerable interest is indicated in the use of "teaching machines"; some growth in their use is expected in mathematics, English, and science.

9. Few of the inactive groups in either survey contemplate tape recorder use; significant interest is shown among inactive groups in the use of data processing equipment for writing student schedules.
Summary

It is quite clear from survey results of these seven states that school people are seeking new and effective means of improving the quality of instruction in the face of increased enrollments. It should be pointed out that the two surveys involving seven states have investigated practices which but represent numerous practices (with their modifications) in the gamut of staff utilization practices existing in education.

Data from both surveys reveal that there is much interest in and enthusiasm for trial of many of the practices under consideration. Yet some complacency is apparent among inactive groups, for frequently well-established practices in operation are contemplated by relatively few schools and school districts.

Although (with the exception of technological devices) activity relative to a number of the practices in Ohio falls short of activity in the six other states surveyed, certain patterns, directions, or relationships in activity are discernible from data of both surveys:

1) Technological devices are most active and schedule changes are least prevalent of all staff utilization practices surveyed. (2) In the element of team teaching, extra pay for team leaders is rare, few team members teach fewer than the usual hours a week, and common planning time exists for team members. (3) In the element of student grouping for special purposes, few schools regularly schedule classes of fifty or more students as one part of the instructional program, activity is greater for small-group discussion than for large-group instruction, and independent study in special facilities during the school day is fairly uniform for all curriculum areas. (4) For the element of teacher aides
student teachers are the most common type of teacher aide, the most common hourly wage range for teacher aides is $1.00 to $1.50, and teacher aides usually perform common functions—clerks, objective test graders, library assistants, and study hall supervisors (lay readers rank high in the six-state survey). (5) For the element of schedule changes conventional scheduling is predominant, little is done with flexible scheduling such as modules of time, schedule changes are made on any given day to meet individual student needs, there is growing activity with summer schools, and little activity is contemplated for schedule changes to meet individual needs or with summer schools.

(6) For the element of technological devices, ETV programs are received in all curriculum areas with greatest activity in academic areas; there is considerable contemplation of use of ETV programs, "airborne" telecasts, and closed circuit TV; overhead projectors are gaining widespread use in all academic areas—greatest use is in science; there is considerable interest in the use of "teaching machines"—growth is anticipated in mathematics, English, and science; few of the inactive groups contemplate tape recorder use, yet operationally it is the most prevalent of the technological devices studied; and much interest is shown in the use of data processing equipment for writing student schedules.

Practices in which activity is less marked in Ohio than in the six other states surveyed are as follows: (1) designation of team leaders where team structure exists, (2) assignment of coordinators of teams where more than one team exists, (3) contemplation of regularly scheduling classes of fifty or more students, (4) informal but informative assembly programs for large groups, (5) provision for small groups
to accompany large-group instruction as part of a regular pattern,
(6) use of teacher aides, (7) extra periods for specialized large-group
instruction, (8) contemplation of use of modules of time in scheduling
of classes, (9) contemplation of acquiring language laboratories, and
(10) use of closed circuit TV.

Practices in which activity is more marked in Ohio than in the
six other states surveyed are as follows: (1) use of reading accelerator
machines in English classes, (2) use of language laboratories,
(3) use of tape recorders in English and foreign language, and (4) data
processing equipment for preparing class schedules.

Complete agreement between the two surveys is lacking relative to
greatest and/or least activity in specific curriculum areas for some
practices and functions: (1) the team teaching pattern relative to
activity in curriculum areas, (2) use of learning facilities for inde-
pendent study beyond school hours relative to curriculum areas, (3) some
variance in the ordering of teacher aide functions, and (4) use of
double or extended class periods relative to curriculum areas.

Inverse relationships exist relative to ETV programs and "air-
borne" telecasts as follows: "Airborne" telecast facilities are more
prevalent than facilities for receiving regular ETV programs in Ohio,
whereas in the six other states half as many schools are equipped to
receive "airborne" telecasts as ETV programs. 8

It is apparent that there are considerable consistency and agree-
ment between findings of the Ohio survey and those of the six-state

8 See footnote 7, p. 81.
survey. A number of factors may account for apparent differences in some findings between the two surveys: (1) the lapse of one and one-half years' time between the two surveys compared, (2) a more clear or more common understanding of staff utilization concepts among educators responding to the questionnaires, (3) the absence from Ohio schools of any of the original experimental projects in staff utilization practices sponsored early by the N.A.S.S.P. Commission, (4) recent regional emphasis on "airborne" telecast research throughout Ohio, and (5) financial aid in the purchase of some technological devices through federal subsidies (for example, the National Defense Education Act).

Further consideration will be given in Chapter V to the results of the preceding comparison of the two surveys to support, confirm, or substantiate over-all conclusions or recommendations for Ohio.
CHAPTER IV

DEPTH STUDY OF PRACTICES IN TWELVE OHIO SCHOOL DISTRICTS

The following descriptions of staff utilization practices existing and/or contemplated in public secondary schools in selected Ohio school districts result from information gathered by interviews with administrators, teachers, and students; by observations; by questionnaires; from school records, brochures, and mimeographed materials; and from correspondence. Lists of the open-ended questions used in interviews and a copy of the check list of inhibiting factors to experimentation may be found in Appendix C, pages 382-385.

Initial interviews with central office personnel and questionnaire responses in the state survey revealed where within the district, staff utilization practices were planned or were underway. Each school district superintendent designated those staff members most knowledgeable of each practice; they, in turn, cited others (teachers, administrators, and/or students) familiar with it or with aspects of the practice.

All persons interviewed were expected to have first-hand experience with the practice or with its planning. Teachers were interviewed during their unassigned periods and students were interviewed during study periods. Students and teachers were assured that their names would not be disclosed in the reporting of problems and successes identified or of changes desired.

Practices described fall within the five elements of staff utilization practices selected for this study: team teaching, student grouping for special purposes, teacher aides, schedule changes, and technological devices. One school was selected for its effort to evaluate a practice.

Descriptions in detail are included herein for the purpose of sharing insights and understandings gained in local situations with those who may wish to study these practices or who may contemplate trying them. It is not intended that any of the local practices described be considered as models of the practice. It is hoped that these descriptions will bring to attention problems and successes with, as well as

---

1See definitions of these five elements of staff utilization practices, pp. 11-12.
relationships within, practices; interested persons may then be cognizant of problems, successes, and relationships as they assess their local educational needs in anticipation of sound educational planning.

Existing and/or Contemplated Practices Described

Team Teaching and Other Innovations in a County School

West Clermont Local School District bounds an area of approximately fifty-four square miles. It is located at the west side of Clermont County about eighteen miles due east of Fountain Square in Cincinnati, Ohio. Topography and highways are such that a twenty mile drive is required to reach downtown Cincinnati from the school district.

The school district is commonly referred to as the "bedroom district" of Cincinnati, since adults residing in the area eat and sleep at home but work in Cincinnati. All of the district was farm land originally; it has become suburbanized within the last ten years.

The inhabitants of the district represent predominantly two working groups—junior executives and factory employees. There are no industries located in the school district. Taxing of business districts provides some income for the schools; for example, a nearby shopping center is the largest business income for the schools.

The county population grew from approximately 39,000 in 1950 to 80,000 in 1960. School growth accompanied population growth in the district. In 1947, the enrollment of grades one through twelve was 457; in 1962 the total enrollment was 5,810 students. Forty per cent of the county school enrollment is in the West Clermont Local School District.
Financial problems for the schools have been experienced simultaneously with the problem of school enrollment growth. Because the major tax base for school income in the district has been real estate, school income locally has been inadequate for providing minimum educational facilities and staff. The school system, consequently, has twice received state-aid grants totaling $2,024,000 to supplement local income for construction of school plants. In fact, it has received the largest state grant yet given to any school district in Ohio for building construction purposes.

This school system is organized on the 6-3-3 plan. Amelia Senior High School just outside Amelia, Ohio, is a new plant opened in 1961-1962. Its enrollment now is 879 in grades ten through twelve. A second new high school will begin operation in 1963-1964 at which time the school system will be organized on the 6-2-4 plan.

The high school is a comprehensive high school, including in its curricular offering electronics, cosmetology, and auto mechanics. Thirty-five per cent of the school's graduates enter colleges or schools of nursing for further training.

Grouping of high school students

The school is quite extensively involved with student grouping and tracking. Grouping was begun in 1956 when administration and staff felt a need for it through anticipated increased enrollments. The purpose of grouping students was to challenge the top students academically and to give a sense of accomplishment to all students. Consolidation took place in 1957, which of course compounded the school enrollment
growth problem. This fact plus initial successes experienced with grouping encouraged the administration to extend and refine grouping procedures.

Grouping for grades nine through twelve is by subject areas. Students may be placed in any one of five groups for each subject area; thus, each student may find himself in different levels of expectation for each of his courses.

The five group levels or section levels for each subject area are (1) college prep, (2) superior, (3) average, (4) below average, and (5) low. Sections of classes are identified by number rather than by description, and section numbers are rotated each year to attempt to de-emphasize any status symbols which might be associated by parents or students with grouping.

Four measures are employed by counselors and teachers for grouping: (1) scores of the Iowa Test of Education Development for grades ten through twelve and scores of the Iowa Basic Skills for grades eight and nine; (2) results of the English Cooperative Exam for English placement, results of the Read General Science Test given in eighth grade for science placement in ninth grade, and the Orleans Algebra Prognosis for mathematics placement; (3) actual achievement in terms of grade points; and (4) personal evaluation by the counselor and by teacher recommendation for some students. Placements in question are discussed by the entire counseling staff. There are four full-time counselors available, two for grades ten through twelve and two for grades eight and nine. Every student is scheduled for conferences by a counselor at least four times during the school year.
Grouping at eighth grade level is across-the-board; in other words, the student is grouped at the same level in all his course offerings.

A characteristic of student grouping at Amelia Senior High School discovered by counselors is that greatest numbers of students fall into top and bottom level sections whereas fewer than are expected normally, fall into the middle group.

Counselors group students early each spring after registration for the coming school year, in order to provide for the principal the number of students to be in each subject area. From this information, the principal builds the master schedule for the coming year.

Problems and successes with grouping.—Counselors and teachers indicated that they find many imperfections in grouping—often they experience judgment conflicts regarding student placement. It was also pointed out that team teaching destroys grouping in that large-group instruction involves teaching at one time three sections of a course, each at a different level. School size is not sufficient to supply three sections of students for each of the five levels of a subject; further, if three such sections existed, scheduling might not permit all three sections to meet at the same hour. Further concern was expressed in regard to whether the appropriate criteria are being used for grouping.

A number of successes in grouping were also identified:

(1) Grouping stimulates the faculty so it does not become lethargic; teachers are willing to try new methods because they recognize
differences present in groups or sections. (2) The holding power of the school is improved; guidance personnel attribute lower drop-out rates in part to meeting individual needs better through grouping. In 1961, results of a survey of leaving capacity indicated a 28.5 per cent drop-out rate. In 1962, the rate was only 25.6 per cent. (3) McBee Keysort scheduling and reporting has aided greatly the mechanics and administration of grouping. See samples of the schedule card and the report card in Appendix D, page 387.

Future direction of grouping.—It was indicated that the guidance department at high school level plans to complete a study this year to determine whether the curriculum of the school and the grouping procedures are meeting the needs of groups four and five (that is, below average and low) in the sophomore class. This information is desired by the administration before the new high school opens in the fall of 1963.

The assistant executive head indicated that the administration and teachers highly favor grouping of students. He believed that grouping will become more refined as time goes on and that the district will continue to strive for improved homogeneous grouping.

The preceding description of grouping has been included herein to provide background for practices to be described.

---

2A description of the use of similar McBee Keysort materials in another Ohio school system appears on pp. 203-211. Use of Keysort materials (a Clermont County School System service) was initiated in West Clermont Local School District in 1959 after consolidation and district population growth were suddenly experienced.
Team teaching was introduced in Amelia Senior High School in September, 1961. Mathematics and science were the subject areas selected in the spring of 1961 by the administration for experimentation with team teaching. It was thought by the administration that these areas had teaching personnel who could work congenially with one another.

Involvement in team teaching at Amelia Senior High School grew out of a suggestion of the executive head of the West Clermont Local Schools to the board of education when it was in the process of planning new buildings. His suggestion was that of considering construction of a building designed for team teaching instead of a traditionally styled building. On the basis of his suggestion, the board of education permitted administrative representatives to visit schools where team teaching was in operation and where buildings were designed for that purpose.

The United States Office of Education recommended visitation and observation of team teaching in schools at Wayland, Massachusetts, and at Newton, Massachusetts. The local visiting committee spent several days in the two school systems interviewing school administrators, team leaders, team teachers, and audio-visual specialists. Classrooms were observed. Tape recordings of interviews made in Massachusetts proved valuable to explain team teaching upon the committee’s return to the West Clermont Schools.

Through visitation of schools organized for team teaching, conferences, and study of the literature, the local administrative committee investigating the worth of team teaching for West Clermont Local Schools
recommended that team teaching be used locally. Strengths recognized in team teaching by this committee were (1) the pooling of the talents of several teachers; (2) the provision for balance in the curriculum, since "checks and balances" of remaining team members prevent any one teacher's spending too much time on a favorite topic; and (3) large-group teaching which encourages teachers to do their best and to make quality preparation for the presentation.

Planning for team teaching involved the cooperative efforts of the executive head, the director of curriculum, the principal, and the teachers. Planning for team instruction was begun a year before it was attempted locally at high school level. Discussions of the concept were held at faculty meetings. The administration made decisions as to areas for team teaching and selected teachers to make up teams.

During the summer, 1961, a conference on team teaching at Ohio University was attended by local administrators and one team leader. Further planning included planning sessions prior to the opening of school; the services of an experienced consultant were obtained for these sessions.

A number of techniques were used to establish communication lines for coordinating, understanding, and promoting team teaching. Taped interviews of visitations in and pictures of Massachusetts' schools mentioned earlier were used to inform the board of education, the teachers, and the community about team teaching and its values. Citizens were informed of the proposed program for team teaching through
an open evening meeting, P.T.A., and civic groups. Written information was provided in brochures, newsletters, and newspapers.

After team teaching was used for one year at the high school in the areas of science and mathematics, it was decided that team teaching should be tried the following year, 1962-1963, in the areas of English and social studies. Change of areas was prompted because of the loss of team leaders for science and mathematics. The administration indicated that it felt that team teaching could be done in any area; it felt that the staff was ready to work in teams in English and social studies.

The present high school building underwent a minor alteration to facilitate team teaching—a permanent wall between two regular classrooms was removed in order to provide space for large-group instruction. The second high school, which will open in 1963-1964, is being constructed to accommodate team teaching—it is to have two large lecture rooms and teacher team offices.

All team teaching experienced this year in English and social studies has been at eleventh grade level. American history was the segment of social studies selected for this instructional organization.

The American history team of teachers indicated that team teaching was initiated in American history in 1962 for the purpose of improving instruction by improving the quality of the staff through inservice education (for example, team planning, instructing, and evaluating).

Leadership to plans for team teaching of American history came from the administration—the executive head, his assistant who serves as director of curriculum, and the principal.
Planning for American history team teaching has been done by the teacher members of the team with assistance from the principal and the director of curriculum.

The board of education publicly indicated its favoring the team teaching plan. No effort was made to inform parents about team teaching in American history except through P.T.A.

Teachers were requested by the administration to check the literature about team teaching in American history; they were requested to do this before planning classroom educational experiences.

The American history team was selected in the spring of 1962 by the executive head and the building principal. A broad topic outline for the course was drawn up during the summer by team members on their own time. Each team member selected the phases of the outline which he wanted to teach to large groups.

The team is composed of one woman (designated team leader by the administration) and two men. All are scheduled one free period at the same time each day to be used for planning purposes. The team leader has two free periods a day. The team leader receives an increment of $250.00 for the year for coordinating the efforts of the team; other team members receive no additional increment. All team members teach four conventional classes in addition to the class involving team teaching.

Large-group instruction of 110 students takes place whenever team members decide it is needed. Topic outlines are provided students to facilitate note-taking. All class periods are forty-five minutes in length. Whenever the students are not involved in large-group
instruction, they meet in regular classes for instruction with one of
the three team members. No effort has been made to have small-group
discussion with groups of ten or fifteen students. The classes (team
teaching) are scheduled the last period in the day.

Students selected by the team assist the teachers with clerical
tasks such as typing. The commercial teachers provided the team with a
list of students from which to select assistants.

A variety of audio-visual aids, such as the felt board, the
opaque projector, and the overhead projector is used by the teacher team.
Transparencies for the overhead projector are prepared by two art
students trained by the art instructor.

The two art assistants (students) volunteered from the Art II
class to be trained in the preparation techniques of transparencies.
The art teacher provides released time from class for these students to
prepare projection materials such as mountings, mattings, cartoons, and
transparencies for the teacher team. The art teacher serves as a tech­
nological adviser to the students if they encounter problems. The
purpose of initiating this program and of making students a part of the
team teaching experience is one of service to others. The director of
curriculum discussed with the art teacher the possibility of training
student art assistants before including students as a part of the team
teaching approach.

Values and problems assessed by art teacher.--The art teacher
indicated that the student art assistant program is of value to the
students involved and to the art department. He felt that this provides
one opportunity for recognition of art in the school. The student art assistants will be recognized for their service in the school honors assembly.

The art instructor also pointed out that he needs to make certain that the art students are not overused—to the detriment of the educational welfare of the students. He indicated that he tries to see that the work is paced so that the students are not overloaded at times.

To continue to work cooperatively with the teacher teams by training student assistants was indicated by the art teacher to be most desirable.

**Assessment of service by student art assistants.**—Both students indicated that they enjoy the experience of being student art assistants to the teacher team and that they feel they benefit personally from the training and experience.

They were also able to identify some problems encountered:

1. Being absent from art class to assist teachers is sometimes a problem.
2. Technical difficulties are often experienced in the preparation of materials.
3. Some transparencies take much too long to prepare—the student assistant sometimes questions whether the value of student time to prepare the transparency equals the value of the product.
4. Student assistants are interrupted occasionally by conferences held in the working area shared by them.

Suggestions for change were the following: (1) Provide a place for student art assistants to work undisturbed. (2) Make it possible for the student assistant to try preparations on the projector in advance to see (preview) how the preparations look before the teacher uses them in teaching.
Reactions of team members to team teaching.—A number of problems encountered by team members were identified: (1) Lack of sufficient time for preparation is a huge problem, particularly when each teacher has five other preparations as well. (2) Students do not assume proper responsibility for note-taking in large-group instruction, particularly average and below-average students. (3) Large-group instruction is made difficult through grouping procedures of the school; for example, a large group may include three group levels, such as average, below average, and low. (4) Some students look for the organizational approach (team approach) as a crutch for their personal inadequacies. (5) Ventilation is not adequate in the large lecture room.

All team members indicated that they feel team teaching has possibilities; they hastened to point out that many problems are experienced just getting the program started. Values, too, were identified by the team: (1) Team teaching helps team members to cooperate and to grow. (2) It is a valuable experience for the advanced student; its value may be questioned for the poor student. (3) The program has merit for teachers and for students. Two teachers felt that it is early to identify successes.

Suggestions for change were pointed out by team members:
(1) Provide additional time for planning. (2) Include small-group discussion (ten to fifteen students) in addition to large-group instruction. (3) Use the talents of more people who are available. (4) Improve ventilation of large lecture room. (5) Schedule large-group instruction in the morning instead of the last period of the school day. (6) Provide some free time for at least one team member just before large-group instruction; this time would enable the setting up (in advance) of
visual aids and would provide for last-minute preparations needed to make for smoother classroom experiences. (7) Provide more summer preparation than was expected last summer. (8) Lighten teacher load outside team teaching.

Responses of American history students.—Values identified by students interviewed were as follows: (1) Strengths of three teachers are exposed to all students of three classes combined for large-group instruction as opposed to each teacher's strengths being exposed to only one-third of the large group where the three sections are conventionally organized. For example, one of the teachers may have traveled to many of the battle fields of the Civil War and may have collected artifacts, pictures, and the like. He, then, can share his first-hand experiences with a large number of students; teachers who have not had these experiences can only share experiences as they interpret them from their second-hand experiences such as reading or documentary films. (2) Large-group instruction provides interesting information which cannot be gotten from a book. (3) Teachers bring out a great deal of information through visual aids such as illustrations or pictures in large-group instruction. (4) Information is put across very well to students since all material is gone over twice—in large groups and in class groups.

Problems, too, were pointed out by students: (1) If information is missed in note-taking in large-group instruction, sometimes the teacher in the regular classroom is unable to supply missing information. (2) There is not enough time in the large-group instruction to get all the information needed. (3) Many students' grades are lower when large-group instruction is used than when only regular class instruction takes
place. (4) The students cannot discuss and ask questions in large
groups.\(^3\) (5) Students hesitate to ask questions in large groups.
(6) Large-group instruction is boring sometimes; the student cannot
listen and take notes all the time. (7) The instructor often goes too
fast for the student to take good notes. (8) It is hard to see from the
back of the lecture room; slides cannot be seen well.

In general, students were somewhat indifferent to team teaching.
Many students interviewed expressed a liking for it part of the time.
They readily identified changes they desired: (1) Bring in resource
people from outside and artifacts from a museum of natural history.
(2) Have large-group instruction no oftener than once a week. (3) More
comprehensive outlines should be provided students to relieve the
student of too detailed note-taking; this arrangement would make it
possible for the student to fill in gaps from the lecture on the outline
and to concentrate on listening rather than writing. (4) Outlines in
question-form with answers supplied and spaces for additional notes is
preferred to topic outlines. (5) Improve ventilation of the room for
large-group instruction.

The team of teachers for eleventh grade English pointed out that
team teaching was initiated in this area in 1962-1963 for the purpose of
using the talents of the staff more effectively; they recognized the
in-service education value to team members derived from planning,
instructing, and evaluating cooperatively.

---

\(^3\)Questions were asked by students in the large-group instruction
observed by the writer; perhaps the student recognized that time for ask­
ing questions is limited, since there are a large number of students
involved.
The English team identified the source of leadership for team teaching as stemming from the executive head, the director of curriculum, and the principal.

Planning was quite a hurdle for the English team. Planning has been done for the most part as the year has progressed. Team members were notified by the administration of their selection one month before the closing of school. One month's work was planned by the team leader during the summer; however, much of this planning was revised by the team after school started.

A one day's planning session prior to the opening of school was used by the team; team members also have a common free period for planning purposes, daily.

As in the American history team, there are three members of the English team—a man (designated as team leader by the administration) and two women. Each team member has four conventional English classes in addition to the team teaching class. Only the team leader receives an increment in pay ($250.00 a year).

Communication lines for understanding, coordinating, and promoting have been informally established; the team leader coordinates team member efforts and parents are informed through P.T.A.

Some of the research and evaluation done by the English team before planning was begun consisted of reviewing pertinent N.A.S.S.P. bulletins, reading *Images of the Future*, reading about the work of Wanda Mitchell in English teaching, and having an opportunity to attend a team teaching conference during the summer at Ohio University.
Evaluation procedures built into the English area consisted of giving the Cooperative English Exam—Test A—Mechanics of Expression at eighth grade level and again at eleventh grade level to determine growth. Results of this study will help to determine what will be taught at this level and the manner of teaching for the whole English program.

The eleventh grade classes of English of the three team members are scheduled at the same hour, thus enabling them to be scheduled together for large-group instruction when desired. At present most of the large-group instruction involves viewing "airborne" telecasts of English instruction, one-half a period, twice a week. Before becoming involved with viewing of telecasts, the three sections of English met as a large group once each week for a class period. Since involvement with "airborne" television, the team has been operating a two-track course of study—two days a week, large-group viewing of telecast programs and three days a week, regular class instruction in the conventional manner.

Teacher reactions to team teaching.—Problems encountered by the English team were as follows: (1) Reaching agreement among team members on what ought to be done is most difficult. (2) Lack of time for planning is a problem even though the three teachers have a period a day for planning. (3) The three classes' being at three different levels presents a problem to the teacher of large groups.

A great benefit to each member of the team is the teacher associations made through planning, instructing, and evaluating cooperatively.
Student reactions to team teaching in English.—The following values were identified by students interviewed: (1) Students get the talents of all teachers; one teacher may be an authority in certain areas. (2) Students receive more than one teacher's ideas through the team approach. (3) Teachers "iron out" conflicting points of view in their planning sessions, so the student is not confused by several points of view. (4) The teacher tends not to get off the subject in large-group instruction.

A few problems were recognized by the students: (1) Seating of students should be on a rotating basis, so that the same students are not always seated at the back of the room where seeing is difficult. (2) Students sitting at the back of the room cannot see films. (3) Hearing is difficult at the back of the room. (4) Students hesitate to ask questions in large groups. (5) The lecturer goes a little too fast at times.

A limited number of changes were suggested by these students: (1) Arrange chairs in the large lecture room in a semi-circular fashion to facilitate hearing and viewing. (2) Provide students with some mimeographed notes to limit the amount of note-taking during lectures for large groups.

Many of the students interviewed indicated that they like team teaching; a small number were indifferent about the experience.

Future direction of team teaching.—Both sets of team members (English and social studies) viewed team teaching as a concept to be continued at high school level in West Clermont Local Schools. They
believed that team teaching may continue in the present high school on a limited basis, but that it will be extended into many areas in the new high school, since its facilities will permit a greater degree of involvement.

Neither teachers nor administrators anticipated involvement with small-group discussion or independent study as integral parts of the team teaching experience, since finance is a limiting factor for such involvement.

Plans for the new high school include two large lecture rooms of amphitheater design, team offices, and no teacher stations in rooms. Teachers will know when they are employed that they are expected to be involved with team teaching. It is expected that team teaching will take place in the four basic areas—English, mathematics, science, and social studies—and may be extended into other areas such as business education.

The director of curriculum indicated a number of anticipated concerns for future team teaching in the West Clermont Local Schools: (1) Staff relations within a team must be good for success to be realized. (2) Getting teachers trained for or willing to try team teaching is a problem to be met. (3) Adequate space and equipment must be provided. (4) Providing sufficient planning time is a necessity for team teaching to be effective. (5) Securing personnel trained to evaluate program and staff and providing time for evaluation must accompany experimentation in order to realize improvement in instruction.
Language laboratory use outside of class

A purpose of the language laboratory is to individualize instruction. The teacher of Spanish and French indicated that she believes that students should have access to the laboratory at times other than class time to work on individual needs or problems. A great deal of individual help is needed for some students to succeed with language learning—more than can be provided within the limits of the class period.

Student laboratory assistants have been trained at Amelia Senior High School by the language teacher to keep the laboratory open to language students the three periods a day when language classes are not scheduled in the laboratory. The student assistant knows the mechanics of laboratory operation and is capable of assisting the student who has special language problems. Student assistants are assigned to the laboratory from their study halls.

Students must have permission to be in the laboratory; these students may be advanced students or they may be students in need of remedial assistance. Advanced language students progress at their own pace; the teacher accepts one hour's work in the laboratory in the place of each homework paper. All students are encouraged to make maximum effective use of the laboratory.

Most problems encountered by the teacher have been mechanical or technical problems related to operation of the equipment. The teacher

---

4The use of the language laboratory for language instruction in Ohio schools is described in two other sections of this chapter, pp. 160-161 and pp. 194-198.
was quite pleased with the student assistant arrangement and emphasized the fact that the language laboratory and student assistants do not in any way replace the language teacher; rather, they help the language instruction to be more effective than it could be through the efforts of one teacher.

Reactions of students.—A student assistant valued the experience of assisting in the laboratory, for she pointed out that (1) it gives her experience in operating a laboratory, (2) it gives her an opportunity to help others, and (3) it also gives access to additional experience with listening to tapes during times when she is not needed by students working in the laboratory. The assistant was unable to relate any problems she had experienced and had no suggestions for change.

Responses of students who were using the language laboratory were as follows: (1) The laboratory makes it possible for the student to hear natives speak the language. (2) The laboratory gives more experience with speaking and listening than regular classroom experiences could. (3) The laboratory provides excellent learning experiences. Students interviewed were unable to identify any problems. A suggestion for change was that the language laboratory be opened more periods a day for student use and that students should make greater use of the laboratory than they do.

Speed reading

Fall, 1962, marked the beginning of a speed reading program at Amelia Senior High School. The purpose for which the program was initiated was to help those students preparing for college to improve
their reading skills. It was offered to college preparatory students; a list of those interested was compiled and screened by the guidance department. After screening processes were completed, a class enrollment of twenty-eight students was realized.

Leadership to plans for speed reading came from the director of curriculum for the district. Administrative procedures were worked out cooperatively by central office personnel, the principal, and the teacher. Instructional planning has been done by the teacher selected, with the assistance of the director of curriculum. The teacher receives an additional increment for teaching the course, since the class meets after school.

Communication lines for the program consisted of teachers of English asking in English classes for names of students interested in such a course. The entire faculty was not involved in promoting the program.

Research and evaluation by the teacher did not precede planning for speed reading. The administration had studied the literature and felt that a program should be initiated.

No evaluation procedures of a formal nature were planned. Tests and test profiles accompany materials being used with the controlled reader and enable each student and the teacher to observe individual progress. An informal evaluation of the program will be made by the administration and the teacher with student assistance at the end of the semester.

Twenty-eight students originally were scheduled to meet each Tuesday and Thursday after school at 2:15 p.m. for one hour and fifteen
minutes of instruction in reading. Because of schedule conflicts, students were able to meet but once a week. A fee of $1.50 for each student for twelve weeks of instruction is assessed. The course is taken for no credit.

Materials used for instruction include the controlled reader, film strips, and the SRA Reading Laboratory. The SRA Reading Laboratory is not used in regular classes. Each student keeps his own record of his progress. Students pace their work in terms of their readiness skills determined by the tests provided. The instruction is individualized—the students at a given time are at different reading levels and the teacher helps individual students with individual problems. All materials are graded; the student finds his level and follows the sequence prepared. The teacher supervises the experiences carefully and times readings.

Teacher reaction to program.—The reading teacher expressed concern about frequency of meetings. She had talked with teachers of reading in other schools who felt that progress cannot be effective if the group meets but once a week. Scheduling the class at the end of the school day is a problem because students are quite tired by that time of day. The speed reading program requires a great deal of concentration on the part of each student—students' being physically and mentally tired when they begin the class does not facilitate reading progress. Absences, too, are a great deterrent to progress when meetings occur but once a week regularly.

Although the teacher believed that it was too early to appraise the program, she sensed that enthusiasm was mild among students taking
the course. She indicated that the controlled reader is a most valuable device; she pointed out that both the "open slot" and "guided slot" approaches had been used with the controlled reader but that students felt that "open slot" reading was much more helpful to them than "guided slot" reading.

It was indicated by the teacher that ability to comprehend is directly related to individual interests. She believed that student comprehension is great if the student has read something of particular interest to him and that it is poor if what is read is of little interest to him.

Further, the teacher expressed hope that students will be able to experience improvement in vocabulary, comprehension, and speed by the end of the semester.

Student responses.—Few problems were recognized by students interviewed. One student pointed out that increased speed experienced in reading class did not seem to be a skill carried over into the reading of technical materials; for example, the reading course did not seem to help the student to read faster, technical materials assigned in physics. Another student indicated that a personal problem (not being able to think words and ideas when reading) slows his progress.

Values recognized were as follows: (1) It helps one to read faster, to retain what one has read, to build a larger vocabulary, and to develop the ability to memorize. (2) It helps the student with homework assignments, for he can complete his assignments more quickly because he can read with increased speed. (3) It will be of value to the student wanting to go into the profession of law—both in training and in practice.
Several suggestions for change were made: (1) The class should meet daily rather than weekly. (2) The reading program should be started earlier—perhaps, in the lower grades. (3) The class should meet oftener than once a week. (4) Reading should be taught at junior high school level. 5

Future direction of reading program.—This attempt to teach reading at high school level to interested students who plan to attend college is a beginning and is experimental. The future for the program will depend in part upon evaluations made at the end of the first semester. It was hoped that a second class will be organized second semester to provide opportunity for further evaluation and observation. The administration, the teacher, and the students all realized that too long a time elapsed between instructional periods as it was scheduled. Some alteration of scheduling will likely be made to increase the frequency of class meetings each week. It was also hoped that greater emphasis can be placed on reading improvement earlier in the school program, a downward extension of the program.

Future direction of the innovations.—This account has been a description of several innovations being tried in a given school at the senior high school level. Personnel have indicated that extension of these practices will be experienced in varied ways throughout the system as needs arise and as evaluation is made locally.

5A reading program for junior high school students in an Ohio school is described on pp. 176-180.
"Basic Concepts," a Form of Team Teaching

Fairview High School at Dayton, Ohio, is one of ten comprehensive high schools in that city. The school has an enrollment of 1,282 in grades nine through twelve and is served by a staff of fifty-five teachers. Sixty-five to seventy per cent of its graduates attend college.

This high school is located in the northwest section of Dayton. The community served by it is largely a residential area, except for the presence of a bottling company and a few small shops in small shopping areas. The campus of Fairview High School borders a well-kept golf course.

A large number of the parents of the student body are professional and business people; a few are laborers.

Most students attending Fairview High School attended grade school at one of five Dayton elementary schools—Fairview Elementary, Cornell Heights Elementary, Fairport Elementary, Gettysburg Elementary, or Loos Elementary. Dayton has fifty-four elementary schools in all.

It was September, 1960, that "basic concepts" as a form of team teaching was first initiated at Fairview High School. The purpose of the program was and is to expand students' horizons by helping them to understand themselves, to become aware of our cultural heritage, to understand and appreciate our democratic heritage, to recognize and evaluate certain prototypes, to realize the importance of the social sciences in the struggle for survival, and to have the opportunity to hear the teachers and resource personnel of the area who are specialists in certain areas. As stated briefly by the principal, it is an effort to fill gaps created for many students by departmentalization at high
school level by unifying and giving meaning to knowledge and understandings gained from a small number of the course offerings.

Strong leadership for the teaching of "basic concepts" came from the high school principal. He had been concerned for many years about "those learnings" and "that knowledge" left to "chance learning" of high school students. He had observed that even though some opportunity was provided to students to "round out" their educations through extracurricular activities, much room for improvement remained. Further, he found many areas of a "well-rounded" education not covered by many students' elections of courses; he felt there was a definite need to fill gaps and to tie together or unify learnings of students.

The idea of "basic concepts" budded in part for the principal from his observation of a summer school experiment which was begun in 1957. A four and one-half week survey course—Introduction to the Arts—was taught by two women and a man; one woman teacher spent two and one-half weeks teaching literature and the theater while the other woman and man each spent one week with the arts. Thirty-five students were enrolled.

In the summer, 1958, only two teachers teamed to teach the survey course and enrollment was limited to twenty-four.

The third summer, enrollment was limited to fifteen and the Ford Foundation provided the Encyclopaedia Britannica Films for the course.

The possibility of making experiences of this nature available to all students was discussed at length with groups of teachers and with the entire staff. A committee of teachers was selected to work with the principal to develop a general outline for the basic concepts program.
The committee agreed upon points of concentration for each grade level: (1) orientation for freshmen, (2) mathematics and science not found in the average high school textbook for sophomores, (3) backgrounds and foregrounds of American civilization for juniors, and (4) humanities based largely on the Encyclopaedia Britannica Films for seniors.

There was continued discussion in faculty meetings; ideas of teachers were incorporated. Suggestions of upperclassmen were included in developing the outline for freshmen. Ideas of many students were also used as plans were discussed in the separate class groups. Suggestions from students reporting their experiences in college were also carefully weighed as plans were developed. All faculty members were asked to suggest and recommend resource people for the program. Planning, then, involved administrators, teachers, and students.

Communication lines for coordinating, understanding, and promoting the idea were established through the following means: (1) It was discussed with parents in a parent meeting where it was announced that the courses were going to be experimented with. (2) It was mentioned at the P.T.A. Open House. (3) A brochure explaining the program was given to all students enrolled. The same brochure was distributed to eighth graders and their parents at the Investment Conference in March, an orientation meeting for incoming freshmen.

Research and evaluation did precede planning for the basic concepts program, particularly within grade level topics. There was little in the literature that could be helpful in planning the over-all program, since to date (as far as was known by the administration), it was the only school known approaching the problem in this manner. As
was stated earlier, careful observations and evaluations had been made of the summer school survey course in the arts for three summers. Also, a course in the humanities had been taught to accelerated students for a number of years. Careful observation of problems and successes encountered in these experiences aided those planning the basic concepts program.

Evaluation practices built into the plan included evaluations each year by teachers, students, and parents. Constant revision of the list of resource people was made to improve the program. Student notebooks are required at all levels. Tests developed by team leaders of the teaching team are given at tenth, eleventh, and twelfth grade levels.

"Basic concepts" is required of all students, grades nine through twelve; each student fulfilling course requirements receives one-fourth credit for each year's work.

The question might arise, How can time be provided for requiring more courses to be taken by students and at the same time not deprive them of courses they want to elect?

Dayton Fairview has met this problem in the following way. All Dayton High Schools have been provided an activity period five days a week. Dayton Fairview High School has chosen to schedule a half-hour activity period but one day a week, thus eliminating four activity periods a week. Each Tuesday evening, school facilities and staff are available for any extracurricular activities that cannot be scheduled during the school day in the one activity period a week.

The regular daily schedule at Fairview has hour periods from 8:30 a.m. until 3:00 p.m. An irregular schedule is carried out each
Monday—the weekly half-hour activity period is scheduled first thing in the morning; three morning classes are each shortened to fifty minutes and afternoon periods remain unchanged. By eliminating four activity periods a week, the "basic concepts" can be scheduled once a week, and still students have more class time available than they would have with five activity periods a week. Each student misses each of his classes once a six weeks' period. The rotating-period schedule for a six weeks for "basic concepts" is shown below. The legend for the schedule is: H—Humanities (seniors), B—Backgrounds and Foregrounds (juniors), M—Mathematics and Science (sophomores), and O—Orientation (freshmen).

<table>
<thead>
<tr>
<th>Period</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Week 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>H</td>
<td>B</td>
<td>M</td>
<td></td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>2nd</td>
<td></td>
<td>H</td>
<td>B</td>
<td>M</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td></td>
<td></td>
<td>H</td>
<td>B</td>
<td>M</td>
<td>O</td>
</tr>
<tr>
<td>4th</td>
<td>O</td>
<td></td>
<td></td>
<td>H</td>
<td>B</td>
<td>M</td>
</tr>
<tr>
<td>5th</td>
<td>M</td>
<td>O</td>
<td></td>
<td></td>
<td>H</td>
<td>B</td>
</tr>
<tr>
<td>6th</td>
<td>B</td>
<td>M</td>
<td>O</td>
<td></td>
<td></td>
<td>H</td>
</tr>
</tbody>
</table>

Teachers who have free periods attend and assist teachers responsible for teaching each week.

The teacher team for the basic concepts program is composed of five team members: (1) A teacher from the history department is in charge of the total program and is adviser of junior backgrounds. (2) A teacher from the English department is in charge of senior humanities. (3) A mathematics teacher assisted by a science teacher is responsible
for sophomore mathematics and science. (4) A language teacher is
adviser for freshman orientation.

The tentative topic outline for each grade level is developed by
the teacher team with the assistance of staff members, students, and
parents. Alterations may be made if necessary during the school year;
each year, the program is revised in terms of evaluations of experiences
and in terms of resource personnel available.

In Appendix D, pages 388-392, are found tentative topic outlines
designed for the 1961-1962 school year; these are taken from a brochure
provided for parents for their evaluation.

During the 1961-1962 school year, seventy-eight per cent of the
faculty and approximately forty men and women from the Dayton area
participated in the basic concepts program.

Instruction in "basic concepts" takes place in the auditorium
which has excellent acoustics. The teacher is provided both a lecturn
microphone and a portable microphone. Each class meets as a whole for
large-group instruction as scheduled. This year's ninth grade class has
approximately 450 students; tenth grade has approximately 350 students;
eleventh grade has approximately 300 students; and twelfth grade has
approximately 210 students. Assistant teachers help with classroom
organization such as class control and checking of attendance.

Instructors and lecturers have at their disposal almost any
Teaching aid desired; for example, the overhead projector, the chalk-
board, the piano, the record player, the tape recorder, the film
Projector, and the like are provided as needed for large-group instruc-
tion. The visual aids department cooperates closely with the program.
The teacher team receives no additional pay for this responsibility; team members are relieved of homeroom duty which amounts to fifteen minutes a day.

The budget provides for hiring resource people and/or paying their expenses, if necessary.

Problems and successes identified

In general, the administration and staff felt that the program has been successful. Results of parent evaluations indicated that parents favor the program. Many graduates have returned to express their appreciation for the "basic concepts" experiences to school personnel. A follow-up study of graduates is planned in the near future by the school administration to attempt to arrive at some type of evaluation of the program.

Administrative responses. -- The principal believed that the junior and senior level programs have been most successful to date; it seemed that the mathematics program for sophomores has been the most difficult to present effectively to a large group.

Problems identified by administrators interviewed were as follows:

(1) Determination of a schedule for the program is a difficult task.
(2) The heterogeneous population of a large group presents a teaching problem. (3) Preparing a lesson which will be of interest to all in a large group is difficult. The teacher of a large group may have the problem of gaining student interest; he finds himself using visual aids and illustrations to help the lower group—yet if visual illustrations are used too frequently the average or above-average student may become
bored. Too frequent use of visual aids can also become too entertaining for some students. (4) Staff acceptance of the program, as each teacher visualizes how much additional time he would like to have for his own course, has been quite gradual for some teachers.

Successes also were recognized by the administrators: (1) The community public seems to be quite interested (voluntarily) in the program. (2) Many inquiries about the program have been received from many parts of the country. (3) The sophomore groups seem to be more mature than sophomore groups normally are. (4) Students appear to become more active in the entire school program and to be more cognizant of school problems than students seemed to be prior to the initiation of the basic concepts program. (5) It has proved to be one successful method of broadening the curriculum without lengthening the school day.

The following possible changes were identified by the administration: (1) There is a need for some revision of the sophomore program. (2) It is possible that "basic concepts" might not be required of all students, since the program does tend to be geared for the academically inclined student. (3) All programs need minor revision through periodic evaluation.

Teacher responses.--Teachers were confronted by problems of this nature: (1) It is most difficult to design a program that is of interest and of value to all students of a grade level. (2) It is a problem to decide what to eliminate and what to add when revising the program. (3) It is not easy to get interesting speakers (outside resource people) who talk to given levels of students. (4) Some class groups are
too large; groups numbering much in excess of two hundred are quite difficult to teach effectively.

Successes, too, were pointed out as follows: (1) Resource people are quite willing to come to give their assistance in the program. (2) From all measures available, program aims are being fulfilled.

A change suggested by one teacher was to eliminate "fill" programs and to meet fewer times during the year in order to provide only high-quality meetings.

Student responses.—Students interviewed seemed to value their "basic concepts" experiences. Values that they specifically recognized were the following: (1) "Basic concepts" gives an excellent background for your subjects. (2) The program provides a great deal of general information that everyone should know. (3) Its method—lecture—gives the student experience in note-taking. (4) The impersonal relationship of the teacher is a welcome change—the teacher is not "breathing down the necks" of students. (5) The student learns responsibility for good study habits, for example, the technique of taking notes. (6) The sophomore, junior, and senior programs excel the freshman program because they each deal with a field or area. (7) The variety of speakers is most valuable. (8) The program provides an added advantage in that students become acquainted with the strengths of a large number of the staff members.

Problems were not so readily identified by the interviewed students as were values. Problems recognized, however, were as follows: (1) It is a disadvantage to the student not to be forced to do some
things; only responsible students benefit from the permissive approach that accompanies large-group instruction. (2) The sophomore topics in mathematics and science are very difficult for most students; they are good if the student is interested in these fields. (3) Students hesitate to speak up in large groups. (4) Teachers must know a great deal about the psychology of teaching large groups.

A number of changes were suggested by the students: (1) There should be the requirement that all students must pass two years of the basic concepts program in order to graduate. (2) Let students have a choice of basic concepts programs at each grade level—then the student can take areas that are of interest to him. (3) A course is needed in marriage and the family. (4) The program offering could be broadened if several schools cooperatively participated and programs were offered via television. (5) Students would like the opportunity to go into small-group discussion occasionally.

**Future direction of "basic concepts."**—It was expected by those involved with the program that it will continue much as it has been conducted. There will be periodic alteration and revision resulting from continual evaluation and accessibility of resource persons. There is also the possibility that scheduling of the program might be revised inasmuch as this phase of the curriculum must be flexible to fit in with the total curricular pattern and must contribute to the needs of the students. As was suggested by the administration, there is the possibility that "basic concepts" may not be required for all students, on an individual basis. It was hoped that the program will continue to provide both a cultural and an educational experience for students.
Although at the present time Fairview High School is the only Dayton high school which has the basic concepts program, next year Kettering Fairmont High School plans to experiment with such a program with select groups—for example, students having 130 I.Q.'s who are under-achievers. Fairmont High School has received a Ford Foundation grant to research the experiment.

The preceding account has been a description of one school's attempt to provide cultural enrichment for all its students by providing them the opportunity to benefit from a wealth of resources available in staff and community not otherwise tapped. Under normal learning circumstances, few students contact more than twenty-five per cent of the teaching staff during their high school careers. This approach extends each student's contacts with staff members much beyond normal educational experiences.

Teaching Ventures in the Arts and in Science

A swiftly growing school enrollment continues to be of concern in the Parma City School District adjacent to the city of Cleveland, Ohio, at its southern edge. Since 1957, the Parma City Schools have received more than 1,000 additional students each year; the district has constructed 271 classrooms to house additional students during the past five years. No decrease in the rate of pupil enrollment growth is anticipated prior to 1975.

What accounts for this rapid school enrollment growth? In 1957, about fifty per cent of the district was yet undeveloped; other areas of Cuyahoga County were already substantially developed. It was then that
developers and builders converged on the area to touch off a large house-building boom. In turn, school enrollments surged upward.

Parma School District is now the ninth largest city school district in Ohio; its present enrollment is approximately 21,000 students at elementary and secondary levels.

The district includes three cities—Parma, Parma Heights, and Seven Hills; it is cosmopolitan in nature. Real estate is the major base for income for school purposes in the school district; its largest industry is a Chevrolet plant. Two comprehensive senior high schools and four junior high schools are maintained in the district. Forty-five to fifty per cent of the graduates of these high schools go to college.

As might be expected, many changes, innovations, and new practices have been considered during the past five years by educational leaders of the district. Many changes have been a by-product of rapid growth; others have resulted from a desire by the board of education, the community, and the staff to upgrade the educational program at the same time.

Valley Forge Senior High School receives tenth through twelfth graders from Parma and Parma Heights. It is the newer of the two senior high school buildings in the Parma School District, having been opened for use in 1961-1962. The building has an enrollment of approximately 1,700 students.

The following is a description of two situations existing at Valley Forge High School which are efforts to experiment with a type of team teaching and a form of individualized or independent study.
Arts Seminar

Planning began in 1960 for an arts seminar which was a vision of a music teacher whose idea jelled through independent research done in partial fulfillment of his master's degree program. He envisioned a need at Valley Forge for correlation of music, art, and literature. It was his hope to expose to eleventh and twelfth grade students the great works of artists, without emphasis on any one of the above areas of the humanities.

Permission was gained from the director of curriculum in the district to form a committee for the purpose of planning for the establishment of an arts seminar. The music teacher was appointed to chair further research and planning in order to report findings and to make recommendations regarding such a seminar. In addition to the appointment of the music teacher on this committee, the planning committee also included a literature teacher and an art teacher. Experimentation in teaching of the humanities at the State University of New York Training School in Albany was explored by this committee. Final recommendations given by the committee to the director of curriculum were in turn made to the superintendent of schools. Permission to establish the seminar in September, 1962, was granted by the superintendent.

In the spring of 1962, publicity procedures were set into motion by the seminar committee for students, teachers, and counselors. Students were informed about the seminar through description of the course by counselors and teachers. Originally the seminar was set up as a year's course; however, too few students could elect the course for a whole year to warrant its addition to the curriculum. The students had
difficulty scheduling an additional course, since the number of periods in the school day had been decreased from ten to seven. For this reason, there was difficulty in "selling" the course to those students who might profit from it most. The course was then offered as a two-semester course, Arts Seminars I and II, which could be taken in either order or singly; each semester of the course offered one-half credit.

Arts Seminars I and II are open to juniors and seniors. Any other prerequisites for the courses are discouraged. Arts Seminar I opened this year with an enrollment of forty-three students.

The three teachers who planned for the seminar teach it. The class meets one period each day and all three teachers are in the classroom every day, whether they each have major responsibility for teaching or not. Whenever any of the three teachers are not teaching the class, they assist the teacher who is.

The team of teachers is free the last period of the day for preparation for the seminar. Members of the team also have lunch periods together. Although a specific time of day for planning is not adhered to rigidly, the team does make certain that its members are together at some time during each day for discussion of plans.

See tentative, topic outlines for Arts Seminars I and II in Appendix D, pages 393-399; both follow a chronological approach to the study of great works.

Medieval Literature and modern poetry is supplied by the instructor; the remainder of the literature is available in paperbacks at a reasonable cost to the student. Prices of the paperbacks range from thirty-five cents to seventy-five cents a copy.
There was no specific or formal evaluation plan built into the experiment with the Arts Seminars. The teacher team hoped to make some evaluation of Arts Seminar I at mid-year. Alteration of the course outline for Arts Seminar II may follow that evaluation.

**Future direction of seminar.**—The teachers felt that it is premature to conjecture what the future direction of the seminar may be. It was hoped that the future course enrollment will grow as this year's classes "sing its praises" and as the learning experiences provided are improved. As is noted in the tentative course outline given, a field trip is planned in each area (music, literature, and art) each semester. These may include hearing a symphony concert, viewing a Shakespearean play, and visiting an art museum. The proximity of this school district to a large metropolitan area provides these cultural advantages.

**Successes encountered.**—The teacher team felt that it is early to evaluate with any degree of certainty the course to date, since they had experienced the teaching of it less than one semester at this writing. Each team member did feel that all students gain from the depth of knowledge and extensive experience of that teacher who teaches each phase of the course, for each is considered a master teacher in his field. Further, they felt that there is great value to the teacher in always being present in the classroom, for each learns much in the content of related fields and in techniques of presentation from other members of the team.
Problems experienced.—Problems identified by teachers and encountered by them during the brief existence of the course were pointed out. The limited number (seven) of periods that can be scheduled in the school day cuts election of courses by students to a minimum. Because of that problem (attracting sufficient enrollment), a selling of a rather low pupil-teacher ratio to the administration was and is necessary. If it were possible, the teachers would prefer having the seminar as a full-year course. Each felt that the repetition required in teaching the courses on a semester basis could be eliminated; thus, additional time would be available for further depth in learning experiences.

Student reactions.—Students interviewed expressed satisfaction for the most part with their seminar experiences. Among the values identified by them were the following: (1) Students get three teachers' views. (2) It is a welcome contrast to the conventional class experience. (3) It provides a well-rounded background in the arts. (4) It is of benefit in the study of English. (5) Students like the pace and the correlation of areas.

A suggestion for change was that because of the varied backgrounds of students enrolled in the course, there is need to provide background for many of the topics discussed for the student who lacks background, yet is very much interested in topics of the course. In other words, in terms of the prerequisites for the course, it is possible to enroll in it from the standpoint of interest and yet be lacking in background for it. These students felt they need a slower pace, lower expectations, or additional background for the course.
Conclusion.—The preceding has been a description of one school's attempt to involve three teachers as a team to teach a larger group of students than is usually found in the conventional classroom. The primary purpose of teaming the teachers was to provide "quality" instruction at all times for the course to larger numbers of students than might otherwise be possible. At the same time there was concern for correlating the areas of music, art, and literature without placing emphasis on any one of the areas over any other. The seminar is limited to eleventh and twelfth graders because of the level of expectation for the course.

Two years of planning and research preceded establishment of the course in September, 1962; adjustments to local needs were made just prior to the beginning of the course by changing the planned full-year course to Arts Seminars I and II to permit greater numbers of students to participate than would have been able, in the full-year course.

This endeavor has had administrative support from its beginning. Communication lines between teachers involved and the administration were rather firmly established very early in the planning. Future direction for the course will depend upon the degree of success experienced by students and teachers this first year of trial.

Advanced Science Topics

Advanced Science Topics is an independent study and research session for twelfth grade accelerated students who have completed the new approach in the sciences—chemistry, biology, and physics—with high achievement in all courses or with potential in mathematics and science.
The class is limited to twelve students because the Advanced Science Topics laboratory is designed for this capacity; at present, nine students are enrolled at Valley Forge High School.

The need for an advanced science course arose when the science department of the district anticipated the needs of those students who had completed successfully the conventional science sequence before twelfth grade. The concept of this course blossomed for the system-wide science department chairman when he attended the National Science Teachers Association Convention in Atlantic City in 1959. At the convention was disclosed the science program developed for the Evanston Township High School, Evanston, Illinois. Although the idea for Advanced Science Topics stemmed from the department chairman's learning about the Evanston program, Advanced Science Topics is not patterned for the Evanston program.

Planning for the course took place during 1960 and 1961 under the leadership of the department chairman and the director of curriculum. Department meetings were held for the purpose of developing plans for the course. At these meetings some resistance to such a course was displayed by teachers of science areas, for often each was a specialist in only one or two of the science areas; consequently, many science teachers were concerned about the qualifications of a teacher for such a course—one who is capable of guiding students doing advanced research in any one of the science areas. Those teachers who had had broad field experiences in the teaching of science welcomed the plan for Advanced Science Topics.
Much of the planning and recommendations for facilities and materials was carried on by the department chairman. He designed the laboratory and selected books for its library and laboratory materials.

Communication lines were established early by providing letters describing the course to all science teachers to be read to science students. Discussions of course plans were in turn held with students by the science teachers.

The students of this class meet one hour each day regularly, five days a week. Each individual may continue his independent work in the laboratory during free time from classes (study halls) throughout the day. Advanced Science Topics proceeds without daily assignments, homework, tests, or grades in the conventional sense. Students are assured a satisfactory grade if they participate in advanced topic activities, prepare a project paper, and give an oral presentation of their investigations. The number of topics investigated by each student is determined in conference by student and instructor, considering background of the student, ability of the student, and the nature of topics investigated. It is the teacher's responsibility to make possible for the students, opportunities, facilities, and time for independent studies in any of the science areas. Early class meetings are devoted to developing proper attitudes toward this individualized and independent study and to breaking from conventional attitudes toward specific assignments, homework, textbooks, tests, grades, and teachers. It is desired that it be possible to experience continuously, open-ended and flexible learning situations wherein students can extend and foster in breadth and depth their knowledge of science and mathematics. Current scientific
developments are also an integral part of the course, the purpose being
to foster in students the intrinsic desire to continue independently to
be up-to-date in their thinking and learning. There is an effort made
to have each student engage in extensive exploration of the scientific
method, research, and research techniques. Students are encouraged to
speculate about possible solutions to current problems. The student is
given much responsibility to take initiative, to be creative, and to
question. He must be able to clarify problems and to seek resource
people and materials to solve his problems. The teacher does not give
answers; rather, he guides, encourages, and questions. The instructor
is available at all times to assist; his capacity is more that of an
adviser than that of a teacher in the conventional sense.

Subscriptions to Science News Letter, Science Digest, Scientific
American, Science Teacher, Chemical Education, and the like are the
periodicals made available to the group. An elected librarian from the
class circulates these and other resource materials to the group. Each
student is expected to review each issue; it is hoped that he may gain
ideas and suggestions for areas for investigation. Students are required
to purchase Science World and Science Math Weekly. The laboratory, the
library, and the shop areas of the school are available to these
students by special arrangement.

A Science Advisory Committee of research scientists from Greater
Cleveland industries meets periodically with the staff of the science
department to work with staff and students in any way it can be of help.
It makes available to the school science department, science journals
and research papers for which the industries have no further need.
Considerable research and evaluation preceded establishment of this course in September, 1962. Those involved in planning kept abreast of innovations and practices in science teaching through reports in the *Science Teacher*, a publication of the National Science Teachers Association. The Science Advisory Committee helped in planning the course. A number of department meetings were devoted to the discussion of the merits of Advanced Placement vs. Advanced Science Topics.

Forms or evaluation instruments were being developed to evaluate Advanced Science Topics projects. Oral presentation of papers written about independent study investigations will take place in April—this meeting will be open to the public. The Science Advisory Committee is expected to be among those attending. Evaluation of the merits of this course will take place through observations of the staff, results of the Westinghouse Talent Search Examination, and the quality of the science fair entries.

**Strengths of course.**—It was recognized by the staff that it was early to evaluate successes experienced. Students were aware of the problems of the researcher. Being provided with varied sources of materials and individualized experiences with research techniques are advantages many science students do not experience before college. The student's not being limited to study but one area of the sciences provided, too, opportunities tailored to each individual's needs. Each student had developed an awareness of the amount of work involved in research.
Weaknesses experienced.—The inexperience of students and of teachers with the unstructured organization of the course presented some problems in terms of adjustment early in the course. An inadequacy of breadth of training and experience on the part of the person directing the independent study was a further weakness encountered. It is desirable to have as director or consultant someone trained in broad fields who has had broad experiences in science teaching. A suggested change was that additional money be made available for purchasing materials; at present students may be limited in what they investigate by what they can afford to investigate, since they now purchase their own materials for their research.

Student reactions.—Students interviewed identified the following values as they have experienced Advanced Science Topics this year: (1) The course is organized in a manner to make one think on his own. (2) Being able to research in an individual's area of interest is highly motivating and gives the student great self-satisfaction. (3) Flexibility of class procedures is conducive to valuable learning experiences; the student is not limited to a rigid routine. (4) The laboratory's being open all day to students is a definite asset. (5) The teacher-pupil relationship is the greatest asset in the course experience; students are dealt with on a mature level and are given much responsibility; the teacher really becomes a counselor giving assistance and encouragement. (6) Having a special area in which to work (home base) in the laboratory is an advantage to the student, for he can leave his research at any point and return to it knowing that it will not have
been disturbed. (7) A relaxed atmosphere is present because students know that they can freely ask questions without fear of the kind of grades they will receive. (8) This experience is good preparation for college—students are actually looking into areas not explored before. (9) It gives opportunity to use and practice things learned in basic science courses. (10) Students can work at their own rates. (11) It is wonderful to experience from within a drive and desire to learn.

Problems identified to date by students interviewed were as follows: (1) The pressure of time may limit the topic for investigation. (2) It is frustrating not to succeed; procedures in this approach to science learning do not guarantee successes as is usually the case in doing laboratory work in conventional courses in which laboratory manuals are provided. (3) The limitations of one's schedule on the times that one may work in the laboratory may also influence what may be investigated, for the time of day one may work may easily alter results that one may get in his research.

Students were unable to think of suggestions for change; each indicated his deep satisfaction with the opportunities available in Advanced Science Topics. It was suggested by one student interviewed that this organizational approach to learning has possibilities in the humanities; he did not feel that this approach could be tried with students under tenth grade level.

**Future direction of Advanced Science Topics.**—The department chairman was encouraged with results in products and attitudes of students enrolled for this brief time. It was hoped that, as students enrolled experience satisfactions with the course as expressed and
disclosed herein, enrollment will grow. The teacher of the course believed that becoming eligible to enroll in Advanced Science Topics will become a long-range goal of students beginning the accelerated science program, since presently enrolled students were doing an excellent "selling" of the course just through their enthusiasm for it.

Conclusion—Herein is disclosed an effort on the part of the Parma City School District to vary from the conventional classroom teaching to experiment with an individualized approach to research study in the sciences. Undoubtedly, having access to a room designed specifically for the purpose of teaching only this course in it is conducive to some degree of success for the students enrolled. It is also to be noted that enrollment is limited to the very able student or the highly interested student.6

A conclusive evaluation would seem premature at this time; however, a number of satisfactions have been registered by students and staff. Perhaps, a most noticeable characteristic of the program by the observer is the high degree of enthusiasm permeating the classroom and laboratory.

Summary

The purposes for which the described situations at Valley Forge Senior High School were established are as follows: (1) to provide broad field learning experiences in the arts and in the sciences to

---

6 This is not to say that this organizational approach should not be tried with other types of students; it is only to point out the limitations placed initially by this school for the purposes of trial.
upper-class students; (2) to provide highly qualified teaching for the learning experiences; (3) to provide enrichment experiences for students. Both practices were initiated in September, 1962.

Leadership for both situations came initially from teachers; however, planning followed through cooperative efforts on the part of administration and teachers.

Communication was of an informal nature in both cases. Information was channeled via teachers and counselors to students.

In both instances at Valley Forge High School, research and evaluation preceded planning for establishing the practices. Informal evaluation continued to accompany the practice.

Successes seemed to outweigh problems encountered to date by staff and students in these experiences. Adjustments already had been made where possible, to meet problems encountered.

Future directions of these programs were not too clear because of the brief existence of both; however, leaders were hopeful that both programs will thrive and be extended. They acknowledged the fact that many changes may take place in the programs as they are extended.

Team Teaching, Teacher Aides, and Technological Devices

Warrensville Heights City School District serves the communities of North Randall, Warrensville Heights, and Warrensville Township. The majority of the students enrolled in the schools reside in Warrensville Heights, which is a rapidly growing residential suburb of Cleveland, Ohio. Warrensville Heights had been a village until 1960 when its population reached sufficient numbers for it to be classified a city.
The school district is located approximately fourteen miles east of the Cleveland Public Square. Residents of the district are business, professional, and semi-skilled people, most of whom are in the middle income group. Before moving to this school district, many of the students lived in Cleveland, Ohio; they have had the experience of growing up with and living with many types of people.

There is practically no industry within the school district; it is primarily residential.

After Warrensville Heights became a city, the school district, in January, 1962, became a city school district; the first year that the district had a three-year high school was 1957. Prior to that year, high school students of the district were tuition students at Orange High School.

Warrensville Heights High School is a comprehensive high school with an enrollment of 975 in grades seven through twelve and a staff of fifty teachers. Forty-five to fifty per cent of its graduates are admitted to four-year colleges each year.

A new high school plant is now under construction; it is to be opened in January, 1964. At the present time, grades seven through twelve are housed in one building which will become a junior high school building when the new senior high school is completed. The junior high school (grades seven through nine) and the senior high school (grades ten through twelve) each have principals. Every available space is being used for instructional purposes; the faculty dining room is scheduled for some mathematics classes.
A rather extensive homogeneous grouping arrangement is carried out at seventh, eighth, and ninth grade levels. Some honors sections are scheduled at tenth, eleventh, and twelfth grades. All grouping is limited by overcrowded conditions; adequate space is not available for more grouping.

Grouping is now limited to the areas of mathematics, English, and language at seventh and eighth grade levels. Grouping is based on four criteria: achievement, social adjustment, native ability, and teacher recommendation. Each six weeks, grouping is reviewed and changes are made if necessary; parent conferences are held prior to any changes.

It is planned for the junior high school, when physical separation from the senior high school takes place, to have heterogeneous groups scheduled in homerooms, music, and art and to have homogeneous groups for other areas.

Grouping is limited to college-bound or able students placed in a separate track at ninth grade level. Honors sections at tenth, eleventh, and twelfth grades provide advanced placement opportunities to students entering college.

In 1957, grouping was initiated by the administration to provide improved learning experiences for each student—to attempt to meet individual needs. At that time, criticisms of American education prompted an "internal look" locally; grouping was the result.

Considerable interest among staff and administrative personnel is shown in the staff utilization practices at both junior high and senior high levels. Some practices are well established; some are only in the planning stages.
Team teaching contemplated in social studies

The social studies department chairman was interviewed in regard to plans for team teaching. Lack of space in the present building curtails any experimentation with team teaching now; however, serious consideration is being given by the social studies teachers to team teaching in the new senior high school.

The social studies department relies on the lecture method for a large portion of its instructional time. The staff recognizes that a great deal of repetition is experienced by teachers; for example, three teachers in an area may each prepare lectures on the same topic and each may give it five periods a day in each of his class sections. It is believed by the staff that teachers could be utilized more effectively and students would be served better than they are, if teachers formed teams and were given released time for cooperative planning. In other words, each teacher might prepare one "quality" lecture (each teacher's topic would be different from that of each of the other two) instead of three lectures, which may meet only minimum standards because of planning time limitations; each teacher could present his lecture to a large group of eighty to ninety students who would have been taught in three separate sections by one of the three teachers by the conventional method. When students were not experiencing large-group instruction, they would be involved in small-group discussions (ten to fifteen students in each group). Independent study and research would be expected of each student also.
Large-group instruction enables use of outside resource persons to a greater degree than does conventional class organization, for it is quite difficult to get people to come in for five periods a day.

"Airborne" television lends itself to large-group instruction; it is already being used by individual classes on a voluntary basis at high school level.

Leadership for the idea of team teaching as a possible approach in the social studies area came from the administration and the teachers. Conferences and meetings of the administration, the coordinator of audiovisual materials, and the social studies teachers have been held to plan for involvement with team teaching in the new high school.

Communication lines for coordinating, understanding, and promoting team teaching can be established through teachers' workshops and P.T.A. groups.

Research and evaluation that preceded initial planning for team teaching consisted of general reading of the literature. Representatives of the social studies department attended a regional conference regarding team teaching at Kent State University; there was also consideration given at Parma to team teaching at an economics conference attended by department representatives.

Planning to date had not yet included evaluation procedures for the practice.

The teacher interviewed did not care to respond to questions regarding future direction, problems, and successes of team teaching, since the practice was not yet underway at Warrensville Heights Senior High School. He indicated that department members are eager to try the practice before entering the new building, if space permits.
Teacher aides

The use of teacher aides was enlisted in January, 1960, to assist teachers of English at Warrensville Heights Junior and Senior High Schools in the grading and evaluation of themes. Pressures had been brought to bear recently on the schools by criticisms of colleges and by publications of educational critics to provide more learning experiences in writing for children. A concern was registered locally to help students to learn to express themselves well; consequently, if "quality" was to be realized, students would need more practice in writing experiences. It seemed logical to the administration at Warrensville Heights to increase emphasis on writing in the English program.

A second problem presented itself in the attempt to emphasize writing in the English program: teachers were confronted with the task of teaching five or six classes of English students and of attempting to evaluate themes and other required writings for all those classes.

The superintendent gave leadership to securing teacher aides to assist teachers in their increased responsibility for evaluating the compositions of students. Both administrators and teachers were involved in developing plans for the use of teacher aides in the English department.

Communication lines were kept open at all times between teacher and teacher aide; frequent conferences by the teacher were held with the teacher aide relative to the aide's gaining an understanding of instructional purposes and goals of the teacher for whom she graded.

Current literature, with its accounts of experimentation in other schools with teacher aides, was the extent of research and evaluation
preceding planning for the practice locally. Concern for increased
teacher fatigue related to increased load in grading spurred interest in
the use of teacher aides.

The Warrensville Heights School System prefers to refer to its
teacher aides as para-professional persons. A number of efforts have
been made to include the teacher aide as an integral part of the school
staff. For example, one teacher aide had chosen to work at school
rather than at home evaluating papers. By so doing, she believed that
she has broken down the usual connotation of the job of being "just a
grader." She indicated that working in the building has helped her to
establish good rapport with teachers and with students. She is "handy"
for conferences with any four of the teachers for whom she grades papers;
students respect and accept her as one of the staff because she is
observed at work by them—to them she is not someone at home who grades
their papers but does not care about them.

Teacher aides receive $2.50 an hour for their services. See work
report form, Appendix D, page 400. At Warrensville Heights, teacher
aides are college graduates having a major in English, but they have not
necessarily taken professional courses.

Each set of papers given the teacher aide to evaluate is accom­
ppanied by a completed teacher's composition form (see Appendix D, p.
401), which defines the expectations that the teacher had for her
students and defines the limits of evaluation for the teacher aide.

This teacher aide is taking professional courses to complete
requirements for certification.
As the teacher aide evaluates each student's composition, she attaches to each theme evaluated, a form (see Appendix D, p. 402) which explains the weaknesses of the paper. A record for each six-weeks period of the class's composition grades (see Appendix D, p. 403) is kept by the teacher aide for the teacher.

Use of teacher aides in the English department is voluntary for teachers; many teachers do elect to use the services of aides.

Evaluation of the teacher aide program consists primarily of informal discussion among English teachers involved and the administration.

Problems and successes identified.—The following problems were identified by the administration and by the teacher aides: (1) Communication between teacher and teacher aide can be a hurdle, for mutual understanding by each of goals and expectations is necessary if the teacher aide's work is to be effective. (2) The proximity of the aide to the teacher is relative to success with the practice. (3) Resistance on the part of some teachers who prefer to do the evaluation themselves presents an obstacle at times to the effectiveness of the practice.8

Successes with the practice, too, were pointed out: (1) The teacher aide can improve in her work and can learn a great deal from working with an experienced teacher. (2) Rapport with students and

---

8One teacher interviewed who opposed the use of teacher aides recognized that the teacher aide may save the teacher grading time, but that using a grader makes it difficult for him to be an effective teacher, since he needs to know errors made by individuals in the class in order to plan subsequent learning experiences.
teachers is good. (3) A great degree of progress in writing performance is evidenced for individual students; the teacher aide can write for each student detailed explanations for writing improvement that the teacher does not have time to do.

No clear-cut suggestions for change in the teacher aide program were made. It was pointed out by one teacher aide that there could be value in getting to know students whose papers the aide grades; however, she further indicated that there is value in not knowing the individual whose paper she grades, for the aide can then feel she is objective in her evaluation.

Student reactions to use of teacher aides.—The following successes and values were pointed out: (1) Writing skills of individual students have improved. (2) Graders can give more time to grading each composition than the teacher can give. (3) The teacher does not have to limit the amount of student writing done in terms of the amount of time she has for evaluation of writing.

Students also recognized that the teacher aide may not always interpret or know what the teacher expects in a given assignment.

No changes in the use of teacher aides were suggested.

Future direction of teacher aide program.—It is hoped by the administration that this service can eventually be provided to all departments. It is believed that the use of teacher aides makes possible individual help to students. School officials are convinced that the English department can develop a much more comprehensive writing
curriculum through the use of teacher aides than is possible without their assistance.

The junior high principal expressed her desire to have the teacher aide designated as an assistant to the teacher; the assistant might aid the teacher in the classroom or outside, depending upon the needs of the teacher and the qualifications of the assistant. She further stated that she sees need for a clerical pool to assist teachers in this plan.

Reading improvement program

The reading improvement program at Warrensville Heights Junior and Senior High Schools is a comprehensive one. All students, grades seven through twelve, are involved in the program each year.

The purpose of the program is to meet the needs of all students whether in the developmental, remedial, or accelerated areas of reading. Specific purposes for the program include at some grade level: the development of greater interest in reading, the improvement of word recognition techniques, better comprehension of content read, the formation of good work habits in reading, the acquisition of study skills to be applied to any school subject, discrimination in the selection of reading material, flexibility in methods and rates of reading, and the values of an extensive vocabulary.

The program was initiated in the fall of 1958. The superintendent wholeheartedly backed the idea of developing such a program at high school level. The present reading consultant designed and developed

\[9\] "Developmental reading" is used herein to describe a program directed toward bringing all students—poor readers, average readers, and superior readers—up to their potential reading capacities.
the high school program. Basic planning was done by the principals and the reading consultant; all teachers have cooperated with the program.

Communication lines established for coordinating, understanding, and promoting the reading program were as follows: Open House, P.T.A. meetings, letters to parents (see samples in Appendix D, pp. 404-408), and information to teachers by discussion and by bulletins.

Considerable research and evaluation were done by the reading consultant before she gave leadership to planning the program. She wrote a number of research papers regarding the teaching of reading and the organization of a reading program in conjunction with her graduate work at Kent State University. Special evaluation was made of methods and content. The consultant visited Bedford High School to observe its reading improvement program. One week's training in a Science Research Institute\(^{10}\) was also attended by the reading consultant.

Both standardized tests and self-evaluation by students are integral parts of the reading program to provide information to students and staff regarding individual progress in reading skills.

The reading center is a converted classroom equipped with nine reading booths along parts of two sides of the room; the nine stations are for individual work with reading pacers. Tables for display of materials are also in the room as well as regulation student desks for teaching class groups.

\(^{10}\) Information regarding these institutes may be secured by writing to Science Research Associates, Inc., 259 East Erie Street, Chicago 11, Illinois.
Reading pacers or mechanical reading devices available in the reading center are a tachistoscope and a controlled reader for group instruction, and rateometers and shadowscopes for individual use. These devices are used to improve reading skills through motivation.

The individualized reading aspect of the program makes use of widely diversified materials developed by the Science Research Associates; each set is entitled Reading Laboratory for a specific purpose. Four such laboratories used in the reading center at present are Reading for Understanding, Reading Laboratory IIIa, Reading Laboratory IVa, and Spelling Laboratory IIIa.

Other printed materials used consist of basal readers, study skills booklets, vocabulary workbooks, Reading Skills books and workbooks, reading tests, and supplementary reading materials.\textsuperscript{11}

Seventh and eighth grade students are assigned for one semester to the reading center one period a week, which is a study period other days. Ninth, tenth, eleventh, and twelfth graders report to the reading center for one period a week for one semester during their English class periods. A combined English and reading grade is received by students at the senior high school level. The consultant works individually with special reading problems referred by teachers in any area. Students are also encouraged to enroll voluntarily in an SRA group during study hall or after school; these groups make use of the Science Research Associates

\textsuperscript{11} See Appendix D, pp. 409-411, for a suggested list of reference materials and books for a high school reading program. The list was prepared, November, 1962, by Mrs. Sylvia Day, Reading Consultant, Warrensville Heights High School.
Reading Laboratory materials, a series of reading and study exercises for self-improvement. Lessons include work in silent reading, comprehension, and vocabulary study. Each student may advance at his own rate of progress. These special reading groups carry no academic credit; certificates of recognition are given to student assistants in the reading center and certificates of award are given to students participating and achieving in the special reading groups.

Each student keeps a reading notebook which includes duplicated materials provided by the teacher, drills, records of achievement, and the like.

Seventh graders take a survey course in their developmental reading class. Comprehension is developed through practice with reading films from the Controlled Reader series and through the use of the basal readers, Parades and More Parades. The tachistoscope, Basic Reading Skills workbooks, and other materials are used to develop word recognition and vocabulary. Study skills and oral reading are also taught at seventh grade level.

Development of study skills and improvement of basic reading skills are emphasized at eighth grade level.

Speed reading, developmental reading, and study skills are taught in grades nine through twelve as part of the work required in English classes. One English class period each week for one semester of each school year is scheduled for reading instruction. Remedial instruction for a student requesting it or for a student referred by parents, teachers, or administrators, is available.
The high school reading improvement program at present is taught by a full-time reading consultant. Mechanical reading devices motivate students, but devices cannot do the whole job. Student assistants aid the teacher also. The consultant's schedule is a full, varied, and demanding one.

Problems and successes identified.--The following problems were identified by the reading consultant: (1) There was a problem of communication and "selling" of the program initially. Teachers assumed that the reading teacher would take care of all problems; consequently, much groundwork had to be laid to help teachers understand purposes and potential of the program. (2) Some stigma was attached until parents and students realized that the program was not limited to remedial work but rather fulfilled needs of all students.

Successes, too, were pointed out as follows: (1) Individual improvement is recognized through standardized test results. (2) There is much serious use of the library. Library circulation has increased to the degree that it was necessary to secure the services of an assistant librarian.

Teacher reactions to reading program.--Only values were registered by teacher responses to inquiry about the reading improvement program. They indicated that it motivates the student, films used are excellent, and vocabulary materials are well geared to student needs.

---

12 A weekly schedule for one semester of the reading consultant appears in Appendix D, p. 412.
Student reactions to reading program.—The students interviewed recognized that the reading program definitely improved their reading skills. None of the students interviewed were able to indicate any problems experienced. Students suggested the following changes:

1. Place more emphasis on speed reading in the program.
2. Eliminate the study of "study skills" at ninth grade level; attitudes toward studying will not change at this level.
3. Schedule classes for all year rather than for one semester, since some students do not have any study hall periods in which to go to the reading center to supplement the class experience.

Future direction of the program.—It was believed by the reading consultant that facilities and services of the reading center will be expanded, particularly when crowded conditions are relieved by the opening of the new senior high school. It was foreseen that coordination of services in the reading program will be needed for the district as the district enrollment increases.

"Airborne" television

During the school year 1961-1962, an attempt was made locally to determine the value of "airborne" television; evaluation was of an informal nature by teachers. Two locations in the building were equipped with receivers, so that teachers might view programs any time they were not scheduled to teach classes. An honors section of American history participated second semester on an experimental basis. Written evaluations of programs were submitted to the principal in the spring. From teacher evaluations and requests, the principal then built the master
schedule, attempting to schedule teachers when their requests coincided with the television schedule.

Warrensville Heights Junior and Senior High Schools officially joined the "airborne" program in the summer, 1962. It was decided by the administration that even with limited use of the television, the cost was justified.

Joint leadership was given to plans for involvement by the superintendent, the audio-visual director, and the board of education. Careful observations were made by them to determine whether a satisfactory signal could be received in this fringe area.

As was mentioned earlier, both the administration and the teachers were involved in planning for the use of "airborne" television.

Communication lines regarding the use of television were established through an evening program sponsored by MAPTI (Midwest Program on Airborne Television Instruction), school reports, and newspapers.

Research and evaluation did not precede planning for the use of MAPTI, for Warrensville Heights was a pilot school for research purposes. No formal evaluation practices were built into plans for use of television. This year, the audio-visual director is requesting from participating teachers their evaluations.

To use or not to use "airborne" telecasts in the classroom is at the teacher's discretion, limited only by the MAPTI schedule. Problems of democracy and American history classes are participating this school year.  

---

13 Some limited use of educational telecasts produced for the Cleveland City Schools by Greater Cleveland commercial stations is made in English and language classes at Warrensville Heights Junior and Senior High Schools.
Four receiving sets are available at the high school—two for senior high school use and two for junior high school use. Eight classrooms are equipped to receive "airborne" telecasts. Installation of master antenna outlets permits moving sets from room to room.

Problems and successes indicated by director of audio-visual education.—Several problems experienced to date with MPATI were pointed out: (1) "Selling" the idea was quite a hurdle. (2) Scheduling programs has been difficult. It is hard to arrange the master schedule and to assign specific teachers at times which synchronize with the MPATI schedule; it is doubly hard to cope with the local time change experienced twice during the school year—fall and spring. (3) There have been some technical problems.

Successes and values were as follows: (1) MPATI provides broader learning experiences for students than they could get just from local resources. (2) The staff has been willing to try new ideas. (3) Nothing actually has happened beyond what one would expect.

Teacher reactions to MPATI.—Successes and advantages recognized by classroom teachers involved with "airborne" telecasts were as follows: (1) It is good used as a supplement to classroom instruction. (2) Telecast presentations are quite well done. (3) It brings to the classroom understandings and knowledge that cannot be experienced otherwise. (4) The classroom teacher can learn a great deal observing the studio teacher. (5) Telecasts are stimulating and interesting. (6) It gives direction to the course and keeps both teachers and students "on the track" or "on the subject."
A few problems were mentioned also: (1) The community time change
conflicts with the television schedule. (2) Scheduling of telecasts is
a problem. (3) Program offering is too limited at junior high school
level. (4) Continuity is lost if not viewed regularly; time available
in relation to "ground to be covered" does not permit viewing every day.

Possible changes were suggested: (1) Make a flexible schedule.
(2) Have a shorter viewing time for each telecast; at least provide
equal time for class discussion and for viewing. (3) Team teaching
might help the scheduling problem inasmuch as it lends itself to flexible
scheduling.

Student reactions to television.—Students interviewed were more
critical of this year's programs than they were of last year's. It was
indicated that instruction was better last year. The instructor "goes
too fast" and "gets off the subject" as he lectures. It was recognized
that students have to work harder if television is used, for they must
listen carefully and take good notes. Some students felt that television
is a frill and not absolutely necessary for learning.

Future direction of television use.—The future use of "airborne"
television will depend upon the programming and scheduling of MPATI.
Provided that scheduling is as flexible as possible and that the program
offering is extended, it was believed that television will find its
place as a supplement to classroom teaching.

Closed circuit television is being planned for use when the new
high school building is opened. The proximity of the new building to
the present building is conducive to a closed-circuit system; the
inter-school hook-up will enable using in the new building the same MPATI antenna system that exists in the present building.

Overhead projectors

Overhead projectors were purchased in April, 1961, for the purpose of helping classroom teachers to improve instruction and at the same time to help them utilize their teaching time better.

Leadership in obtaining and in using the projectors was provided by the director of audio-visual education. Both the director and the teachers were involved in planning for use of the overhead projector. A three-week summer workshop was held at the school; it gave teachers board-of-education credit for salary increments.

In September, 1962, a system-wide instructional materials workshop was held for one day to acquaint teachers with processes available for preparation of instructional materials, with special emphasis on projection materials.

Communication lines in regard to workshops mentioned and to use of the overhead projectors were established through the School Board Report to Staff Members, the superintendent's letter to parents, conference programs, and local newspapers.

Research and evaluation preceded plans for the use of the overhead. The audio-visual director attended conferences and conventions and reviewed pertinent literature.

Four overhead projectors are used full-time in the high school. These were purchased through Title III of the National Defense Education Act on a school-matching-of-funds basis. Extensive and daily use of the
overhead projector is made in the areas of mathematics, chemistry, social
studies, and industrial arts. Fairly frequent use of them is made in
home economics, language, and business education areas.

Projectors are available on a reserve basis from the audio-visual
room. Student assistants are trained to assist teachers in preparation
of instructional materials for the overhead.

Some advantages to teachers in the use of the overhead projector
are as follows: (1) It makes possible closeups for large groups.
(2) The teacher can face the class at all times. (3) It can be used
successfully in a lighted room. (4) There is immediate recall of
information. (5) The teacher needs to write or prepare material once
for all her classes; it eliminates repetition of writing for the teacher.
(6) It is possible to demonstrate motion of solid objects; for example,
the meshing of gears. (7) It can be used by any teaching area. (8) It
is limited in its use only by the teacher's imagination.

Evaluation of the overhead projector is informal in nature; it
occurs primarily through informal discussion by teachers. The director
indicated that teachers are a "built-in evaluation system."

Problems and successes identified by director.—The director of
audio-visual education pointed out a number of problems: (1) There is
lack of equipment to meet needs adequately. (2) Educating the community
in regard to new technological devices to aid teaching is a large task.
(3) Sometimes the board of education is reluctant to invest in equipment
because of public opinion.
The following successes were identified: (1) Teachers have grasped very quickly "how to use" and "why to use" the overhead projector. (2) Teachers are monopolizing and utilizing existing equipment.

**Future direction in use of overhead projector.**--It was recognized that there is need to purchase additional projectors; if more are available, greater use of them will be made. Further, if the overhead can be left in the classroom as standard classroom equipment, teachers will use it more extensively. The director added that teachers are reluctant to use equipment they must sign up for.

**Teacher reactions to projector use.**--Responses to inquiry about problems experienced by teachers in using the overhead projector were as follows: (1) The projector is not always available for use when it is needed. (2) There are no problems in evidence.

Values recognized were as follows: (1) Materials can be prepared in advance of class period; no waiting to put on the chalkboard is required. (2) Materials can be written once; repetition of writing for each class is not required. (3) It is an attention-getter of students and a time-saver for the teacher. (4) It is a most useful teaching device. (5) Rooms do not need to be darkened to use the overhead projector. (6) It is not an answer to everything but it does certain jobs very well.

A change suggested was to provide more overhead projectors for classroom use.
Student reactions to projector use.—No problems were identified and no changes were suggested. Values were described as follows: (1) The overhead projector saves student and teacher time. (2) It adds variety and makes class interesting. (3) Teacher presentations such as writing, demonstrations, or illustrations are seen more easily and more distinctly by all students via the overhead than without it.

Tape recorders

Five portable tape recorders are available for classroom use and four tape recorders are used in the language laboratory. The audio-visual department has two tape decks for duplicating tapes.

Tapes and tape recorders are quite valuable to the substitute teacher, for if a teacher anticipates his absence he may tape parts or all of the instruction for the class in advance; the substitute teacher finds this procedure of decided assistance in her teaching.

Tape recorders have been provided for instructional use, since the beginning of the audio-visual program. Their use is left to the discretion of each teacher.

Teacher reactions to use of tapes and recorders in language laboratory.—Values identified were these: (1) Tape recorders cause all students to begin working at the same time; other students can continue their work as the teacher works with individual students. (2) Instruction is individualized; students are kept "on their toes" by this technique.

It was pointed out that tapes and tape recorders are limited in their use for teaching of language, to drill—this is only part of the
job. Commercial tapes have been used to date; it is hoped that tapes can be made for the teaching of comprehension skills.

It was indicated that teachers would like to have a laboratory of their very own which does not have to be shared with others.

**Student reactions to use of language laboratory.**—Values of the tapes, recorders, and individual stations in the laboratory were recognized by students: (1) The laboratory is most valuable. (2) Tapes give actual experience with language spoken by natives. (3) Use of the laboratory materials develops the student's power of concentration. (4) Tape recorders help students to improve conversation skills. (5) Native pronunciations can be learned through use of tapes.

Responses to problems encountered were as follows: (1) Mechanical problems in laboratory operation are somewhat frustrating. (2) Not enough tapes are available. (3) There are no problems.

Greater use of the language laboratory was suggested.

**Teacher and student reactions to use in classroom of tape recorder.**—One teacher replied that he uses the tape recorder infrequently. Problems indicated by those interviewed were of a mechanical nature.

Each teacher and each student interviewed indicated that they could make no suggestions for changes.

Others pointed out that the tape recorder has its place in the classroom. To be effective, tapes should be very dynamic. It was further pointed out by a student that tapes are relatively ineffective and somewhat superfluous if the classroom teacher is very good.
Warrensville Heights Junior and Senior High Schools use McBee Keysort materials for student scheduling, making class lists and attendance records, and their reports to parents. (See samples of the preceding materials in Appendix D, pp. 413-414.) Materials were custom-designed for the needs of the Warrensville School System; they were not "ready made" to be adapted to by the school.

Of the three Keysort forms used at Warrensville Heights Junior and Senior High Schools, teachers and students were most familiar with the report card. The other two forms are mainly for administrative and clerical use. For reason of familiarity, interviews with teachers and students were limited to consideration of the report card.

**Teacher reactions to report card.**—Values of the Keysort report card recognized by teachers were as follows: (1) It is less work for the teacher. (2) Mechanics are held to a minimum. (3) It is easy for the teacher.

Responses to problems identified were the following: (1) Sorting of cards is time-consuming for the office staff. (2) There are no problems. (3) Objectivity is difficult.

Two suggestions for change in the report card were made: (1) Include the attendance record on the report card. (2) Provide space for comments of the teacher.

---

14 A more detailed account of the use of Keysort materials is given for an Ohio school, pp. 203-211.
Students' reactions to report card.—Responses of students interviewed favoring the report card were as follows: (1) It works well. (2) It is very good.

Problems pointed to in the report card were as follows:

(1) Cumulative grades by semester hide progress patterns. (2) Grades can be compared better the old way—when not cumulative each grading period. (3) It is difficult to see the over-all picture when cumulative grades are given.

One change was suggested—go back to the old report card devoid of cumulative grades.

This discourse has been a description of staff utilization practices undertaken in one school situation. Compositely, the practices "spell out" an attempt to utilize staff effectively yet provide rich learning experiences for students.

Three-year Experiment with Schedule Changes

The community of the Upper Arlington City School District located at Upper Arlington, Ohio, is a suburban residential area northwest of Columbus, Ohio. It is comprised mainly of middle and upper economic groups. Many of its citizens are engaged in professional fields such as law, medicine, engineering, and university teaching. Others are employed as administrators of major businesses, as business owners, and as salesmen. Most of the city's growth has taken place during the last eighteen years.

There are five elementary schools, two junior high schools, and one senior high school in the school system which is organized on the
6-3-3 plan. The new senior high school was opened in 1957; a new classroom wing was added to it in 1960. The present senior high school enrollment is approximately 1,500. The high school curriculum is primarily college preparatory, since over ninety per cent of its graduates in past years have gone to college.

Seventy teachers, two and one-half guidance counselors, the principal, and his assistant comprise the senior high school staff.

High school schedule changed

Prior to September, 1962, Upper Arlington High School was organized on a six-period day plus an open lunch hour; each period was fifty-six minutes in length. Beginning in September, 1962, the schedule of classes was changed to eight periods of varied length with five minutes between classes. The day's schedule begins at 8:15 a.m. with a five-minute homeroom period. The first three periods are each fifty-five minutes in length; periods four, five, and six are each forty minutes in length; and periods seven and eight are each fifty-five minutes in length. The school day ends at 3:35 p.m.

Permission to vary lengths of periods of the school day on an experimental basis for three years was granted by the State Department of Education of Ohio, for minimum educational standards for the State of Ohio designate that "the class periods shall be not less than 40 minutes in the clear for the short period day and 55 minutes in the clear for the long period day" and that "a schedule composed of some long and
short periods is not approved."\textsuperscript{15} State department approval was given with the stipulation that local research and evaluation accompany the experiment; a yearly evaluation report is to be forwarded to the State Department of Education.

Developments leading to change

Since the fall of 1951, hour-long periods with supervised study had existed at Upper Arlington High School. Gradually, both public and faculty concerns were voiced to make it possible for students to take more courses. The principal and the superintendent noted this increased concern about the time that James B. Conant pointed to the need for longer school days and that Sputnik was launched. The school community saw a need for a school day at least seven, and possibly nine, periods long in order to provide opportunity for its students to develop optimally.

Experiences to date with plan

This plan for a school day of eight periods (five of fifty-five minute length and three of forty minute length, including a closed lunch period) was initiated by the administration. The purposes of the schedule change were (1) to give opportunity to students to elect more courses; (2) to experiment to see what can be done effectively with varied lengths of class periods in all subject areas; and (3) to have a semi-closed lunch hour because of limited cafeteria facilities.

Planning for this change was done almost exclusively by the administration, except for informal discussions with staff.

Communication lines established relative to initiation of the plan were of brief duration. In the spring of 1962, announcement was made to parents through group conferences and the local press that the new schedule would become effective the following fall. At the time of preregistration, students were informed of the plan by counselors and administrators in student homerooms. Individual conferences were held with students who had scheduling problems or questions about the change.

Very little research preceded planning for the change because very little research is actually available, relative to this approach, since State Educational Standards have not permitted varied lengths of periods in Ohio. Periodical literature was the main source of inspiration to the administration; familiarity of the administration with J. Lloyd Trump's writings and findings in experimentation with modules of time and blocks of time encouraged the administration to want to try such a plan as this one.

Specific plans for evaluating the three-year experiment were not yet finalized at the time of the interviews. Questions to which answers will be sought by evaluation were identified: (1) What effect, if any, does this schedule have on academic achievement? (2) What effect, if any, does the new schedule have on the over-all administrative operation of the school? (3) What effect, if any, does the new schedule have on scheduling of students?
Weaknesses and strengths identified by the principal.—Although the principal felt that there were no serious problems encountered to date, he did relate some minor concerns about the plan. (1) Students may overload with courses without making wise decisions just because it is possible to elect more courses than they have previously been able to select. (2) Sixth period lunch does not end until 1:35 p.m. which is rather late in relation to the opening and closing times of the school day. (3) Staff and students seem to be quite conscious of the lengthened school day; the presence of pressure and the absence of a relaxed atmosphere seem to be sensed by staff, students, and administration. (4) There are increased numbers of students eating in the cafeteria; however, crowded cafeteria conditions need not result from change of schedule, for students are permitted to go home for lunch by special arrangement.

The principal acknowledged the fact that it is very early to identify successes and problems. He felt that a measure of success is the fact that teachers have not complained unduly and he has had some voluntary favorable reaction from teachers.

It is significant that when the principal set up the master schedule for September, 1962, no effort was made to assign certain courses or certain teachers to one or the other length of period. Any laboratory courses which were assigned to a forty-minute period do meet twice a week for eighty minutes as required by state minimum standards.

Teacher reactions to varied lengths of periods.—Teachers interviewed identified the following problems: (1) Students receiving only forty minutes of instruction are slighted. (2) Two lengths of class periods for the teacher cause added work for the teacher, since two
examinations must be constructed at testing intervals. (3) Eighty minutes is too long a period of time for some laboratory work. (4) It is a problem to plan equal educational experiences and opportunities for students for both forty and fifty-five minute periods. (5) Different lengths of periods are a psychological problem to some students, for many feel it is unfair for some students to have fifty-five minutes of instruction while others may have only forty with the same teacher in the same course. (b) It is more difficult to teach given content in short periods than in long periods. (7) Closed lunch hour makes teacher conferences with teacher friends impossible during the lunch hour. (6) It is difficult to schedule student conferences during short periods. (5) It is impossible to squeeze fifty-five minutes of work into forty minutes. (1) Teaching techniques are restricted in the short class period.

Responses to values recognized by the teachers were as follows:
(1) The schedule change provides additional periods for students to elect courses. (2) Eighty minute blocks of time are ideal for working in the laboratory, yet students having only fifty-five minutes for laboratory work are not handicapped. (3) Slower students may elect extra study periods rather than additional courses. (4) It is difficult to think of any values. (5) Closed lunch period relieves congestion in the lunch room. (6) No teachers are now assigned to supervise a room for students bringing lunches, for these students now may eat in the regular cafeteria lunch room; therefore, teacher assignments for extra supervisory duties are reduced. (7) More is accomplished in short periods because the teacher and the students get to the "business of the
day" more quickly, knowing that their time is limited, than if they felt no limit on time. (8) Closed lunch period cuts down on confusion. (9) Students are not rushed in eighty-minute laboratory periods; they tend to be free in asking questions. (10) Students are more responsive in the forty-minute period than in the fifty-five minute period; the fifty-five minute period requires too long an attention span.

A variety of suggestions for change were made by teachers: (1) It is too early to evaluate the product. (2) Foreign language is difficult to teach using the language laboratory in forty-minute intervals; language should have eighty-minute laboratory periods, too. (3) All class periods should be the same length. (4) The teacher can surmount problems arising from this schedule plan as long as there is some flexibility provided. (5) Two conference periods instead of one for each teacher should be scheduled for student counseling; two conference periods were not necessary when all classes were an hour in length and there was time in class for supervised study. (6) If a teacher's study hall assignment were alternated two or three days a week with his conference period, more students would have the opportunity to schedule conferences with him, since this would open two different periods during the week for conferences; otherwise, conferences would be limited to the same period every day. (7) Classes ought to be of uniform length. (8) All periods of fifty-five minutes in length are preferred. (9) There is no problem in having class periods of different lengths; the teacher just needs to adjust content to the interval of time available.
Student reactions to schedule changes.—Students enumerated the values in this year's schedule as follows: (1) Students can take more subjects than it was possible to take with a six-period day. (2) There are none. (3) A student can have additional study halls. (4) Short periods for language classes are good. (5) Variety in lengths of periods is good; the student does not get bored with routine.

Responses to problems encountered by students were as follows: (1) Sixth period is too late to eat lunch. (2) In junior high school there were forty minute periods only; in coming to senior high school, it takes a month to adjust to fifty-five minute periods. (3) Students were told in junior high school that at the senior high school there would be fifteen minutes of each period for study; it does not work out that way in practice. (4) Tests for short periods take parts of two days whereas tests for long periods are completed in one day—forty minute classes thus get behind fifty-five minute classes. (5) Some films are too long for the forty minute period. (6) Fifty-five minute study halls are too long. (7) Short periods are fine for study halls but not for classes. (8) There is congestion in some areas of the building during closed lunch period because students are confined there to insure quiet for classes in session throughout the building. (9) Students can accomplish more in hour periods than in forty-minute periods. (10) The same tests are given to forty-minute classes as to fifty-five minute classes. (11) This schedule is about the same as any others. (12) Forty minutes is not long enough for class discussion. (13) There are no problems. (14) The new idea is not a good one.
Responses to inquiry about changes desired in the schedule were
the following: (1) Schedule non-academic courses in forty-minute periods.
(2) Build a larger cafeteria. (3) Schedule all periods for the same
length of time. (4) Fifty-five minute periods are best; schedule all
periods that length. (5) Periods should be uniform. (6) Have last
year's schedule with two lunch periods. (7) Required courses should be
scheduled for fifty-five minutes and electives should be scheduled for
forty minutes. (8) The school day should be lengthened. (9) Arrange
to balance the number of study halls for individual students each day;
it is pretty boring to have two in a row. (10) Last year's schedule is
preferred.

The most frequently mentioned value was being able to elect more
courses whereas the most frequently mentioned problem was having periods
of differing lengths.

Future direction of plan.—Evaluation will be carried on each
year and adjustments in the plan will be made. Future directions will
depend upon the findings of the evaluation and the reaction of the State
Department of Education to those findings.

Tuition Summer School, Programmed Learning, Reading;
Accelerator Machines, and Audio-visual Equipment

The Marion City School District is located at Marion, Ohio, the
county seat of Marion County. This city is known for a number of
characteristics—the center of large, rich, agricultural and dairy
farms; "the shovel city of the world"; an industrial center with many
highly diversified industries; and a railway center for four major
railroad companies.
Geographically, the city is found in Northcentral Ohio, about forty-five miles north of Columbus, Ohio, on Routes 23 and 30 S.

The city through the years has shown a gradual increase in population from 6,558 in 1830 to about 37,500 today. Similarly, school enrollment growth has been gradual.

The area of the school district is approximately seven and one-half square miles. There are nearly 8,200 public school students in Marion housed in eleven elementary school buildings, three junior high school buildings, and one high school building. A twelve grade program is also sponsored by the Catholic parish of Marion.

Marion City School District has been fortunate to house its school enrollment without resorting at any time to excessively large classes or double sessions.

In the 1960 general election, a "Pay as You Go" bond issue was passed which provided future funds for three new buildings and two additions. During this year ground is to be broken for one of the approved additions—an addition to the senior high school (now seventy rooms) which was opened in 1953.

Situations and practices described herein were observed in the Marion Harding High School and in Taft Junior High School. Marion Harding High School is comprehensive, houses grades ten through twelve, has an enrollment of 1,521, and has a staff of fifty-four. Taft Junior High School is the largest in the city, houses grades seven through nine, has an enrollment of 745, and has a staff of thirty-three. Taft Junior High School serves an area of the city which has acquired a large housing development; the development has attracted semi-professional people and skilled workers who have influenced the leadership,
achievement, and social growth of students attending the school by supporting its upgrading of educational standards in recent years.

Summer school at Marion Harding High School

A summer school for remedial and for enrichment purposes was initiated in 1960 after a remedial summer school program had existed for approximately fifteen years. The school felt that it had a responsibility not only to help students make up failing work but also to provide an opportunity for students who wished to do so (1) to take additional work that might enable them to get courses which could not be scheduled because of scheduling conflicts or (2) to permit them to complete their high school programs in less than four years.

Leadership to plans for a summer school some fifteen years ago originated from the administration and staff. Recent extension of the summer school program to dual purposes has been planned cooperatively by the superintendent, principals, and deans.

Communication lines for coordinating, understanding, and promoting the summer school program have been established through the following media: (1) the daily newspaper; (2) fliers placed in the junior high school offices which are available for teachers to give to students who may need to go to summer school; (3) literature provided for the ninth grade orientation program; (4) brochures provided to the Marion Catholic High School; (5) conferences held by the summer school director with failing students; (6) informal discussions by social studies teachers with classes in regard to enrichment aspects of summer school; and (7) phone calls to and conferences with parents.
Prior to the addition of enrichment opportunities to the summer school program, the principal gathered information about existing enrichment programs among the Buckeye Conference Schools. He was able to learn in this manner about some of the problems and successes experienced by other schools, the length of time which seemed desirable for a summer school session, and its cost.

Summer school at Marion Harding High School is now held for six and one-half weeks, five days a week, from 8:30 a.m. to 12:00 noon. Students may attend only half of the 8:30 to 12:00 session if they are making up but one semester's work. Three teachers are employed to teach in the remedial program: one teacher for mathematics and science, one teacher for English, and one teacher for social studies. Three teachers are employed to teach American history and world history in the enrichment program. In addition, there is a director of summer school.

Enrollment for summer, 1962, was 175.

Tuition is charged as follows: (1) In the enrichment program, personal typing (1/4 credit) costs $12.50, and social studies (1 credit) costs $25.00. (2) In the remedial program a one-half-credit course costs $9.00 and a one-credit course costs $18.00.

Evaluation of each summer school session is done informally by its staff. No specific evaluation instruments have been developed for this purpose.

Future direction of summer school.—It was hoped that the enrichment program will grow to include a wider course offering. Initially, social studies offerings were selected to be taught in the enrichment
program because these are required courses of all Marion Harding students; therefore, when course offerings had to be limited, it was believed that teaching required courses in summer school would meet the needs of the greatest number of students.

Problems and successes encountered.—Although few problems were identified by the director, two of consequence were indicated: (1) In the enrichment program, the ability of some students (specifically, vocational students who need to take required courses to provide released time for jobs during the school year) is a problem when they are taught in the same sections with students who plan to complete high school early to enter college. (2) Vacations and absences pose a problem, since one day's absence in summer school is significant when a day's session is three and one-half hours in length. Usually three days of legitimate summer school absence will cause withdrawal, since makeup is too difficult and since minimum state requirements must be met.

Values identified were the following: (1) The drop-out picture has improved for the district, since some students will drop out of school if they lack but one credit to graduate. (2) Some students can graduate a year early; thus, they are helped to get a job earlier or they may enter college early. (3) Students may graduate with a much broader background and more than the minimum number of course credits by participating in summer school.

Student reactions.—Opportunities in summer school valued by students interviewed were as follows: (1) Attending summer school makes it possible to avoid carrying five subjects during the regular school
year. (2) The student can delve much more deeply into a subject when he is studying but one course than he can delve into each when he is taking several courses. (3) The blocks of time available in summer school also facilitate depth of study, for longer than hour class periods make it possible for teachers to include many interesting sidelights which students may pursue in depth outside of class. (4) Social studies is much more unified through being concentrated into fewer weeks than one year. (5) The relaxed atmosphere of summer school is most inviting.

Reactions to inquiry about problems confronting students attending summer school were as follows: (1) The student cannot retain so much of a course in six and one-half weeks as he can retain in one year. (2) Summer school courses are not so comprehensive as those taken during the regular school year. (3) Two hours might have been more comfortable for one class session than were three and one-half hours.

Responses of students in regard to suggestions for changes in the summer school program were these: (1) No change is needed. (2) Shorten daily sessions to possibly two hours and extend the number of weeks that summer school meets.

Reading improvement program

The reading improvement program in the Marion City Schools has a number of facets. All students in ninth grade at Taft Junior High School are required to participate in its reading improvement program. Reading improvement classes before and after school are also offered second semester each year to seniors at Marion Harding High School who participate voluntarily. Each summer a reading improvement class is
offered to high school graduates who participate on a volunteer basis and who wish the course before entering college in the fall. Any other effort toward the teaching of reading at high school level in the Marion City Schools is voluntary and permissive on the part of each teacher. One such effort will be described later herein; a tenth grade English teacher has made the teaching of reading an integral part of her English instruction.

Reading accelerator machines such as the tachistoscope and the controlled reader are used at junior high school level and in the voluntary reading classes for seniors and for graduates. The controlled reader is used to develop eye movement skills; this device along with the tachistoscope helps students to increase speed in reading. At the same time, questions are answered by the student relative to material he has read via the reading accelerator machines; consequently the student is concerned with comprehension and understanding simultaneously. It is hoped that these improved skills will aid the student and will be functional in all of his reading experiences.

Although automated devices are not used by the tenth grade English teacher, other materials and aids for improving speed in, understanding of, and comprehension in reading are used, such as *English 2600*, a tutor text or self-teaching text; the *SKA Reading Laboratory*; and *Reading for Understanding* by Thelma Gwinn.

The reading improvement course given to all ninth graders at Taft Junior High School was begun in September, 1962, after considerable success for four years with two sections each year of ninth grade English (emphasis on reading) provided for students having reading problems. Upon evaluating the progress of students experiencing these
special English classes, the administration and the staff felt that all students should have the opportunity for help in reading. This fall, ninth grade students were grouped according to reading levels and placed in sections of twenty to twenty-five. Each group meets each day for forty minutes during its extracurricular class period for one six-weeks' period.

Planning for the course was done cooperatively by the principal and the teachers of reading. Communication was limited to explanations of the program to teachers at staff meetings. There was no special communication with parents of the students.

Research and evaluation did precede the planning for use of the tachistoscope. Pertinent literature was sought and read by the administration. A school in the Cleveland, Ohio, area was visited to observe the tachistoscope used in a functional reading program. Upon findings of the research and evaluation, one machine was purchased and used in classes for college-bound seniors. Later the junior high schools began to experiment with its use.

Evaluation practices built into the reading program are simply the prepared tests accompanying the materials used with these machines. Each student keeps his own record of his progress, so that both the student and the teacher are aware of the student's successes and problems at any time.

**Future direction of junior high program.**—A reading teacher felt that there is need for a different type of reading materials. He indicated that he is hopeful that each building will soon have a reading
laboratory where individual students may work with reading accelerator machines.

Problems and successes experienced.—The teacher had sensed that some students resent being taken from the activities period which could normally be used by the student for study purposes. He quickly added that none are hostile toward the program. It was further pointed out that follow-up of the program is difficult and that it is very hard to determine the degree of progress.

The success encountered has been that of individual improvement and of group improvement in reading and comprehension level.

Suggestions for change.—The teacher pointed out that he believes that these devices ought to be used at elementary level. Reading improvement ought to be concentrated at one grade level in junior high school—preferably, at the earliest possible grade level. Every precaution should be made to avoid repetition in the program to guard against loss of student interest.

Student reactions at Taft Junior High School.—Values identified by students interviewed were as follows: (1) The reading course helps the student to increase reading speed by teaching him to skip small words such as the, a, and an. (2) The controlled reader helps the student to develop skill in reading a steady flow of words and ideas; meanings are grasped more readily when the student realizes that he has but one opportunity to view the printed lines or phrases when using the controlled reader. (3) Vocabulary is increased. (4) Reading has become
enjoyable. (5) The Reading Laboratory is fine because the student can
progress at his own rate.

Few problems were indicated by students. Responses were as
follows: (1) There are no problems. (2) It takes study time for the
class. (3) The reading program at junior high level goes [is paced] a
little too fast.

Student suggestions for the reading improvement program were
given: (1) Provide more experience with the controlled reader and less
experience with the SRA Reading Laboratory. (2) The period should be
longer than forty minutes. (3) The transition from elementary grade
level reading to junior high level reading should be more gradual; there
is need for development of additional materials to make the transition
smooth.

Since the reading courses for seniors and graduates are offered
outside the regular school day, only brief information about them will
be included herein. The course offered to seniors before and after
school second semester meets for twenty to twenty-four sessions. The
summer program for graduates meets four or five nights a week for a
month. This course is open to any graduate living in the school
district (including graduates of the parochial schools).

All sections of tenth grade English taught by one teacher at
Marion Harding High School are being exposed to reading improvement
within their English classes. This year, the teacher has been given
high ability groups and low ability groups. High ability sections are
composed of able and willing students and low ability sections are
composed of students with reading levels of fifth and sixth grades.
September, 1962, was the first experience that this teacher had had teaching low ability groups; for five years previous to September, 1962, she had taught only high ability groups.

Because of the teacher's recognition of reading problems within high and low groups, she asked the principal for materials necessary to provide some reading improvement experiences for her classes. It was upon her request that the SRA Reading Laboratory, College Prep Edition by Don H. Parker; English 2600, A Scientific Program in Grammar and Usage, by Joseph C. Blumenthal; and Reading for Understanding by Thelma Gwinn were purchased for her classes. These materials are used as supplements to regular class work. For example, upon completion of a unit in English, these materials may be used for several class meetings before another English unit is begun. Also, the teacher recommends to individual students work with specific sections of these materials to help them improve individual weaknesses. All of these materials are designed for students to progress at their own rates.

Leadership for the use of these materials was initiated by the classroom teacher; however, she was encouraged by the administration to proceed and was given its cooperation at all times.

No formal communication lines were established for coordinating, understanding, and promoting the use of these materials. This teacher did call voluntarily a meeting during the summer of all tenth grade English teachers for the purpose of revising the curriculum at tenth grade level; however, each teacher is free to use the methods and techniques to instruct in his own classes that he deems best.
Considerable research and evaluation of these practices preceded this teacher's use of these materials. A course entitled "Teaching of the Gifted" was taken at Toledo University, some Cleveland schools were visited for the purpose of observing their program for grouped learning, and conferences were held with a Marion junior high school teacher who was already using the materials.

The evaluation accompanying the use of these reading materials was of an informal nature: the teacher solicited student opinion and changed curricular experiences in terms of sound student suggestion.

Problems and successes encountered.—A concern with each type of group was indicated by the teacher: (1) Slow students need very close supervision; many of these students have emotional and home problems. (2) Able students are too much concerned with pleasing the teacher rather than with meeting their individual needs; consequently, they hesitate to assume responsibility in selection of grade level reading materials.

Successes identified for each group were the following: (1) The number of students ranking high in competitive examinations such as the Ohio Senior General Scholarship Test and the National Merit Scholarship Exam has increased markedly in recent years. (2) Slow students have shown increased interest in reading and have become greatly interested in making individual book reports.

The teacher acknowledged that there are many variable factors which may affect this increase in number; however, she stated that she believed the work being done with reading at high school level has been one strong factor affecting these scores.
Student reactions to reading program in tenth grade English.—

Students felt that the materials used in the teaching of reading are quite valuable. They identified the following values to them:

(1) Through the use of these rate builders, both comprehension and speed are greatly improved. (2) It teaches a method for studying. (3) It improves speed and comprehension at the same time.

No problems of group significance were pointed out. Reactions to inquiry about the things in the program which upset them were as follows: (1) There are no problems. (2) Infrequent use of materials in English class does not benefit to any degree the student who has already had considerable experience with them.17

Suggestions for change were the following: (1) The materials ought to be used more regularly. (2) Six weeks or so in the English curriculum ought to be set aside for concentration on reading improvement—there should be a definite time established for its study. (3) Tachistoscopes and controlled readers ought to be used at high school level.

Future direction of program in English Ten.—The teacher was unable to predict any well-defined direction to the reading aspect of the English curriculum, since the program is entirely an individual teacher matter. She did state that she believed that continued stress on reading improvement at high school level will continue to broaden horizons for the student and will help to develop individual interests.

17 This student was a transfer student and had had experience with comprehension and rate builders since sixth grade.
An ideal to strive for would be, she believed, a reading laboratory center for reading improvement and remedial purposes.

Programmed learning in ninth grade algebra

At Taft Junior High School, September, 1962, one section of ninth grade algebra was organized for the use of programmed learning. The only criterion established for placement of students in this section was that the student have average or above-average ability to read. The Encyclopaedia Britannica Films materials were purchased by the board of education at an initial cost of $11.80 a child. Inserts for the programs can be purchased later by students for thirty cents each. The materials were purchased by the board through Title III of N.D.E.A. (National Defense Education Act).

The teacher of this section of algebra was asked by central office personnel if he might be willing to try teaching the class in this manner. The teacher agreed to try it because he is interested in experimenting with different methods and techniques of teaching. The administration explained that its purpose in trying on a limited basis this technique is to determine whether the method is acceptable in this community and whether it may be one means of providing courses not taught regularly. The primary purpose is to look at method rather than to pinpoint a particular subject area for its use.

As implied herein, initial leadership came from central office administration. Continued planning was done cooperatively by administration and teacher. The teacher was free to organize the class in his
own manner. It was decided that class size this year would be limited
to thirty students.

Communication lines were of an informal nature. The building
staff was informed about the course at teachers' meetings. Students
involved in the program informed their parents after they (the students)
had been informed by the teacher.

Before initiating plans for the experiment, the superintendent
perused and studied the literature available on this topic. He
addressed a professional group in Columbus, Ohio, last year regarding
programmed learning in mathematics. The teacher of the algebra section
researched the topic in periodical literature through his personal
interest.

The class had an enrollment of twenty-eight. No transfer student
could be admitted to the class during the school year unless the student
had been having the course on a programmed learning basis in his former
school.

The teacher introduced the course through his own explanation;
he did not use any commercially prepared introductions. He emphasized
the importance of each individual student's responsibility. A great
deal of guidance was needed at the beginning of the course experience.
Gradually, more and more responsibility was given to each student. The
teacher pointed out that he teaches individuals and guides each student
to discover his own "trouble spots."

As the class was observed at work, the teacher was most discerning
at all times in regard to each individual and his progress. To illus-
trate this fact: While explaining something to one student, the teacher
called to a student across the room to tell him that he had accidentally turned two pages instead of one of the program. This illustration is given to point out that programmed learning does not replace the classroom teacher, for supervision and guidance is needed in varying degrees and is dependent upon the degree of responsibility that individual students are capable of assuming.

No definite evaluation practices were yet built into the trial with programmed learning. The teacher hoped to compare the progress of this group with that of his conventional classes in algebra.

Successes and problems encountered.—An adjustment that a teacher of a class for programmed learning must face is the change of teacher expectation, from that of group or class response to that of individual response. The only time that a group response is received is at the time a summary test is given.

First six weeks was a period of adjustment for students as well as for the teacher. Much effort was directed toward developing student ability and responsibility to adjust the pupils' study and work habits to this type of learning.

A weakness for the able student was pointed out by the teacher: the program does not pace levels of learning rapidly enough for some students.

The teacher felt that about ninety per cent of the class are highly motivated (intrinsically) by this individualized approach to learning. The teacher believed that because of not being pressured externally to work, some students obtained higher grades than they did in their conventional mathematics classes other years. The teacher
summarized by stating that he believed the method has merit because of
its individualized instruction approach; however, he would withhold
final evaluation until further study has been made. He believed it too
early to make conclusive judgments.

**Student reactions.**—Values sensed by students were more readily
identified than were problems or changes desired. Values to the students
interviewed were as follows: (1) Explanations of the program are good.
(2) The student can progress at his individual rate. (3) The teacher
helps individually students who have questions. (4) The student learns
more from self-teaching than from being taught conventionally. (5) The
student does not have to keep up with his classmates; he can review any
time he wants anything he does not understand. (6) Learning to teach
oneself could help one to learn how to teach others. (7) It is an
advantage to the student to be on his own to learn at his own speed.

Most students reacted to the inquiry about problems in a rather
surprised manner and said that they did not think they were experiencing
any problems. Two students indicated they would like more group
participation. When questioned further to determine if they preferred
conventional classroom instruction to the programmed learning approach,
they quickly explained that they would like some of each—they were not
willing to give up programmed learning.

Suggestions for change were consistent with problems identified
by the students or by the teacher: (1) Include class discussion along
with programmed learning. (2) No changes are needed. (3) The program
should not dwell so long on some things; the student should be permitted
to go on to new material if he is already familiar with a section.18
(4) Include more class discussion.

**Future direction of programmed learning.**—The teacher doubted that large numbers of classes will become involved with programmed learning in the Marion City Schools for a number of reasons—the limit of finances for initial expenditures, the degree of willingness and ability of teachers to adjust to this type of teaching, and the imperfection of evaluation instruments to determine without question that this method is superior to other methods of instruction. Further trial of the method will likely ensue in a variety of situations; it will probably then be used for specific purposes or as a means to meet specific goals in teaching.

Audio-visual equipment—overhead projector and tape recorder

An audio-visual program was begun in the Marion City Schools in the early 1940's. Its purpose was to make available in sufficient supply audio-visual materials for improvement of instruction. A concerted effort in the last five years has been made to get and to make available all types of teaching materials and aids.

Leadership for the program was initiated by the administration; planning has been undertaken cooperatively by administrators and teachers. De-centralization relative to the audio-visual program has been administrative policy, since central control of equipment did not work well

---

18 This reaction correlates with that of the teacher, earlier, pointing out that pacing of learning levels in the program should be stepped up for some able students.
when tried. Except for special equipment, most of the equipment is located at building level.

Any communication lines relative to exchange of materials or equipment were set up through central office.

The audio-visual program was not developed in the absence of research and evaluation. Marion participated in research studies conducted by Kent State University in the use of audio-visual materials. An individual evaluation of the program was also done for local purposes.

Evaluation consisted of informal discussions at building level in staff meetings and by the administration at central office and at principals’ meetings.

This year, high school teachers requested an all-day audio-visual workshop which will be held February 21. Teachers were very much interested in new developments of audio-visual materials. Plans for the workshop were being made by the in-service education committee composed of teachers and administrators. This committee had also had the assistance of the State Director of the Division of Audio-visual Education in planning the workshop.

Central office coordinator's reaction to program.—Two problems presently stand out, as indicated by the program coordinator: (1) Adequate utilization of equipment already available in the buildings and (2) adequate finances to purchase expensive equipment.

Through the years he has discerned some progress in the utilization of equipment in certain areas. Also, it has been gratifying to him
to note the willingness of many teachers to be ready to use new ideas and to experiment.

A change that he would like to see more evidence of among teachers is their conviction that value received warrants the preparation that is necessary to utilize audio-visual materials.

Tape recorders and overhead projectors.—Tape recorders are quite regularly used in the instructional program of the Marion City Schools.

Tape recorders have been available to teachers at high school level since they were perfected in 1946 or 1947. The audio-visual coordinator at high school level recommended purchase of tape recorders at that time after he had purchased one for personal use and realized its usefulness and potential for instruction.

At Marion Harding High School, individual instruction to teachers is usually given in the use of equipment as needed. During the past twenty years, one building level conference on the use of tape recorders was held.

Leadership was given by the principal in the use of tape recorders; however, teachers use their own discretion in regard to whether and when a tape recorder is used. The administration initiated the purchase of the overhead projector.

Most frequent use of tape recorders at the senior high school was in the music, the speech, and the foreign language departments. The overhead projector had not yet been used by the teachers; it was believed that the overhead will be in great demand among teachers after the workshop in February.
Formal evaluation practices were not a part of the efforts made to improve and encourage the use of tape recorders and the overhead projector.

Problems and successes with tape recorders.—The building coordinator indicated that he would rank "fear of teachers to use equipment" as first on his problem list. He stated that the usual response from teachers has been either that they cannot operate given equipment or that they do not know anything about it. It was further added that it is difficult to determine whether the fear is one of possible breakage or whether it is one of being uninformed.

Successes that have come into view slowly were also pointed out by the coordinator. (1) There is progress in utilization of equipment—tape recorders are used fifty per cent of their possible use. (2) Additional tape recorders have been purchased because of need.

Future direction of use of tape recorder and the overhead projector.—Use of tape recorders and other audio-visual equipment should increase tremendously. It was felt that the interest in the workshop and the workshop experience in February will boost the "quality" and "quantity" of utilization.

Student reactions to tape recorder use.—Values of the tape recorder identified by students were as follows: (1) Tape recorders are quite useful, for the student can discover faults in his speech, such as speaking too rapidly and enunciating poorly, through listening to his voice on tape. (2) Tape recorders are valuable because the student can
hear how he sounds to other people when he speaks. (3) The tape recorder exposes many speech defects such as mumbling and hesitating.

When questioned about identifying anything that upset the student in his experiences with the tape recorder, the students replied as follows: (1) Nothing is upsetting. (2) It is somewhat frustrating to discover that the recorded voice does not sound as expected by its owner. (3) Hearing oneself may prove embarrassing to some students. (4) It is sometimes surprising if not shocking to discover discrepancies in voices.

Every student interviewed suggested more frequent use of the tape recorder. All students interviewed looked upon the recorder as helpful.

**Student reaction to use of overhead projector.**—Although, as has already been pointed out, the overhead projector had not yet been used by teachers at Marion Harding High School, the projector was used once by a resource person for the Joe Berg Science Seminar which meets on Thursday nights. One student was interviewed relative to its use and responded as follows: (1) It is valuable because notes can be seen more easily than they can be seen on a chalkboard, particularly for large groups. (2) The use of the machine impresses students in part because it provides variety and diversity of method.

No problems were identified.

The student felt that she was not familiar enough with the device to suggest possible changes in its use. It did occur to the student that the overhead projector lends itself readily to the teaching of mathematics.
The preceding description has related the experiences of selected schools of the Marion City School District in meeting local needs of students with a forward look for ways to make the most effective use of their teaching staff.

The Use of the Language Laboratory and a Student Training Program in Audio-visual Aids

The New Philadelphia City School District, New Philadelphia, Ohio, is located in Tuscarawas County, which is primarily agricultural with some industry. Among products of area industries are sewer pipes, construction machinery and equipment, ventilating fans, roller bearings, and the like.

New Philadelphia has a population of approximately 15,000; its growth has been rather gradual through the years, for a number of its residents are older people. Most residents are in the average income bracket.

The high school plant is located almost centrally in the city of New Philadelphia. This plant includes three buildings: New Philadelphia Senior High School built in 1914 on one and one-fourth acres; Welty Junior High School built in 1925 on one and one-third acres; and the shop and physical education building completed in 1959. There are seven elementary schools in the district. Grades K-12 have an enrollment of 3,500 students.

Present enrollment in grades ten through twelve is 666; enrollment in grades seven through nine is 900. There are thirty full-time junior high school teachers, twenty-five full-time senior high school teachers, and ten part-time teachers shared by the junior and senior high schools.
The history of the school organization is an interesting one. Until 1926, the schools were organized on the 8-4 plan. In the fall of 1926, the system became a 6-3-3 organization and remained so for twenty-five years. In 1951, it was organized on a 6-6 basis and continued on that plan until 1961 when once more it became a 6-3-3 organization. The most recent change in organization was made because of size; the physical arrangements of the joined buildings (senior high and junior high) and increased enrollment presented administrative problems, so separation took place and two principals were named.

Language laboratory

The language laboratory was installed in the New Philadelphia Senior High School for the purpose of helping students improve their listening and speaking skills in modern languages. The laboratory was first placed in operation in the fall of 1961. It is used for the teaching of French and Spanish.

Plans for installing the laboratory originated from the administration. Teachers were consulted in regard to the need for such an installation and the administration timed the purchase so that one-half of the expenses incurred could be defrayed by federal funds through appropriations of the National Defense Education Act.

Once the laboratory was installed and commercial tapes were purchased, it became each language teacher's responsibility to make use of the laboratory.

No communication lines for coordinating, understanding, and promoting use of the language laboratory were established, for the
teachers recognized the value of the facilities to the learning of language. The administration did schedule classes in the laboratory for each of the two modern language teachers, each two days a week.

Neither the principal nor the teacher interviewed was aware of any research and evaluation preceding planning for the laboratory. Each believed that decision for the purchase was based on the fact that the facility could be purchased in part with the aid of federal funds and that it was generally accepted as "the thing to do" by many administrators at that time.

The laboratory is a converted classroom; it has thirty student stations and the teacher console. Booths are permanently placed in the conventional rectangular arrangement with the teacher console mounted on a platform at the front of the room. The console's being elevated by the platform makes it possible for the teacher to see each student readily from the front of the room as he communicates individually with the students.

The language department has established four purposes for its program: to develop in students the skills of reading and writing the language in classroom experiences, and to develop the skills of listening and speaking the language in the laboratory experiences.

Commercial tapes rather than teacher-made tapes are used almost exclusively by the language teachers. These tapes are tapes prepared to accompany the textbook that is used. For example, one tape in French has one lesson on it which is to be mastered by the students in one week. There are thirty-six tapes for a thirty-six week school year. Each tape corresponds to a given lesson in the textbook.
The teacher of French believed that using the commercially prepared tapes is a distinct advantage to the student, since the speech of eight different people (four women and four men) is experienced at varied times during the course of thirty-six tapes. The eight people come from eight different geographical locations in the country; thus the student adjusts to and understands eight different varieties of dialect rather than just that of the classroom teacher. The teacher also recognized a disadvantage of the commercial tapes in that they are too advanced for many of his students.

The O'Brien and Lafrance text and taped materials of Ginn and Company are used for French courses taught at senior high school level at New Philadelphia.

No evaluation practices were built into the use of the language laboratory. Evaluation practices have been limited to the conventional grading, marking, and reporting procedures used relative to evaluating the student's work. Recently, some question was raised by the administration as to whether too much time and emphasis might have been placed on laboratory experiences at New Philadelphia, since a New Philadelphia graduate had recently failed a college language placement test which was geared to the conventional approach to language learning rather than to the modern approach.

Teacher reactions to laboratory use.--Two major problems were indicated by the teacher interviewed: (1) There is not sufficient time in a school year to accomplish satisfactorily all four goals established by the department through the use of the materials and facilities
provided. (2) The commercial tapes and the text are paced too rapidly for local needs.

Values in the use of the laboratory were also pointed out:
(1) Students are more highly motivated through the use of the laboratory than they are through exclusive use of the textbook. (2) Individual guidance of students via laboratory facilities is possible on the part of the teacher (provided time permits).

Suggestions for changes desired were as follows: (1) It would be desirable for the teacher to have more freedom in developing the curriculum; then the curriculum could more nearly meet individual and local needs. (2) A semicircular arrangement of laboratory stations would improve the physical aspects of the learning experiences.

Student reactions.---Students interviewed had difficulty in identifying any problems encountered in the use of the laboratory or changes that they would like to have made. One problem experienced was that some of the speaking on tapes is too fast and too difficult.

Values of the laboratory were readily identified: (1) The laboratory helps the student to develop correct pronunciation. (2) The student is not afraid to respond, since no other student hears him as he practices. (3) The tapes help the student to develop proper inflection in speaking. (4) It is very helpful.

Future direction of use of the language laboratory.---No significant change in the use of the language laboratory was anticipated, other than normal changes expected from enrollment increases and/or from maintaining of resource materials and equipment. The laboratory was recognized by
both staff and students to be a valuable part of the students' language learning experiences.

Audio-visual program for Welty Junior High School

Audio-visual equipment was first obtained for junior high school use in 1933 when a Victor silent projector was purchased with activities money. Now the audio-visual facilities available at junior high school level include three Bell and Howell film projectors, two slide projectors, two filmstrip projectors, six tape recorders, three record players, one daylight screen, three "movers" or reverse projectors, an audio-visual room with a seating capacity for eighty, six classrooms which can be darkened, regular screens, tapes, filmstrips, and records.

There had never been a budget for the audio-visual department; all equipment had been purchased from activities money raised through a number of projects such as magazine drives, plays, and musicals.

In 1952, a training program for students was begun, to prepare students to maintain and operate the equipment. The training program has come to be regarded among students as a most desirable educational opportunity.

Leadership for the audio-visual program came initially from the administrative level. The administration recognized the need for providing equipment for classroom use and appointed an interested teacher to supervise its use. It was the teacher, then, who initiated the student training program with the cooperation of other staff members and the principal.
The supervisor believed there would be value in students' having the experience of maintaining and operating audio-visual equipment. At the same time, she felt that greater use of audio-visual materials would be made if student operators were available, since teachers seemed to fear the mechanical aspects of operation. Students would relieve the teacher to concentrate on instruction. It was for the above reasons that the supervisor requested permission to have a student training program for the audio-visual department.

Student conferences, class discussions, and teachers' meetings were the means of communicating to students and faculty the purposes of the program and the plan for training operators. For the training program, about 100 eighth grade students volunteer each spring to be trained. Teachers then recommend students from the volunteer list. Approximately twenty-five students are selected from the original 100 volunteers. Ninth grade students who were trained the previous year then have responsibility each spring for training the incoming group of twenty-five trainees. The students are trained during their study halls, before school, and after school, in the care of and cleaning of equipment and materials, and are taught how to operate each piece of equipment. Before school each day, students clean, adjust, and set up equipment that will be used; after school each day, the "take down crew" cleans, checks, and dismantles equipment.

Two projectionists are reserved for each period of the school day to be on call. Student trainees indicate the periods during the coming school year that they would like to work in the audio-visual department. The principal then makes out each student's schedule for the following
fall, not scheduling the student for classes during the periods selected by the student to work with audio-visual equipment.

The supervisor of audio-visual education has responsibility for coordinating the program and for supervising student projectionists. Considerable work is involved for the supervisor in ordering materials for teachers and in returning the materials promptly when the teacher has finished using them.

Films and filmstrips must be ordered a year in advance from the State Department Division of Audio-visual Education. Materials from the Ohio Valley Regional (Wheeling, West Virginia) and the Cleveland Regional Film Circuit (Cleveland, Ohio) are ordered each month. Free materials from commercial sources are also ordered each month.

Record keeping for the program is also quite involved. The weekly schedule of projectionists must be posted at all times to maintain proper student control. A record of postage expenditures must be filed. The schedule of films to be expected each month and the calendar for showing of all films must be posted. An order schedule of films must also be kept up-to-date. A teacher evaluation file of all materials used is kept and returned to the teacher to assist him in ordering materials for the following year. An annual comprehensive report of the audio-visual program is given to the principal for his records and evaluation.

Some of the regular uses of audio-visual materials and equipment each year have been the following: (1) The opaque projector is widely used in the department of English as a device for projecting student themes for checking and instructional purposes. In social studies it is used to show maps and to increase the size of maps for chart or
blackboard use. Its ability to increase the size of images projected is used for painting backgrounds and backdrops for stage productions. It is used by the science department for science fair projects also.

(2) Tape recorders are used in the teaching of spelling, English, and floor talks. (3) Ohio history tapes are used in the teaching of social studies.

Although the department did not yet have an overhead projector, one was in demand for use in the science and the industrial arts areas.

No evaluation procedure was built into the program. Teachers do return a written evaluation of films they use to the coordinator of the audio-visual program. The coordinator attends audio-visual conferences at regional and state levels and teacher workshops to keep abreast of latest developments in the field.

The supervisor of the audio-visual department summed up her reaction to problems and successes experienced in the program in this way: (1) Students sometimes assume a little too much responsibility, some are not responsible; a weeding out process sometimes is resorted to, to rectify these problems. (2) More money is needed to finance an adequate program. (3) In many instances, students do a better job than do teachers, for teachers rarely have the time to maintain equipment adequately. (4) Also, students do not fear handling and operating the equipment.

**Teacher responses.**—The following were among the values of the audio-visual program that teachers interviewed identified: (1) Films show places and things that cannot be experienced otherwise by the students. (2) Films help the student who is a poor reader. (3) Films
can bring textbook information up to date. (4) Student projectionists are very much appreciated, for mechanics of operation get in the way of teaching if the teacher operates equipment; thus, class control may become difficult. (5) Films aid visually the perception of ideas and are a good change of pace from the standpoint of teaching techniques.

Problems, too, were pointed out by interviewed teachers: (1) Films that are mailed often do not show up when they are expected. (2) Films are not previewed by the teacher; consequently, selection is made on the basis of title and description only. (3) There are not enough films available. (4) It is often difficult to correlate audio-visual materials because they must be ordered so far in advance of showing. (5) Many films are outdated.

A few suggestions for improvement were made by teachers: (1) Purchase an overhead projector and Tecnifax materials for its use. (2) Additional equipment is needed.

**Student reactions to training program.** Values that students felt they derived from the experience were as follows: (1) The student who has never before had experience with mechanical operations is helped a great deal. (2) The experience of showing films at varied levels and in all learning areas widens the horizons of understanding of the projectionist. (3) The experience could be a link to a vocation.

Problems that often frustrate the student trainer were identified: (1) Mechanical failures of equipment often present perplexing problems. (2) Both serving as a projectionist and training others for the work are satisfying experiences; however, showing is preferred to training,
since showing is less frustrating than teaching is to many students in
the program.

A suggestion was made relative to the training program. At
present, only ninth graders operate equipment for teachers. It is
believed by ninth grade trainers that trainees (eighth graders) should
have full responsibility part of the year during their "internship,"
because they learn more if they are responsible.

Future direction of the audio-visual program.—It was expected
that the audio-visual program will be extended to having an audio-
visual director appointed for the school system. The worth of the
program at the junior high school level was recognized and supported by
the administration. Such an appointment would necessitate financial
support from the board of education rather than a dependence for finances
from activities funds as is presently done.

This has been a description of one school system's endeavors at
high school level with a language laboratory and with a student training
program for audio-visual aids, for the purpose of improving instruction
and assisting teachers with their teaching tasks.

Some Use of Technological Devices

Rossford High School has an enrollment of 630 students in grades
seven through twelve. Four hundred twenty of these students are enrolled
in grades nine through twelve. Although it might be expected that grades
seven and eight would have a significantly larger enrollment propor-
tionally than do grades nine through twelve, this is not the case.
Undoubtedly, fewer numbers of students than might be expected in grades
seven and eight can be explained by the fact that there are two Catholic schools, grades one through eight, located within the Rossford Exempted Village School District. Many children leaving these parochial schools continue their high school educations at Rossford High School.

Rossford High School is located in the village of Rossford which is contiguous with the city of Toledo. Rossford is the third largest urban area in Wood County.

The Rossford Exempted Village School District has four elementary schools, a junior high school, and the high school previously mentioned. The district serves approximately 1,350 students who live in the incorporated area of Rossford and in rural areas and communities in Ross and Perrysburg Townships.

For many years the village of Rossford and school district lines coincided; consolidation began in 1957 when Glenwood was added to the school district. In 1959 Lime City also joined the school district. Prior to Glenwood's and Lime City's becoming a part of the Rossford School District, high school students of those districts were tuition students at Perrysburg, Ohio.

McBee Keysort for scheduling

It was in 1959, at the time that Rossford High School experienced increased enrollments because of consolidation, that McBee Keysort, a means for improving the efficiency of scheduling practices, was tried. In fact, the enrollment in grades seven through twelve had doubled that year. McBee Keysort is sometimes referred to as the "poor man's data processing."
The purpose for initiating the use of the Keysort for scheduling was to facilitate handling greater numbers of student schedules in less time than had been done in the past by completely manual processes.

Leadership for use of McBee Keysort materials originated with the administration (the principal). He had read about the values of the process in *The Bulletin of the National Association of Secondary-School Principals* and became interested in determining how its use might be advantageous in his school situation.

Before making recommendations to the board of education regarding the use of Keysort materials at Rossford High School for scheduling of students, the principal visited and observed practices in a neighboring school system. After careful study and observation, the principal recommended to the superintendent who in turn recommended to the board of education that an expenditure of $600 to $700 be made for a three-year period to purchase necessary Keysort materials to aid the scheduling process. No other communication took place. The board of education approved the superintendent's recommendation.

Initial steps in scheduling at Rossford are much the same as conventional scheduling procedures. Student registration takes place in the spring of the year. A special registration card is supplied each student at each grade level. See sample of freshman registration blank, Appendix D, page 415. Course elections are then typed or printed on the schedule card by the secretarial staff. See schedule card, Appendix D, page 415. The secretary also codes course elections along the edges of the schedule card. By punching appropriate positions along the edges of the card and using the Keysort needle or spindle, the secretary can then
sort all cards of students who have elected courses such as English I, general science, or home economics, in that order. By counting the number of cards sorted for each course such as English I and general science, the secretary can quickly supply the principal with class tallies and course counts. The principal can then make the master schedule.

Using the master schedule, the principal and the assistant principal then write each student's schedule simply by writing on the schedule card the period for each class and its room assignment.

From the schedule card is then typed a copy of each student's schedule in duplicate; one copy is mailed before school opens to the student and the other copy becomes the locator card for office use. See Appendix D, page 416. It is hoped that in the future, the schedule card can be designed with two carbon copies to eliminate further typing of the student schedule to produce the student copy and the locator card.

No formal evaluation procedure is built into the practice. Alterations will take place as improvements are found necessary through trial and error by the administration and the secretarial staff.

Future direction of scheduling process.—In addition to developing an awareness for ways of improving the scheduling process, it may be possible for Rossford and for schools of its size to convert their scheduling procedures to automation processes (such as IBM or the like) by pooling their resources to purchase or rent key punches and minimum equipment jointly or to have work done at a data processing service center. The principal indicated that these possibilities are under consideration.
Successes and problems encountered.--The principal was unable to identify any major problems experienced other than the normal concerns for improvement. He quite definitely stated that the opening of school each year has been a quite smooth process since the use of McBee Keysort for student scheduling. He stated the following reasons for a smooth school opening: (1) There are very few conflicts and errors in scheduling. (2) The enrollment balance of classes and study halls is very good.

Keysorting has been a definite time-saver for the principal and his assistant—where they did spend most of the summer to schedule students, they now spend approximately two weeks. This method makes it possible for clerks and secretaries to assume some of the work of student scheduling formerly done by the principal.

McBee Keysort for grade reports

The McBee form of grade reporting to parents was begun at Rossford in 1960, to relieve the homeroom teacher of some clerical duties. Information about the student is typed on and punched into the card by the office secretary during the summer. The report cards with this information, one for each subject that each student takes, are supplied to the teacher of that student for that subject at the opening of school. See Appendix D, page 416.

The school administration presented the possibility of the use of this reporting system to the faculty for its consideration after the administration had become aware of its merits through visitation of a nearby school using the system. The staff after discussion and study
voted to adopt this type of report card. Both the administration and
the staff were involved in designing the report card.

Letters explaining changes in reporting practices were sent to
parents along with the student schedule cards mailed during the summer
of 1960. Parents were informed as to reasons why the change was being
made.

During the time that planning for use of the McBee Keysort report
card took place, the administration and the staff studied and evaluated
the practice by keeping abreast of reports of schools throughout the
United States in *The Bulletin of the National Association of Secondary-
School Principals* and by visiting in two nearby school districts which
were already involved with the practice.

The day that report cards are to be distributed to students, the
student receives his copy of his report card in each of his classes.
The teacher needs only mark the appropriate grade for the appropriate
grading period in the space provided. She may also check qualities of
the student in need of improvement.

Realizing the problem faced by parents to sign each of the report
cards for each subject (each student would have five or more), the
principal designed an envelope to hold all report cards of the student.
The parent's signature must be placed once each grading period on the
report card envelope (see Appendix D, p. 417).

Evaluation of the practice is done in an informal manner. Faculty
discussion of the report card occurs in staff meetings; faculty opinion
is solicited. The faculty has voted unanimously to continue use of the
McBee reporting system.
Future direction of reporting practice.—The reporting practice will likely continue much as it is now for the next three years, for the school now has a three-year supply of the report card forms. The McBee system will likely be continued until something better replaces it. The principal anticipates that the district will probably use automated data processing when the senior high school enrollment reaches one thousand.

Problems and successes experienced.—A problem experienced by the administration with the report card is the great amount of secretarial time required to sort the grade reports when returned to the office. If the reports were printed on a stiff paper, sorting with the Keysort needle would not be a problem; however, they are written on a good quality paper which crushes and bends easily in order to make it possible for grades to be recorded in carbon copy on each of the following six weeks' reports as well as the current one. This procedure makes cumulative grade reports to parents each six weeks, yet the teacher records the grade only once.

To resolve the problem, the principal has returned to teachers for aid in compiling reports such as honor roll lists and failure lists from grade reports, by having the homeroom teacher provide the office a list of those students eligible. Teachers can provide the lists more quickly than is now possible through sorting by the secretary.

It was also necessary to change the honor roll system where eligibility was based on point hours of students to an A-B system. Careful communication with parents was required relevant to this change to preserve good public relations.
The administration and the staff felt that there definitely is much less record keeping for teachers through use of the McBee system for grade reports. With some modifications there could be still less. Evidence of a further measure of success, the administration believed, is the absence of parent complaints about the report system.

**Student reactions.**—Students interviewed identified a number of concerns about their McBee Keysort grade reports; however, only a few are significant responses in regard to keysorting, for several are common and basic to grade reporting in general. Student responses relevant to McBee Keysort cards were as follows: (1) Make reports on stiff paper; the paper now used is too flimsy. (2) Somehow remove the carbon from the back of the report card—the carbon gets on clothes. (3) The flimsy paper on which reports are written is difficult to insert into the envelopes.

When asked to identify values of the Keysort report card, several students commented as follows: (1) One form of report card is as good as another. (2) Values are difficult to think of. (3) Citizenship grades each six weeks are good. (4) Our parents do not have to sign all the cards; they sign the envelope once.

Student suggestions for changes in the report card were these: (1) Hand out all cards at one time in the homeroom; this would eliminate going through the suspense in every class for a whole day. (2) It would be well to hand out cards early during the class period so students can ask any questions they may have about the grades—now the teacher is willing to discuss questions after class, but some students cannot remain after class. (3) Use a stiff paper. (4) The envelope should be
enlarged or should open lengthwise rather than at its narrow end.

(5) Give out report cards at the end of the day. (6) The ability of the student to change a grade on the report card should be made very difficult. (7) Grades should appear on the grade card each six weeks for only the current grading period.

In general, students interviewed were satisfied with the report cards now used or were somewhat indifferent to them. One student responded that she preferred the type of report card distributed prior to McBee Keysort.

"Airborne" telecasts in Spanish

During the school year 1961-1962, "airborne" telecasts in Spanish were used for orientation purposes once a week at eighth grade level. Staff and students felt that this experimental attempt was successful and valuable.

This year two sections of beginning Spanish are participating in the program for the purpose of improving instruction. It is felt that modern language students should experience hearing the language spoken by a number of natives and trained speakers rather than by limiting their language experiences to hearing only one voice—their teacher's. Rossford does not yet have an electronically equipped language laboratory.

Leadership for participation in "airborne" telecasts originated from the administration. Planning has been done cooperatively by the administration and the staff. Planning relative to classroom use has been permissive and informal. Once a teacher indicates a willingness to participate, the principal then endeavors to schedule the classes so participation is possible with the least schedule conflict. The teacher
is then free to use his or her own discretion in regard to choice of methods and techniques used in the classroom.

There have been no special communication lines established for the beginning Spanish classes. The teacher interviewed was unaware of any parental contacts.

Research and evaluation preceding participation in "airborne" television were done primarily by the school administration through contacts with those promoting the practice at Purdue University. The Spanish teacher had had two experiences with N.D.E.A. institutes which helped her in planning for television use in Spanish classes; however, those institutes were not geared exclusively to the use of educational television in teaching.

Physical arrangements are somewhat hampering to the program inasmuch as the class is moved to another room long enough to view the telecast and is then returned to the classroom. Additional time is wasted in movement from room to room, since the class meets for ten minutes in the regular classroom before going to the television-equipped room.

Teacher reactions.--A teacher of Spanish commented that the Spanish telecast is excellent for junior high school level but is geared too low for the levels of most of the beginning high school Spanish students. She indicated that English is spoken too frequently in the Spanish course on television. It was further pointed out that materials which correlate with the television course are needed for classroom use. The teacher is able to correlate materials and instruction at times but would like to accomplish this goal more frequently; additional correlated
materials would aid the students in learning Spanish and the teacher in planning for good instruction.

Local interruptions such as dismissal of classes for assemblies or emergencies interfere with learning by "airborne" television, for the programs are presented on schedule, since other participating schools expect to view the programs as scheduled. Missing telecasts for emergencies causes loss in a student's preparation for television examinations, for the student finds it difficult if not impossible to make up the work missed.

Although the teacher felt that television teaching of Spanish worked better last year because of the age-levels of the classes participating and because of when and how scheduled, she pointed out that television provides a fresh approach to learning no matter how tired the classroom teacher may be. Many props are available through television teaching that are not available in the conventional language classroom. There is security to the students and to the teacher in knowing that the "airborne" telecast of Spanish is always there.

Moving from room to room on days that television is viewed by the Spanish classes takes time which the teacher felt is needed for class instruction.

Teacher suggestions for change were the following: (1) Include additional reinforcement of learning in the television teaching by having more pattern drills using new methods of language teaching. (2) Televis a program geared for beginning Spanish students at high school level. (3) Make available classroom materials correlated to "airborne" telecasts. (4) Improve physical facilities and interrupt classes as little
as possible. (5) Endeavor to have studio teachers who pronounce Spanish correctly.

When asked to point out the values of the Spanish telecast, the teacher replied that in addition to values she had previously discussed, it is a diversion to students from conventional teaching techniques and it maintains their interest. She believed that television teaching has merit as a supplement to classroom instruction, that her students do benefit from participating in the "airborne" telecasts, particularly since the students are exposed to several native speakers and teachers of Spanish.

Student reactions.—Beginning Spanish student responses varied; most students interviewed favored having Spanish telecasts as part of classroom instruction.

Values identified by interviewed students participating in classes viewing telecasts for Spanish were as follows: (1) Television provides for immediate oral responses from the student; the student is forced to respond immediately through the studio teacher's waiting for his response. (2) It helps the student to recognize words through excellent examples and illustrations by the studio teacher without being told meanings in English. (3) It extends the students' vocabularies beyond what is gained in classroom instruction only. (4) Additional experience is gained in how to speak the language. (5) It gives practice in speaking, and the way it is taught is very interesting.

The following responses to inquiry about problems were indicated: (1) The television teacher does not give ample time for responses
sometimes. (2) There is no apparent problem. (3) The telecasts should coincide with the textbook; the vocabularies are not the same for both. (4) There is conflict of accent in pronunciations; the expectation is that the student pronounce Spanish as it is taught by the classroom teacher—this fact makes for confusion at times. (5) The conflict in accents of the man and women studio teachers causes problems for the student.

Changes suggested by students were these: (1) Give more time for oral responses of students. (2) The telecasts ought to be a little longer; television instruction is preferred to conventional classroom instruction. (3) The classroom teacher should not attempt to instruct while the studio teacher is instructing; corrections and questions could be jotted down by both teacher and students and saved for discussion following the telecast. (4) Television classes should be more difficult; they are now repetitious and too easy.

It is interesting that the students and teacher interviewed identified practically the same problems and values of "airborne" telecasts; however, emphases of concerns differed somewhat for the two groups. Students emphasized organization and instruction in the classroom whereas the teacher emphasized, in addition, administrative problems and changes.

"Airborne" telecasts in eighth grade science

The school administration committed itself to the "airborne" television program in 1961 for the purpose of improving instruction and it is felt that the school must get all it can from its investment.
Teachers are encouraged by the administration to participate in television classes whenever feasible.

Because of the time of day that the "airborne" telecast of eighth grade science is given and because of the local schedule of classes, only one science section (eighth grade) participates. Eighth grade science students are grouped at Rossford High School and this section is of low-average ability.

Although this year is the first time that eighth grade science has participated in the program, it is not the first time that this school has participated in science television. Last year, the ninth grade science classes intermittently participated on an experimental basis.

Initial planning for the use of television was done primarily by the administration; however, participation and planning at classroom level for its use is voluntary on the part of the teacher. The administration assists teachers to facilitate the use of telecasts.

No formal or definite communication lines for coordinating, understanding, or promoting the use of "airborne" television have been established. As previously stated, teachers may voluntarily participate; however, they are encouraged by the administration to take part if participation contributed to the meeting of instructional goals.

The science section may view the science telecast two days a week. It is still a matter of discretion on the part of the teacher to evaluate in advance the appropriateness of program content each day and to determine whether the class will view each day's telecast. In other words, the teacher or the class is not bound to the use of telecast
preparations even though the class is scheduled to use them. Telecasts are considered by the teacher to be a supplement to her teaching.

No evaluation practices other than informal teacher observation and evaluation are built into the use of science telecasts.

Future direction of eighth grade science telecasts.--The teacher would use these programs for all her sections if scheduling them were possible. Because of the problem of scheduling classes to view the programs, the teacher would prefer having money invested regionally for "airborne" telecasts used to produce the same instructional experiences for students on motion picture film.

Problems and successes encountered.--Scheduling was viewed by the teacher as a major problem in the use of "airborne" telecasts.

Major values identified by the teacher were as follows:

(1) Materials not otherwise available to our school are viewed in the classroom. (2) It is an excellent means for developing and extending science vocabularies of students. (3) It is of particular value to the teacher for gaining ideas about techniques in teaching; the alert classroom teacher improves her own methods of teaching through observing the teaching of the studio teacher.

Student reactions.--Several students from this section of eighth grade science were interviewed and enthusiastically expressed their appreciation for the telecasts.

Values identified by them were the following: (1) It is an easier way to learn text materials because you do not have to read so
much. (2) Experiments shown are explained very well. (3) Experiments can be seen on television that cannot be done in class. (Student was referring to lack of materials and equipment). (4) More is learned by watching the telecasts than is learned by just talking in class.

Few problems were identified by these students, perhaps because of their maturity level. One concern expressed was that the television teacher tries to get too much into one program.

Suggestions for change were relative to the one problem identified by the students. (1) Telecasts should be more brief than they have been. (2) It should be viewed more often than it is. (3) The television teacher should not put so much in one day's program.

"Airborne" telecasts for individual students

This is a description of the way one school has endeavored to meet the needs of all its students even though the school cannot afford financially to offer a special curriculum for one or two or three students where conflicts arise.

Special arrangements have been made for three students to view "airborne" telecasts during the school day which are not viewed by classes of Rossford High School. Two students are taking advanced chemistry in this manner and one student is taking a semester of American government.

Advanced chemistry.—For purposes of advanced placement, Bowling Green State University, Bowling Green, Ohio, offers cooperatively with the "airborne" program a course in advanced chemistry. Two students
from Rossford High School participate, tuition free. Four days a week during this school year, the students' schedules have been written so they may view advanced chemistry telecasts during the school day. Saturday mornings the students participate in laboratory work at Bowling Green State University. Each student participating bears the cost of his transportation, textbooks, laboratory manual, problems book, and laboratory apron. The University evaluates the student's progress. Bowling Green State University will give credit for the course if the student chooses to attend college there.

One student identified values of this opportunity to her in this way: (1) Even if a college is attended that does not recognize this credit, the student will have benefited by experience for future college work in chemistry. (2) The presentation and experiences are very good—particularly those at Bowling Green. (3) The experience will also help the student to decide whether he or she really wants a career in the field of chemistry.

Problems were minor for this student. The student missed the first few days of the program which made for a difficult beginning in the course. Also the student attends physical education class for one-half hour and then is permitted to leave class to rush across the building to view the telecast. The student felt that close scheduling causes some loss in both physical education and in advanced chemistry.

A suggestion for change made was that topics by television and at the University be made to coincide.

The student expressed much enthusiasm and appreciation for the opportunity.
American government.—One senior student had a schedule conflict which would not permit her to get a fourth year of mathematics which she needed and wanted. The principal permitted her to schedule the mathematics course and take American government through "airborne" telecasts. Telecasts are viewed four days a week. Fridays, by special arrangement, conferences are held with the teacher of American government classes of Rossford High School. Testing and evaluation is done by the Rossford government teacher and the student will receive credit for the course, provided established standards are met.

Although the student interview disclosed that the student would prefer taking the course with a class or group of students, appreciation for meeting her needs in this manner was expressed.

Some student concern was evidenced during the student interview: tests cover class discussion and current events which are omitted in the telecast experience. The student indicated that for this reason her grades were hurt but that her knowledge was not; she felt that there were compensations involved, for she believed she was learning things through the telecast that other students were not—however, this fact was not indicated by the evaluation she received. Class discussion was desired by the student.

The student valued the excellent illustrations and the quality of teaching in the telecasts viewed. Further, it was believed by the student that the telecasts would be excellent for a class in American government.

Suggestions by the student interviewed included (1) the addition of current events to "airborne" telecasts of American government and
(2) the appropriateness of using some of the telecasts for social studies offered at eleventh grade level.

The preceding account indicates the utilization of McBee Keysort processes and of "airborne" telecasts to meet the needs of students and at the same time to relieve staff of unnecessary clerical duties.

An Evaluation of "Airborne" Television

The Newark City School District is located at Newark, Ohio, approximately thirty-five miles east of Columbus, Ohio.

The city of Newark is the county seat of Licking County, the second largest county in Ohio. The county is one of Ohio's outstanding agricultural areas; its principal products are milk, meat, fruits, and grains. Approximately seventy manufacturing organizations are established in the Newark area, also.

Main lines of the Baltimore and Ohio and Pennsylvania Railroads pass through Newark. Facilities of major airlines are available at nearby Port Columbus.

Several universities and a college are within commuting distance of Newark. They include Ohio State University, Denison University, Capital University, Otterbein College, Ohio Wesleyan University, and Ohio University Branches at Zanesville and Lancaster. A Branch of the Ohio State University is now located in Newark; this offers a two-year program of freshman and sophomore courses and professional courses for teachers.

The Newark Public School System is a growing organization. The former Newark Township School became a part of the Newark Public Schools in recent years. Three new elementary schools were built, one of which

The school enrollment is housed in twelve elementary buildings, five junior high school buildings, and the new, campus style, senior high school operating in eight buildings.

Each of the eight buildings comprising the senior high school functions as follows: (1) building A, gymnasium; (2) building B, food service; (3) building C, sophomore academic classes; (4) building D, junior academic classes; (5) building E, senior academic classes; (6) building F, science classes and laboratories; (7) building G, language laboratory, library, administrative offices, business education classes, and journalism classes; and (8) building K, music instruction.

Already sophomore enrollment has outgrown the sophomore building and three sophomore homerooms are housed in the senior building.

Newark Senior High School has an enrollment of 1,583 in grades ten through twelve; there is a staff of seventy-six full-time teachers and four part-time teachers.

MPATI tried in social studies

During the school year 1961-1962, two American history classes and one world history class completed courses with MPATI (Midwest Program on Airborne Television Instruction). Two classroom teachers of American history and one classroom teacher of world history were involved with MPATI telecasts. Each teacher had one class involved with MPATI and each had four additional sections involved in conventional instruction.

General information about MPATI was first brought to the attention of Newark teachers in the spring of 1961, when a professor from the Ohio
State University explained its use at a faculty meeting. The following August the three social studies teachers mentioned earlier were informed that their assignments included work with MPATI.

The purpose for initiating experimentation with MPATI in Newark was to evaluate its use locally and to attempt to determine whether instruction might be improved through its use.

Leadership for this experimentation came from the administration. As it happened, the three teachers assigned to work with MPATI were interested in trying new teaching techniques and so did not object to this assignment.

Planning was done cooperatively by administration and teachers. Representatives from each of the elementary, junior high, and senior high schools attended a two-week workshop regarding television instruction at the Ohio State University during the summer of 1961. None of the three high school teachers assigned to work with MPATI were privileged to attend the workshop; however, the high school principal did attend it.

Orientation telecasts by MPATI were held for administrators and teachers one week before the opening of school. The telecasts were really helpful to technicians and administrators; there was no instructional assistance given teachers in these demonstrations.

Communication lines for understanding and promoting MPATI consisted of letters to parents of students in classes involved and a P.T.A. program on television instruction held in the fall. A sample MPATI telecast was demonstrated at that meeting for orientation of parents.
Further, an in-service, one-day workshop for Newark teachers was held in April, 1962. The theme of the workshop was "Television Instruction," and consultants were brought in for the workshop. Teachers involved since September, 1961, with MPATI expressed regret that this workshop was not held earlier in the school year.

For the most part, teachers were free to use their own discretion relative to classroom instruction and organization. There were occasional informal discussions and conferences with the assistant superintendent in charge of instruction.

Research and evaluation preceding planning for the telecasts were limited to administrative investigations. Since "airborne" telecasts were new to educational television, administrative inquiry consisted primarily of conferences with regional representatives of MPATI and of viewing sample MPATI telecasts. Teachers were not involved except as has been indicated herein.

Three classes, two in American history and one in world history, viewed the respective telecasts four days a week, Monday through Thursday, for twenty-five minutes each day. Telecasts of MPATI were actually thirty minutes in length; however, the Newark bell schedule was five minutes too late to permit students of the sections to view the first five minutes of each telecast. Twenty minutes of each class period remained for classroom instruction and discussion. Fridays, the teachers followed up the work of the previous four days' instruction with motivation techniques, discussion, and testing. Tests for the courses were designed by the respective classroom teachers.

The same standard texts were used for all classes in American history and in world history—for both MPATI and conventional classes.
For example, *Adventures in American History* by Graff and Kraut was used in all American history classes. A teacher's manual was also used for MPATI classes in American history; it is entitled *Our Adventures in Freedom*. *Syllabus of Resource Units in American History*, by John Dickey, Instructor, 1960, Purdue Research Foundation. A similar text and manual were used in world history instruction. Library materials were extensively used in all classes.

Evaluation practices were built into the program as follows. All classes were formed heterogeneously. Teachers evaluated students' progress with teacher-made tests and teacher observations. Results of Every Pupil Test scores each semester were recorded; these provided one measure of progress for the guidance department in its effort to compare progress of students in MPATI with that of students in conventional classes. Teachers at different intervals also solicited student opinions of telecasts viewed, in order to make necessary alterations to improve curricular experiences.

In addition to Every Pupil Test scores, the guidance department also compared growth in student achievement (grade point ratios) and results of Ohio Scholarship Tests.

A high school counselor evaluated the MPATI instruction in the following manner. Students in television and regular classes were grouped (for purposes of evaluation only) according to ability. Grouping was done on the basis of scores made on the Henmon-Nelson Test of Mental Ability which had been administered to all entering tenth graders the first day of school. Six groups resulted: (1) I.Q. 120 and above, (2) I.Q. 115-119, (3) I.Q. 110-114, (4) I.Q. 100-109, (5) I.Q. 90-99,
and (6) I.Q. below 90. Since control groups were not set up when classes were formed, the counselor felt that this was the most reliable means to make comparisons.

See in Appendix D, page 418, the American history report made by the counselor to the superintendent, including his analysis and recommendation. A similar report was also submitted in world history; however, a copy of it was not available at this writing.

Student opinions, November 21, 1961.—Further evaluation was done by one American history teacher who twice sought student opinions during the year. The following is a composite report of student reactions to the use of MPATI, collected in written form by the teacher. No effort was made to structure student opinions, for questions were not designed to which they were to react; instead, students were asked to write how they felt about MPATI.

Values and advantages in the use of MPATI in their class were recognized; these are listed in the order from most frequently mentioned to least frequently mentioned: (1) The studio teacher has more facilities and resources with which to teach than does the usual classroom teacher.19 (2) Telecasts are more interesting than conventional classroom experiences. (3) Learning by television is excellent.

Disadvantages or problems encountered by the students were also pointed out. These are listed from the most frequently mentioned to the least frequently mentioned. Although the number of problems recognized

---

19 Among materials mentioned in this category were the following: maps, artifacts, replicas, documentary films, and props.
was greater than the number of values, each problem was identified by fewer students than was each value. (1) Telecast instructor goes too fast in speaking. (2) Television instruction should have been voluntary for students. (3) Telecast teacher does not stress important facts. (4) There are too many technical problems. (5) It is difficult to adjust to note-taking and to careful listening simultaneously. (6) Student cannot ask the television teacher questions. (7) There is not enough class time available for discussion. (8) Television teacher never repeats points to meet individual differences in listening. (9) Regular classroom teacher can explain better. (10) Ideas related by television teacher sometimes are in conflict with those of textbook. (11) Conflict between school's schedule and that of MPATI causes a loss in learning to the student. (12) The teacher's vocabulary is too difficult.

Two months after the MPATI class was begun, seventeen students favored its use. Two disliked the use of MPATI, one felt indifferent about it, and two recommended that it be used only for those students who wanted the experience.

Student opinions, May, 1962.--Reactions of students at this time were somewhat more structured than were those collected the previous November, for the American history teacher required students to respond in writing to questions designed by her. They were permitted, however, to make additional comments as well as to answer the questions.

Values or advantages experienced by students were as follows, ordered from most frequently to least frequently recognized: (1) Instructional resources such as documentary films and artifacts used by the
television instructor are impossible to secure for use in the average conventional classroom. (2) Telecasts have helped the student to understand little points or details. (3) Depth in the study of American history can be attained by this technique. (4) It helps those who do not like to read everything. (5) The routine of viewing the telecast for the first twenty-five minutes of class is good. (6) It would be better if telecasts were longer and more frequent than they are.

Problems or disadvantages associated with the use of MPATI were also identified. The following, ordered from most frequently to least frequently mentioned, were given: (1) The studio teacher stresses minor points instead of major ones. (2) Technical problems are frequent. (3) Additional class time is needed for discussion. (4) Points are covered too rapidly. (5) Conflicts between the school schedule and that of MPATI is disconcerting. (6) Note-taking is difficult. (7) The routine gets monotonous. (8) Telecasts are boring at times. (9) Instructor should define terms better than he does. (10) Telecasts held student interest more in the beginning than they do now. (11) The lectures are over the heads of many students. (12) Instructor should spend less time with songs and jokes. (13) Television instruction is too impersonal. (14) It is easier for the student to ignore television than it is to ignore the classroom teacher. (15) Student has to be able to adjust to the lecture method of teaching.

Eight months after experimentation with MPATI was begun, only one student favored its use, six were against the use of MPATI, nine favored its use with reservations, and four felt that participation of students should be voluntary.
Student reactions in interviews, January 7, 1963.--Students interviewed identified the following values gained in American history class, 1961-1962, through the use of MPATI: (1) Studio teacher broadened the students' vocabulary through definitions of terms. (2) Telecasts were enjoyable because they added variety to classroom instruction. (3) Telecasts were interesting. (4) Materials and resources were used that are not usually available in the conventional classroom. (5) Studio teaching was very good. (6) Going over telecast instruction afterwards with classroom teacher was fine for reinforcing learning.

Problems were also identified by the students interviewed as follows: (1) The studio teacher talked too fast. (2) Make up work for absences was quite difficult because of telecasts missed. (3) Reception was often poor because Newark was on outskirts of reception area. (4) Students often had difficulty adjusting to this method of learning. (5) The studio teacher did not follow the text; television content was quite condensed. (6) Students had to adjust to note-taking; often the student missed a great deal of the information given while he was engrossed taking notes. (7) Questions could not be directed to the studio teacher. (8) The telecasts became more and more boring as time went on; much of the material many of the students had already had. (9) The beginning of each day's telecast was missed because of the school schedule's conflicting with that of MPATI. (10) There was not enough time available for discussion, review, and tests.

Suggestions for change in the program made by interviewed students were the following: (1) Improve MPATI reception. (2) Origin of telecasts should be local; then reception would be good. (3) Coordinate the school
schedule and that of MPATI. (4) Require less taking of notes by the student so he can concentrate on what is being offered.

**Teacher reactions to MPATI in American history.**—A number of problems were recognized by the classroom teachers interviewed:

1. American history was telecast at 10:00 a.m. but the class did not convene until 10:05 a.m.; thus, five minutes of the telecast were missed each day by students and teacher.
2. Some technical difficulties were experienced—some days the program was not received because of distance of receiver from source, the set always had a humming sound within, and the antenna was in need of adjustment.
3. It was a difficult task to correlate assignments in text with television lectures.
4. The television vocabulary was advanced for many students.
5. There was insufficient time for discussion following telecast.
6. There was not enough time to orient students at the beginning of the year; for example, students need help in learning how to take notes.
7. The program was geared to the average and above-average student—not to slow learners.
8. Current events were slighted.
9. A passive attitude developed among many students as the year progressed.
10. The classroom teacher had so little time available that it was difficult for him to get to know his students.

Among successes experienced and indicated by the American history teachers were the following: (1) Instructional aids such as props, documentary films, artifacts, and maps were excellent and could not be duplicated in the conventional classroom.

(2) The studio teacher was well-educated and was a master teacher.

(3) The development of an
atmosphere of the culture of each period was effectively done by the
studio teacher through his singing of some appropriate songs of each
period.

Suggestions for changes in MPATI reception desired by the teachers
were as follows: (1) Minimize scheduling problems. (2) Eliminate
technical problems. (3) Have homogeneous groups and separate telecasts
for each group. (4) Use MPATI as a supplement to classroom teaching:
for the teacher is aware of what materials and resources are available
locally in the library; has control, then, over what is taught; and can
thus help students go into depth in their study. (5) Provide hour
class periods if television is to be used in order to permit adequate
time for discussion.

The reactions of teachers and students interviewed in January,
1963, as well as the reactions of students at two intervals while
experiencing MPATI in American history, were mixed. Problems and
successes identified were fairly consistent among the groups. The
newness of the technique may have affected early reactions of students,
since their reactions six months after the experience were consistent
with their responses at the end of the course and since they favored the
telecasts in the beginning but had many reservations at the end of the
course. Most of the problems identified by both groups were of a
resolvable nature. Schedule conflicts might be relieved but probably
could not be resolved completely in most instances, since MPATI serves
hundreds of schools. Technical problems might not be such that they
could be eradicated, since Newark is located on the edge of the broad-
casting area.
As stated earlier, the world history evaluation report on MPATI was not available for this writing; however, the teacher and some students were interviewed concerning their experiences with the telecasts.

**Teacher reactions.**—The teacher stated that the greatest problem with MPATI was a technical one; reception was very poor at times and sometimes the plane did not ascend. A close second to the technical problem was that of the local schedule conflicting with that of MPATI. Students missed the first five minutes of each telecast. Other teacher responses were as follows: (1) Telecast instruction was difficult for slow students. (2) Slow students seemed to lose interest as newness of the technique wore off. (3) Teacher dress was disconcerting to viewing students—not enough variety in dress tended to become monotonous to the viewer. (4) The studio teacher's not following the outline provided to participating schools caused problems for the classroom teacher. (5) A longer class period is needed to provide preparation time for the classroom teacher before the telecast.

The following successes were indicated in the use of MPATI:

(1) Instruction was excellent. (2) The MPATI class did exceptionally well; however, the average I.Q. of the MPATI class was a little higher than that of the conventionally taught sections. (3) The props, maps, and other instructional aids used by the studio teacher were excellent. (4) The correlation of studio teaching with topics of the textbook was very good.

The teacher made the following suggestions for change:

(1) Lengthen the class period. (2) Eradicate technical problems if possible. (3) Provide a better and more comprehensive or detailed
outline—in fact, provide the classroom teacher with the script in advance. (4) Coordinate school and MPATI schedules. (5) Use a greater number of instructional aids (for example, documentary films) than were used.

**Student reactions.**—Values of MPATI telecasts identified by interviewed students who had participated in the television section of world history in 1961-1962 were these: (1) Telecasts as a whole were quite good; illustrations, demonstrations, and materials were excellent. (2) Television teacher did not repeat; consequently, the student learned to listen carefully.

Problems pointed out by students were the following: (1) There was too much emphasis on cultural background and not enough on political and economic backgrounds. (2) Not enough artifacts were included relative to Greek and Egyptian history. (3) Clothing, voice, and facial expression of teacher were distracting to the viewer; students became occupied with teacher flaws rather than with what was being taught. (4) Too much emphasis was given to the study of pyramids. (5) Presentation was boring; too much depth given in theories behind facts. (6) Studio teacher moved too rapidly over important items.

Suggestions to improve world history telecasts were made by students: (1) Include a greater number of artifacts on Greek and Egyptian history. (2) Be certain that the studio teacher is enthusiastic and expressive as she teaches, that the voice is pleasant, that dress is appropriate, and that the presentation does not give an impression of being dramatized. (3) Give more time for each topic. (4) Provide more
varied illustrations and more time for discussion. (5) Provide outlines for students.

**Future direction of MPATI.**—On the basis of the evaluation made by the guidance department at the high school, the administration decided that MPATI would not be used this year, 1962-1963, at high school level. Teachers who had been involved with telecast instruction were not formally involved in the making of the decision to discontinue MPATI at high school level. Informal discussions with the teachers involved had been held occasionally by the assistant superintendent in charge of instruction.

Future directions for Newark with educational television will be bound to a great degree by influences other than MPATI experiences. Newark received a private financial grant for building a television tower for its own educational television station, WGSF. Limited financial appropriations for related needs have slowed progress toward realizing the local station; however, in but a few days, the local, closed circuit operation will begin. For the remainder of this year, a hook-up with the Ohio State University Television Station, WOSU, will provide WOSU telecasts to the Newark schools. Next year, 1963-1964, Newark will be provided the taped, Michigan Educational Television materials. As appropriations permit, the Newark Public School System will eventually have its own television studios.

The fact that Newark became involved in establishing its own educational television program of instruction before MPATI and that results from experimentation with MPATI at high school level did not
indicate an overwhelming need for it, accounts in part for discontinuing the use of MPATI this year at high school level.

This has been a description of the evaluation made by one school system involved in experimentation with "airborne" television. It is not the purpose herein to evaluate the process of evaluation, but rather to describe one school's experiences related to the experiment and to an effort to evaluate the experiment.

Relief from Many Clerical Duties

The Willoughby-Eastlake City School District is a rapidly growing consolidated school district consisting of seven separate municipalities, three of which are cities. The 1960 Census indicates a school district population of 51,598 citizens. The school enrollment for the district (1962-1963) is 11,127; its enrollment in 1952 was 4,290. The present rate of school enrollment growth for the district is one of the most rapid in the state.

The school district is located approximately eighteen miles east of Cleveland, Ohio, and consists of an area of thirty-one square miles. Students are housed in thirteen elementary school buildings, three junior high school buildings, and two high school buildings. Both high school buildings and two of the junior high school buildings are undergoing additions; a new junior high school building will be completed for opening in September, 1964.

Because the school enrollment of this district has increased 266 per cent in the past ten years and because each year approximately 880 additional students must be housed and educated, citizens and educators
have been constantly reminded of problems of staff utilization. Additional students require additional staff each school year.

As early as 1955, school leaders in the district anticipated the many problems of the future related to pupil accounting, both for teachers and for administrators. Concerted efforts were made by the school administration to look for ways to cope with problems of rapid growth and increased numbers of students and simultaneously to maintain and improve "quality" education.

Approximately eighteen months of discussion, research, and planning preceded the use of data processing to relieve certificated staff of clerical duties, so that a great proportion of the staff's time might be directed toward improved instruction.

A number of commercial concerns initially were consulted by district administrators in regard to the potential of data processing for educational purposes. IBM was interested in working with educational leaders of the school district to develop the program.

A representative of the Civil Government Division of IBM in Endicott, New York, and local (Cleveland Office) IBM representatives conferred at length with educational leaders (administrators, supervisors, and teachers) to determine whether IBM might serve as a tool to help relieve the growing pains of the school district, both for the present and for the future.

School district educational leaders also reviewed the literature to become familiar with data processing procedures relative to student accounting. Although practices in this area were limited, the literature
revealed valuable information regarding the use of data processing for grade reporting in Whittier, California. Representatives of the school administration visited the school system of Jackson, Michigan, to gather additional information.

During the eighteen months of investigation and planning relative to the use of data processing, the school system's educational leaders became convinced that data processing could be a valuable tool to relieve teachers of clerical duties so that they might devote most of their time to improve the quality of their teaching. At the same time, it was evident that a great amount of information could be permanently and compactly stored for use in valuable and varied ways which are never tapped if manual processing is depended upon.

Once the administration was convinced of the worth of data processing to instruction, in 1957 it decided to experiment on a small scale with only one of many possible uses of data processing for instruction. Six weeks' grade reports were selected for trial first in only one high school building. District administrators made trial runs of grade reports on machines of a local industry's business department at night when the industry machines were not in use. Requests for a budget for leasing equipment for school district use were not submitted to the board of education until administrators had demonstrated that report cards could be done in the local situation effectively. Of course, it was pointed out that teachers then were responsible for recording the grade once on a mark sensed card and that this record could then be duplicated in many other reports by machine with one hundred per cent accuracy. Frequent staff meetings were held to keep
teachers informed of the progress with grade reporting, to enlist their assistance in checking grade lists for accuracy, and to help them to mark sense cards accurately. The importance of their assistance in perfecting the process was emphasized; staff was reminded often that the checking of grade lists would no longer be necessary after the first year and that thereafter plans were underway to let the machine handle attendance reports as well as report cards. Although, as occurs when change is in the making, there were some confusion and some resentment of checking by staff members of grade reporting initially; inclusion of staff at all times in the development of the process helped it to become functional.

Establishment of communication lines was viewed by the administration as an important aspect of the development of data processing for educational purposes. Letters to parents accompanied the new machine-printed report cards. In buildings, mark sensing was illustrated to teachers through the showing of the IBM filmstrip on mark sensing. Workshops were held at the school district IBM office for secretaries who then became valuable arms for data processing. Holding the workshops in the data processing office made it possible for secretaries to understand what happens to the services that they provide to the machine, to understand the need for accuracy, and to appreciate the ramifications of errors in recording and filing, for here could be observed the machine stopping when cards were not properly mark sensed or when other manual errors were made.

By January, 1958, the board of education had leased some equipment for installation locally and had hired a director of data
processing. The district data processing center has now begun its fifth full year of operation.

Description of district installation

The purpose of including a description of the Willoughby-Eastlake data processing installation is to acquaint the reader with the equipment provided locally to carry on the data processing procedures to be described for this district. It is understood that any district looking forward to such an installation would wish to determine its local needs and then plan its data processing installation to meet local needs.

The following are brief descriptions of uses of machines in the Willoughby-Eastlake installation:

024 and 026 Key Punches.—The key punch operator uses the key punch to punch information from any source document into the storage card. The keys on the key board of the key punch are operated manually in a manner similar to the operation of the keys of the typewriter. The purpose of the key punch is to punch holes into the IBM card in coded positions on the card, so that the card by its holes can convey the punched information to the machines which sort, collate, account, reproduce, interpret, or calculate.

083 Sorter.—This machine simply puts IBM cards in whatever order they are desired for feeding into machines. For example, it might be necessary to sort the cards of tenth grade girls from those of tenth grade boys.
Collator.—The collator is used to sequence check the IBM cards. For example, it will take the cards of tenth grade girls in the previous illustration and put them in number sequence as determined by the number codes for names. The collator is also used to group or merge IBM cards for two or more students. Suppose that there are two decks of cards of information about each student in twelfth grade. This machine will make from the two decks of cards one deck by merging each student's two cards in sequence, one behind the other, and at the same time will place in a requested sequence all students' cards (two each) for twelfth grade. At the same time that the collator puts in sequence and/or merges cards, it points up missing cards in the sequence. This function of the machine, to stop if any cards in the sequence are missing, is of great value for file checking.

Another possible use of the collator is to select all cards from the universe of cards having a given birthdate. This use of the collator makes possible very quickly a listing of students by birthdate.

Accounting Machine.—The accounting machine writes information in printed form. Written reports are made from information prepared on cards (by the key punch) which are ordered in decks by the sorter and/or the collator just described. This machine writes all reports, whether they be lists, report cards, attendance reports, grade lists, or the like.

Addition and subtraction are performed by this machine; if an RPQ (Request Price Quotation) device is attached, the machine can also multiply.
Reproducing Punch.--The reproducing punch has three major functions: (1) It summarizes data (for example, it provides the sum of grade points for each student at the end of a given grading period; the 602 Calculator described next converts grade points to point averages for each student). (2) It has the ability to machine punch into the mark sensed card, mark sensed information which appears on that card (for example, teachers mark sense grades on the IBM card each six weeks period; that same card is machine punched by the reproducing punch, so that mark sensed information is now punched into the card). (3) It gang punches IBM cards. (For example, at the end of each school year, a record must be kept of promotions and failures. Failing students' cards are sorted from a grade level deck, since no change in grade level takes place; the remainder of the grade level deck represents students to be promoted to the next grade level. The reproducing punch will gang punch all cards of students to be promoted to the next grade level with that information.)

602 Calculator.--This machine performs addition, subtraction, multiplication, division, and square root; it provides point averages, test scores, achievement grades, and attendance of individual students. (For example, the calculator is fed the mark sensed and punched daily attendance card of the student; it adds the total number of days absent to the total number of days not due; it subtracts that total from the known days in the attendance period and gives the number of days present--the number of days present is then punched and stored by the machine on a trailer card at the end of an attendance period.)
548 Interpreter.--This machine reads the punched card and prints at the top of the card information punched thereon, so that the card can be identified without knowledge of coding.

The preceding gives the basic functions of the seven types of machines in the school district's processing center. Numbers used for naming the machines have no significance except for identifying the IBM machines.

Rental machines for special purposes

The district rents time at the regional center (Cleveland IBM Data Center) for the use of some other machines. They are as follows:

1401 Series Processors.--The general function of these machines is to produce information on tape and to write information. They also compute—add, subtract, multiply, and divide. An example of the use of this type of machine is its assistance in standardized test scoring, such as scoring the California Mental Maturity Tests. Mark sensed cards (student responses) are fed into the machine. The machine gives raw scores, converted scores, and the item analysis. The time taken to convert scores by machine for a class of thirty students is approximately eight seconds. Manual conversion is much more time consuming. This operation is completed in three phases: phase one gives the raw score on tape; phase two converts from raw score on tape to converted score and writes or prints the information by home room, by grade, or by school; phase three takes the tape (from phase one) and produces the item analysis.
**7070 Computer**—This computer is used for writing student schedules—the advantage of its use is its large capacity for storing information and its speed. Student election of courses is first key punched on cards and transferred to tape by the 1401 Processor. The tape bearing the students' elections of courses is fed into the 7070 Computer. The computer scans all possible schedules that can be written for each student and then produces on tape the best schedule that is possible to write for each student. The computer tape is then run on the 1401 Processor once again which prints out the student schedules and simultaneously punches class cards. The class cards can then be used to get student lists (for example, dean's lists and class rank lists).

No future rental of machine time for district

After December, 1962, there will no longer be any need to rent time at the Cleveland IBM Data Center for use of the 1401 Processors and 7070 Computer, since the 1620 Computer will then be installed at the school district's data processing office. This computer has been purchased by the school district as an instructional device for use to train students enrolled in the Division of Data Processing at the Chandler Technical School, a two-year, post high school of the Willoughby-Eastlake City Schools. The school has been established in cooperation with the State Department of Education. Its curriculum in data processing and computer technology is only one of the offerings of the school in preparing students for eventual employment in area industry. The 1620 Computer will at the same time be used for school district needs.
1620 Computer.—This computer has large and flexible storage capacity; however, it is a much slower operating machine than the 7070 Computer. The 1620 will take over soon the tasks of test scoring and student scheduling, formerly performed by the 1401 Series Processors and 7070 Computer.

Teacher and administrative tasks performed with the aid of data processing

Not all of the following tasks were performed with electronic equipment in the early development of the district's program. As was indicated earlier, in 1957 report cards were provided through data processing; in 1958, attendance reporting was perfected. Each year brought additions of tasks, changes, and improvements in data processing techniques and procedures. To progress toward effective means of realizing the potential of data processing as a tool for relieving certificated personnel of many clerical duties, continued change was discovered and accepted as an integral part of data processing techniques by those involved with procedures.

It is acknowledged that the tasks to be discussed are not unique—they are tasks that are commonly performed by teachers and administrators; however, relatively few schools think of machine performance of these tasks. The following are record keeping tasks which require limited effort by teachers and administrators to complete; the major effort in each is performed by machine: (1) report cards; (2) permanent records and transcripts; (3) class lists; (4) point averages; (5) honor roll lists and merit roll lists (junior high); (6) class rank lists; (7) student locator cards; (8) fee lists and fee cards; (9) student
lists including standardized test scores and achievement grades (for counselors' use for grouping purposes); (10) tallies which aid principals in building master schedules; (11) scheduling of students (writing of individual student schedules); (12) grade distribution lists by teacher, by school; (13) statistical reports (projection reports, for example, to anticipate staffing for schools or special needs through enrollment growth); (14) failure lists; (15) incomplete lists; (16) class lists; (17) credit check lists (used for promotion on semester basis—to determine change of home room); (18) home room attendance registers; (19) year-to-date attendance reports (every six weeks); (20) statistical reports (State Foundation ADM Report, Superintendent's Report to State-Form 10, Age-Grade Distribution State Report, Fall Principal's Report); (21) current school district enrollment count; (22) current school district student census information (completed through verification reports from parents three weeks before the end of the school year); (23) assistance in setting of school boundaries; (24) test scoring and item analysis; (25) shot-immunization records; (26) curriculum materials catalogue (kept up-to-date through card system) which lists films, film strips, and records available from the curriculum materials laboratory for the district; (27) professional materials handbook; (28) packing slips to accompany materials being transported from curriculum materials center to schools (includes evaluation by teacher using material); and (29) school bus schedules.

The following discourse is to explain briefly how a few of these tasks are accomplished and to give some indication of the division of responsibility for these tasks between man and machine.
A source document of student census information is provided to the local IBM center on a registration sheet completed by the parent of the student upon registering. See copy of student registration form, Appendix D, page 419. From this source document, information is punched (by 024 or 026 Key Punches) into storage cards: a salmon colored IBM card receives personal information about the pupil; a green colored census card receives information regarding family; and a blue colored IBM card receives information regarding pupil residence. See examples of these cards, Appendix D, page 420. Student information stored on these cards is then printed by machine on the pupil information record form (see Appendix D, p. 421) and is given to the student's home room teacher. Duplicate copies are also supplied to the central office (Pupil Personnel Services).

Student census information from the storage cards described above plus the student's class schedule is printed on the pupil locator card and is provided to the central office and to the building office. This card (see Appendix D, p. 422) becomes the central office record of the student and at the same time provides each building with information needed to locate a student at any given time within the building during the school day. These cards must be kept current if student schedules are changed at any time just as they are changed if provided through manual effort.

The school office is supplied each grading period a deck of attendance cards composed of one card each for all students in the school, filed alphabetically by home room number. Internal attendance procedures are flexible; each building may devise attendance reporting
procedures within the building in the way which seems most effective in terms of building personnel and needs. For example, each home room teacher is supplied with an IBM card for each student in his home room. The teacher might send to the office the cards of any students not present. (These cards are returned later in the day to the home room teacher via his mail box for attendance checking the following day.) Another internal approach to attendance reporting might be such that the teacher simply sends to the office each day a note bearing the names of absent students. At any rate, notifying the school office of absentees from his home room each day is the extent of clerical tasks that the teacher performs relative to keeping attendance records. An office secretary records (mark senses) on the attendance cards supplied by the local data processing center, absences of students not present and sends the student cards to the data processing center at the end of the attendance period. See Appendix D, page 423. These cards are then punched by the 514 Reproducing Punch and become storage cards for attendance records (see p. 241, 602 Calculator). Every fifteenth day, the central office and buildings are provided a listing of absent students, indicating the days and times the students were absent. This same information makes it possible for the data processing office to make year-end attendance reports. Neither teachers nor administrators at building level have responsibility for keeping these. Instead, the home room teacher is provided by the data processing center an attendance report for his home room for each grading period. Neither does the teacher record this information on the student report card; the machine does this task. (See Appendix D, p. 424.) The attendance register
(see Appendix D, p. 425) is also supplied the teacher by the data processing office—the home room teacher needs only sign the register to meet state legal requirements. This procedure cuts to a minimum the time-consuming task of the teacher to keep the home room attendance register.

In regard to reporting grades, the teacher keeps his class register book (grade book) just as he would in any teaching situation. The data processing center supplies the classroom teacher with a deck of cards ordered alphabetically, by period, one card for each student in each of his classes. From his grade record book which is likely ordered alphabetically, by period also, the teacher transcribes (mark senses) the corresponding grade with a special marking pencil on each student's card. See Appendix D, page 426. This deck of mark sensed cards is then returned to the data processing office where trailer attendance cards (see 602 Calculator, p. 241) are merged with the punched mark sensed cards, and grade reports (student report cards) are machine printed (see Appendix D, p. 427). See also previous sections 085 Collator and 407 Accounting Machine, page 240. From the teacher mark sensed cards, such reports as honor rolls, merit rolls, failure lists, and incomplete lists may be supplied by the data processing office to building teachers, counselors, or administrators.

Permanent record cards for each student are prepared at the data processing center year by year; all grades, absences, test results, and the like are shown for each year in attendance to date. See Appendix D, pages 428-429.

At the end of the eleventh and twelfth grades, the center prepares transcripts for colleges or prospective employers. A transcript is
attached to the diploma of each graduate; the wording of the diploma indicates that the transcript (student permanent record) accompanies it. See Appendix D, page 429.

As is described, the principal, teachers and counselors are freed from a great many record-keeping tasks and tasks of duplication relative to attendance, grades, transcripts, and permanent records; consequently, they have more time for teaching and counseling. At the same time teachers and counselors are provided with a great deal of information very quickly about each student, so that they can be kept constantly informed and can help the student whenever the need arises.

The task of student scheduling has also been simplified for the administrator and his staff by data processing. See sample of student schedule, Appendix D, page 430. Where once a principal and five or six staff members might work three to ten weeks writing student schedules for a building enrollment of 1,250, now the data processing equipment accomplishes the same feat in approximately fifteen minutes. In fact, the machine actually does a better job than can be accomplished manually, for the machine scans all possible schedules that could be written for a student's choice of courses and determines the best schedule possible in terms of the criteria established for a good schedule. The machine is instructed prior to its writing the schedules that certain characteristics should not be present in a satisfactory schedule; for example, it may be told not to schedule a student in physical education the period following his lunch period. Usually when scheduling is done manually, the schedule writer simply by trial and error looks for a possible schedule without conflict and writes up the first schedule that will
work for the student. Time does not permit the administrator to scan all possible schedules without conflict for each student, as the machine does in only a brief time.

Except for the machine's writing of the student schedule, the function of the principal in scheduling remains much the same prior to the actual writing of the schedule. Counselors and teachers carefully work with individual students and parents in making their course selections. Once all students have preregistered, the data processing equipment (by sorting) is used to supply quickly the building principal with tallies of courses selected. The principal then uses this information, the number of teaching spaces available, and the limits of class load to make a master schedule. (He may use the conflict matrix in data processing, which is comparable to the conflict chart in the manual procedure to build his master schedule.) A few student schedules are then run on the machine to test the master schedule for conflicts and accuracy. Alterations in the master schedule may be made when needed. The actual determination of and writing of individual schedules is done completely by machine. The machine can simultaneously schedule the student in a class according to his ability if desired. The data processing center, from this information, furnishes the principal and the teacher a class list of students and a fee card for courses the student has selected that require fees. A copy of the fee card supplied to the teacher is also made for the student's parent, indicating as well the total amount of all fees due. See Appendix D, page 431. It will be noticed that the classroom teacher is freed from all record keeping in collection of fees, for the fee card is perforated such that the
receipt, machine printed, is simply torn from the fee card and given to the student upon payment of the fee. The remainder of the fee card is retained by the teacher and turned in to the office with the fee money. See Appendix D, page 432.

Schools in Ohio are required to keep a student health record which shows immunization processes. This, too, is prepared by the data processing office. See Appendix D, page 433.

Standardized tests (achievement, aptitude, and the like) are machine scored. Scores are converted as explained on page 242, 1401 Series Processors. Data processing provides item analysis of test responses, grade placement, percentiles, and the like. Some tests have IBM cards as answer sheets on which the student marks his answers to questions. See Appendix D, pages 434-436.

Data processing has also become a functional aid to providing printed masters for cataloguing films, film strips, and records. See Appendix D, page 437. This printed catalogue indicates to the teacher something about each film, its length, and an evaluation of it. Periodically, supplements to the catalogue are sent to teachers listing any new materials which have arrived at the curriculum materials center. The catalogue is to be revised every two years.

A packing slip to accompany the film as it is distributed throughout the district is provided through data processing. The packing slip bears mark sensed information provided by the user of the film—the teacher—who evaluates the film.

Similarly, professional materials are catalogued by data processing and their sources are then known to all staff members in the district.
Data processing assists the transportation manager in bus scheduling by providing him with lists of students by street, by school, and by grade. This information is quite helpful to him, since the same fleet of buses is used to transport students to elementary schools, to junior highs, and to high schools.

The preceding account gives some idea of the great burden of clerical duties that machines can bear. Man either accomplishes them at the sacrifice of something else (planning and teaching, in the case of the teacher) or is unable to accomplish them effectively because of lack of assistance and time.

One might ask about cost of such a program. There is no intent to lead one to believe that this operation reduces cost. Again, the purpose is to free the staff from extensive clerical tasks, so that the important functions of education for which teachers and administrators are prepared may be performed by them. Further, detailed information is available quickly and can be stored for purposes of research (for example, educational program evaluation) later.

The data processing staff at the school district center consists of one and three-fifths key punch operators, one trainee tab operator, one tab operator, and one supervisor—all are employed at an annual total salary cost of approximately $23,500.

The district installation described herein was leased for approximately $20,350 a year until April, 1962. The four key punches, the 082 Sorter, and the 407 Accounting Machine have now been purchased for instructional purposes at the Chandler Technical School mentioned on page 243. Outlay for leased machines will now be much less annually as
a result of these purchases. The same equipment is handling payroll for the school district. Soon it will keep staff records, warehouse records, and school inventory records as well. These functions, however, are considered to be by-products of the data processing operation as a tool for improving education.

Although the use of data processing does not guarantee improved or "quality" education, it certainly provides a teaching environment relieved of many detailed, non-essential, non-teaching assignments for teachers and administrators. This school district justifies the cost of data processing through believing that it is accomplishing more effectively these tasks as it experiences rapid growth than it could do or was able to do previously, manually.

The elementary teachers of this school district are also relieved of most clerical duties by the district data processing office; however, tasks performed for the elementary schools are not included herein, since this study is limited to grades seven through twelve.

Future direction of program

It was believed by educational leaders in the school district that the teacher-range of clerical duties has been pretty well covered. It was further believed that future emphasis will be placed on the use of data processing for evaluation purposes of all phases of the educational program. The school system has now been able to collect and store a wealth of student information for a four-year period. The information stored for the four-year period is in readily usable and accessible form, on cards ready for use by the machine. It was hoped that data collected will be used in varied and meaningful ways.
Further use of the process can be made in keeping health records of students and of staff.

Staff (certificated and non-certificated) census information on IBM cards will also afford a wealth of information easily, accurately, and quickly. Once the procedure is developed, much assistance can be given the personnel manager to anticipate area needs in staffing; this machine assistance should help to build and maintain balance in staff qualifications by curriculum areas.

Problems and successes encountered

Local administrators considered the counsel of IBM resource people and form salesmen valuable assets to successes they have experienced with data processing as it has been developed for meeting local needs in the school district.

As district administrators looked back to identify problems encountered in initiating and establishing the data processing program, they recognized that most of the problems occurred before a technical supervisor was hired. They admitted that there is need for continual effort to improve and optimize procedures and tasks which are already underway. Problems of communication procedures were also in need of improvement as the program was extended; evidence of change for purposes of improvement in communication was found in directives developed by the data processing office, office of pupil personnel, principals, and secretaries. Financing the program also had its problems, although this district has had exceptional acceptance by all involved—the board of education, administrators (leadership originated from this group), citizens, teachers, and students. Because machine utilization is limited
if data processing personnel work only the regular forty-hour week, and because it is necessary to get maximum machine utilization at times when several tasks mentioned earlier become due simultaneously, overtime for the data processing center employees has been permitted. Since September, 1962, curtailment of overtime has been incurred to see whether operations can be made more efficient. Experience to date indicated that not operating on an overtime basis during rush periods causes delay in completing some tasks which affects the effectiveness of the process.

District administrative leaders felt that major successes have been realized in the areas of grading, attendance reporting, student scheduling, permanent records, test scoring, and their many related tasks listed previously. Through the ongoing processing and storage of information by data processing, for example, the Superintendent's Report to the State—Form 10 can now be produced in one day following the close of school. Public relations with parents have been improved through their not having to give duplicate census information about their children year after year; rather, they need only provide additional or changed information on the census verification form distributed to them each spring (see Appendix D, p. 438), once initial registration census information has been provided. Many records are available by machine in one operation—duplicate copies are distributed to teachers, counselors, administrators and to central office; the time element and adequate clerical help make it almost impossible to provide by manual process an equal amount of information in a short time. It is not intended to imply that the job cannot eventually be done manually provided that time is relatively unimportant and that adequate assistance is provided. It
was pointed out that, in general, many more and varied uses can be made of the same data, provided data processing is available, than can be made manually because of the time element.

The time element is definitely an important factor in writing student schedules; the machine can actually do a more effective job in schedule writing than can man. Actually, the machine in this task frees the teacher, counselor, or administrator who would normally be engaged in writing student schedules to plan, teach, or counsel students.

To summarize the thinking of administrative leaders in the district in regard to the use of data processing for educational purposes (granted that there are problems present in any educational endeavor), after four years of experience the administrators believed in the program enough that they have been willing to expend unlimited time and energy to overcome problems and to realize that belief theorized by them originally—that data processing is a tool which relieves teachers and administrators of many clerical tasks. They view data processing as a tool with a potential for a high degree of accuracy and speed and as one effective means for improving education.

Teacher reactions.—Typical values of data processing were indicated by teachers as follows: (1) saves much time for the teacher—permits her to prepare and to teach; (2) eliminates a great deal of written work and record keeping for the teacher; (3) facilitates attendance reporting; (4) is much faster than manual procedures; (5) minimizes duplication of record keeping by teacher; (6) lightens work load of both classroom and homeroom teacher; (7) saves time particularly for the
beginning teacher who very quickly is confronted with a maze of procedures; (8) duplicates grades efficiently; (9) is very accurate; (10) standardizes for all buildings the cumulative record so it can be easily read and evaluated; (11) abbreviates writing of information through process of mark sensing.

Among typical responses of teachers indicating problems they have encountered in their experiences with data processing were the following: (1) Recently, it takes too long to get results--the office does not have locator cards yet; report cards were late this six weeks. (2) Procedures and the program have been improved each year; there is still much needed improvement. (3) Teacher load here seems to be the same as it was in New Jersey; the office staff in New Jersey did for teachers what data processing does here with the exception of grade distribution which is most helpful. (4) Report cards lack teacher comments and that personal touch. (5) There are no problems. (6) It is most praiseworthy. (7) It is expensive but it can be justified in terms of its help to staff. (8) If errors are made in key punching or in transcribing, data processing will duplicate this type of error.

Teacher responses to inquiry about possible suggestions for change in data processing were as follows: (1) Either provide additional secretarial staff or overtime to the existing staff to gain maximum use of machine time, or limit the use of data processing to only those tasks which can be accomplished effectively with limited machine time; (2) provide more time for orienting teachers in the use of procedures and coding of IBM information; (3) work more closely with parents in
marking and reporting; (4) provide for teacher comments to be checked on report card; (5) none are needed.

To summarize the reactions of teachers in the district to the use of data processing for educational purposes, the teachers seemed to favor use of data processing—none registered indifference to its use.

Student reactions.—Typical student responses indicating values in the use of data processing in the district were as follows: (1) It is easier and quicker for teachers and students. (2) Report cards are easier to read when they are machine printed. (3) Since the teacher mark senses the student grade but once on a card and the machine records the grade for all reports, the teacher can wait until the very end of the grading period to determine grades. (4) It is accurate and efficient. (5) It is a convenience to the student for report cards to be produced in duplicate form, for each student can keep his copy of his grade report. (6) It provides the teacher a great amount of information about each student which helps her to help her students (guidance purposes). (7) The machine cannot make mistakes except as mistakes are given it, so there are few errors.

Few students suggested problems encountered by them; it is likely that their lack of recognition of problems was attributed to the fact that their direct experience with data processing reports was limited in most cases to report cards and attendance tallies. Several juniors and seniors were aware of preparation of cumulative records and transcripts by data processing. Perhaps, the maturity level of the student was a
factor, although several problems and suggestions given demonstrated student insight in the matter.

Student responses to inquiry about problems encountered, grades seven through twelve, were namely: (1) There are no problems with it. (2) Machines can break down and delay reports more than they would be delayed if the teacher made them. (3) Report cards lack teacher comments. (4) It would be better to have pluses (+'s) and minuses(-'s) included with grades. (5) Any report system is all right. (6) Report cards were slow this six weeks period. 20

Typical responses to inquiry regarding suggestions for change by students interviewed in the data processing program were the following: (1) It is satisfactory. (2) There are none. (3) Include pluses (+'s) and minuses (-'s) in the grading system. (4) Write complete information on the report card rather than code information; coding is difficult for parents to understand even when the key appears on the card. (5) Somehow indicate on the report card whether the student is working up to his capacity.

Future direction of data processing

The preceding account has been an effort to describe and survey in depth in a given school district the practice of data processing for educational purposes--the initial purpose of the district is to relieve

20 Student problems (3) and (4) just mentioned are not limitations of the machine; these policy limitations were made in marking and reporting before data processing came into use in the Willoughby-Eastlake City Schools. Also, problem (2) can be refuted through reference, for example, to a teacher's illness delaying reports if the manual approach is used.
teachers and administrators of clerical duties in order to free them for
the tasks of teaching and improving instruction.

From all indications, unless financial problems or a weakening
in belief in the value of the practice becomes insurmountable to those
involved, it would appear that this district will continue to extend and
to improve the use of data processing for purposes of utilizing staff
better and improving instruction.

Contemplated Involvement with Staff
Utilization Practices

Two school districts were selected on the basis of their interest
in and contemplation of becoming involved with staff utilization
practices. It was hoped that through the interview technique, reasons
for delay in involvement with staff utilization practices might be
ascertained.

Fayette County School District

The Fayette County School District is rural, with the exception
of the villages of Jeffersonville (approximate population of 1,000) and
Bloomingburg (approximate population of 500). The Fayette County School
District Office is located in Washington Court House, Ohio, about forty
miles southwest of Columbus, Ohio.

Fayette County is recognized as a rich agricultural district and
is noted for its production of corn, beef, dairy products, and pork.

A unique feature of the Fayette County School District is the
fact that it was the first county district in Ohio to undergo complete
consolidation and to have but one high school for the county district.
Consolidation was begun in 1954 and was completed during an eight-year period.

In November, 1954, a merger of eight local school districts—Jasper, Concord, Green, Perry, Wayne, Madison, Marion, and Union—became the original Miami Trace Local School District through the approval of the districts' voters at the General Election. This merger became effective July 1, 1955.

Shortly after the General Election in November, 1955, Jefferson, Paint, and Bloomington Local School Districts were transferred, by action of the Fayette County Board of Education, to the new Miami Trace Local School District.

In the November, 1956, General Election, a bond issue of $1,652,500 was presented by the Miami Trace Board of Education to build a new high school and was approved by citizens of the district.

On July 1, 1958, the Fayette County Board of Education transferred the New Holland School District to Miami Trace Local School District.

Delays in building plans were experienced due to litigation from 1956 to 1961; the new high school building was begun in May, 1961, and completed in September, 1962, when the Miami Trace High School, built on a twenty-seven and six-tenths acre plot, was opened.

The county high school houses grades nine through twelve; it has an enrollment of 910 and a staff of forty-two teachers. The enrollment next year should reach 1,000. Housing developments within the county are boosting school enrollment.

Citizens of the county district favored complete consolidation because they believed a broader curricular offering was possible at
reasonable cost; there would be the same county tax base for all.
According to the county superintendent, the latter reason for consolidat-
ing—to lessen the cost—has caused some problems at times with the
local board of education, for the board has hesitated at times to spend
money because the voters were promised that education would cost less
through consolidation.

County superintendent's reactions.--The following reasons were
given by the county superintendent for questionnaire responses' being
marked "contemplated" or "existing."

1. Classes of fifty or more students were contemplated to be
regularly scheduled in physical education and health as one part of the
instructional program because of an anticipated shortage of staff for
that area resulting from a lack of finances.

2. Students quite regularly were organized within regular
classes of English, social studies, and science into groups of fifteen
or less for the purposes of discussion and exchange of ideas. The
superintendent indicated that this small-group discussion was being
carried on to meet individual needs, particularly until a five-area
choice of course election is possible for all students. In the future,
all students may choose one of the following areas: business education,
general, academic, vocational (Smith-Hughes program), or industrial
arts. The area of student concentration throughout high school will be
designated on the student diploma. This year's freshman class was the
first to have an opportunity to elect from a five-area choice (result
of consolidation broadening curricular offering).
Future grouping of students will be done on a school-wide basis rather than as a continuation of intraclass grouping. Large scale student grouping is not done presently because the testing program has been inadequate and there have been an insufficient number of guidance counselors and inadequate guidance facilities. None of the smaller schools had guidance programs (one county guidance person, half-time for entire county) prior to consolidation.

There are now one and seven-eighths counselors for the high school and three-fourths of the time of the county guidance person devoted to elementary and high school levels. The increased number on the guidance staff, since consolidation, has made it possible to broaden the testing program; eventually, there will be test score evidence available to assist in a student grouping program.

3. Scheduling of most students specifically for independent study in places other than study halls or in regular classrooms and making learning facilities available to students doing independent study beyond regular school hours will become possible in academic areas, now that facilities are available in the new county high school. A lengthening of the school day will come slowly because of the extensive area over which students must be transported and because of the local board's attitude to keep staff size to a minimum.

An effort was made during the 1961-1962 school year by a science teacher to provide individualized learning and independent study for his students. Students were given blocks of work with deadlines for each to be completed. The student was given the freedom to do the work when he wanted. The entire year's work was blocked out for the student at the
beginning of the year. Experiments in laboratory were not assigned to be done at a given time; rather, so-many experiments were to be completed by the end of each grading period. Individual help was given by the teacher when requested. The student knew the requirements for the grade for which he wished to strive. There were no tests until the end of each block of work.

Students interviewed valued this experience in chemistry class very much. Values recognized by the students were these: (a) It developed individuality and responsibility among students. (b) It was good preparation for college where no one supervises study, for students discovered that work had to be completed each day. (c) There were few discipline problems. (d) Oral presentation of the student's research to the class developed student poise.

There were some problems experienced by students: (a) Students frequently had difficulty with pacing their work. Many discovered by experience that reading and reference work should be done in advance of class work so that class experiences would be more meaningful. (b) Less interested students did not work to their capacities.

Changes that students suggested in the independent study approach in chemistry were as follows: (a) Make clear the importance of the course. (b) Increase the amount of individualized work. (c) Emphasize measures of safety that should be adhered to by students at all times in the laboratory. (d) Each student should have his own desk and materials to prevent copying reports in workbooks.

4. The availability of technological devices in Fayette County Schools has been dependent upon availability of funds to purchase them.
One of the purposes of consolidation was to make it possible to finance improved instruction for county school pupils. Overhead projectors, teaching machines, and tape recorders were checked "contemplated for use" on the questionnaire returned by the county superintendent. Since June, 1962, an overhead projector, two tape recorders, and one teaching machine with sample programs were purchased for use at the high school. The overhead projector has been closeted until January, 1963, when a new budget will make available money to purchase materials for the overhead. Recorders were being used in the areas of English, speech, social studies, and foreign language. The teaching machine and graded programs were purchased for teachers to study and experiment with during this school year; voluntary teacher experimentation is to be done for the purpose of determining the need and advisability of purchasing either machines and programs or programmed books for future use on a more extensive basis. Recommendations to the board of education will be made by the county superintendent on the basis of the findings of individual teachers.

The interview with the county superintendent revealed that lack of finance and lack of facilities have up to the present time hampered local districts in becoming involved with many staff utilization practices considered in this study. Because of the extended period of involvement in consolidation procedures, citizens of the county and their elected representatives, the local board of education, are slowly undergoing attitudinal changes which will make involvement in staff utilization practices more feasible in the future than at the present time.
Developments and practices that were begun or were being contemplated received much initial leadership at the administrative level. Further leadership came or must come from teachers and administrators jointly assuming responsibility for carrying out the practices.

Communication lines have existed on a limited basis. The working relationship of administration and staff has been quite satisfactory. Communication has occurred through conferences, meetings, county supervisor consultations, P.T.A., and in-service county workshops.

Research and evaluation have preceded planning for some innovations contemplated, namely, the teaching machine and grouping for special purposes. The literature was reviewed and some schools involved with the practices were visited by staff members. Evaluation built into grouping will involve more extensive and adequate use of standardized tests and their results.

Problems anticipated.—The county school district is characterized by varied interests, since it only recently underwent complete consolidation. Prior to consolidation, local schools were too small even to ask their citizens for many educational needs, for small schools simply could not finance broad curricular offerings. A problem of "selling" the need for innovations to this type of community has been recognized by the administration as difficult.

Similarly, problems of finance will continue to haunt the district as a result of promises, to districts involved in transfer, that consolidation would bring a reduction in cost at the same time that it would make possible a broader curriculum. Reduction in cost has seemed
to overshadow a broader curriculum (which is bound to cost more than a minimum curriculum) in the minds of citizens in the county.

No staff problems were anticipated, since this year's staff was quite interested in improving the curriculum.

**Successes realized.**—Administrators recognized that there has been a high degree of acceptance by staff and students of practices tried or discussed to date. The administration further believed that educational improvement will be verified whenever records are available to measure growth of students.

**Future directions.**—The administration expressed faith that a great extension of program and further instructional improvement are in sight for students of the new county high school because of cooperative and interested attitudes displayed by staff members.

Vinton County School District

Vinton County was created from portions of Athens, Hocking, Jackson, Ross, and Gallia counties in 1850. It lies in the Appalachian plateaus; its topography is characterized by ridges, streams, and hills.

This county is located in the southeastern quarter of Ohio between the Scioto and Hocking rivers. The county's population has been steadily declining since 1880. There are four incorporated villages located within—McArthur, the county seat; Hamden; Zaleski; and Wilkesville.

The county is an area of great forest potential; unfortunately, however, land has been cleared too frequently with little regard for the effect on soils or future forest growth.
State forest property includes 24,901 acres of county land. Outstanding is Zaleski Forest, a scenic area, in which is included Lake Hope, an annual recreation place for thousands of people. Zaleski Forest is owned by the United States Government but is leased to the State Forestry Division for management.

The economy of the county centers about agriculture and utilization of natural and mineral resources. Types of employment are agriculture, manufacturing, mining, and construction. The major natural and mineral resources are coal, iron ore, clays, limestone, oil, and gas. Industrial products include brick, powders, and preserved woods. Agricultural occupations include grazing, cattle raising, and orcharding.

A number of state and national highways facilitate transportation for its citizens.

The Vinton County School District has undergone a series of transfer and consolidation experiences since 1928. In 1928 there were seventeen local school districts in the county. Today there are but six. Most of the reduction in numbers of school districts has taken place since 1946.

Within the six local districts are five high schools and seven elementary schools. Swan School District is the only district which does not have a high school; its high school students are tuition students at McArthur.

Enrollments of the five high schools, grades nine through twelve, are Allenville, 215; McArthur, 250; Brown-Zaleski, 85; Hamden, 110; and Wilton, 110. Three of the schools are six-year high schools and have enrollments as follows in grades seven through twelve; McArthur,
Brown, 150; and Hamden, 175. All of the enrollments combined would make one medium-sized high school if housed under one roof.

Topography has been frequently blamed for hindering more rapid consolidation. Many times consolidation was not brought to a vote of the people because many people maintained that roads were inadequate for consolidation.

County superintendent's responses.--When asked why the Vinton County Schools contemplated involvement but were not involved with team teaching and with student grouping for special purposes, the county superintendent replied that high school size is now too small to justify large-group instruction and the teaming of teachers for instruction. He expressed much interest in the innovations, since they are of general interest in many schools and since local teachers have expressed interest in them. It was his belief that the team approach would strengthen the teacher program of the district.

In reply to a question about the fact that learning facilities were made available to students doing independent study beyond regular school hours in mathematics and foreign language, the superintendent stated that this was done for the purpose of improving the academic backgrounds for students for college entrance—in other words, to meet the needs of students not having access to these courses in the curricular offering. The teachers were not paid for the extended time spent helping individual students.

Classes scheduled for longer than normal periods but for fewer times a week and the creation of extra periods for specialized
large-group instruction were contemplated by the superintendent to accommodate "quantity" and to improve "quality" of instruction.

Use of technological devices was explained by the superintendent to be limited because of the lack of finances to provide facilities and materials for each of the five small high schools.

**Past and future development pictures.**—A great deal of the leadership for contemplated involvement with staff utilization practices will have to come from the county administration. Planning for innovations will have to be cooperatively done by county administrators, local administrators, and teachers.

Groundwork for encouraging development of practices will be done through local P.T.A.'s, civic groups throughout the county, newspapers, and in-service meetings. In the past, joint meetings of all local boards of education and their administrators were held. The county superintendent indicated that these meetings will be held twice each year at which consultants will be provided to inform the group regarding educational needs in the county (for example, consolidation, improved instruction, and facilities).

Research and evaluation to precede planning for staff utilization practices will be handled by the county guidance services personnel.

**Future direction of county program.**—Further consolidation of high school districts will come. One (possibly two) county high school was predicted by the administration for the future. It is feasible that high school enrollment would then be sufficient to warrant becoming involved in many of the staff utilization practices considered herein.
Problems slowing progress that will likely continue to arise in the process of change were mentioned by the county superintendent.

(1) Local administrators do not have the perspective of total needs at the county level; therefore, they frequently cling to the status quo.

(2) The lack of finances hinders the system's ability to procure a sufficient number of "good" teachers.

The county superintendent identified the progress in consolidation a significant success for the district and expressed the hope that further progress for this district is in store.

The preceding descriptions reveal that delay in involvement with staff utilization practices may be due to reasons peculiar to a given local situation.

**Brief Overview of Range of Practices Described**

Preceding accounts reveal varied degrees of staff utilization practices as well as a variety of them—from no involvement to some involvement to rather extensive involvement in one or more of the five elements selected for this study.

**Team Teaching**

Forms of team teaching have been described wherein either selected students or all students were involved. Team teaching to varying degrees was also underway in the areas of English, social studies, humanities, art, and music. Trials with it had been made in other areas such as science and mathematics. Contemplation of this practice in still other areas, such as physical education and business education, was indicated.
Teacher teams, in all cases described, were officially comprised of teachers only; however, one school included student assistants in the team—clerical assistants for typing and art assistants for preparing projection materials. Team size varied from three teachers to five. In each instance, common unassigned periods or brief intervals of time for planning were provided for team members. Team leaders were either designated or recognized in each case; emphasis on team leader status was made in one school through provision of salary increments for team leaders. In each school under study for team teaching, team members taught the usual number of hours a week—one class period a day for team teaching and the remainder of periods each day for conventional classroom assignments.

Student Grouping for Special Purposes

Class sizes for large-group instruction varied from forty-three to 450 students. Frequency of meeting in large groups varied from once a week to five days a week. When students were not meeting in large groups, they were meeting in classes of conventional size.

Small-group discussion held with fifteen or fewer students did not accompany large-group instruction of team teaching; however, one of the selected schools indicated use of small-group discussion (intraclass grouping) to individualize instruction.

Evidence of independent study and research for students in the area of science was described; however, this experience was not in conjunction with team teaching, for the students were under the supervision of but one teacher.
Teacher Aides

It is reported herein that one of the selected schools employed college-trained adults as graders of English compositions. Several of the twelve school districts had aides (for example, student teachers from teacher-training programs and high school students) to assist teachers, but the aides were not employed and so did not fall within the definition of "teacher aide" chosen for this study.21

Schedule Changes

There seemed to be little evidence of flexible scheduling in the schools visited. Evidence of schedule changes of a limited nature was given in the preceding descriptions of trials with a daily schedule of two-lengths of periods, with variance of the schedule to meet individual needs, and with a tuition summer school. Again, in none of these instances, was there any relation of schedule changes to team teaching.

Technological Devices

Practically the gamut of technological devices included in this study was found among the twelve selected schools.

Use of "airborne" telecasts was described in the areas of chemistry, American government, American history, world history, Spanish, English, and eighth grade science. In one school, television was being used in a team teaching situation; in the others, it was used in conventionally organized classes. It was used as a supplement to classroom teaching in some cases; in others, telecasts were viewed on four consecutive days each week.

21 Definition of "teacher aide" is given on p. 11.
Overhead projectors were found in use in team teaching and in conventionally organized classes; in some instances, the projector was available but not used. Reasons for non-use were either (1) materials were not available or (2) teachers were unfamiliar with operation of the projector.

Reading programs extended beyond the school day or were well organized during the school day. Points of emphasis on reading included given grade levels of students in the English program, all grade levels of students, or students planning to enter college. Reading accelerator machines were used in all programs described except one—a tenth grade English program. The machines were used by individual students in individual pursuits and by the teacher for group instruction.

Language laboratories were usually used only under teacher supervision; with the aid of student assistants, one school opened the laboratory to language students for independent study when it was not scheduled for classes and if students had study halls. Selected schools made greater use of commercially prepared tapes than of teacher-made tapes.

Contemplation of use of closed-circuit television was described for two school systems. None of the twelve school districts were yet involved with it; however, one anticipated its use shortly after early January, 1963.

Trial of programmed learning in the areas of mathematics and English was disclosed; one county school district had purchased for teacher evaluation a teaching machine and sample programs. Programmed learning in schools observed did not seem to have a place of importance
in instructional practices that many of the other practices considered in this study had.

Tape recorders were found available in the selected schools quite frequently.

A description of a student training program for operation of audio-visual equipment at junior high school level was included.

Involvement with data processing varied from use of McBee Keysort for scheduling and for report cards to use of complete automation for relief to teachers and administrators from the many, usual clerical tasks.

Most of the practices described for the twelve school districts were being tried in the absence of planned evaluation procedures of a formal nature. One school's completed evaluation procedures used to assess the worth of MPATI telecasts were described herein. Another school was planning evaluation procedures for its experimental daily schedule of two lengths of class periods.

Analysis of Data with Reference to "Questions to Be Answered"

Team Teaching

Team teaching existed in three school districts and was contemplated in two other districts of the twelve school districts selected for further study and described herein.

Purposes for which initiated

Although organizational efforts in team teaching instruction in the selected schools were not alike, purposes for initiating the practice were similar.
Team teaching in the selected schools was initiated for the following purposes: (1) to provide "quality" instruction, (2) to expose large numbers of students to the talents and skills of several teachers, (3) to provide unified learning experiences, (4) to provide balance in the curriculum, and (5) to utilize teacher time and ability effectively.

When initiated

In the schools observed and visited, team teaching had been initiated since 1960. It was begun in three of the selected school districts in the years 1960, 1961, and 1962. Another school district planned to initiate team teaching early in 1964 when a new high school building will be opened and space will permit. A county school system contemplated team teaching involvement in its long-range plans, for further consolidation was awaited for school size to warrant involvement with the practice.

Relationship of extent to grade level

Evidence was not sufficient to conclude that there was or was not a relationship of extent of team teaching to grade level.

Although team teaching existed in three schools at eleventh grade level, in two schools at twelfth grade level, and in one school at ninth and tenth grade levels, the frequency of the grade level involved did not necessarily indicate a relationship of extent of the practice to grade level, for a number of reasons: (1) Reasons for establishing the

---

22 See footnote 2, p. 3.
practice in schools where it existed were related to other considerations than grade level, such as "readiness" of teachers to become involved with the practice. (2) Flexibility of scheduling team experiences makes it difficult to determine this relationship; no established pattern of organization was evident in all cases. (3) Team teaching experiences in these schools had been too recent to provide evidence to establish the fact that there was or was not a relationship.

Further, schools which contemplated involvement with team teaching had not designated a concern for where the practice will be initiated in terms of grade level.

Nature of leadership and planning in establishing practice

Leadership for establishing team teaching in two schools was administrative; in the third school, leadership originated from a teacher.

Planning in all three schools has been a cooperative endeavor of administration and teachers. One school included representatives of the student body in its planning, in addition to the principal and the teachers.

Communication lines established

Communication lines were established for coordinating, understanding, and promoting team teaching in all three schools. A greater number of avenues of communication were established in the two schools where students were required to participate than were established in the one school where students could elect to participate.
Inhibiting factors\textsuperscript{23} to experimentation

In the opinion of teachers interviewed in schools selected for this study, the following factors (ordered from most frequently to least frequently mentioned) seemed to inhibit experimentation in team teaching: (1) lack of space, (2) lack of funds, (3) lack of trained staff, (4) other things with higher priority, (5) lack of time, (6) lack of staff support, (7) only a fad, (8) insufficient substantiating research, (8) not suitable to our type of program, (8) merits of technique questionable, (8) small size of school, (9) lack of board of education support, (9) my dislike for it, (9) accrediting association standards, (9) lack of administrative support, and (9) lack of ability of students.

Administrators interviewed identified these factors (ordered from most frequently to least frequently mentioned) as inhibiting experimentation in team teaching: (1) lack of space, (2) lack of trained staff, (3) lack of funds, (4) lack of staff support, (5) lack of time, (5) other things with higher priority, (6) creates staff jealousies, and (6) not suitable for our type of program.

It should be noted that there was agreement among rankings of responses of administrators and teachers in two of the first six most frequently mentioned inhibiting factors, namely, (1) lack of space, and (5) lack of time. Administrators and teachers nearly agreed on the remaining four rankings—lack of funds, lack of trained staff, other things with higher priority, and lack of staff support.

\textsuperscript{23}See Appendix C, p. 385 for check list form.
Research and evaluation

Research and evaluation preceded planning for establishment locally of the innovation in the three school districts where team teaching existed. Evaluation had also accompanied the practice locally as it had been developed.

Problems and successes

Problems identified by staff and students.--Problems encountered fell within the general areas of (1) lack of sufficient time for teacher preparation, (2) physical aspects of large lecture room such as ventilation, light, elevation of seats, (3) reaching agreement on decisions to be made by team members, (4) scheduling problems related to broadening of curriculum without lengthening school day, (5) maintaining student interest in and pacing work of a heterogeneous population of large groups, (6) slow acceptance by staff, (7) need for small-group (ten to fifteen students) discussion and for maximum limit of students in large groups, (8) difficulty of note-taking, (9) hesitancy of students to ask questions in large groups, (10) "readiness" of students to use the team teaching approach as an excuse for personal inadequacies, (11) difficulty of obtaining resource people capable of speaking on student levels.

Successes identified by staff and students.--Although it was pointed out by several staff members that they thought it too early to identify successes, the following observations made by staff and students were believed to be indicative of some measure of success: (1) Team members have learned to cooperate and to profit from observing the
teaching of others. (2) Large-group presentations are good; teachers stay "on the subject" and many students prefer the impersonal touch.

(3) The community shows interest voluntarily; inquiries about the practice have been received from distances. (4) Variety of method and correlation of ideas or areas are welcomed by students; students believe reinforcement of learning takes place through both large-group and class instruction. (5) Large-group experiences develop skills in note-taking and in listening. (6) Resource people are quite willing to participate. (7) Students indicate appreciation for experiencing the talents of more than one teacher and the varieties of resource personnel. (8) Students seem to take more active part in the entire school program and sophomore groups seem more mature, since the establishment of team teaching. 24 (9) It provides unified content, knowledge, and understandings that cannot be obtained from a book.

Direction of the practice

Those in leadership positions in two of the three school districts involved with team teaching expected the practice to be continued (with revisions for improvement) and extended. None of the schools selected for this study anticipated involvement with small-group discussion or independent study in team teaching. Team teaching staff members of one school believed it premature to conjecture future directions although they were hopeful that the practice will be continued.

24 It is possible that this observation may be related more closely to content taught than to the experience of team teaching.
Student Grouping for Special Purposes

In this section will be considered small-group discussion and independent study only, since data relative to large-group instruction have already been analyzed in the preceding section regarding team teaching.

Small-group discussion within regular classes of English, social studies, and science existed in one school district selected for this study. Independent study existed in science in two selected school districts.

Purposes for which initiated

Small-group discussion and independent study were initiated to meet individual needs.

When initiated

Small-group discussion and independent study were initiated in their respective schools in 1962. A science teacher tried in 1961 an independent study approach in chemistry; he discontinued the practice in 1962. Neither practice existed in conjunction with team teaching.

Relationship of extent to grade level

Evidence was not available to indicate that extent of either practice was or was not related to grade level. Small-group discussion occurred in grades nine through twelve; independent study in one school occurred for able students (twelfth grade) who had completed the academic science sequence. Also, independent study of chemistry was conducted at eleventh grade level in another school.
Nature of leadership and planning in establishing practice

Leadership for small-group discussion and for independent study came from teachers. Planning for the practices was carried out cooperatively by administrators and teachers.

Communication lines established

Communication lines were of an informal nature; they were established primarily through teacher and counselor discussions with students, informative letters, and meetings of staff.

Inhibiting factors to experimentation

Check list responses (ordered from most frequently to least frequently mentioned) of teachers indicated the following inhibiting factors to experimentation with student grouping for special purposes:
(1) lack of space, (2) creates student jealousies and snobbishness, (3) lack of time, (4) lack of trained staff, (5) lack of funds, (5) other things with higher priority, (6) lack of community support, (6) lack of board of education support, (6) insufficient substantiating research, (6) contrary to school philosophy, (6) accrediting association standards, (6) school size, and (6) ability of students.

Check list responses (ordered from most frequently to least frequently mentioned) of administrators pointed to the following inhibiting factors: (1) lack of space, (2) lack of funds, (2) lack of trained staff, (2) creates student jealousies and snobbishness, (3) lack of staff support, (3) schedule problems.

Administrators and teachers agreed that lack of space and the creation of student jealousies and snobbishness were prime factors
inhibiting trial of student grouping for special purposes. Responses of each showed agreement of selection of two other factors, lack of funds and lack of trained staff; however, the two factors did not receive identical ordering in each group.

Research and evaluation

Research and evaluation preceded planning for student grouping for special purposes; they accompanied practices in two out of three situations.

Problems and successes

Problems identified by staff and students.--Several problems were identified in relation to student grouping for special purposes: (1) adjustment problems (for teacher and students) related to the unstructured nature of the small-group discussion and independent study, (2) lack of breadth of training and experience of teacher, (3) lack of funds, (4) schedule limitations, (5) pressure of time, and (6) less interested students' not working to capacities.

Successes identified by staff and students.--Values and successes included the following: (1) development of individuality and responsibility of student, (2) good preparation for college learning experiences, (3) development of student poise, (4) provision of highly motivating learning experiences, (5) maintenance of good teacher-pupil rapport, (6) relaxed learning atmosphere and flexible schedule, (6) working at individual rates, and (8) lack of discipline problems to interfere with learning experiences.
Direction of the practice

Those in leadership were encouraged by the products and attitudes evidenced to date; however, they recognized that it was early to predict direction. Extension of the practice or at least continuation of it, with expected changes to accompany normal instructional improvement, was hoped for by those involved.

Teacher Aides

One of the twelve school districts selected for depth study was involved with the use of teacher aides.

Purposes for which initiated

The purpose for initiating the use of teacher aides was to relieve teacher load in evaluating student compositions in the English program which included increased emphasis on writing. The purpose was to maintain and improve "quality" with increased "quantity."

When initiated

The practice was initiated in 1960.

Relationship of extent to grade level

There is no relationship of extent to grade level. Use of teacher aides by English teachers is permissive at any grade level.

Nature of leadership and planning in establishing practice

Leadership for securing teacher aides came from the superintendent; planning for their use was done cooperatively by administrators and teachers.
Communication lines established

Continual communication took place between teacher and teacher aide to assure common understandings of purposes.

Inhibiting factors to experimentation

Responses (ordered from most frequently to least frequently checked) of teachers indicated the following inhibiting factors to experimentation with teacher aides: (1) lack of funds, (2) lack of board of education support, (2) other things with higher priority, (3) lack of community support, (4) lack of space, (4) lack of trained staff, (4) only a fad, (4) state minimum standards, (5) lack of staff support, (5) insufficient substantiating research, (5) not educationally sound, (5) contrary to school philosophy, (5) accrediting association standards, and (5) merits of technique questionable.

Administrator responses (ordered from most frequently to least frequently checked) pointed out these inhibiting factors: (1) lack of funds, (2) other things with higher priority, (3) insufficient substantiating research, (4) lack of board of education support, (4) lack of trained staff, (4) accrediting association standards, (5) lack of staff support, (5) my dislike for it, (5) not educationally sound, (5) contrary to my philosophy, and (5) not suitable to our type of program.

Again, administrators and teachers agreed completely on the first two inhibiting factors—lack of funds and other things with higher priority. Other inhibiting factors of experimentation nearly agreed upon by teachers and administrators were lack of board of education support, insufficient substantiating research, and lack of trained staff.
Research and evaluation

Research and evaluation preceding planning for use of teacher aides consisted of review of current literature. Evaluation accompanying the practice was informal through teacher-administrator discussions.

Problems and successes

Problems identified by staff and students.—Problems identified were few, relative to the use of teacher aides: (1) reaching of mutual understandings by teacher and teacher aide and (2) slowness of some staff members to accept the practice.

Successes identified by staff and students.—A number of values and successes were pointed out: (1) The teacher aide learns from the teacher she assists. (2) Teacher aide rapport with students and teachers is good. (3) There is evidence of growth in writing performance of individual students. (4) The teacher aide has time to write detailed criticisms and explanations regarding student writing. (5) Amount of writing required is based on student needs rather than on amount of time the teacher has available to evaluate what is written.

Direction of the practice

It was hoped that this service can be extended to all departments of the high school. It is possible that the teacher aide might eventually assist the teacher in or outside the classroom, depending upon the aide's qualifications.
Schedule Changes

Schedule changes existed in three schools; the nature of existing schedule changes consisted of two lengths of periods in the school day, a summer school to provide special opportunities, and change of regular schedule for an individual student's needs.

Purposes for which initiated

Schedule changes were initiated to meet individual needs and to experiment for improvement purposes. Specific purposes were to provide the opportunity to students to elect a greater number of courses or to take courses by television that could not be offered by local staff, to extend the school year to facilitate student progress (through remedial and enrichment programs of summer school), and to make effective use of limited lunchroom facilities.

When initiated

These changes have had their beginnings since 1960 in the three schools described previously. The summer school was initiated the earliest of the three instances of schedule changes; each of the remaining two cases was begun in 1962.

Relationship of extent to grade level

No evidence was given in any of the three instances of any relationship of extent to grade level. In each case, the practice applied to needs of students at any grade level.
Nature of leadership and planning in establishing practice

Leadership came from the administration; planning was done primarily by the administration with some informal discussions with staff.

Communication lines established

Communication lines for coordinating, understanding, and promoting schedule changes were established in each of the three instances; however, duration of emphasis on communication varied in each situation. Greatest emphasis on communication existed in promoting the summer school program. Equally important, but of briefer duration, was communication relative to trial of varied lengths of periods during the school day. Changes for individual needs involved the least emphasis on communication.

Inhibiting factors to experimentation

Teacher responses (ordered from most frequently to least frequently checked) pointed to the following inhibiting factors to experimentation: (1) lack of space, (2) lack of time, (3) lack of board of education support, (3) creates student jealousies and snobbishness, (3) other things with higher priority, and (4) merits of technique questionable.

Administrator responses (ordered from most frequently to least frequently checked) were quite scattered and indicated the following inhibiting factors: (1) state minimum standards, (1) accrediting association standards, (2) lack of time, (3) lack of funds, (3) lack of space, (3) lack of community support, (3) lack of staff support,
(3) lack of trained staff, (3) creates staff jealousies, (3) creates student jealousies and snobbishness, (3) other things with higher priority, and (3) insufficient substantiating research.

It is interesting that administrators and teachers reached general agreement on but four of the preceding inhibiting factors: lack of space, lack of time, creates student jealousies and snobbishness, and other things with higher priority.

Fewer factors were checked by teachers under the column "schedule changes" than were checked by them under the other four elements of staff utilization practices. It is probable that one or two reasons may account for that fact: Either teachers recognized schedule changes as an administrative problem or they did not formulate opinions because they were unaware of inhibiting factors in this area.

Research and evaluation

Very little research and evaluation preceded planning for the practice; research was limited to review of related periodical literature and some school visitations. Formal evaluation will accompany the experiment with varied lengths of class periods; otherwise, informal staff-administrative discussions were the extent of evaluation accompanying the development of the practice.

Problems and successes

Problems identified by staff and students.--A variety of problems was indicated for staff and students: (1) teacher preparation increased, (2) pacing of work (same content) in varied lengths of periods,
(3) psychological problems for students who feel they do not have equal opportunities, (4) scheduling of teacher-teacher and teacher-student conferences difficult with short periods, (5) restriction of teaching techniques in short periods, (6) student adjustment to varied lengths of periods, (7) makeup work difficult in large blocks of time, (8) lengths of class periods, and (9) lack of class discussion.

Successes identified by staff and students.--Several successes were pointed out by staff and students as follows: (1) school day lengthened to accommodate the election of more courses or study halls, (2) reduction of number of supervisory duties of teachers, (3) less confusion during closed lunch hour, (4) drop-out picture improved, (5) blocks of time allowing depth, (6) preparation for college, (7) early graduation possible, (8) student academic load lightened if desired, and (9) monotony avoided through varied lengths of periods.

Direction of the practice

It was believed that schedule changes will be continued in schools now involved, direction of the practice depending upon evaluation findings and the reaction of the State Department of Education in Ohio. It was hoped that summer school offerings will be extended.

Technological Devices

The use of technological devices was inquired about in nine out of the twelve school districts visited for this study, since the statewide survey revealed most extensive involvement in this area of the five elements of staff utilization practices under study.
Purposes for which initiated

Technological devices described herein were initiated in the schools for the following purposes: (1) to relieve staff of clerical duties, (2) to individualize instruction, (3) to improve instruction and to utilize teaching time better, (4) to experiment to discover the "role" of the technological device in education, (5) to help individuals improve listening and speaking skills, (6) to meet individual needs, and (7) to evaluate use.

When initiated

Except for use of the tape recorder and for the beginning of an audio-visual student training program which began in 1946 and 1952 respectively, the majority of technological devices considered in this descriptive survey was initiated since 1957.

Relationship of extent to grade level

No effort was made by the schools to limit the use of technological devices to given grade levels. The relationship of extent to grade level (if one existed in any case) did not result from stated purpose or from substantiating evidence.

Nature of leadership and planning in establishing practice

Leadership for establishing the use of technological devices came from the administration. Further planning was done cooperatively by the administration and the teacher; teachers assumed responsible roles in planning for the use of the devices.
Communication lines established

Considerable variance existed relative to the establishment of communication lines to coordinate, understand, or promote the use of technological devices. In several instances, no effort was made to establish communication lines; in several other situations, modest or limited efforts were made to establish lines. Communication lines were usually of an informal nature when established; for example, lines were established through teachers and their classes, staff meetings, central office media, student conferences, letters to parents, P.T.A. groups, and teacher workshops.

Inhibiting factors to experimentation

"Lack of funds" was checked most frequently by both teachers and administrators as inhibiting factors to experimentation with technological devices. It is interesting that administrators checked "lack of trained staff" second most often as an inhibiting factor but that teachers did not recognize it as an inhibiting factor at all.

Other teacher responses on the check list (ordered from most frequently to least frequently mentioned) were as follows: (2) lack of space, (2) other things with higher priority, (3) lack of time, (3) lack of community support, (3) my dislike for it, and (3) insufficient substantiating research.

Other administrator responses (ordered from most frequently to least frequently checked) were as follows: (3) insufficient substantiating research, (4) lack of space, (5) lack of time, (5) lack of staff support, (5) only a fad, and (5) other things with higher priority.
Teachers and administrators agreed on another factor, insufficient substantiating research, as inhibiting experimentation; they were somewhat agreed on the inhibiting factors—lack of space, lack of time, and other things with higher priority.

Research and evaluation

Research and evaluation preceded planning for use of technological devices in approximately 80 per cent of the situations studied. About 20 per cent of the situations in which technological devices were used did not initiate research and evaluation prior to local planning.

Approximately 65 per cent of the cases observed which used technological devices had evaluation of an informal nature accompanying planning for the innovations; approximately 35 per cent had no evaluation procedures built in to accompany planning.

Most of the technological devices were being used in the absence of planned and formal evaluation procedures. One school situation is described where an evaluation of MPATI had been made; another school described was proceeding to evaluate its trial of flexible scheduling.

Problems and successes

Problems identified by staff and students.--The problems pointed out by staff and students extended into a number of areas. Lack of finance, materials, equipment, time, teachers' personal touch, and local administrators' perspective of needs were frequently referred to in the several areas of technological devices herein considered. "Selling" program designed for using a number of these devices was recognized, too,
as a problem. Other related problems were as follows: (1) scheduling programs and equipment, (2) technical and mechanical problems, (3) correlation of content and pacing of work, (4) added secretarial work load, (5) adequate utilization and adjustment to methods (by teachers and students), (6) errors duplicated by data processing, and (7) difficulty in evaluating product.

Successes identified by staff and students. — Values of and successes in the use of technological devices were readily pointed out even though some felt that it was too early to evaluate the practice. Instructional and individual improvement was evidenced by results of standardized tests: improved speed and comprehension in reading; improved habits of study; degree of student motivation; willingness of teachers to try devices; and increased breadth of learning experiences. There were added opportunities for teachers to learn from other teachers.

Use of many of the devices tended to individualize instruction; for example, the studio teacher, tapes, programmed learning, and the like freed the classroom teacher to work with individual students.

Records in several schools showed increased, and even maximum, utilization of equipment.

Devices to relieve staff members of clerical duties provided smooth operation through saving teacher time, lightening teacher load by minimizing duplication, providing a wealth of information about students in a short time; further, devices were accurate and efficient. Other indications of successes were these—increased circulation of library materials, improved student control through increase of student interest,
and cognizance of purposes or aims through use of some devices which seem to aid students and teachers to remain "on the subject" under discussion.

Direction of the practice

In each of the nine school districts, it was indicated that continuation of use of technological devices was probable; it was expected that extension, expansion, and improvement of their use would follow as needs arise, as local evaluation suggests, and as finances permit.

Findings for "Questions to Be Answered"

The preceding analysis of data with reference to "questions to be answered" for each of the five elements of staff utilization practices under study in selected Ohio public secondary schools will now be considered totally to provide answers to those questions. Questions and findings follow.

1. For what purposes were the practices initiated? When were the practices initiated?

A major goal of the selected schools in staff utilization practices was to attain "quality" in instruction while utilizing teacher time and abilities effectively in the wake of or in anticipation of increased enrollments and/or consolidation. Meeting individual needs through individualizing instruction was underlying involvement of many of the practices described herein. Several schools initiated certain practices for the express purposes of experimenting to improve instruction and of evaluating locally the worth and place of the practices.
Except for the use of the tape recorder earlier, staff utilization practices in the selected schools were initiated since 1957; most of the practices in the twelve districts were initiated during the years 1960-1962.

2. Is the extent of practices related to grade level?

Information gathered in the selected schools does not indicate that there is or is not a relationship of extent of staff utilization practices to grade level. As indicated in descriptions of practices in this chapter and as pointed out in the previous section dealing with analysis of data, it is fact that certain practices did occur at given grade levels; however, reasons given for initiating the practice did not include a criterion of grade level.

3. What is the nature of the leadership and planning provided for establishing the practices?

Leadership for establishing the practices has come in a majority of instances from the administration; in several instances, leadership has stemmed from teachers.

The nature of planning has been a cooperative endeavor, for the most part, of administrators and teachers; in a number of cases, teachers have assumed considerable responsibility in the cooperative planning. In one school, students have been included in the planning by administrators and teachers.

4. Are there established communication lines for coordinating, understanding, and/or promoting practices?

Communication lines are established in each of the five elements of staff utilization practices under consideration in the selected
schools; in some instances of use of technological devices, communication lines are non-existent as in the use of tape recorders and language laboratories.

It was usually found that communication is of an informal nature, varying from modest efforts to more extensive efforts in establishing communication lines for coordinating, understanding, and/or promoting staff utilization practices. The duration of emphasis on and the degree of concern with communication varies with the nature of the practice and its relation to those involved. Communication lines are frequently established through teachers, counselors, classes, individual students, staff meetings, central office personnel or media, parent letters, P.T.A. groups, workshops, conferences, and local news media.

5. What factors seem to inhibit experimentation in Ohio public secondary schools?

In the opinions of teachers and administrators in the twelve school districts selected for depth study, the following factors (ordered from most frequently to least frequently checked) are recognized as most inhibiting to experimentation in staff utilization practices: (1) lack of funds, (2) lack of space, (3) lack of trained staff, (4) other things with higher priority, and (5) lack of time. A number of other inhibiting factors, checked a few times each by staff and administrators, may be found in the preceding analysis with reference to each of the five elements of staff utilization practices considered in this survey.

6. Do research and evaluation precede planning for the innovations or do they accompany the practices?
Research and evaluation precede planning for staff utilization practices in the majority of cases; very little precedes plans for schedule changes. Research and evaluation preceding planning is non-existent in only about twenty per cent of instances relative to the use of technological devices.

There are fewer instances—in fact, very few of a formal nature—of research and evaluation accompanying the practices than there are preceding the innovations. There are several instances in which built-in evaluation practices do not accompany them. Most evaluation procedures accompanying the development of these practices are informal, usually consisting of discussions, observations, and the like.

7. What problems and successes do staff and pupils identify in the initiation and establishment of staff utilization practices?

Many problems that staff and pupils identify in initiating and establishing the use of staff utilization practices are related to matters of adjustment for students and teachers, such as lack of time for preparation; human relations among members of teacher teams and with teacher aides and teachers; pacing work and correlating content; maintaining student interest; acceptance of practices by some students and teachers; limitation of teaching techniques in carrying out some practices; maintaining adequate utilization of methods, equipment, staff, and materials; physical aspects of classroom; difficulty of effective note-taking; hesitancy of students in large-group instruction to ask questions; psychological problems of students who feel educational opportunities are not equal through use of varied lengths of periods; difficulty of securing resource persons who speak on student levels;
problem of role and responsibility in very large groups; absence of small-group discussions accompanying team teaching; and differing lengths of class periods.

Other important problems are related to scheduling of programs and equipment, lack of breadth of training and experience of the teacher, lack of funds, "selling" programs using technological devices, technical and mechanical problems, and evaluating products resulting from the use of technological devices.

The successes in initiation and establishment of staff utilization practices that staff and students identify lie mainly in three general categories: (1) improvement of instruction, (2) individualized instruction, and (3) teacher improvement. It could be said that all successes recognized, point to improvement of instruction, for it is expected that individualized instruction and teacher improvement contribute to improvement of instruction.

Some specific evidences of successes in each of the three categories indicated by staff and students are as follows: (1) Improved instruction consisted of quality, large-group presentations; variation of methods used; improved skills in note-taking, listening, reading, and study habits; increased student participation in entire school program; growth in writing performance; effective evaluation of compositions made possible; depth study permitted by flexible scheduling; increased breadth of learning experiences; degree of student interest and motivation; increased and maximum effective use of technological devices; good rapport (community, resource personnel, teachers, teacher aides, and students); and increased library circulation. (2) Individualized
instruction was comprised of development of student individuality, responsibility, and poise; provision of motivating learning experiences; opportunity to work at individual rates of learning; possibility of electing more courses or additional study time; improved drop-out picture; possibility of early graduation; lightening of student academic load; and improved results of standardized tests. (3) Teacher improvement consisted of learning to cooperate with other staff members; self-improvement through observing and assisting other teachers; good working environment; reduction in number of supervisory and clerical duties; and a willingness of teachers to try.

8. What direction do those in position of leadership expect these practices to take in their local schools?

Many of those in position of leadership acknowledge that it is early to predict direction of several of the practices in their schools, for the practices have existed only a relatively short time; in other instances, leaders express with degrees of certainty directions in which they believe practices will move.

In general, it is indicated that staff utilization practices existing will be continued, extended, improved, and expanded as needs arise, as evaluation suggests, and as finances permit. Those who have no involvement or very little involvement anticipate considerable involvement as size and finances permit.

The intent herein has been to provide detailed description and analysis of representative and varied staff utilization practices in
selected Ohio public secondary schools, in order to extend in depth many understandings gained through interviews with administrators, teachers, and students and through first-hand observations of practices.

Conclusions drawn from findings in this section will be included in the next chapter along with those for the entire study.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose herein shall be to summarize the findings of this study completed to this chapter, to indicate conclusions of the study, and to make recommendations based on those findings and conclusions.

Résumé

Overview of Tasks Completed

Five major tasks established initially for this study have been fulfilled, namely, (1) to determine staff utilization practices existing and/or contemplated (including varieties of implementation) in Ohio public secondary schools, (2) to select and study promising individual projects in selected Ohio school situations, (3) to identify and compare findings in Ohio practices with those of six other states already surveyed, (4) to answer questions to which answers were sought from Ohio questionnaire data and from selected school district data, and (5) to provide detailed accounts of promising individual projects.

1See Chapter II, pp. 25-68.  2See Chapter IV, pp. 89-301.

3See Chapter III, pp. 69-82.  4See pp. 56-68.

5See pp. 295-301.

6See pp. 91-271; attention is also called to related resource materials in Appendix D, pp. 386-438.
Data Analyses Procedures

Horizontal analysis of data has provided answers to questions relative to over-all staff utilization practices in each phase of the survey—of Ohio and of selected school districts in Ohio. Vertical analysis of data has been provided relative to each of the five elements of staff utilization practices under study separately via questionnaires and via interviews. A summary of both horizontal and vertical analyses of data will follow in order to draw conclusions and to make recommendations.

Staff Utilization Practices

Questionnaire data reveal that there is interest in and enthusiasm for trial of many of the practices included in this study among Ohio educators. Many school districts are quite actively engaged with the practices while others are contemplating becoming involved with them. Ohio school districts cannot be considered complacent, then, in regard to practices in operation; however, considerable complacency is in evidence relative to contemplation of involvement with these practices, for there is so little involvement anticipated compared to existing involvement for a number of the practices.

Although reported activity is more marked in high schools than in junior high schools in each of the five elements of staff utilization practices, that practices are more prevalent at grades of high school level than at those of junior high school level does not follow, since high schools in Ohio may be comprised of grades 9-12 or 7-12 and junior high schools may be comprised of grades 7-8 or 7-9. The overlap in organizational pattern makes such an inference invalid.
In general, no consistent relationship exists between staff utilization practices and types of school districts in Ohio (exception: use of data processing). Summer school activity is almost identifiable with types of school districts; otherwise, district patterns cannot be clearly defined.

Although some aspect of staff utilization practices is found in all of the curriculum areas, some distinct relationships do exist between certain elements of the practices and curriculum areas. These relationships will be pointed out later as each element of staff utilization practices is considered vertically in the study.

Numerous varieties of implementation of these practices are reported by school district superintendents who responded to the questionnaires. Generally, the practices reported locally divide responsibilities among a number of persons to relieve teachers, place additional responsibility on students, provide ways locally to develop special skills in teachers, and limit teacher load and class size.

The nature of evaluation procedures reported to accompany experimentation with practices is informal, conventional, and subjective for the most part. In fact, formal evaluation procedures are practically non-existent among procedures reported in Ohio. Most procedures reported are not designed specifically to evaluate a given practice but rather are those used to evaluate program and staff in general.

---

7See the description, pp. 221-235, of one school district's effort to evaluate MPATI for the teaching of American history.
Analysis of data gathered in twelve selected school districts in Ohio reveals interesting information and understandings relative to staff utilization practices.

Staff utilization practices in the selected school districts were initiated since 1957 (exception: the tape recorder came into use earlier). In fact, most of the practices in the twelve districts were initiated during the years 1960-1962.

Practices were initiated in selected schools to attain "quality" education while utilizing teacher abilities and time effectively and while facing increased enrollments and/or consolidation. Underlying many practices described is the purpose of meeting individual student needs. Several schools have initiated specific practices for experimental purposes to improve instruction and to evaluate at local levels the value and place of the practices.

Reasons given for initiating practices do not include a criterion of grade level; however, certain practices do occur at given grade levels. Selected school district information therefore does not indicate that there is or is not a relationship of extent of practices to grade level. Actually, practices occur at all secondary levels.

Leadership for establishing practices has stemmed most frequently from administration; in several cases, it has come from teachers. Planning has been a cooperative endeavor by administrators and teachers. In one situation, students have been included in the planning.

Communication lines (usually informal) are established for coordinating, understanding, and/or promoting practices except for the
use of certain devices such as tape recorders and language laboratories. Duration of and degree of emphasis on communication vary with the nature of the practice and its relation to those involved with it.

Lack of funds, lack of space, lack of trained staff, other things with higher priority, and lack of time are factors most frequently thought to be inhibiting to experimentation in staff utilization practices by teachers and administrators in the selected school districts.

Except for schedule changes, research and evaluation usually precede planning for staff utilization practices. There are few instances of research and evaluation accompanying practices. Most evaluation procedures are informal, consisting of discussions, observations, and the like.

Many problems identified by staff and students in the initiation and establishment of staff utilization practices are related to matters of adjustment on the part of students and teachers. Other problems relate to scheduling of programs and equipment, lack of training and experience of teachers, lack of funds, "selling" of the value of technological devices, technical and mechanical difficulties with equipment, and evaluating of products resulting from the use of technological devices.

Successes in initiation and establishment of practices identified by staff and students lie in the areas of improvement of instruction, individualized instruction, and teacher improvement.

That many of the practices considered in this study have spread and will continue to spread in Ohio is substantiated by the amount of
activity in many areas well established and by activity in a number of instances quite recently occurring. Education in Ohio is experiencing some change from rigid and conventional educational practices to an attitude of "willingness to try" new practices locally.

Those in positions of leadership in the twelve selected school districts, in general, believe that existing practices will be continued, extended, improved, and expanded as needs are identified, as evaluation suggests, and as finances permit. Many acknowledge that several of the practices have not been tried locally for a long enough period of time to predict directions to be taken.

The remainder of this summary will consider separately the analyses of the elements of staff utilization practices included in this survey.

Team teaching

Ohio questionnaire data indicate that team teaching has developed in Ohio since 1958 with greatest activity demonstrated from 1960-1962. In schools interviewed for this practice, team teaching was initiated since 1960; one school anticipates initiation of team teaching in 1964 in its new building while a county district contemplates involvement with the practice in its long-range educational plans (consolidation is awaited for school size to justify establishment of the practice).

Team teaching has gained much interest among educators in Ohio. Its modest beginning is significant in terms of its short life (less than five years in Ohio) and in terms of the activity shown in some curriculum areas through teachers sometimes teaming with others to
instruct one or more classes. Degree of activity does vary greatly among the many characteristics of team teaching.

Team teaching activity is more marked in high schools than in junior high schools, according to findings from questionnaire data. Information from selected schools does not give evidence sufficient to conclude that there is or is not a relationship of extent of team teaching to grade level. Reasons given for establishing the practice in a given manner were those such as availability of teachers having a "readiness" to become involved or provision for unified learning experiences. Also, none of the schools contemplating team teaching designate any concern for initiation of the practice in terms of grade level. In fact, in the three selected school districts having team teaching and in the two selected districts contemplating the practice, purposes given for initiating team teaching in addition to those above are the following: (1) to provide "quality" instruction, (2) to expose large numbers of students to the talents and skills of several teachers, (3) to provide balance in the curriculum, and (4) to utilize teacher time and ability effectively.

The degree of activity in team teaching in Ohio varies, but characteristics of it are found in all subject areas and on any secondary level of instruction. Greatest activity with team teaching is found in the curriculum areas of English, social studies, science, and physical

---

Footnote 8: The above fact does not give sufficient evidence to infer that team teaching activity is greater at upper secondary grade levels than at lower secondary grade levels because of the overlap in organizational pattern for high schools and junior high schools in Ohio. See footnotes 5 and 6, p. 34.
education and health; moderate activity exists in mathematics and practical arts; and least activity is found in foreign language and fine arts. In only two subject areas, English and science, do team members teach fewer than the usual hours a week—and in those only rarely.

Several Ohio districts where team structure exists designate a team leader, but only one district reports giving extra pay to the team leader.

Common planning time is arranged for team members in nearly all instances of systematic, regularly scheduled team teaching.

No consistent relationship between team teaching practices and types of school districts is discernible, for activity vacillates among types of districts for the various aspects of team teaching.

In selected school districts, leadership for establishing team teaching in two schools comes from administrators, while in the third school leadership originates from a teacher. Planning, however, is done cooperatively by administrators and teachers; one school includes students as well as teachers and the principal in its planning.

Communication lines in the selected schools are established for coordinating, understanding, and promoting team teaching. More avenues of communication are established where students are required to participate than where they may elect to participate.

Administrators and teachers in the selected schools view the following factors as deterring to experimentation with team teaching: lack of space, lack of time, lack of funds, lack of trained staff, other things with higher priority, and lack of staff support.
Research and evaluation preceded plans to establish team teaching in the selected schools; informal evaluation has accompanied the practice as it has been developed.

Staff and students indicate a number of problems encountered in team teaching and falling within the following general areas: lack of sufficient time for teacher preparation, physical aspects of large lecture rooms, reaching agreement on decisions to be made by team members, schedule problems related to broadening of curriculum without lengthening school day, maintaining student interest in and pacing work for large groups, slow acceptance by staff, need for small-group discussion and for limit of class size in large groups, difficulty of note-taking, hesitancy of students to ask questions in large groups, "readiness" of some students to use the approach as an excuse for personal inadequacies, and many resource people unable to speak on student levels.

Observations indicative of measures of success with team teaching are also identified by staff and students (several staff members thought it too early to identify successes): cooperation of team members and learning from observing the teaching of others; good quality of large group presentations (teachers stay "on the subject" and many students prefer the impersonal touch); voluntary community interest; variety of method and correlation of ideas and areas welcomed by students; reinforcement of learning through both large-group and class instruction; development of skills in note-taking and in listening; willingness of resource people to assist; appreciation by students of talents of several teachers and of varieties of resource personnel; and unification of content, knowledge, and understandings.
Leaders in two school districts selected for study expect team teaching to be continued, improved, and extended locally; staff members of another district believe it premature to conjecture about the future of the practice. No selected schools anticipate involvement with small-group discussion or independent study to accompany large-group instruction.

Contemplation of involvement with team teaching, according to questionnaire responses, varies from some activity to very little.

Student grouping for special purposes

Questionnaire data indicate that most of the activity in student grouping for special purposes (large-group instruction, small-group discussion, and independent study) has occurred in the 1950's and 1960's. Selected schools (three are involved) initiated small-group discussion and independent study in 1962. Neither practice accompanied large-group instruction in conjunction with team teaching.

Questionnaire responses indicate that a large per cent of the school districts report activity with student grouping for special purposes at high school level; a much lower per cent report activity with the practice at junior high school level. Evidence from selected

---

9 In this section, the summary of findings pertaining to data collected in selected school districts is limited to small-group discussion and independent study only, since large-group instruction was an integral part (in each case) of team teaching summarized in the previous section.

10 This fact does not imply that activity with student grouping for special purposes is greater at upper secondary grade levels than at lower ones--reasoning is similar to that given in footnote 8, p. 308.
schools does not indicate that extent of either practice is or is not related to grade level. Small-group discussion occurs in grades nine to twelve and independent study occurs at eleventh and twelfth grades. Both small-group discussion and independent study are established to meet individual needs.

In Ohio, activity in student grouping for special purposes ranks second to that of technological devices among the five elements of staff utilization practices. Scheduling of fifty or more students regularly in a class occurs infrequently; however, large-group instruction is established through school assemblies definitely planned to bring information to large groups of students and through two or more conventional classes sometimes combined for purposes of instruction. Small-group discussion is frequently organized as an intra-class grouping arrangement; however, it rarely occurs in separate classes of fifteen or fewer students to accompany large-group instruction as part of a regular pattern. Independent study has also gained "firm footing" inasmuch as learning facilities are available to students for this purpose beyond the regular school hours and inasmuch as students are scheduled for independent study in work areas such as shops, laboratories, and the library rather than just in study halls or classrooms.

Activity in large-group instruction is greatest in English, social studies, science, physical education and health. Activity in small-group discussion is most pronounced in English, social studies, and science. Activity in independent study is fairly uniformly distributed in all curriculum areas. In selected schools, small-group
discuss.ion occurs in regular classes of English, social studies, and science; independent study exists in science.

Contemplation in Ohio of involvement with large-group instruction, small-group discussion, and independent study is relatively small compared to existing practices.

Variation in activity of student grouping practices is not related to given types of school districts, according to findings from questionnaire data.

In selected school districts, leadership for small-group discussion and for independent study comes from teachers. Planning for the practices is carried out cooperatively by teachers and administrators.

Informal communication lines are established through teacher and counselor discussions with students, informative letters, and staff meetings.

Lack of space and the creation of student jealousies and snobbishness are prime factors for inhibiting trial of student grouping for special purposes, as seen by administrators and teachers. Two other factors are also seen by them to deter experimentation with the practice—lack of funds and lack of trained staff.

Research and evaluation preceded planning for student grouping; informal procedures in research and evaluation have accompanied the practice in two of the three selected school districts.

Problems identified by staff and students in selected schools in relation to student grouping for special purposes are as follows: adjustment problems (for teacher and students) related to the unstructured nature of this class organization (small-group discussion and
independent study), lack of breadth of training and experience of
teacher, lack of funds, schedule limitations, pressures of time, and
less interested students' not working to potential capabilities.

Values derived from small-group discussion and independent study,
as identified by staff and students, are the following: development of
individuality and responsibility of student, good preparation for college
learning experiences, development of student poise, provision of highly
motivating learning experiences, maintenance of good teacher-pupil
rapport, relaxed learning atmosphere and flexible schedule, working at
individual rates, and lack of discipline problems to interfere with
learning experiences.

Those in leadership positions feel it is early to predict direc-
tion; however, they are hopeful that extension of the practice or at
least continuation of it will ensue (they would expect changes to
accompany normal instructional improvement).

Teacher aides

Relatively little activity exists in Ohio in the element of
teacher aides as a staff utilization practice. Existing involvement in
Ohio has gained impetus during the 1950's and 1960's. A few schools
reported initiation of the practice as early as the 1930's and 1940's.11
One school district selected for study of teacher aides initiated the
practice in 1960.

11 These schools are probably referring to the use of student
teachers as early as the 1930's and 1940's.
A majority of schools reporting involvement with teacher aides is high schools rather than junior high schools.\(^{12}\) In the school selected for study in depth of teacher aides, their use is permitted at any secondary grade level by English teachers. The use of teacher aides in this school is to relieve teacher load in evaluating student compositions in the English program which includes increased emphasis on writing. Teacher aides are this school's means of improving "quality" while faced with increased "quantity" of work.

Except for rather uniform activity of student teachers in all curriculum areas, there is relatively little activity for other teacher aide functions in any given curriculum area. It is found that teacher aide activity is greatest in the area of English; moderate in science, social studies, physical education and health, mathematics and practical arts; and least active in foreign language and fine arts. In consideration of all curriculum areas, teacher aide functions are most frequently those of library assistants, objective test graders, study hall supervisors, and clerks, in that order. Teacher aide involvement is not identified with any one type of school district. Compensation for teacher aides is found in a wide range, from $.77 to $2.80 an hour; payment of $1.00 to $1.50 an hour is common in Ohio.

There is very little contemplation of use of teacher aides in the Ohio public secondary school districts responding. In the selected school where lay readers are used to evaluate student compositions in

\(^{12}\) It should not be inferred from this fact that activity with teacher aides is more marked at upper rather than lower secondary grade levels--reason is similar to that given in footnote 8, p. 308.
English, it is hoped that teacher aide service can be extended to all
departments, grades seven through twelve. It is conjectured by an
administrator that the teacher aide may eventually assist the teacher in
or outside the classroom, depending upon individual qualifications of
the aide.

In this school, leadership for securing aides for the English
department comes from the superintendent; planning is done cooper­
atively by administrators and teachers.

Continual communication takes place between teacher and teacher
aide to assure common understandings and purposes.

Teachers and administrators in the selected school districts view
the following as inhibiting factors to experimentation: lack of funds,
other things with higher priority, lack of board of education support,
insufficient substantiating research, and lack of trained staff.

In the school district using teacher aides in the English program,
research and evaluation preceded planning for their use through the
review of current literature; evaluation accompanying the practice has
been informal and limited to teacher-administrator discussions.

Problems identified in this school are few; reaching of mutual
understandings by teacher and teacher aide and reluctance of some staff
members to accept the practice.

A number of values and successes pointed out by staff and
students follow. The teacher aide learns from the teacher she assists.
There is good teacher aide-student and teacher aide-teacher rapport.
Growth is evident in the writing performance of individual students.
The teacher aide has time available to write detailed criticisms and
explanations regarding student writing. The amount of writing required is based on student needs rather than on the amount of time the teacher has available to evaluate what is written.

Schedule changes

With the exception of summer school activity which is well established for instruction in the academic areas and fairly well established in non-academic areas, complacency nearly prevails in the element of schedule changes. Little interest is shown in flexible scheduling; there is some concern for adjusting the regular schedule on any given day to meet the needs of an individual student.

Most schedule change activity in Ohio has occurred in the 1950's and 1960's. Eight city school districts report activity prior to 1950. In the three schools selected for further study relative to schedule changes, schedule changes have occurred since 1960. Of the three instances of schedule changes, summer school was initiated the earliest; each of the remaining two situations was begun in 1962.

Existing activity with schedule changes was much more marked in high schools than in junior high schools. In each of the three selected districts where schedule changes were considered, the practice applies to the needs of students at any grade level.

Changing of the regular schedule to meet the needs of individual students in Ohio is fairly active and is consistent for all curriculum

---

13 It does not follow that activity with schedule changes is more marked in upper than in lower secondary grade levels--see similar reasoning, footnote 8, p. 308.
areas. Summer school instruction shows marked activity; activity in it is greatest in English, mathematics, social studies, and science. Least activity is evidenced in physical education and health. Flexible scheduling such as longer than normal periods, extra periods for large-group instruction, and modules of time occurs quite rarely among districts responding.

No wide difference in degree of activity among types of school districts is evidenced except for summer school activity where city districts are most active, county districts are moderately active, and exempted village districts are least active.

Of the five elements of staff utilization practices chosen for this study, schedule changes are least active.

In selected schools, leadership for schedule changes comes from the administration; planning also is done by the administration with some informal discussions with staff.

Communication lines are established in each selected school situation; however, duration of emphasis on communication varies with the situation. To explain: Greatest emphasis on communication existed in the promotion of the summer school program; of briefer duration was emphasis on communication relative to trial of varied lengths of periods during the school day. Changes for individual needs involved least emphasis on communication.

Administrators and teachers in selected school districts reached general agreement on four factors which they believe are inhibiting to experimentation: lack of space, lack of time, creates student jealousies and snobbishness, and other things with higher priority. Two
observations are of interest in considering the agreed-upon inhibiting factors mentioned: (1) Administrators ranked state minimum standards and accrediting association standards before any of the agreed-upon inhibiting factors. (2) Fewer factors were checked by teachers under the element of schedule changes than were checked under the four other elements of staff utilization practices.\textsuperscript{14}

In the three districts selected for study of schedule changes, very little research and evaluation preceded planning for the practice; research has consisted of a review of related periodical literature and some school visitations. Formal evaluation is to accompany the experiment with varied lengths of class periods described previously in this chapter; otherwise, evaluation procedures accompanying the development of the practice have been informal.

A variety of problems are mentioned by staff and students in the selected schools relative to schedule changes: (1) increased teacher preparation, (2) pacing of work (same content) in varied lengths of periods, (3) psychological problems for students who feel they do not have equal opportunities, (4) difficulty of scheduling of teacher-teacher and teacher-student conferences within short periods, (5) restriction of teaching techniques in short periods, (6) student adjustment to varied lengths of periods, (7) difficulty of makeup work for large blocks of time, (8) lengths of class periods, and (9) lack of class discussion.

\textsuperscript{14}It is probable that teachers either recognized schedule changes as an administrative problem or were unaware of inhibiting factors in this area.
Successes (with schedule change experiences) pointed out by staff and students in the selected schools are the following: (1) a lengthened school day to accommodate the election of additional courses or study halls, (2) reduction of number of supervisory duties of teacher, (3) less confusion during closed lunch hour, (4) improvement in drop-out picture, (5) study in depth allowed through blocks of time, (6) preparation for college, (7) early graduation made possible, (8) student academic load lightened if desired, and (9) avoidance of monotony through varied lengths of periods.

Those in leadership in the three school districts involved with schedule changes indicate that these changes will be continued in schools now involved. Further, in one school, direction of the practice will depend upon evaluation findings and State of Ohio Department of Education reactions. It is believed that summer school offerings will be extended.

Ohio questionnaire data indicate that very slight involvement with schedule changes is contemplated. The very limited contemplation of summer school activity compared to existing activity is significant.

Technological devices

Of the activity reported on Ohio questionnaires relative to staff utilization practices, activity is most pronounced in the element of technological devices.

Most involvement with technological devices has spread during the late 1950's and early 1960's. Three city districts reported some involvement as early as 1940. In the nine districts selected for further
study of this element of staff utilization practices, the majority of
the devices was initiated since 1957 (exceptions: use of the tape
recorder began in 1946 and an audio-visual student training program
began in 1952).

In Ohio, activity with technological devices is evidenced more
frequently in high schools than in junior high schools. In selected
schools, no effort is made to limit use of technological devices to
given grade levels. The purposes stated in selected schools for initiation
of the use of technological devices are namely: (1) to relieve
staff of clerical duties, (2) to individualize instruction, (3) to
improve instruction and to utilize teaching time better, (4) to experi-
ment to discover the "role" of the technological device in education,
(5) to help individuals improve listening and speaking skills, (6) to
meet individual needs, and (7) to evaluate their use.

Most of the activity with technological devices is in the
academic areas: greatest activity is in English and foreign language;
activity is moderate in social studies, science, and mathematics; least
activity is found in fine arts, practical arts, and physical education
and health.

Activity with the tape recorder in Ohio far surpasses that with
other technological devices. Other technological devices firmly estab-
lished are reading accelerator machines, overhead projectors, "airborne"

---

\footnote{This fact does not imply that activity with technological
devices is more marked in upper than in lower secondary grade levels
because of organizational patterns for high schools and junior high
schools in Ohio. See footnotes 5 and 6, p. 34.}
television, data processing equipment, educational television, and
teaching machines and programmed learning. Electronically equipped
laboratories have made their mark in foreign language only. Use of
closed circuit TV is least marked, yet contemplated use of it is higher
than existing use of it. The use of data processing equipment is
uniform for all curriculum areas.

Except for practices involving use of data processing equipment,
contemplated activity with technological devices is more marked in the
academic than in the non-academic areas. Also, contemplated activity
with them is much less than existing activity with them.

There is no significant relationship between types of school
districts and the use of technological devices.

In selected school districts, leadership for establishing use
of technological devices comes from the administration. Planning is
done cooperatively by the administration and teachers with teachers
assuming responsible roles.

Communication lines in the selected districts for coordinating,
understanding, or promoting the use of technological devices are usually
informal when established. In several instances, no effort was made to
establish communication lines; in still others, modest or limited efforts
were made. Lines may be established through teachers and their classes,
staff meetings, central office media, student conferences, letters to
parents, P.T.A. groups, and teacher workshops.

Factors believed by staff and administrators to inhibit experi­
mentation with technological devices are lack of funds and insufficient
substantiating research. Factors somewhat agreed upon are lack of space,
lack of time, and other things with higher priority. Administrators ranked lack of trained staff as highly inhibiting whereas teachers did not recognize it as a factor at all.

In about 80 per cent of the selected situations studied, research and evaluation preceded planning for use of technological devices. Nearly 65 per cent of the cases observed have had evaluation of an informal nature accompanying planning for the innovations.

Problems related to the use of technological devices and pointed out by staff and students are the following: (1) lack of finance, materials, equipment, time, teachers' personal touch, and local administrators' perspective of needs; (2) "selling" a program designed for use of a number of the devices; (3) scheduling programs and equipment; (4) technical and mechanical problems; (5) correlation of content and pacing of work; (6) added secretarial work load; (7) adequate utilization and adjustment to methods (by teachers and students); (8) errors duplicated by data processing; and (9) difficulty in evaluating products.

Values of and successes with the devices are many and varied, as indicated by staff and students: (1) instructional and individual improvement evidenced by results of standardized tests, by improved speed and comprehension in reading, by improved habits of study, by degree of student motivation, by willingness of teachers to try devices, and by increased breadth of learning experiences; (2) opportunities for teachers to learn from other teachers; (3) freeing of classroom teacher to work with individual students; (4) increased and maximum utilization of equipment; (5) saving of teacher time; (6) lightening of teacher load by minimizing duplication; (7) providing a wealth of student information
in a short time; (8) accuracy and efficiency; (9) increased circulation of library materials; (10) improved student control through motivation; and (11) mutual (teacher and student) cognizance of purposes or aims which aid students and teachers to remain "on the subject."

Continuation of the use of technological devices in the selected districts is probable. In fact, their use will probably be extended and improved.

Other procedures

That Ohio administrators are searching for effective ways of improving instruction is evidenced by the varied procedures tried at local levels to use professional competencies, time, talents, and energies of staff to best advantage. Such local efforts lie in a number of categories: (1) reduction of teacher load through relief from supervision of extra duties, through relief from clerical duties, through released time for special duties, through limiting of class size, and through reduction of pupil loads; (2) extension of the school week to include Saturday seminars and of the school year for teacher employment; (3) establishment of in-service programs to improve teaching techniques and to share responsibility in curriculum planning and development of curriculum materials; and (4) division of responsibility among teachers and administrators for supervision of instruction.

Evaluation procedures

Except for few instances, evaluation procedures described by superintendents are informal and are used to evaluate program and staff
generally rather than to evaluate specific aspects of the instructional program such as staff utilization practices.

Superintendents responding to Ohio questionnaires indicate concern about needs for formal and specific evaluation of these practices; however, various reasons are given for continuing in the conventional manner—for example, lack of establishment of criteria; lack of "know how" relative to evaluation; lack of instruments developed for measuring; lack of time, space, and money.

Two Surveys Compared

It is revealed in both surveys that interest in the staff utilization practices has been growing (growth in team teaching activity in Ohio has followed that in the six other states by approximately two years). There is more agreement than disagreement among items surveyed in the two studies. In general, Ohio activity with these practices falls short of that reported in the six-state survey, except in the element of technological devices in which activity with several practices are more marked in Ohio. Considerable complacency among inactive groups is evident in both surveys, for contemplated activity is much less than existing activity in a number of the practices.

The preceding summary has been an attempt to fulfill an over-all purpose of this study—to indicate focus, locus, and direction of change in staff utilization practices in Ohio public secondary schools.

---

16 A comprehensive summary of this section is found on pp. 85-88.
Conclusions

That there is much interest in staff utilization practices in Ohio is supported by a number of facts: (1) the 57.3 per cent questionnaire response from one mailing, (2) eager initial acceptance of selected schools to participate in further study, and (3) the activity with practices existing and contemplated in all types of school districts geographically scattered throughout the state.

Although the interest and the enthusiasm exhibited by many educators in Ohio for trying new or different ways of doing things are a sign of change in educational attitudes, Ohio educators are sorely in need of assistance with and encouragement in formal evaluation of staff utilization practices under study. That change is occurring is evident; however, specific and formal evaluation has not occurred simultaneously to determine values of practices or directions to be pursued. Throughout each phase of this survey, the need for evaluation of practices is evident from questionnaire responses and from data acquired in selected school districts. The need is not the result of indifference to the problem, for concern was expressed relative to the problem in returned questionnaires by administrators. The fact that 53 per cent of those responding to questionnaire items wrote comments in regard to evaluation procedures and the fact that several superintendents requested any information that might be gleaned from contacts made through this survey are indicative of their interest and concern. Superintendents gave the following reasons for continuing in the conventional manner with informal, program and staff evaluation: lack of "know how" relative to
formal and specific evaluation; lack of establishment of criteria; lack of instruments developed for measuring; and lack of time, space, and money.

Lack of evaluation of staff utilization practices in Ohio may account in part for low contemplation of practices by those of the inactive group. Direction relative to practices cannot be anticipated by administrators with any degree of certainty in the absence of sound or specific evaluation procedures or of knowledge of research.17

The spread of varieties of practices is evident in Ohio; this fact is supported by the concentration of activity with many of the practices in the late 1950's and early 1960's. This spread is indicative of the long-recognized educational principle that "there is not one way or means to an end or a goal in education." As an illustration, the use of educational television or the language laboratory may be used to accomplish similar goals in the teaching of language—the first makes use of the group technique for language instruction and responses, whereas the second makes use of the individualized instruction technique. Experimentation with and evaluation of these practices can disclose values of each practice and the respective effectiveness in instruction of each.

As implied in the preceding paragraph, the intent of evaluation of the many staff utilization practices is to determine under different

17 Administrators and teachers identified insufficient substantiating research as one of the four most frequently mentioned inhibiting factors to experimentation in two out of the five elements of staff utilization practices selected for this survey.
conditions their worth or value as it relates to assisting the teacher
to enhance the learning experiences of students.

As indicated by findings in selected schools, quite varied
factors have influenced the relatively recent activity with and initia-
tion of (spread of) a number of the staff utilization practices—namely,
reports in the current literature (for example, N.A.S.S.P. Bulletin and
other periodicals); the National Defense Education Act; recent criticisms

18 It is recognized that conclusions drawn from data collected in
selected schools should be viewed with some caution in reference to
validity because of the limited numbers of cases from which such infer-
ences can be made. Care has been exercised by the writer in making
conclusions of this type; however, where the same factors or conditions
relative to these practices repeatedly appear in different school dis-
tricts or environments, conclusions drawn from selected situations are
believed to be in order. Further substantiation of this position follows:
Selected school districts are a representative sample in which districts
were selected in such a manner that characteristics of the sample are
similar in important respect to the characteristics of the universe.
(See p. 20.) "This process of matching the sample to the universe per-
mits greater validity of inference from the sample to the universe and
from the sample to other variables than when the sample has been selected
at random."

An effort not to introduce bias into interview responses was made
when opinions were sought through interviews of teachers during their
free periods and of students from study halls. Teachers and students
interviewed were not selected by the interviewer, as a further step to
avoid the bias in the sample that interviewers tend to select inter-
viewees who are rather like themselves. Sometimes circumstances beyond
the control of the investigator may cause the sample to be biased. As a
precaution, where this could be anticipated as a possibility by the
investigator, the interviewer requested of those teachers or administra-
tors selecting individuals to be interviewed that (1) individuals be
familiar with the practice, (2) a balance of both sexes be provided if
possible, and (3) in the case of students, a balance of all grade levels
involved with the practice be represented. It is recognized that the
preceding measures do not guarantee the absence of bias from the sample;
however, the interviewer (and writer) is convinced that biases were at
least varied if present because of the variety and diversity of opinions
received.

*Travis, op. cit., p. 253.
at national level which have had impact on the thinking of local admin-
istrators, boards of education, and interested citizens; development of
teacher interest in practices through experiences and dissemination of
project information provided in teacher-training institutions at graduate
level, in national and regional conferences, and in local workshops;
administrative and teacher leadership; and regional emphasis on
"airborne" television. It is impossible to know the weight that these
or other factors\(^{19}\) may have exerted in spurring interest in and ultimately
the spread of staff utilization practices.

At the same time that spread of staff utilization practices
occurred in Ohio, there existed many factors which tend to inhibit
experimentation with practices or which at least support convention,
convenience, security, or complacency among educational leaders. Again,
the degree of influence of the various factors on leaders to deter or
eradicate or contemplate the possibility of establishment of these
practices is unknown. It has already been pointed out that lack of
evaluation or evaluation procedures may account in part for the low
contemplation of practices by administrators. In selected school dis-
tricts contemplating involvement with staff utilization practices, the
following reasons were given for delay in involvement: (1) Some com-
munities and boards of education cling to the status quo. (2) Adequate
class size and adequate finances to become involved have now been

\(^{19}\) Another contending factor which possibly has influenced interest
in these practices is affiliation with or membership in N.A.S.S.P. by
institutions (schools), superintendents, principals, and teachers. It
is fact that 66 out of 176 superintendents responding to questionnaires
in the Ohio survey are members of N.A.S.S.P.
realized through consolidation; however, additional time is needed to develop district attitudes receptive to involvement (attitudinal change is slow in districts comprised of varied interests as a result of consolidation). 20 (3) Finances are inadequate for involvement. (4) Facilities are not sufficient for involvement. (5) School size is too small. Lack of finance was given as reason for contemplation of specific practices in five selected schools. In all twelve selected school districts, the following factors were considered by administrators and teachers as inhibiting to experimentation: (1) lack of funds, (2) lack of space, (3) lack of trained staff, (4) other things with higher priority, and (5) lack of time.

It is safe to conclude that local circumstances influence involvement with practices no matter how strong the pressures at other levels. Reasons for the status of practices locally are peculiar to local situations.

Once practices are tried, human relations are basic to many of the problems and successes encountered with many of the practices. The degree of ability to adjust on the part of staff and students is of primary importance in solving problems and in realizing successes with practices. Adjustment to flexibility of people and of schedules, to less structured situations than the conventional, and to procedures and devices—adjustment to all or to some of the items mentioned is necessary whenever any of the staff utilization practices are tried. For example, the following responses are illustrative of staff and student adjustment

20 Attitudes of consolidated districts are also influenced by the manner in which consolidation takes place.
problems in each of the elements of staff utilization practices described in selected schools: (1) team teaching—Reaching agreement among team members on what ought to be done is most difficult (p. 106). (2) student grouping for special purposes—It is frustrating not to succeed; procedures in this approach to science learning do not guarantee successes as is usually the case in doing laboratory work in conventional courses in which laboratory manuals are provided (p. 137). (3) teacher aides—Communication between teacher and teacher aide can be a hurdle, for mutual understanding by each of goals and expectations is necessary if the teacher aide's work is to be effective (p. 146). (4) schedule changes—Different lengths of periods are a psychological problem to some students, for many feel it is unfair for some students to have fifty-five minutes of instruction while others may have only forty with the same teacher in the same course (p. 168). (5) technological devices—The overhead projector is not always available for use when it is needed (p. 159). Responses also illustrate staff and student adjustment required in experiencing successes: (1) team teaching—There is great value to the team teacher in always being present in the classroom, for each team member learns much in the content of related fields and in techniques of presentation from other members of the team (p. 129). (2) student grouping for special purposes—The student learns responsibility for good study habits, for example, the technique of taking notes (p. 123). (3) teacher aides—The teacher does not have to limit the amount of student writing done in terms of the amount of time she has for evaluation of writing (p. 147). (4) schedule changes—More is accomplished in short periods because the teacher and the students get
to the "business of the day" more quickly, knowing that their time is limited, than if they felt no limit on time (pp. 168-169). (5) technological devices--The television teacher does not repeat; consequently, the student learns to listen carefully (p. 233).

To say that the ability to adjust on the part of those involved is of primary importance in solving problems and realizing successes with practices is not to imply that those involved (staff and students) are at the mercy of innovations and "gadgets." It is expected that evaluation procedures will accompany the innovations and "gadgets" as human relations come into play such that innovations and "gadgets" are made to function effectively by administrators and teachers in order to fulfill a purpose--to enhance the learning experiences of students. Innovations and "gadgets" must be functional for teacher and student; ultimately, the functional practices will assist in realizing improved instruction in the educational program in the wake of increasing school enrollments.

To illustrate the preceding relationship with an abstract explanation, apply qualities of adjustment, flexibility, sincere interest, and cooperation of those involved (human relations) to planning and doing (educational practices)\(^2\) accompanied by ongoing evaluation--the interaction of these educational ingredients over a period of time is a basis for effective educational change or educational change with direction. Deficiencies in characteristics or delays in aspects of any one of these educational ingredients can deter or delay effective educational change.

\(^2\)It is understood that educational practices (planning and doing) are carried on by individuals who have sufficient training and background to give educational leadership to practices.
which in turn may hinder educational progress. This study has uncovered some deficiencies through opinions of administrators and teachers in selected school districts in Ohio, namely, lack of funds, lack of space, lack of trained staff, other things with higher priority, and lack of time. Further, factors\textsuperscript{22} which underly delay of involvement with staff utilization practices were disclosed in selected school districts contemplating some of the practices.

Educational ingredients of time and ongoing evaluation indicate that educational change cannot be dependent solely on normative studies for evaluation and research. Longitudinal studies as well are needed. To support the need for longitudinal studies, attention is called to changes of attitudes and opinions of students involved with "airborne" television\textsuperscript{23} taken at intervals of two months, eight months, and thirteen months after initiation of the practice.

Ohio questionnaire data and that of selected schools involved with team teaching and student grouping for special purposes indicate that there is considerable interest in the concept of these practices, but only in that part of each which will fit in rather comfortably with conventional schedules and practices. To support this generalization, questionnaire data give evidence that activity with the practice, teachers sometimes team with others to instruct one or more classes, has gained sufficient ground in Ohio to show that tentative steps in team teaching have been established; yet a quite noticeable drop in activity

\textsuperscript{22}See pp. 329-330.

occurs with the practice of a systematic arrangement whereby teams of
teachers and/or aides teach large groups of students. Further, where
team structure does exist, few school districts designate team leaders,
only one district provides additional pay for team leaders, and rarely
do team members teach fewer than the usual hours a week. In districts
where more than one teaching team exists, appointment of coordinators
of teams is somewhat more readily recognized in Ohio than is extra pay
for team leaders. Common planning time for team members is recognized
to the same degree that systematic, regularly scheduled team teaching
is recognized in Ohio. On the other hand, whereas a considerable number
of districts bring together in school assemblies large groups of students
for informative purposes—and sometimes for class instruction, few
districts regularly schedule classes of fifty or more as part of the
instructional program, and still fewer districts have separate classes
of fifteen or fewer for small-group discussion to accompany large-group
instruction as part of a regular pattern. At the same time, however,
there seems to be little hesitancy for the practices of organization of
groups of fifteen or fewer students within regular classes for purposes
of discussion and exchange of ideas or of scheduling students for
independent study in specific areas of work during the school day or
after regular school hours.

The preceding relationships imply that rigid scheduling is one
obstacle to further involvement. As long as adjustments in scheduling
can be made temporarily for large numbers of people or permanently for a
few people, changes are made and ideas are tried; for example, common
planning time for a few teachers can be arranged in the schedule, or
industrial students can be scheduled for independent study, or some flexibility can exist within regular classes which does not alter the master schedule since the teacher takes care of intra-class grouping. To veer from the conventional scheduling of equal class periods or blocks of time (multiples of the class period interval of time), in order to provide a flexible arrangement of master schedule which in turn would accommodate more activity in team teaching and student grouping for special purposes, involves a multitude of facets of a larger educational problem to be overcome simultaneously.

Data from selected school districts in Ohio support many of the preceding relationships found from questionnaire data. Large-group instruction was found without small-group discussion, and in no case did time for large classes vary from regular lengths of class periods. In one school, team leaders received extra compensation for that responsibility. In one school, a coordinator of teams was designated. In two of the selected schools, team leaders were designated by the administration and recognized as such by other members of the teams. In one school, team members taught one less class period a day than other teachers. Although common planning time for team instruction was recognized in each of the selected schools involved with team teaching, the length of time for common planning designated officially varied from fifteen minutes to one hour. Independent study for students scheduled in special work areas (science laboratory, library, and shop) during the school day occurred in two of the selected districts in the curriculum

24 This period was designated as the planning period for team instruction.
area of science. It is readily discernible from preceding facts that pattern relationships existing in the composite of selected schools in regard to team teaching and student grouping for special purposes are similar to pattern relationships emerging from questionnaire data of all school districts reporting.

To substantiate further the generalization made earlier that there is reluctance to tamper with conventional scheduling as related to team teaching and student grouping for special purposes, consideration will be given to schedule changes in general. Questionnaire data reveal that the element of schedule changes is the least active of the five elements of staff utilization practices studied in Ohio. In fact, except for considerable activity (permissible) with the lengthened school year (summer school), conventional scheduling is predominant in Ohio public secondary schools. Practices such as (1) classes scheduled for longer than normal periods but for fewer times a week, (2) creation of extra periods for specialized large-group instruction, and (3) division of the school day into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules) occur very rarely in Ohio. There is only slightly greater activity with changing the regular schedule for an individual student on any given day. Schedule changes found in selected schools support preceding conclusions—one school is experimenting with two lengths of class periods and another has made individual schedule changes to avoid conflict of scheduling of courses and to enable participation in an advanced placement course sponsored jointly by a university and by "airborne" television.

Teaching aide activity, too, is low in Ohio except for involvement with student teachers from teacher-training programs. Low acceptance of or low activity with teacher aides cannot be due to
teachers' being unwilling to delegate to or share with non-certificated personnel some of these responsibilities, for in selected school districts students are being used to perform responsibilities or functions such as those designated for clerks in team teaching; for example, student operation and maintenance crews of audio-visual equipment, student assistants managing the language laboratory during periods when language teachers are not instructing classes in the laboratory, and typing and preparation of transparencies by students.\textsuperscript{25} One of the twelve selected school districts makes use of teacher aides as lay readers of English composition.\textsuperscript{26} Although conclusive evidence is not available to make generalizations as to why teacher aides are rarely used in Ohio, the four most frequently mentioned inhibiting factors to experimentation with teacher aides listed by administrators and teachers in the twelve selected school districts are not inconsistent with findings available. These factors are as follows: lack of funds, other things with higher priority, lack of board of education support, and insufficient substantiating research. Problems encountered with the practice in one of the selected schools were communication between teacher and teacher aide and resistance of some staff members to accept or support the practice. It is possible that lack of funds appropriated for the practice may be due to lack of staff acceptance and board of

\textsuperscript{25} Descriptions of these practices are included in pp. 198-203, pp. 109-110, pp. 100-101, respectively.

\textsuperscript{26} See description of practice, pp. 144-148; the practice in this school is not carried out in conjunction with team teaching.
education support. In turn, it is possible that lack of support from the staff and the board of education may be due to lack of sufficient substantiating research (evaluation needs emerge again) or to concerns for other things with higher priority. The problem of communication between teacher and teacher aide relates to the area of human relations discussed previously.

Technological devices reign highest in activity among the five elements of staff utilization practices considered in this study. Of the five elements of staff utilization practices considered in selected school districts, activity with technological devices is most common. Technological devices as considered herein embrace a wide variety of contrivances the purpose of which is to enhance learning experiences of students and/or to assist the administration and staff to provide quality education for all youth. The purpose of this study is to determine the nature of existing and contemplated devices; there is no intent to determine the effectiveness of the devices. Findings of questionnaire data indicate that tape recorders are most prevalent; language laboratories, overhead projectors, "airborne" telecasts, and reading accelerator machines are next in order of prevalence. Educational TV programs and data processing equipment are well established also. Least activity is found with closed circuit TV.

In referring to inhibiting factors to experimentation in this element of the practices, administrators and teachers of the selected school districts agreed upon the following: (1) lack of funds, (2) insufficient substantiating research, (3) lack of space, and (4) lack of time.
Lack of funds could quite logically account in part for the ordering of activity among several of the technological devices. Reasons for this generalization are as follows: Tape recorders and reading accelerator machines are probably the least expensive of the devices considered in terms of cost for each student who may benefit. The installation for "airborne" telecasts serves a wide geographical area (Midwest Region) so that per-pupil cost is quite low. Overhead projectors and language laboratories can be purchased through federal subsidies on a matching-of-funds basis; neither is inexpensive but many local schools may be psychologically influenced to participate in order to get local installations at approximately half cost. Also, language teachers and their students (data from selected school districts) value the assistance of the laboratory in language instruction; once mechanical difficulties are overcome, few problems are encountered. Educational TV programs (not including "airborne"), data processing equipment, and closed circuit TV installations are quite costly. McBee Keysort procedures are a fair substitute for automation in data processing; Keysort is not so versatile but is comparatively inexpensive. Commercial concerns do make rental time available for data processing equipment and some school districts are now considering the sharing of minimum installations to minimize cost.

In fact, it is quite likely that lack of funds is an influencing factor on the ordering of activity among the five elements of existing staff utilization practices in Ohio. Reasoning is as follows: (1) Lack of funds is recognized as foremost among inhibiting factors to
experimentation with staff utilization practices (exception: the element of schedule changes). (2) Lack of finance is recognized by staff as a problem in the elements of student grouping for special purposes and technological devices; it is implied but not stated directly as a problem in the elements of team teaching and schedule changes. (3) Lack of money is referred to by administrators of selected schools as a factor causing delay in becoming involved with staff utilization practices (contemplation of practices). As has been discussed in relation to activity within the element of technological devices, financing of several of the technological devices has been eased through federal subsidies or through cooperative plans for their utilization. No such large-scale or local endeavors have emerged in Ohio to assist in the financing of any of the four other elements of staff utilization practices under study. As a consequence in part, then, of the preceding financial relationships, activity with technological devices is greatest among the elements of staff utilization practices.

As problems and needs and successes are reviewed among the staff utilization practices, further relationships or patterns emerge which logically support the abstract explanation given earlier for bringing about effective educational change. The case has been made for the need for formal and specific evaluation of staff utilization practices. Successes with many of the practices imply good staff relations, good rapport—good staff and student adjustment to learning situations.  

---

27 See pp. 332-333.  
28 Consider human relations in practices.
Problems encountered such as (1) more time is needed for planning, (2) there is need for small-group discussion, (3) additional equipment is needed, (4) "selling" a program is difficult, and (5) rigid scheduling hampers flexibility in program—all imply the need for financial appropriations to provide space, equipment, and qualified personnel to meet such needs. Still other problems such as making effective presentations to large groups, hesitating to ask questions in large groups, experiencing frustrations with note-taking in large-group instruction or in telecasts, and pacing of work—all imply the need for trained staff and the need for staff and students to be able to adjust.

Although this survey is not intended to deal with finance, it would seem that finance underlies a number of concerns herein. There is no doubt that evaluation needs as described will require additional finances. It is quite likely that lack of evaluation procedures in Ohio may be due to lack of funds for this purpose and to lack of trained personnel to give leadership for evaluation.

Perhaps leadership from and dissemination of information by the Commission on Staff Utilization Practices and financial support from the Ford Foundation and the Fund for the Advancement of Education for some projects in the six states account in part for activity with staff utilization practices in the six states surveyed leading that in Ohio (exception: element of technological devices) even though the six-state

29 It is recognized that money does not cure all ills in education and that there may be a tendency for some educators to use the excuse of lack of funds as a crutch for self-satisfaction, personal inadequacies, or complacency—the status quo may provide security to some individuals.
survey was conducted one and one-half years before the Ohio survey. Yet the lapse of time (one and one-half years) between surveys, accompanied by the financial incentives described for some technological devices, may account in part for activity with technological devices in Ohio being more marked than that in the six other states. The generalization would seem justified that where money has been available in Ohio, activity with practices in Ohio has kept pace with those of the six states.

It has been attempted in the preceding discourse to draw conclusions by substantiating them with findings, relationships, and data from the Ohio questionnaire survey, from selected school districts visited, and from the report of the six-state survey.

Recommendations

Since this study is not evaluative or exhaustive and since the purpose of the survey is simply to discover the nature of what exists or is contemplated with respect to staff utilization practices, there are a number of needs unfulfilled at its conclusion.

Now that there is this record of the nature of staff utilization practices existing and contemplated in Ohio public secondary schools, further studies are needed. The following studies are suggested.

1. A study of the value of staff utilization practices by elements.

2. A study of the relationship of large-group instruction to ability grouping and vice versa.

---

30 Projects were not financed in Ohio.
3. A longitudinal control study of the relationship of staff utilization practices to growth in learning.

4. A study of the respective roles of staff and students involved with staff utilization practices.

5. A study of dissemination of information at state and local levels relative to staff utilization practices.

6. A study of staff relations involved in teacher teams--teaching effectiveness as it relates to personnel problems.

7. A comparative control study of the effectiveness of large-group instruction accompanied by small-group discussion and independent study, large-group instruction accompanied by regular classroom sessions, small-group instruction, and conventional classroom instruction.

8. A study of professional growth of teachers in team instruction and in conventional instruction.

9. A study of the relationship of expenditures for staff utilization practices to educational growth of students.

10. A study of the relationship of student motivation and interest to the use of staff utilization practices--specifically, technological devices, schedule changes, teacher aides, student grouping for special purposes, and team teaching.
As has been inferred by conclusions drawn in this study, a number
of recommendations\footnote{It is recognized that there are needs at local levels in areas
other than those of staff utilization practices; however, these recom-
mendations are limited to staff utilization practices since the study is
limited to them. The State Department of Education would have the
responsibility of assessing needs in all areas and maintaining balance
of assistance to needs.} are in order.

1. Evaluation of staff utilization practices should be made at
state and at local levels.

2. Assistance with leadership in evaluation through in-service
programs should be given by the State Department of Education, state
teacher-training universities, private teacher-training universities,
and local administrators.

3. Teacher-training institutions should prepare teachers for
evaluation by developing in them skills and "know how" relative to
evaluation practices.

4. Efforts should be made cooperatively by university consultants
and teachers to develop instruments and techniques for evaluating staff
utilization practices.

5. The State Legislature should appropriate money to the State
Department of Education to be disbursed to classroom teachers and to
administrators (who exhibit educational leadership qualities) in the form
of fee or tuition grants for approved graduate courses in evaluation
techniques.

6. Research consultants for practices should be available from
the State Department of Education and from state universities for local
consultation or for local workshops relative to staff utilization
practices.
7. The State Department of Education should be the center for disseminating knowledge of staff utilization practices (for example, knowledge relative to research and evaluation of the practices) to local school districts and to other state departments of education through special bulletins and/or professional organization publications.

8. Partial grants based on need should be available to teacher-training institutions from the State Department of Education for control studies of staff utilization practices.

A Final Word to Those Contemplating Involvement

This study has been conducted during a time of concern for quality education in the wake of continuing increased enrollments and an inadequate supply of certificated teachers. It is assumed that each school situation is unique relative to its local needs, but that there is a common thread of philosophical belief running through educational goals of individual schools—namely, a belief that individual differences exist among students; a belief that there are individual differences among teachers; a belief that learning is individual; a belief that learning consists of the consideration of facts, inquiry, and creativity; a belief that small-group learning is important because many of our civic decisions are determined by small groups of people; a belief that flexibility is necessary to provide variety in learning experiences; and a belief that making administrative arrangements such as providing plenty of money, facilities, and certificated staff will not guarantee quality education.

As a local school may anticipate involvement with staff utilization practices, sight of the total curriculum must not be obscured.
Continued attention must be given to selection of content and experiences, readiness for and motivation of learning, applications of problem-solving techniques, creativity, and evaluation of products. Goals and purposes should be clarified and mutually understood, appraised, and evaluated. Enthusiasm for and interest in innovations should be maintained realistically and practically; care should be exercised against being carried away by the "halo" effect of a practice or an experiment. Appraisal should be carefully designed so that reports of improvement can be carefully documented. Keeping up-to-date and informed about the nature of learning is important. Care should be exercised not to confuse means with ends: Subjects, tools, methods, materials, and techniques are means to an end (goal)—improvement of instruction.

An administrator must be able to give strong educational leadership to the preceding steps with staff. To do so he must bear in mind that the major goal is improvement of instruction; the technique, the method, and the like are but the means. With improvement of instruction his central theme, he must be able to provide his teachers with adequate preparation time, facilities, and materials while conducting a public relations program based upon informing parents what is being done, why it is being done, and enlisting their assistance—all this to realize success in the instructional program. Each secondary school and each member of its staff should assume their respective responsibility for improved education.
APPENDIX A

Sample of Questionnaire Mailed to City School District Superintendents (pp. 348-353)

Sample of Questionnaire Mailed to County School District Superintendents (pp. 354-359)

Sample of Questionnaire Mailed to Exempted Village School District Superintendents (pp. 360-365)

(Inserted in Envelope Attached to Back Binding)
To Ohio Public School Superintendents:

A survey is being conducted in Ohio to supplement work done by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals. We are soliciting your support in our effort to add the information from Ohio to that of the six states already surveyed. We have been assured that the Association is interested in publishing the results of this survey in The Bulletin of the National Association of Secondary-School Principals.

The purpose of the enclosed questionnaire is to determine staff utilization practices now existing in public secondary schools of Ohio. It is not intended that this study be evaluative. It is recognized that the five elements of staff utilization practices being surveyed are not exhaustive but rather are only representative of ways to utilize staff most effectively; therefore, you are encouraged to describe other ways you have developed than those arbitrarily chosen for purposes of this study. Your return of the questionnaire is valuable no matter to what degree your school district is involved in these practices. Please identify yourself and your school district.

Please fill out the questionnaire and return it in the enclosed stamped envelope before July 15, 1962. We would appreciate the return of any questionnaires not completed by that date also.

Thank you for your cooperation and interest.

Sincerely,

LORELLA A. MCKINNEY, INSTRUCTOR
DR. C. B. MENDENHALL, PROFESSOR
Department of Secondary Education

STATE OF SOME STAFF UTILIZATION PRACTICES IN PUBLIC SECONDARY SCHOOLS OF OHIO

Name of School District: _________________________________________________________

Address:  ____________________________  ____________________________  ____________________________
              City          State          County

Superintendent's Name: __________________________________________________________

Member of N.A.S.S.P.?  □ Yes  □ No
DIRECTIONS

Indicate for your school system each practice by subject areas according to this plan:
Write A in the block under the appropriate subject(s) if the practice is now operating
Write B if the practice is now being contemplated
Leave blank if the practice is neither operating nor being contemplated

Example of how to complete the questionnaire:
Tape recorders are systematically used by teachers to convey information and ideas

Meaning: The above example shows that tape recorders are now used in English and physical education, being planned for use in some foreign language, but not being planned for use in any other subject.

SECTION I—TEAM TEACHING

Definition—An arrangement whereby two or more teachers with/without teacher aides plan, instruct, and evaluate cooperatively one or more class groups during a given period(s) in order to take advantage of their respective special competences.

SUBJECT AREA

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

1. Teachers sometimes team with others to instruct one or more classes
2. There is a systematic arrangement whereby teams of teachers and/or aides teach large groups of students
3. Where the team structure exists, the most experienced or able teacher is designated as team leader
4. Some financial incentive plan exists to give the team leader extra pay
5. Team members teach fewer than the usual hours per week
6. If more than one teaching team exists, someone is assigned to coordinate the activities of these teams
7. Opportunity is provided within the schedule for team members to meet together during a common free time

Briefly indicate any type of team teaching arrangement not described in the above statements (e.g., cutting across subject lines)

SECTION II—STUDENT GROUPING FOR SPECIAL PURPOSES

Definition—The practice of varying the size and composition of classes to fit specific methods of instruction and content in order to improve student learning and utilize staff better.

SUBJECT AREA

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

Large-Group Instruction
1. Some school assembly programs with relatively large groups are definitely planned to bring information to the students in attendance
2. Two or more conventional classes are sometimes combined for purposes of instruction
3. Classes of 50 or more students are regularly scheduled as one part of the instructional program

Add details about large-group instruction in your school (e.g., percentage of time, other arrangements):
Small Group Discussion

4. Students quite regularly are organized within regular classes into groups of 15 or less for the purposes of discussion and exchange of ideas.

5. Separate classes of 15 or fewer for small-group discussion accompany large-group instruction as part of a regular pattern.

Add details about small-group discussion in your school (e.g., percentage of time, other arrangements):

Independent Study (to work on projects in addition to ordinary “homework”)

6. Most students are scheduled specifically for independent study in places other than study halls or in regular classrooms (e.g., in the library, laboratory, shop, and in other facilities).

7. Learning facilities (e.g., library, laboratory, shop, art room, etc.) are made available to students doing independent study beyond the regular school hours.

Add details about planned programs for independent study (other than conventional homework) in your school:

SECTION III—TEACHER AIDES

Definition—A teacher aide is any employed person working in the school or at home in order to assume some of the duties conventionally handled by teachers; for example, clerks, student aides, lay readers, laboratory assistants, and other non-certificated persons.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

1. These kinds of aides are employed (please mark separately):
   - Student teachers from teacher-training program
   - College students (non teacher-trainees)
   - Clerical workers
   - College-trained adults from the community
   - Other adults (not college trained or clerks)

2. These aides function as (please check separately):
   - Laboratory supervisors
   - Lay readers of some written work
   - Objective test graders
   - Teachers for make-up or remedial work by individuals or small groups
   - Hall or playground supervisors
   - Study hall supervisors
   - Library assistants
   - Shop supervisor
   - Clerks

Indicate hourly wages and describe any other practice involving teacher aides now in operation at your school:
SECTION IV—SCHEDULE CHANGES

Definition—Schedules are more flexible because of modifications which affect the length and/or number of periods, lengthen the school year, or provide for new types of activities.

Subject Area

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Classes are scheduled for longer than normal periods, but for fewer times per week</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Extra periods for specialized large-group instruction have been created</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The school day is divided into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The regular schedule may be changed for an individual student on any given day</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>A summer school is operated to provide special opportunities for all students who wish to attend</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

If so, is tuition charged: Yes ☐ ☐ ☐ ☐ ☐ ☐ ☐ No ☐ ☐ ☐ ☐ ☐ ☐ ☐

Indicate any other operational or contemplated schedule changes in your school or add details concerning the above statements:

SECTION V—TECHNOLOGICAL DEVICES

Definition—Technological devices, long used to enrich instruction, now accompany the development of teacher teams, the use of teacher aides, and the redeployment of students. Included are such aids as overhead projectors, tape recorders, television, and automated instruction devices (e.g., teaching machines, programmed books).

Subject Area

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ETV programs are received over one or more TV sets available in the building</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Facilities are available to receive &quot;airborne&quot; telecasts</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Overhead projectors are used</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>The reading classes use such devices as reading accelerator machines</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>An electronically equipped laboratory is utilized (e.g., language)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Closed circuit TV is utilized for large-group instruction</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>&quot;Teaching machines&quot; are available for use as self-teaching devices in independent study or regular classroom instruction</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Tape recorders are systematically used</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Data processing equipment is used in preparing student class schedules</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Data processing equipment is used in preparing student reports (e.g., cumulative records, attendance reports, report cards, etc.)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Indicate the form and function of any other technological devices used in your school:

SECTION VI—OTHER PROCEDURES

Please describe any other ways you have developed to make better use of the professional competencies, time, and energies of teachers in your school:

Acknowledgement: Most of the preceding questions have been taken from the questionnaire of the Committee on Staff Utilization of the National Association of Secondary School Principals, December 19, 1960.
SECTION VII — DISTRICT PROFILE

DIRECTIONS

Please list below those junior and senior high schools under your supervision which are presently engaged in any one or more of the five elements of staff utilization practices being surveyed in this study. Indicate in the appropriate column which practice or practices exist in each of the schools you have listed by writing the year that the practice was initiated.

EXAMPLE OF HOW TO COMPLETE THE CHART:

<table>
<thead>
<tr>
<th>Name of High School Building</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edison Junior High</td>
<td>7-9</td>
<td>1958</td>
<td></td>
<td></td>
<td>1958</td>
<td>1958</td>
</tr>
<tr>
<td>South High</td>
<td>10-12</td>
<td>1960</td>
<td></td>
<td></td>
<td></td>
<td>1959</td>
</tr>
</tbody>
</table>

MEANING: The above example shows that Edison Junior High School (grades 7-9) has underway team teaching, schedule changes, and technological devices which were initiated in 1958 in those areas. South High School (grades 10-12) is using student grouping for special purposes initiated in 1960 and technological devices initiated in 1959.

Fill in as directions above indicate:

STAFF UTILIZATION PRACTICES PROFILE CHART

<table>
<thead>
<tr>
<th>Name of High School Building</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
</table>

NOTE: Please indicate by placing a (1) ONE and/or a (2) TWO before the names of schools written above which are your first and second choice selections of schools which have the most extensive staff utilization practices underway in one or more of the above five areas.
SECTION VIII — EVALUATION PROCEDURES

Describe briefly the evaluation procedures used by you and your staff to evaluate staff utilization practices underway in your school system.
To Ohio Public School Superintendents:

A survey is being conducted in Ohio to supplement work done by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals. We are soliciting your support in our effort to add the information from Ohio to that of the six states already surveyed. We have been assured that the Association is interested in publishing the results of this survey in *The Bulletin of the National Association of Secondary-School Principals*.

The purpose of the enclosed questionnaire is to determine staff utilization practices now existing in public secondary schools of Ohio. It is not intended that this study be evaluative. It is recognized that the five elements of staff utilization practices being surveyed are not exhaustive but rather are only representative of ways to utilize staff most effectively; therefore, you are encouraged to describe other ways you have developed than those arbitrarily chosen for purposes of this study. Your return of the questionnaire is valuable no matter to what degree your school district is involved in these practices. Please identify yourself and your school district.

Please fill out the questionnaire and return it in the enclosed stamped envelope before July 15, 1962. We would appreciate the return of any questionnaires not completed by that date also.

Thank you for your cooperation and interest.

Sincerely,

Lorrela A. McKinney, Instructor
Dr. C. B. Mendenhall, Professor
Department of Secondary Education

---

**STATE OF SOME STAFF UTILIZATION PRACTICES IN PUBLIC SECONDARY SCHOOLS OF OHIO**

Name of County School District: ____________________________________________

Address: ________________________________________________________________

County Superintendent's Name: __________________________________________

Member of N.A.S.S.P.? □ Yes □ No
DIRECTIONS

Indicate for your school system each practice by subject areas according to this plan:

Write A in the block under the appropriate subject(s) if the practice is now operating
Write B if the practice is now being contemplated
Leave blank if the practice is neither operating nor being contemplated

Example of how to complete the questionnaire:

Tape recorders are systematically used by teachers to convey information and ideas........ A B

Meaning: The above example shows that tape recorders are now used in English and physical education, being planned for use in some foreign language, but not being planned for use in any other subject.

SECTION I—TEAM TEACHING

Definition—An arrangement whereby two or more teachers with/without teacher aides plan, instruct, and evaluate cooperatively one or more class groups during a given period(s) in order to take advantage of their respective special competences.

Subject Area

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

1. Teachers sometimes team with others to instruct one or more classes

2. There is a systematic arrangement whereby teams of teachers and/or aides teach large groups of students

3. Where the team structure exists, the most experienced or able teacher is designated as team leader

4. Some financial incentive plan exists to give the team leader extra pay

5. Team members teach fewer than the usual hours per week

6. If more than one teaching team exists, someone is assigned to coordinate the activities of these teams

7. Opportunity is provided within the schedule for team members to meet together during a common free time

Briefly indicate any type of team teaching arrangement not described in the above statements (e.g., cutting across subject lines).

SECTION II—STUDENT GROUPING FOR SPECIAL PURPOSES

Definition—The practice of varying the size and composition of classes to fit specific methods of instruction and content in order to improve student learning and utilize staff better.

Subject Area

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

Large-Group Instruction

1. Some school assembly programs with relatively large groups are definitely planned to bring information to the students in attendance

2. Two or more conventional classes are sometimes combined for purposes of instruction

3. Classes of 50 or more students are regularly scheduled as one part of the instructional program

Add details about large-group instruction in your school (e.g., percentage of time, other arrangements):
Small Group Discussion
4. Students quite regularly are organized within regular classes into groups of 15 or less for the purposes of discussion and exchange of ideas ..............................................
5. Separate classes of 15 or fewer for small-group discussion accompany large-group instruction as part of a regular pattern ..............................................................
Add details about small-group discussion in your school (e.g., percentage of time, other arrangements):

Independent Study (to work on projects in addition to ordinary "homework")
6. Most students are scheduled specifically for independent study in places other than study halls or in regular classrooms (e.g., in the library, laboratory, shop, and in other facilities) ........................................................................................................................................
7. Learning facilities (e.g., library, laboratory, shop, art room, etc.) are made available to students doing independent study beyond the regular school hours ........................................................................................................................................
Add details about planned programs for independent study (other than conventional homework) in your school:

SECTION III — TEACHER AIDES
Definition—A teacher aide is any employed person working in the school or at home in order to assume some of the duties conventionally handled by teachers; for example, clerks, student aides, lay readers, laboratory assistants, and other non-certificated persons.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

1. These kinds of aides are employed (please mark separately):
   - Student teachers from teacher-training program
   - College students (non teacher-trainees)
   - Clerical workers
   - College-trained adults from the community
   - Other adults (not college trained or clerks)

2. These aides function as (please check separately):
   - Laboratory supervisors
   - Lay readers of some written work
   - Objective test graders
   - Teachers for make-up or remedial work by individuals or small groups
   - Hall or playground supervisors
   - Study hall supervisors
   - Library assistants
   - Shop supervisor
   - Clerks

Indicate hourly wages and describe any other practice involving teacher aides now in operation at your school:
SECTION IV—SCHEDULE CHANGES

Definition—Schedules are more flexible because of modifications which affect the length and/or number of periods, lengthen the school year, or provide for new types of activities.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

SUBJECT AREA

<table>
<thead>
<tr>
<th></th>
<th>S</th>
<th>J</th>
<th>M</th>
<th>A</th>
<th>L</th>
<th>S</th>
<th>J</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Classes are scheduled for longer than normal periods, but for fewer times per week
2. Extra periods for specialized large-group instruction have been created
3. The school day is divided into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules)
4. The regular schedule may be changed for an individual student on any given day
5. A summer school is operated to provide special opportunities for all students who wish to attend

If so, is tuition charged: Yes No

Indicate briefly any other operational or contemplated schedule changes in your school or add details concerning the above statements:

SECTION V—TECHNOLOGICAL DEVICES

Definition—Technological devices, long used to enrich instruction, now accompany the development of teacher teams, the use of teacher aides, and the redeployment of students. Included are such aids as overhead projectors, tape recorders, television, and automated instruction devices (e.g., teaching machines, programmed books).

SUBJECT AREA

2. Facilities are available to receive airborne telecasts
3. Overhead projectors are used
4. The reading classes use such devices as reading accelerators machines
5. An electronically equipped laboratory is utilized (e.g., language)
6. Closed circuit TV is utilized for large-group instruction
7. "Teaching machines" are available for use as self-teaching devices in independent study or regular classroom instruction
8. Tape recorders are systematically used

Indicate the form and function of any other technological devices used in your school.

SECTION VI—OTHER PROCEDURES

Please describe any other ways you have developed to make better use of the professional competencies, time, and energies of teachers in your school:

Acknowledgement. Most of the preceding questions have been taken from the questionnaire of the Committee on Staff Utilization of the National Association of Secondary School Principals. December 10, 1960.
## SECTION VII — DISTRICT PROFILE

Please list below those junior and senior high schools under your supervision which are presently engaged in any one or more of the five elements of staff utilization practices being surveyed in this study. Indicate in the appropriate column which practice or practices exist in each of the schools you have listed by writing the year that the practice was initiated.

### EXAMPLE OF HOW TO COMPLETE THE CHART:

<table>
<thead>
<tr>
<th>Name of High School</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edison Junior High</td>
<td>7-9</td>
<td>1958</td>
<td></td>
<td></td>
<td>1958</td>
<td>1958</td>
</tr>
<tr>
<td>South High</td>
<td>10-12</td>
<td></td>
<td></td>
<td>1960</td>
<td></td>
<td>1959</td>
</tr>
</tbody>
</table>

**MEANING:** The above example shows that Edison Junior High School (grades 7-9) has underway team teaching, schedule changes, and technological devices which were initiated in 1958 in those areas. South High School (grades 10-12) is using student grouping for special purposes initiated in 1960 and technological devices initiated in 1959.

### STAFF UTILIZATION PRACTICES PROFILE CHART

<table>
<thead>
<tr>
<th>Name of High School Building</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** Please indicate by placing a (1) ONE and/or a (2) TWO before the names of schools written above which are your first and second choice selections of schools which have the most extensive staff utilization practices underway in one or more of the above five areas.
SECTION VIII — EVALUATION PROCEDURES

Describe briefly the evaluation procedures used by you and your staff to evaluate staff utilization practices underway in your school system.
June, 1962

To Ohio Public School Superintendents:

A survey is being conducted in Ohio to supplement work done by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals. We are soliciting your support in our effort to add the information from Ohio to that of the six states already surveyed. We have been assured that the Association is interested in publishing the results of this survey in *The Bulletin of the National Association of Secondary-School Principals*.

The purpose of the enclosed questionnaire is to determine staff utilization practices now existing in public secondary schools of Ohio. It is not intended that this study be evaluative. It is recognized that the five elements of staff utilization practices being surveyed are not exhaustive but rather are only representative of ways to utilize staff most effectively; therefore, you are encouraged to describe other ways you have developed than those arbitrarily chosen for purposes of this study. Your return of the questionnaire is valuable no matter to what degree your school district is involved in these practices. Please identify yourself and your school district.

Please fill out the questionnaire and return it in the enclosed stamped envelope before July 15, 1962. We would appreciate the return of any questionnaires not completed by that date also.

Thank you for your cooperation and interest.

Sincerely,

LORELLA A. MCKINNEY, INSTRUCTOR
DR. C. B. MENDENHALL, PROFESSOR
Department of Secondary Education

---

**STATE OF SOME STAFF UTILIZATION PRACTICES IN PUBLIC SECONDARY SCHOOLS OF OHIO**

Name of School District: __________________________________________________________

Address: ________________________________________________________________

City State County

Superintendent's Name: ______________________________________________________

Member of N.A.S.S.P.? ☐ Yes ☐ No
DIRECTIONS

Indicate for your school system each practice by subject areas according to this plan:

Write A in the block under the appropriate subject(s) if the practice is now operating

Write B if the practice is now being contemplated

Leave blank if the practice is neither operating nor being contemplated

Example of how to complete the questionnaire:

Tape recorders are systematically used by teachers to convey information and ideas

Meaning: The above example shows that tape recorders are now used in English and physical education, being planned for use in some foreign language, but not being planned for use in any other subject.

SECTION I—TEAM TEACHING

Definition—An arrangement whereby two or more teachers with/without teacher aides plan, instruct, and evaluate cooperatively one or more class groups during a given period(s) in order to take advantage of their respective special competences.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

1. Teachers sometimes team with others to instruct one or more classes

2. There is a systematic arrangement whereby teams of teachers and/or aides teach large groups of students

3. Where the team structure exists, the most experienced or able teacher is designated as team leader

4. Some financial incentive plan exists to give the team leader extra pay

5. Team members teach fewer than the usual hours per week

6. If more than one teaching team exists, someone is assigned to coordinate the activities of these teams

7. Opportunity is provided within the schedule for team members to meet together during a common free time

Briefly indicate any type of team teaching arrangement not described in the above statements (e.g., cutting across subject lines)

SECTION II—STUDENT GROUPING FOR SPECIAL PURPOSES

Definition—the practice of varying the size and composition of classes to fit specific methods of instruction and content in order to improve student learning and utilize staff better.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

Large-Group Instruction

1. Some school assembly programs with relatively large groups are definitely planned to bring information to the students in attendance

2. Two or more conventional classes are sometimes combined for purposes of instruction

3. Classes of 50 or more students are regularly scheduled as one part of the instructional program

Add details about large-group instruction in your school (e.g., percentage of time, other arrangements):
Small Group Discussion

4. Students quite regularly are organized within regular classes into groups of 15 or less for the purposes of discussion and exchange of ideas.

5. Separate classes of 15 or fewer for small-group discussion accompany large-group instruction as part of a regular pattern.

Add details about small-group discussion in your school (e.g., percentage of time, other arrangements):

Independent Study (to work on projects in addition to ordinary "homework")

6. Most students are scheduled specifically for independent study in places other than study halls or in regular classrooms (e.g., in the library, laboratory, shop, and in other facilities).

7. Learning facilities (e.g., library, laboratory, shop, art room, etc.) are made available to students doing independent study beyond the regular school hours.

Add details about planned programs for independent study (other than conventional homework) in your school:

SECTION III - TEACHER AIDES

Definition—A teacher aide is any employed person working in the school or at home in order to assume some of the duties conventionally handled by teachers; for example, clerks, student aides, lay readers, laboratory assistants, and other non-certificated persons.

1. These kinds of aides are employed (please mark separately):
   - Student teachers from teacher-training program
   - College students (non teacher-trainees)
   - Clerical workers
   - College-trained adults from the community
   - Other adults (not college trained or clerks)

2. These aides function as (please check separately):
   - Laboratory supervisors
   - Lay readers of some written work
   - Objective test graders
   - Teachers for make-up or remedial work by individuals or small groups
   - Hall or playground supervisors
   - Study hall supervisors
   - Library assistants
   - Shop supervisor
   - Clerks

Indicate hourly wages and describe any other practice involving teacher aides now in operation at your school:

(3)
SECTION IV—SCHEDULE CHANGES

Definition—Schedules are more flexible because of modifications which affect the length and/or number of periods, lengthen the school year, or provide for new types of activities.

(Mark in the squares: A if now operating, B if contemplated; leave blank if neither.)

SUBJECT AREA

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

1. Classes are scheduled for longer than normal periods, but for fewer times per week
2. Extra periods for specialized large-group instruction have been created
3. The school day is divided into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules)
4. The regular schedule may be changed for an individual student on any given day
5. A summer school is operated to provide special opportunities for all students who wish to attend

If so, is tuition charged: Yes No

Indicate briefly any other operational or contemplated schedule changes in your school or add details concerning the above statements:

SECTION V—TECHNOLOGICAL DEVICES

Definition—Technological devices, long used to enrich instruction, now accompany the development of teacher teams, the use of teacher aides, and the redeployment of students. Included are such aids as overhead projectors, tape recorders, television, and automated instruction devices (e.g., teaching machines, programmed books).

SUBJECT AREA

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

1. ETV programs are received over one or more TV sets available in the building
2. Facilities are available to receive “airborne” telecasts
3. Overhead projectors are used
4. The reading classes use such devices as reading accelerator machines
5. An electronically equipped laboratory is utilized (e.g., language)
6. Closed circuit TV is utilized for large-group instruction
7. "Teaching machines" are available for use as self-teaching devices in independent study or regular classroom instruction
8. Tape recorders are systematically used
9. Data processing equipment is used in preparing student class schedules

Indicate the form and function of any other technological devices used in your school:

SECTION VI—OTHER PROCEDURES

Please describe any other ways you have developed to make better use of the professional competencies, time, and energies of teachers in your school:

Acknowledgement: Most of the preceding questions have been taken from the questionnaire of the Committee on Staff Utilization of the National Association of Secondary School Principals, December 19, 1960.
**SECTION VII — DISTRICT PROFILE**

**DIRECTIONS**

Please list below those junior and senior high schools under your supervision which are presently engaged in any one or more of the five elements of staff utilization practices being surveyed in this study. Indicate in the appropriate column which practice or practices exist in each of the schools you have listed by writing the year that the practice was initiated.

**EXAMPLE OF HOW TO COMPLETE THE CHART:**

<table>
<thead>
<tr>
<th>Name of High School</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edison Junior High</td>
<td>7-9</td>
<td>1958</td>
<td></td>
<td></td>
<td>1958</td>
<td>1958</td>
</tr>
<tr>
<td>South High</td>
<td>10-12</td>
<td></td>
<td>1960</td>
<td></td>
<td>1960</td>
<td>1959</td>
</tr>
</tbody>
</table>

**MEANING:** The above example shows that Edison Junior High School (grades 7-9) has underway team teaching, schedule changes, and technological devices which were initiated in 1958 in those areas. South High School (grades 10-12) is using student grouping for special purposes initiated in 1958 and technological devices initiated in 1959.

Fill in as directions above indicate:

**STAFF UTILIZATION PRACTICES PROFILE CHART**

<table>
<thead>
<tr>
<th>Name of High School</th>
<th>Grades</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aids</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
</table>

**NOTE:** Please indicate by placing a (1) ONE and at a (2) TWO before the names of schools written above which are your first and second choice selections of schools which have the most extensive staff utilization practices underway in one or more of the above five areas.
Describe briefly the evaluation procedures used by you and your staff to evaluate staff utilization practices underway in your school system.
APPENDIX B

Letters of Correspondence with Selected School District Personnel (pp. 367-381)
Mr. Paul W. Briggs, Superintendent
Parma City Schools
5401 West 54th Street
Parma, Ohio

Dear Mr. Briggs:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the returned questionnaires have now been processed. Having met the criterion of degree of involvement, Parma Senior High School has been selected for further study in the areas of team teaching, student grouping for special purposes, teacher aides, and technological devices.

I should like your permission to visit personally in Parma Senior High School to learn more about the practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend at least one day in the school talking with administrators, supervisors, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. George A. Walker, Superintendent  
Warrensville Heights City Schools  
4500 Warrensville Center Road  
Cleveland 28, Ohio  

Dear Mr. Walker:  

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the returned questionnaires have now been processed. Having met the criterion of degree of involvement of existing and contemplated practices, Warrensville Heights High School has been selected for further study in the areas of team teaching, student grouping for special purposes, teacher aides, schedule changes, and technological devices.

I should like your permission to visit personally in Warrensville Heights High School to learn more about the practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend at least one day in the school talking with administrators, supervisors, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Dear Dr. Eberhart:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the returned questionnaires have now been processed. Having met the criteria of degree of involvement and length of time practiced, your high schools and junior high schools have been selected for further study in the area of technological devices, particularly data processing.

I should like your permission to visit personally in your schools to learn more about the practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your schools. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principals (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend a day or two in your school system talking with administrators, supervisors, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criteria of degree of involvement and length of time practiced, Welty Junior High School has been selected for further study in the area of technological devices, particularly teaching machines and language laboratory.

I should like your permission to visit personally in Welty Junior High School to learn more about the practices. This request will be followed Tuesday, November 13, by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend a day in the school talking with administrators, supervisors, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. George A. Walker, Superintendent
Warrensville Heights City Schools
4500 Warrensville Center Road
Cleveland 28, Ohio

Dear Mr. Walker:

This letter is in reference to my request to visit the Warrensville Heights High School (letter of October 19, 1962) and in reference to a recent phone conversation with your secretary. She indicated to me that school days falling between November 26 and December 7 would be convenient for visitation.

I should like to come to your High School on November 26. I will probably need to remain all or part of November 27 to complete gathering of information for the study. If these days are not convenient, please let me know as soon as possible.

Thank you for your cooperation and assistance.

Sincerely,

Lorella A. McKinney
Mr. Robert S. Brown, Superintendent
Marion City Schools
Box 509
Marion, Ohio

Dear Mr. Brown:

In June, 1962, you received and responded to a questionnaire distrib-
uted by Dr. C. B. Mendenhall and Lorella A. McKinney in the Depart-
ment of Secondary Education, the Ohio State University, to survey
staff utilization practices existing and contemplated in Ohio public
secondary schools. The Ohio survey was being conducted to supplement
work in six other states directed by Dr. J. Lloyd Trump, Secretary
of the Committee on Staff Utilization of the National Association of
Secondary-School Principals.

The data from the questionnaires returned have now been processed.
Having met the criteria of involvement, length of time involved, and
geographic location, Harding Senior High School has been selected for
further study in the areas of evaluation procedures and technological
devices, particularly the controlled reader, tachistoscopes, overhead
projectors, etc.

I should like your permission to visit personally in Harding Senior
High School to learn more about the practices. This request will be
followed soon by a phone call from me to answer any questions you may
have in regard to the study and to seek permission to conduct further
study in your school. Since I will be visiting several other schools
for further study, in order to facilitate setting up my itinerary, will
you please have determined with the principal (by the time I call you)
those dates which seem most convenient for my visit. I will likely
need to spend a day in the school talking with administrators, super-
visors, teachers, and a few students. I will make every effort for my
visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. William L. Ramsey, Superintendent
Rossford Exempted Village Schools
701 Superior Street
Rossford, Ohio

Dear Mr. Ramsey:

In June, 1962, you received and responded to a questionnaire distrib-
uted by Dr. C. B. Mendenhall and Lorella A. McKinney in the Depart-
ment of Secondary Education, the Ohio State University, to survey
staff utilization practices existing and contemplated in Ohio public
secondary schools. The Ohio survey was being conducted to supplement
work in six other states directed by Dr. J. Lloyd Trump, Secretary of
the Committee on Staff Utilization of the National Association of
Secondary-School Principals.

The data from the questionnaires returned have now been processed.
Having met the criteria of extent of involvement, school size, and
geographic location, Rossford High School has been selected for further
study in the areas of team teaching, student grouping for special pur-
poses, teacher aides, schedule changes, and technological devices.

I should like your permission to visit personally in Rossford High
School to learn more about the practices. This request will be fol-
lowed soon by a phone call from me to answer any questions you may
have in regard to the study and to seek permission to conduct further
study in your school. Since I will be visiting several other schools
for further study, in order to facilitate setting up my itinerary, will
you please have determined with the principal (by the time I call you)
those dates which seem most convenient for my visit. I will likely need
to spend at least one day and possibly two in the school talking with
administrators, supervisors, teachers, and a few students. I will make
every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. Walter B. Heischman, Superintendent  
Upper Arlington City Schools  
1950 N. Mallway  
Columbus 21, Ohio

Dear Mr. Heischman:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criteria of degree of involvement and uniqueness of approach, Upper Arlington High School has been selected for further study in the area of schedule changes.

I should like your permission to visit personally in Upper Arlington High School to learn more about the practice. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your schools. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend all or part of one day in the school talking with administrators, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. Roy C. Thompson, Superintendent
Clermont County Schools
Batavia, Ohio

Dear Mr. Thompson:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criterion of extent of involvement of existing and contemplated practices, Amelia High School has been selected for further study in the areas of team teaching, student grouping for special purposes, teacher aides, schedule changes, and technological devices.

I should like your permission to visit personally in Amelia High School to learn more about the practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend at least a day or two in the school talking with administrators, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. H. L. Boda, Assistant Superintendent  
Dayton City Schools  
348 West First Street  
Dayton, Ohio

Dear Mr. Boda:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criterion of uniqueness of approach, Fairview High School has been selected for further study in the areas of team teaching and student grouping for special purposes.

I should like your permission to visit personally in Fairview High School to learn more about the practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school. Since I will be visiting several other schools for further study, in order to facilitate setting up my itinerary, will you please have determined with the principal (by the time I call you) those dates which seem most convenient for my visit. I will likely need to spend a day in the school talking with administrators, supervisors, teachers, and a few students. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. Roger O. Hoffman, Superintendent  
Fayette County Schools  
Washington Court House, Ohio

Dear Mr. Hoffman:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criterion of contemplated involvement, the Fayette County School District has been selected for further study in the areas of team teaching, student grouping for special purposes, and technological devices.

I should like your permission to interview you to learn more about the contemplated practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school district. I will likely need to spend a day talking with you, other administrators, and supervisors. If any teachers have been involved in any planning for these practices, I may wish to talk with a few of them. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. Thomas B. Southard, Superintendent
Newark City Schools
19 North Fifth Street
Newark, Ohio

Dear Mr. Southard:

In June, 1962, you received and responded to a questionnaire distribu-
ted by Dr. C. B. Mendenhall and Lorella A. McKinney in the Depart-
ment of Secondary Education, the Ohio State University, to survey
staff utilization practices existing and contemplated in Ohio public
secondary schools. The Ohio survey was being conducted to supplement
work in six other states directed by Dr. J. Lloyd Trump, Secretary of
the Committee on Staff Utilization of the National Association of
Secondary-School Principals.

The data from the questionnaires returned have now been processed.
Having met the criterion of involvement in evaluation procedures used
to evaluate MPATI, Newark Senior High School has been selected for
further study.

I should like your permission to visit personally in Newark Senior
High School to learn more about the MPATI practice and your evaluative
procedures relative to the school year 1961-1962. This request will
be followed soon by a phone call from me to answer any questions you
may have in regard to the study and to seek permission to conduct
further study in your school. Since I will be visiting several other
schools for further study, in order to facilitate setting up my itiner-
ary, will you please have determined with the principal (by the time I
call you) those dates which seem most convenient for my visit. I will
likely need to spend a day in the school talking with administrators,
teachers, and a few students. I will make every effort for my visit
to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Mr. William L. Ramsey, Superintendent  
Rossford Exempted Village Schools  
701 Superior Street  
Rossford, Ohio

Dear Mr. Ramsey:

This letter is in reference to my request to visit the Rossford High School (letter of November 9, 1962) and in reference to my recent phone conversation with you. You indicated to me by phone that the week of December 10 would be convenient for visitation.

I should like to come to your High School on December 12. I will probably need to remain all or part of December 13 to complete gathering of information for the study. If these days are not convenient, please let me know as soon as possible.

Thank you for your cooperation and assistance.

Sincerely,

Lorella A. McKinney
Mr. David M. Bryson, Superintendent  
Vinton County Schools  
Memorial Building  
McArthur, Ohio  

Dear Mr. Bryson:

In June, 1962, you received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals.

The data from the questionnaires returned have now been processed. Having met the criteria of existing involvement and contemplated involvement, the Vinton County School District has been selected for further study in the areas of team teaching, schedule changes, and teaching machines.

I should like your permission to interview you to learn more about the contemplated practices. This request will be followed soon by a phone call from me to answer any questions you may have in regard to the study and to seek permission to conduct further study in your school district. I will likely need to spend a day talking with you, supervisors, teachers, and a few students relative to the use of teaching machines and contemplated involvement with team teaching and schedule changes. I will make every effort for my visit to be as unobtrusive as possible.

Thank you for your consideration.

Sincerely,

Lorella A. McKinney
Dear Dr. Mayer:

This is to confirm the dates December 4 and 5, 1962, for my visitation at Amelia High School as arranged by phone with Mr. Harry R. Moore. Mr. Moore asked me to forward this letter to you; he indicated that he would be in touch with Mr. James Woldridge and Mr. Keith Williams regarding my coming.

In June, 1962, Mr. Roy C. Thompson received and responded to a questionnaire distributed by Dr. C. B. Mendenhall and Lorella A. McKinney in the Department of Secondary Education, the Ohio State University, to survey staff utilization practices existing and contemplated in Ohio public secondary schools. The Ohio survey was being conducted to supplement work in six other states directed by Dr. J. Lloyd Trump, Secretary of the Committee on Staff Utilization of the National Association of Secondary-School Principals. Amelia High School has been selected for further study in staff utilization practices.

I am looking forward to my visit at Amelia High School; I hope I shall have the privilege of meeting you during my stay.

Sincerely,

Lorella A. McKinney
APPENDIX C

Open-ended Questions for Interviews in Selected Schools (pp. 383-384)

Check List of Factors Believed by Administration and Staff of Selected Schools to Inhibit Experimentation with Staff Utilization Practices (p. 385)
OPEN-ENDED INTERVIEW QUESTIONS

1. For what purpose did your school initiate this practice? When was it initiated?

2. Who gave leadership to plans for the practice?

3. Who was involved in the planning for the practice? How were they involved?

4. Were communication lines for coordinating, understanding, and promoting the practice established? If so, how?

5. Did research and evaluation precede planning for the innovation? If so, how? If not, why?

6. Describe the practice as it exists in your school.

7. What evaluation practices are built into your plan?

8. What future direction do you expect this practice to take in your school?

9. Identify the problems encountered in initiating and establishing the practice.

10. Identify the successes encountered in establishing the practice.

Questions for Teachers Involved

1. What are the strengths of this practice?

2. What are the weaknesses of this practice?

3. What suggestions for change in the practice would you make if you had no inhibiting factors?

Questions for Students Involved

1. What values do you feel that you derive from this practice? (What do you like about this practice?)
2. Does anything about the practice frustrate or upset you? If so, what? (What do you not like about this practice?)

3. If it were possible for any change to be made, what changes in the practice would you suggest?
Which factors below seem to inhibit experimentation in your school in each of the five areas? Place an X opposite the factor on the left under the appropriate areas. Note: A factor may inhibit in one or more of the five areas.

<table>
<thead>
<tr>
<th>Inhibiting Factors</th>
<th>Team Teaching</th>
<th>Student Grouping for Special Purposes</th>
<th>Teacher Aides</th>
<th>Schedule Changes</th>
<th>Technological Devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Space</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Community Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Staff Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Board of Education Support</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Trained Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only a Fad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My Dislike for It</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creates Staff Jealousies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creates Student Jealousies and Snobbishness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Things with Higher Priority</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insufficient Substantiating Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Educationally Sound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrary to School Philosophy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contrary to My Philosophy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Suitable for Our Type of Program</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Minimum Standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accrediting Association Standards</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merits of Technique Questionable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other: (list)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

McBee Keysort Forms Used at Amelia Senior High School (p. 387)

Topic Outline of Basic Concepts (1961-1962) Taught at Dayton Fairview High School (pp. 388-392)

Tentative Topic Outline of Arts Seminars I and II Taught at Valley Forge Senior High School, Parma, Ohio (pp. 393-399)

Teacher Aide Report Forms; Reading Program Letters to Parents, Source Reference List, and Weekly Schedule; and McBee Keysort Forms Used at Warrensville Heights Junior and Senior High Schools (pp. 400-414)

School Forms and McBee Keysort Forms Used at Rossford High School (pp. 415-417)

"Airborne" Television Evaluation Report from Newark High School (p. 418)

Data Processing Forms Used for Relieving Staff of Clerical Duties in the Willoughby-Eastlake City Schools (pp. 419-438)

386
Lesson 1. Fairview High School—Its History, Organization, Regulations, and Student Government

Lesson 2. Effective Study—Note-taking, Organization of Material, and Budgeting of Study Time

Lesson 3. Better Reading and Listening—Vocabulary Development


Lesson 5. Importance of Choosing Wisely—Attitudes, Development of Self-direction

Lesson 6. Scholarship Tests—Students' Preparation

Lesson 7. Use and Control of the Speaking Voice

Lesson 8. Good Grooming

Lesson 9. Improvement of Communication

Lesson 10. The School Counselor—His Function and Value to the Student

Lesson 11. The Printed Word and Picture

Lesson 12. The Human Element in Space Travel

Lesson 13. Getting Along with Other People

Lesson 14. Preparation for College

Lesson 15. Responsibility of the Teen-age Driver

Lesson 16. Importance and Function of the Modern Newspaper

Lesson 17. History of the English Language

Lesson 18. Solution of Personal Problems

Lesson 19. Drama Appreciation

Lesson 20. Election of Courses and Subjects for Next Year
Lesson 21. Physical Fitness
Lesson 22. Sports for the Fans
Lesson 23. Health Hygiene
Lesson 24. Health Problems
Lesson 25. Hobbies and Other Leisure-time Activities
Lesson 26. Wise Use of Television
Lesson 27. Social Life--Dating, etc.
Lesson 28. Evaluation of Freshman Orientation Lessons
Lesson 29. Summation of Basic Concepts Course

Sophomore Mathematics and Science

Lesson 1. Mathematics as Logical Thinking
Lesson 2. Mathematical Curiosity
Lesson 3. Film--The American Engineer
Lesson 4. )
Lesson 5. )History of Mathematics
Lesson 6. )
Lesson 7. )
Lesson 8. )Explanation and Use of the Slide Rule
Lesson 9. Ciphering Match
Lesson 10. Mathematics in Industry
Lesson 11. Mathematics in the Stock Market
Lesson 12. )
Lesson 13. )Mathematics in Insurance
Lesson 14. )Thinking Machines
Lesson 15. )Time and Space
Lesson 16. )Laws and Measurement in Science
Lesson 16. Building Blocks of the Universe
Lesson 17. From Atoms to Organisms
Lesson 18. Building Blocks of Living Things
Lesson 19. Our Biological Heritage
Lesson 20. Film--Biology
Lesson 21. Electronics
Lesson 22. Geology--"The World You Live On"
    --"Let's Dig a Big Hole"
Lesson 23. Wealth of the Sea
Lesson 24. Man's Conquest of Disease
Lesson 25. Putting a Man into Space
Lesson 26. Gateways to the Mind
Lesson 27. )
    )Better Things for Better Living
Lesson 28. )
Lesson 29. Reaching for the Stars

    Junior Backgrounds and Foregrounds of
    American Civilization

Lesson 1. Egyptian Civilization
Lesson 2. The Fertile Crescent--Mesopotamia
Lesson 3. Contributions of the Ancient Hebrews
Lesson 4. History and Culture of the Ancient Greeks
Lesson 5. Roman Civilization
Lesson 6. Feudalism
Lesson 7. The Renaissance
Lesson 8. The Reformation
Lesson 9. Mercantilism and the Commercial Revolution
Lesson 10. The Age of Absolutism
Lesson 11. The Intellectual Revolution of the 17th and 18th Centuries
Lesson 12. The French Revolution
Lesson 13. The Age of Romanticism and Reaction
Lesson 14. Industrial Revolution
Lesson 15. Rise of Democracy and Nationalism
Lesson 16. Intellectual and Artistic Progress during the Age of Democracy and Nationalism
Lesson 17. Western Imperialism—Africa
Lesson 18. Western Imperialism—The Far East
Lesson 19. The Gold Problem and the Federal Reserve System
Lesson 20. The American Negro Today
Lesson 21. Labor and Management
Lesson 22. The American Indian Today
Lesson 23. The Role of a Free Press
Lesson 24. Conservation of Natural Resources
Lesson 25. The Congo, an International Problem
Lesson 26. Space Travel
Lesson 27. Voices in Space—Latest Developments in Communication
Lesson 28. The Cuban Situation

Senior Humanities

Lesson 1. )
Lesson 2. )
) Our Town—Lecture and Encyclopaedia Britannica Film
Lesson 3. )
Lesson 4. )
Lesson 5. Evaluation of a Classic
Lesson 6. Introduction to the Arts
Lesson 7. Music as One of the Arts--demonstrated lecture
Lesson 8. Music Mode--demonstrated lecture
Lesson 9. )
    )Etymology
Lesson 10. )
Lesson 11. Folk Dancing as an Art
Lesson 12. Origin and Development of the Dance
    Film, Appalachian Spring
Lesson 13. Music Appreciation--Film, Whistle, Plum, and Boom!
Lesson 14. Architecture
Lesson 15. The Mind of the Eastern World--India
Lesson 16. The Mind of the Eastern World--China
Lesson 17. The Greek Mind and Spirit
Lesson 18. The Greek Theatre
Lesson 19. )
Lesson 20. )
    )Oedipus Rex--Lecture and Encyclopaedia Brittanica Film
Lesson 21. )
Lesson 22. )
Lesson 23. Panel Discussion of Oedipus Rex by three clergymen
Lesson 24. The Short Story
Lesson 25. )
Lesson 26. )
Lesson 27. )Hamlet--Lecture, student panels, and Encyclopaedia
    Brittanica Film
Lesson 28. )
Lesson 29. )
Lesson 30. String Choir Concert (Miami University students)
TENTATIVE TOPICS
for
Arts Seminar I -- Course Outline

I. Introduction to Prehistoric Art
   A. Stone-Iron Ages
   B. Cave Drawings

II. Egyptian Art
    A. Temples
    B. Sculpture

III. Middle Eastern Art
     A. Babylonian
     B. Assyrian
     C. Persian

IV. Greek Art
    A. Aegean (3000-1000 B.C.)
    B. Hellenistic (1000-400 B.C.)

V. The Classical Theater
   A. Aristotle (Poetics on Tragedy)
   B. Sophocles (Oedipus Rex)

VI. Etruscan and Roman Art (1000 B.C.-400 A.D.)

VII. Early Christian and Byzantine Art (200-1400 A.D.)

VIII. Painting before 1400 A.D.

IX. Field Trip to Art Museum

X. What Is Music? How to Listen
    A. Brittain: "Young Persona Guide"
B. Monteverdi: "La Mer D'Ariano" and Des Pres: "Motet"
C. Palestrina: "Adoramus Te Christe"
D. Early Instrumentation

XI. Early Medieval Art

XII. Romanesque Art

XIII. Selected Medieval Writings
   A. Ballads and Religious Poetry
   B. Legends and Sagas

XIV. Gothic Art
   A. Early
   B. High
   C. Late

XV. Renaissance Art
   A. Early
   B. High
      1. Italian
      2. North Europe

XVI. Introduction to Renaissance Literature
   A. The Elizabethan Theater
   B. William Shakespeare: Othello

XVII. Scarlatti: "Cat's Fugue"

XVIII. Bach: "Cello Suite"

XIX. Handel: Selections from Messiah and "Royal Fireworks"

XX. Seventeenth Century Art (Rubens, Van Dyck, etc.)

XXI. Eighteenth Century Art (Watteau, Gainsborough)

XXII. Introduction to Neo-classical Literature
XXIII. Alexander Pope: Selected Poetry

XXIV. Mozart: "Jupiter Symphony; Overture to Marriage of Figaro, Magic Flute (Opera)

XXV. Haydn: Selections

XXVI. Neo-classic and Romantic Art

XXVII. Beethoven: Piano Sonata, etc.

XXVIII. Brahms: "Alto Rhapsody," Hungarian Dances, etc.

XXIX. Dvorak: "New World Symphony"

XXX. Impressionistic Art

XXXI. Post-impressionism

XXXII. Introduction to Romantic Literature

XXXIII. Emily Bronte: Wuthering Heights

XXXIV. Schubert: Songs (Art Songs)

XXXV. Chopin: Piano Music

XXXVI. Tchaikowsky: "Romeo and Juliet," etc.

XXXVII. Moussorgsky: "Pictures at an Exhibition"

XXXVIII. Field Trip

XXXIX. Introduction to Realism and the Rise of "Social Consciousness" in Literature (Upton Sinclair: The Jungle)

XL. Contemporary Art

XLI. Sibelius: "Finlandia"

XLII. Bartok: Hungarian Folk Songs

XLIII. Introduction to Modern Trends in Literature

A. George Orwell: Animal Farm

B. Arthur Koestler: Darkness at Noon
XLIV. Art of the United States

XLV. R. Thompson: "Alleluia"

XLVI. Monegger: "Pacific 231"

XLVII. Hindemith: "Symphony in B-Flat for Band"

XLVIII. Berg: "Lyric Suite"

XLIX. Gershwin: "An American in Paris"

L. Oriental Art
   A. Japanese
   B. Chinese
   C. Russian

Arts Seminar II -- Course Outline

I. Introduction to Art
   A. Architectural Origins and Early Forms
   B. Review of Prehistoric Art
   C. Egyptian Art
   D. Greek Art (Golden Age of Greece and Hellenistic)

II. Review of the Classical Theater
   A. Influence of Mythology
   B. Euripides: Medea

III. Etruscan and Roman Art (Summary of Roman Sculpture)

IV. Early Christian and Byzantine Art
   A. Painting: 200-1400 A.D.
   B. Pre-classic Painting
   C. Painting in Service of Early Christian Church
V. Introduction to Music
   A. Gabrieli: Canzonas
   B. Early Instrumentation
   C. Di Lasso
   D. Byrd: Madrigals

VI. Medieval Art
   A. Christian Influence on the Arts
   B. Review of Romanesque—Emphasis on Architecture and Sculpture

VII. Selected Medieval Writings
   A. "The Church Fathers"
   B. The Bible as Literature

VIII. Medieval Art (continued)
   A. Review of Gothic Spirit of Art
   B. Cathedrals

IX. Minor Arts
   A. Art of the Renaissance (Review)
   B. Golden Age
   C. Architecture

X. Review of Renaissance Literature and the Elizabethan Theater
   A. Marlowe: The Tragical History of Dr. Faustus
   B. The Faust of Goethe and Mann
   C. Influence of Faust on Music

XI. Bach: Partitas, Cantata, Motet, etc.

XII. Handel: Selections from Messiah, "Water Music"
XIII. Seventeenth and Eighteenth Century Art: Review
   A. Painting
   B. Classic vs. Academic Point of View

XIV. Eighteenth Century Neo-classic Art

XV. Review of Neo-classic Literature (Dryden: Selected Poetry)

XVI. Mozart
   A. "Symphony #40"
   B. Overture to "The Magic Flute"

XVII. Haydn
   A. "String Quartet, Op. 74, #3"
   B. "Concerto in D for Cello"

XVIII. Beethoven
   A. Overture to "Fidelio"
   B. "Symphony IX"
   C. Piano Sonata

XIX. Brahms
   A. Variations on a "Theme by Haydn"
   B. "Lieder"

XX. Review of Romantic Literature (Jane Austen: Pride and Prejudice)

XXI. Schubert: "Art Songs"

XXII. Saint-Saens: "Dance Macabre"

XXIII. Dvorak: "Slovanic Dances"

XXIV. Tschaikowsky: "1812 Overture"

XXV. R. Strauss: "Til Eulenspiegel"

XXVI. Puccini: "La Boheme"

XXVII. Modern French Art
A. Impressionism
B. Pointalism
C. Cubism
D. Surrealism

XXVIII. Field Trip (May Show)

XXIX. Review of Realism and the Rise of "Social Consciousness"
      in Literature (Frank Norris: The Octopus)

XXX. Stravinsky: "Petrouchka"

XXXI. Vaughan Williams: "On Wenlock Edge"

XXXII. R. Thompson: "Peaceable Kingdom"

XXXIII. Debussy: "Afternoon of a Faun"

XXXIV. Prokofiev: "Peter and the Wolf"

XXXV. Bartok: "String Quartet"

XXXVI. Schoenberg: "Theme and Variations for Band"

XXXVII. Art of the United States
      A. Relationship of American to European Culture
      B. Influence of English and French Schools
      C. Contemporary Artists of the United States and of the
         Local Scene

XXXVIII. Gershwin: "Rhapsody in Blue"; What Is Jazz?

XXXIX. Review of Modern Trends in Literature
      A. Franz Kafka: The Metamorphosis
      B. Revolt in Poetry

XL. Review and Summary
### WARRENSVILLE HEIGHTS HIGH SCHOOL

**WORK REPORT**

Name ________________________________

<table>
<thead>
<tr>
<th>Day of Week</th>
<th>Date</th>
<th>Hours Worked</th>
<th>School</th>
<th>Signature of Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>2</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>3</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>4</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>5</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>6</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>7</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>8</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>9</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>10</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>
WARRENSVILLE HEIGHTS HIGH SCHOOL

Teacher's Composition Form

Name ___________________________________ Grade ____________________________

Date of Composition ________________ Homework_______ In Class__________

Assignment:

__________________________________________

__________________________________________

Purpose of Assignment:

__________________________________________

__________________________________________

Place emphasis on the following items:

Choice of Words________________________ Paragraph Development______________

Coherence____________________________ Paragraph Development______________

Grammar_____________________________ Punctuation_______________________

Logical Completeeness_______________ Spelling___________________________

Mechanics___________________________ Usage___________________________

Organization_______________________ Vagueness__________________________

Parallel Structure__________________ Variety of Sentence Structure_______

Wordiness__________________________
Theme No. ______

Name ____________________________

Last               First

English _____ Period _____ Date ___________________________

Title ____________________________

The grade has been lowered because the paper was late

does not specifically meet the assignment

The paper is weak in:

<table>
<thead>
<tr>
<th>Choice of Words</th>
<th>Coherence</th>
<th>Grammar</th>
<th>Logical Completeness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanics</th>
<th>Organization</th>
<th>Parallel Structure</th>
<th>Paragraph Development</th>
<th>Punctuation</th>
<th>Spelling</th>
<th>Usage</th>
<th>Vagueness</th>
<th>Variety of Sentence Structure</th>
<th>Wordiness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further comments:

______________________________________________________________

______________________________________________________________
WARRENSVILLE HEIGHTS HIGH SCHOOL
CLASS RECORD COMPOSITION GRADES

Semester _________ First _________ Second _________ Third _________ Grading Period

Class Period_________ Teacher______________ Aide____________________

<table>
<thead>
<tr>
<th>Name</th>
<th>Weekly Composition Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>------</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Copy)

WARRENSVILLE HEIGHTS JUNIOR HIGH SCHOOL

4285 Warrensville Road Cleveland 28, Ohio

February 3, 1961

Dear Parents,

As a part of the enrichment program of Warrensville Heights Junior High School, all students in the seventh and eighth grades are enrolled in a developmental reading program for one semester of the school year. Each class reports to the special reading room for one period each week during the semester.

Your child's class has just completed a semester of work in the reading program. A general summary of the work will indicate some of the objectives which we strive to accomplish.

The Controlled Reader, a mechanical reading device by means of which material to be read is projected on a screen at varying rates, was used to develop greater interest in reading and to increase the speed of reading. A comprehension test based on the material read was given following the reading of each film.

Both speed and comprehension were stressed through the use of the McCall-Crabbs Standard Test Lessons in Reading, a series of lessons designed to help teach students how to comprehend rapidly varied kinds of material.

Reading Skills, a reading test for grades seven to twelve, was used for vocabulary work and as a reference for a "How to Study" unit. The basic readers for seventh and eighth grades, Parades, More Parades, and Panoramas, provided material for silent reading comprehension lessons, for oral reading, and for the development of listening skills. Other reading texts and workbooks were used by the different groups as they participated in the various reading experiences.

The goals for the developmental reading program have included: the development of greater interest in reading; the improvement of word recognition techniques; better comprehension of material read; the formation of good work habits in reading; the acquisition of study skills to be applied to any school subject.

The progress of each pupil's reading growth has been recorded and placed in his folder. I would be very pleased to discuss this growth pattern with you.
The seventh and eighth grade classes have been interested and enthusiastic about the work of the reading program. It has been a pleasant experience for me to have the privilege of working with these fine young people in this phase of our school's enrichment program.

Sincerely yours,

(Mrs.) Sylvia Day
Reading Consultant
Dear __________________:

We wish to congratulate you upon the fine academic attitude shown by your ________, __________ through ______ voluntary participation in a special high school reading class during the first semester of the school year. Students who are willing to take such courses in the interest of self-improvement are to be highly commended.

The special reading groups carried on the work of the Reading Laboratory, a well-planned series of reading and study exercises for grades seven to twelve, prepared by the Science Research Associates, Inc. The lessons included work in silent reading, comprehension, and vocabulary study. Each student advanced at his own rate of progress.

As a general rule, the special reading groups carry no academic credit, but the reading and study skills developed by the work can be applied to any high school subject. The satisfaction derived from personal improvement seems to most students adequate compensation for the time spent in class.

We hope that ________ will continue to do work of the same excellent quality that ______ has done with the Reading Laboratory. We need students of this type because they contribute so much to the academic standing of our school.

Sincerely,

Sylvia Day (Mrs.)
Reading Consultant
Dear Parents,

Tenth grade English classes have been enrolled during the second semester in the developmental reading program which is a phase of our school's enrichment program. Each class has reported to the Reading Center, Room 212, for one period each week over a period of fifteen weeks.

Study skills have been emphasized in a unit of work based on the book, How to Study, by Clifford T. Morgan and James Deese. Both speed and comprehension have been stressed through the use of the McCall-Crabbs Standard Test Lessons in Reading, a series of lessons designed to help teach students how to comprehend rapidly varied kinds of reading material.

The Controlled Reader, a mechanical reading device by means of which stories and articles are read from a screen, has been used extensively for speed reading and visual training. A comprehension has followed the use of each reading film.

Vocabulary work has involved the use of the dictionary and of the Science Research Associates book, Developing Your Vocabulary, by Paul Witty and Edith Grotberg.

The Diagnostic Reading Tests, Forms A and B, were administered in September and in May, and the progress of each student's reading growth was recorded and was discussed with him.

The objectives for the reading program have included: the development of greater interest in reading; discrimination in the selection of reading material; flexibility in methods and rates of reading; the values of an extensive vocabulary; better comprehension of all materials read; the acquisition of study skills.

It is hoped that the developmental reading course has been of some value to every student.

Sincerely yours,

(Mrs.) Sylvia Day
Reading Consultant
WARRENSVILLE HEIGHTS HIGH SCHOOL
Reading Improvement Center

June 9, 1961

Dear Parents,

As a part of the enrichment program of Warrensville Heights High School, all students in the eleventh grade English classes have participated in a developmental reading program during the second semester.

Study skills have been emphasized in a unit of work based on the book, "How to Study," a pamphlet on study skills written by Clifford T. Morgan and James Deese. Both speed and comprehension have been stressed through the use of the McCall-Crabbs Standard Test Lessons in Reading, a series of lessons designed to help teach students how to comprehend rapidly varied kinds of reading material.

The Controlled Reader, a mechanical reading device by means of which stories and articles are read from a screen, has been used extensively for speed reading and visual training. A comprehension test has been given for each reading film.

Vocabulary work has involved the use of the dictionary and of the Science Research Associates book, Developing Your Vocabulary, by Paul Witty and Edith Grotberg.

The objectives for the reading program have included: the development of greater interest in reading; discrimination in the selection of reading material; flexibility in methods and rates of reading; the values of an extensive vocabulary; better comprehension of materials read; the acquisition of study skills.

An excellent attitude toward the work of the reading program and the finest cooperation have been apparent at all times. Much interest and enthusiasm for the various reading activities have been shown by the students in these classes. It is hoped that the reading course has been of benefit to every student.

Sincerely yours,

(Mrs.) Sylvia Day
Reading Consultant
USEFUL REFERENCE BOOKS FOR HIGH SCHOOL READING TEACHERS


READING DEVELOPMENT MATERIALS PUBLISHED BY SCIENCE RESEARCH ASSOCIATES, INC. (57 West Grand Avenue, Chicago 10, Illinois)

Better Reading Books:
- Volume I: Levels 5.0 through 6.9
- Volume II: Levels 7.0 through 8.9
- Volume III: Levels 9.0 through 10.9

READING LABORATORIES:
- SRA Reading Laboratory IIIa, Secondary Edition, Grades 7 - 12
- SRA Reading Laboratory IVa, College Prep Edition, Grades 9 - 13
- Reading for Understanding, Comprehension Exercises, Grades 3 - 12, and College Remedial
- Spelling Laboratory IIIa, Individualized Spelling, Grades 7 - 9
SRA Reading Booklets:

You Can Read Better, by Paul Witty
How to Study, by Ralph C. Preston and Morton Botel
Streamlining Your Reading, by Paul Witty
Helping Children Read Better, by Paul Witty

Reading Tests:

Triggs Diagnostic Reading Tests: Survey Section
1. RANGE: Lower Level - Grades 4 - 8
2. RANGE: Upper Level - Grades 7 - 13
California Reading Test: Advanced - 9 - 14
California Reading Test: Intermediate - 7 - 8 - 9
Iowa Silent Reading Tests
Durrell Analysis of Reading Difficulty
Gray's Standardized Oral Reading Paragraphs

BOOKS AND WORKBOOKS SUITABLE FOR A HIGH SCHOOL READING PROGRAM

BOOKS: Junior High:
Parades and More Parades, Basic Readers, Grade 7
Panoramas and More Panoramas, Basic Readers, Grade 8
(Scott, Foresman and Co.)
Worlds of Adventure Grade 7
Worlds of People Grade 8
Worlds to Explore Grade 9
(American Book Co.)

Senior High:
Prose and Poetry for Appreciation Grade 10
The L. W. Singer Co., Inc.
Prose and Poetry of America Grade 11
The L. W. Singer Co., Inc.
Prose and Poetry of the World Grade 12
The L. W. Singer Co., Inc.

Reading Skills, by Evelyn Wood and Marjorie Barrows:
(Henry Holt and Co.)
How to Improve Your Reading, by Paul Witty
(Science Research Associates, Inc.)

Teen-Age Tales Series
(D. C. Heath and Company)
Thorndike-Barnhart High School Dictionary
(Scott Foresman and Company)

WORKBOOKS:

Developing Your Vocabulary, by Paul Witty and Edith Grotberg
(Science Research Associates, Inc.)
Basic Reading Skills for Junior High School Use
(Scott, Foresman and Company)
Basic Reading Skills for Senior High School Use
(Scott, Foresman and Company)

Think-and-Do Book, Parades
Think-and-Do Book, More Parades
Think-and-Do Book, Panoramas
Think-and-Do Book, More Panoramas
(Scott, Foresman and Co.)

McCall-Crabbs Standard Test Lessons in Reading, Books D and E
Study Type of Reading Exercises, by Ruth Strang
(Bureau of Publications, Teachers College, Columbia University)

Tests for Reading Skills, (Henry Holt and Co.)
How to Study, by Clifford T. Morgan and James Deese
(McGraw-Hill Book Co.)

SRA Guidance Booklets:
Make Your Study Hours Count
by C. d'A. Gerken and Alice Kemp
Study Your Way through School
by C. d'A. Gerken
Improve Your Learning Ability
by Harry N. Rivlin
Reader's Digest Reading Skill builders, books 2 and 4
(New York: Reader's Digest Educational Department)

MECHANICAL DEVICES:

1. Controlled Reader
   Educational Developmental Laboratories, Inc.
   75 Prospect Street, Huntington, New York
   Representative: Nate Quillen, Medina, Ohio

2. AVR Rateometer
   Audio Visual Research
   531 South Plymouth Court, Chicago 5, Illinois

3. Phrase-o-scope
   Better Reading Program, Inc.
   20 West Jackson Blvd., Chicago, Illinois

4. Tachistoscope
   Lafayette Instrument Company
   Lafayette, Indiana
### Reading Schedule

**Warrensville Heights Junior and Senior High School**

**1962-1963 - First Semester**

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assembly Bell</td>
<td>Regular Bell</td>
<td>Assembly Bell</td>
<td>Regular Bell</td>
<td>English I Class</td>
</tr>
<tr>
<td>8:10</td>
<td>8:10 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>8:55</td>
<td>8:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>9:58</td>
<td>8:10 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>10:31</td>
<td>8:10 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>11:19</td>
<td>12:07 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>12:07</td>
<td>12:07 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>12:55</td>
<td>14:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>1:43</td>
<td>14:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>2:31</td>
<td>14:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>3:15</td>
<td>14:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>4:00</td>
<td>14:00 Reading Conference</td>
<td>75 Reading Class</td>
<td>75 English I Class</td>
<td>74 Reading Class</td>
<td>English I Class</td>
</tr>
<tr>
<td>SUBJECT</td>
<td>ROOM</td>
<td>ROOM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRST SEMESTER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Freshman Registration Form

**Rossford High School**

**FRESHMAN REGISTRATION**

<table>
<thead>
<tr>
<th>REQUIRED:</th>
<th>INSTRUCTIONS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>English I</td>
<td>You may elect two other unit subjects plus instrumental and vocal music. If you have reason to vary from this general rule, please consult your advisor.</td>
</tr>
<tr>
<td>General Science</td>
<td></td>
</tr>
<tr>
<td>and - or</td>
<td></td>
</tr>
<tr>
<td>Ind. Arts - Home S.</td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td></td>
</tr>
</tbody>
</table>

**ELECTIVE:**

**INSTRUCTIONS:**

You may elect two other unit subjects plus instrumental and vocal music. If you have reason to vary from this general rule, please consult your advisor.

---

**Parental Approval**

---

**Name**

**Address**

**Phone No**

**Date of Birth**

**Previous School**

---

---
<table>
<thead>
<tr>
<th>Period</th>
<th>Room</th>
<th>Subject</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PUPIL PROGRESS CARD  
HIGH SCHOOL  
Rossford, Ohio

<table>
<thead>
<tr>
<th>Grade</th>
<th>Year 19</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homeroom</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parent's Signature

<table>
<thead>
<tr>
<th>I.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>II.</td>
<td></td>
</tr>
<tr>
<td>III.</td>
<td></td>
</tr>
<tr>
<td>SEM.</td>
<td></td>
</tr>
<tr>
<td>IV.</td>
<td></td>
</tr>
<tr>
<td>V.</td>
<td></td>
</tr>
<tr>
<td>VI.</td>
<td></td>
</tr>
<tr>
<td>SEM.</td>
<td></td>
</tr>
<tr>
<td>YEAR</td>
<td></td>
</tr>
</tbody>
</table>


NEWARK HIGH SCHOOL

Evaluation Report of "Airborne" Television in American History

<table>
<thead>
<tr>
<th>Groups</th>
<th>Ohio Scholarship Tests Group Average and %ile</th>
<th>Grade Point Ratios (Exam and Average)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1st Sem.</td>
<td>2nd Sem.</td>
</tr>
<tr>
<td>I.  I.Q. 120 and above</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>63.8</td>
<td>85th</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>69.0</td>
<td>92nd</td>
</tr>
<tr>
<td>II. I.Q. 115-119</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>59.9</td>
<td>81st</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>52.4</td>
<td>70th</td>
</tr>
<tr>
<td>III. I.Q. 110-114</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>65.0</td>
<td>86th</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>52.0</td>
<td>69th</td>
</tr>
<tr>
<td>IV. I.Q. 100-109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>60.0</td>
<td>81st</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>48.5</td>
<td>61st</td>
</tr>
<tr>
<td>V. I.Q. 90-99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>50.0</td>
<td>65th</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>45.3</td>
<td>53rd</td>
</tr>
<tr>
<td>VI. I.Q. Below 90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Classes</td>
<td>43.2</td>
<td>40th</td>
</tr>
<tr>
<td>T.V. Classes</td>
<td>38.8</td>
<td>37th</td>
</tr>
</tbody>
</table>

There were 159 American history students included in the above study, thus giving a sizeable representation in each ability group. An attempt has been here made to compare the achievements of the T.V. history students with the achievements of the regular history students by ability groups.

It can be noted above that there was a grade point gain in four of the groups in the regular history classes while there was a gain in only group III in the T.V. classes. This would indicate that T.V. teaching of history in this instance has effected no appreciable increase in academic achievement.

It would seem from this study that T.V. is a good teaching tool when used to supplement classroom instruction, but there is no indication that one could recommend the exclusive use of T.V. as a history teaching device.

Gerald B. Balser
Counselor
### School Year

1969 to 1970

#### Pupil Information Record

**Willoughby-Eastlake City Schools**

<table>
<thead>
<tr>
<th>Student Name</th>
<th>Birth Date</th>
<th>2 Lives With</th>
<th>Enter Date</th>
<th>Exit Date</th>
<th>Grade</th>
<th>Code</th>
<th>First Name</th>
<th>Last Name</th>
<th>Address</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Key to Codes

1. **Birth Place Student**
   - 1 Ohio
   - 2 U.S.
   - 3 Foreign

2. **Sex**
   - 1 Male
   - 2 Female

3. **Lives With**
   - 1 Father
   - 2 Step-Father
   - 3 Mother
   - 4 Step-Mother
   - 5 All Other Father
   - 6 Adopted Mother
   - 7 Adopted Father
   - 8 Other
   - 9 Foreign

4. **Entered From**
   - 0 Home
   - 1 Kindergarten
   - 2 School Out of State
   - 3 Another U.S. School
   - 4 Another Willoughby-Eastlake School

5. **School**
   - 1 Browing
   - 2 Chandler
   - 3 Garfield
   - 4 Jefferson
   - 5 Lincoln
   - 6 Longfellow
   - 7 M-A
   - 8 Rockley
   - 9 Holland
   - 10 North High
   - 11 South High
   - 12 Eastlake Junior High
   - 13 Willoughby Junior High
   - 14 S. S. Senior High
   - 15 Willowick High
   - 16 Sheffield High
   - 17 Metrotown High
   - 18 Highland High
   - 19 Independence High
   - 20 Central High
   - 21 North High
   - 22 South High
   - 23 Eastlake Junior High
   - 24 Willowick Junior High
   - 25 S. S. Senior High
   - 26 Sheffield High
   - 27 Metrotown High
   - 28 Highland High
   - 29 Independence High
   - 30 Central High
   - 31 Browing
   - 32 Chandler
   - 33 Garfield
   - 34 Jefferson
   - 35 Lincoln
   - 36 Longfellow
   - 37 M-A
   - 38 Rockley
   - 39 Holland
   - 40 North High
   - 41 South High
   - 42 Eastlake Junior High
   - 43 Willowick Junior High
   - 44 S. S. Senior High
   - 45 Sheffield High
   - 46 Metrotown High
   - 47 Highland High
   - 48 Independence High
   - 49 Central High

6. **Birth Place Parents**
   - 0 Ohio
   - 1 Other
   - 2 Foreign

7. **Family Status**
   - 1 Living
   - 2 Deceased
   - 3 Living Separated
   - 4 Living Divorced
   - 5 Living Divorced Remarried
   - 6 Living Widowed Remarried
   - 7 Other
   - 8 Foreign

8. **Religion**
   - 1 Catholic
   - 2 Jewish
   - 3 Protestant
   - 4 Other

9. **Language in Home**
   - 0 Lives Less Than One Mile From School
   - 1 Lives One Mile Or More From School

10. **Guardian**
    - 0 Father
    - 1 Mother
    - 2 Step-Father
    - 3 Step-Mother
    - 4 Adoptive Father
    - 5 Adoptive Mother
    - 6 Grandfather
    - 7 Grandmother
    - 8 Other

11. **City Code**
    - 0 Withdrawn
    - 1 Parent
    - 2 Uncle
    - 3 Grandparent

12. **Transportation**
    - 0 Does Not Ride Bus
    - 1 Does Ride Bus

**Note:** Explanation of coded information numbered boxes above is on reverse side.
<table>
<thead>
<tr>
<th>STUDENT CODE</th>
<th>STUDENT LAST NAME</th>
<th>1ST WEEK</th>
<th>2ND WEEK</th>
<th>3RD WEEK</th>
<th>4TH WEEK</th>
<th>TOTALS</th>
<th>TIME</th>
<th>TARDY</th>
<th>NOT DUE</th>
</tr>
</thead>
</table>

TEACHER'S SIGNATURE: ____________________________
## WILLoughby-Eastlake City Schools

### Grade Report

- **Parent's Copy**

<table>
<thead>
<tr>
<th>GRADE</th>
<th>SCHOOL YEAR</th>
<th>SCHOOL CODE</th>
<th>ABSENCES TO DATE</th>
<th>STUDENT NO</th>
</tr>
</thead>
</table>

### Course Credits

<table>
<thead>
<tr>
<th>COURSE</th>
<th>INSTRUCTOR</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>EXAM</th>
<th>FINAL</th>
<th>CREDITS</th>
</tr>
</thead>
</table>

### Grade Key

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>EXCELLENT (A)</td>
</tr>
<tr>
<td>3.0</td>
<td>GOOD (B)</td>
</tr>
<tr>
<td>2.0</td>
<td>AVERAGE (C)</td>
</tr>
<tr>
<td>1.0</td>
<td>BELOW AVERAGE (D)</td>
</tr>
<tr>
<td>0.0</td>
<td>UNSATISFACTORY (E)</td>
</tr>
<tr>
<td>♦</td>
<td>INCOMPLETE (I)</td>
</tr>
<tr>
<td>D</td>
<td>DROPPED</td>
</tr>
</tbody>
</table>

### Notes

- Grades are based on class achievement and fixed course standards.
- Please call for a school conference if you have any questions.

---

**Credits Earned to Date**

- **Credit Granted May Not Be Used in 17.0 Credits Required for Graduation or in Grade Classification**
# Student Information

**W.Loughby Eastlake City Schools**

<table>
<thead>
<tr>
<th>Grade</th>
<th>First Name</th>
<th>Last Name</th>
<th>Class Name</th>
<th>Grade</th>
<th>Student Code</th>
</tr>
</thead>
</table>

## Attending

| Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code | Days | Times | Grade | Year | School | Home Room | Teacher Code |
|-------|------|--------|-----------|-------------|------|-------|-------|------|--------|-----------|-------------|------|-------|-------|------|--------|-----------|-------------|------|-------|-------|------|--------|-----------|-------------|------|-------|-------|------|--------|-----------|-------------|------|-------|-------|------|--------|-----------|-------------|

## Grade Key

- **Excellent (A)**
- **Average (C)**
- **Unsatisfactory (F)**
- **Good (B)**
- **Below Average (D)**
- **Dropped (D)**

## School Codes

- 11: North High School
- 21: Eastlake Junior H.S.
- 31: South High School
- 41: Loughby Junior H.S.

## California Maturity Maturity

**Language**

- English
- Social Studies
- Business
- Industrial Arts

## California Achievement

**Reading**

- Voc
- Comp
- Fund
- Real
- Mech
- Spelling

**Spring**

- Pass
- Fail

- Gain
<table>
<thead>
<tr>
<th>COURSE</th>
<th>PERIOD</th>
<th>ROOM NUMBER</th>
<th>SEM</th>
<th>DAYS</th>
<th>CREDIT</th>
</tr>
</thead>
</table>

**SEASON CODE**

1. 1st SEMESTER ONLY
2. 2ND SEMESTER ONLY
3. ALL YEAR

**TO THE STUDENT:**

IT IS REQUIRED THAT YOU BRING THIS COPY OF YOUR SCHEDULE WITH YOU WHEN YOU REPORT TO THE ABOVE SCHOOL.

**STUDENT COPY**
STUDENT

WILLOUGHBY-EASTLAKE CITY SCHOOLS

SCHEDULE OF FEES

REGISTERED FOR THE COURSES AND ACTIVITIES LISTED BELOW FEES ARE CHARGED TO COVER MOST OF THE COST OF CONSUMABLE SUPPLIES USED BY THE STUDENT

<table>
<thead>
<tr>
<th>COURSE OR ACTIVITY</th>
<th>FEE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL $
<table>
<thead>
<tr>
<th>STUDENT LAST NAME</th>
<th>STUDENT FIRST NAME</th>
<th>CLASS DESCRIPTION</th>
<th>PAYED</th>
<th>TOTAL</th>
<th>FEES</th>
<th>STUDENT CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WILLoughby EastLAKE
CITY schools
WILLoughby, Ohio

Fee Card

The amount indicated above as "Fee" has been paid.
## Test Analysis Class List

<table>
<thead>
<tr>
<th></th>
<th>Reading</th>
<th>Writing</th>
<th>Mathematics</th>
<th>Science</th>
<th>Social Studies</th>
<th>Science</th>
<th>Date of Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford Achievement Gr. Pl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Achievement Gr. Pl.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO-OPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Mental Maturity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Last Name</th>
<th>First</th>
<th>Grade</th>
<th>Test Name</th>
<th>Score</th>
<th>Student Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test totals are in the row above.

Test averages are in the row below.
DEAR PARENTS:

The information shown on this form is a part of your child's school record. Please check for accuracy and make changes only where they are necessary. If corrections are to be made, record them in the blank spaces under the items to be changed. A prompt return of this form to the school would be appreciated.

Chris Artale, Director
Pupil Personnel Services

Willoughby-Eastlake City Schools

<table>
<thead>
<tr>
<th>STUDENT NAME</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LAST NAME</td>
<td>FIRST NAME</td>
<td>BIRTH DATE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| STUDENT LIVES WITH | | |</p>
<table>
<thead>
<tr>
<th>LAST NAME</th>
<th>FIRST NAME OF FATHER OR PERSON HAVING PARENTAL AUTHORITY</th>
<th>FIRST NAME OF MOTHER OR PERSON HAVING MATERIEL AUTHORITY</th>
<th>PLACE OF EMPLOYMENT</th>
<th>OCCUPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<p>| STUDENT ADDRESS | | |</p>
<table>
<thead>
<tr>
<th>HOUSE NO.</th>
<th>STREET NAME</th>
<th>TELEPHONE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHECK ONE:

- INFORMATION CORRECT AS PRINTED.
- INFORMATION NOT ACCURATE, CORRECTIONS HAVE BEEN MADE.

PARENT SIGNATURE
APPENDIX E

Appendix Tables I-V Giving Number of Responses to Elements of Staff Utilization Practices in Ohio (pp. 440-444)
### Table I

**The Number of Responding Ohio School Districts Indicating the Existence of and/or the Contemplation of Involvement with Team Teaching as Public Secondary School Practice as of June, 1962**

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area (A—Operating; B—Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition:</strong> An arrangement whereby two or more teachers with or without teacher aide plan, instruct, and evaluate cooperatively one or more class groups during a given period(s) in order to take advantage of their respective special competencies.</td>
<td><strong>Districts Reporting</strong></td>
</tr>
<tr>
<td></td>
<td>English</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Teachers sometimes team with others to instruct one or more classes.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>2. There is a systematic arrangement whereby teams of teachers and/or aides teach large groups of students.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>3. Where the team structure exists, the most experienced or able teacher is designated as team leader.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>4. Some financial incentive plan exists to give the team leader extra pay.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>5. Team members teach fewer than the usual hours per week.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>6. If more than one teaching team exists, someone is assigned to coordinate the activities of these teams.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>7. Opportunity is provided within the schedule for team members to meet together during a common free time.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
</tbody>
</table>

*The above responses were tallied from questionnaires returned by 89 city school districts out of a possible 151, 47 county school districts out of a possible 86, and 39 exempted village school districts out of a possible 66. There were 176 questionnaires in all returned out of a possible 307 mailed.*
<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area (A—Operating; B—Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Those kinds of aids are employed (please count separately):</td>
<td></td>
</tr>
<tr>
<td>(a) Provision teachers from teacher-training program</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>21 20</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>15 15</td>
</tr>
<tr>
<td>All</td>
<td>36 35</td>
</tr>
<tr>
<td>(b) College students (non teacher-teachers)</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>1 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>1 0</td>
</tr>
<tr>
<td>(c) Clerical assistants</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>1 2</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>2 2</td>
</tr>
<tr>
<td>All</td>
<td>3 4</td>
</tr>
<tr>
<td>(d) College-trained adults from the community</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>4 3</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>4 3</td>
</tr>
<tr>
<td>(e) Other adult (not college trained or clerical)</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>0 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>0 0</td>
</tr>
<tr>
<td>2. Those aids function as</td>
<td></td>
</tr>
<tr>
<td>(please count separately):</td>
<td></td>
</tr>
<tr>
<td>(a) Laboratory supervisors</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>0 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>0 0</td>
</tr>
<tr>
<td>(b) Lay readers of some written work</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>1 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>1 0</td>
</tr>
<tr>
<td>(c) Objective test graders</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>4 4</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>2 2</td>
</tr>
<tr>
<td>All</td>
<td>6 6</td>
</tr>
<tr>
<td>(d) Teachers for make-up or remedial work by individuals or small groups</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>3 3</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>3 3</td>
</tr>
<tr>
<td>All</td>
<td>6 6</td>
</tr>
<tr>
<td>(e) Hall or playground supervisors</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>2 2</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>2 2</td>
</tr>
<tr>
<td>All</td>
<td>4 4</td>
</tr>
<tr>
<td>(f) Study hall supervisors</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>1 1</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>1 1</td>
</tr>
<tr>
<td>All</td>
<td>2 2</td>
</tr>
<tr>
<td>(g) Literary assistants</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>2 2</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>2 2</td>
</tr>
<tr>
<td>All</td>
<td>4 4</td>
</tr>
<tr>
<td>(h) Shop supervisor</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>0 0</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>0 0</td>
</tr>
<tr>
<td>All</td>
<td>0 0</td>
</tr>
<tr>
<td>(i) Clerical</td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>A  B</td>
</tr>
<tr>
<td>County</td>
<td>5 5</td>
</tr>
<tr>
<td>Exempted Village</td>
<td>2 2</td>
</tr>
<tr>
<td>All</td>
<td>7 7</td>
</tr>
</tbody>
</table>

The above responses were tallied from questionnaires returned by 80 city school districts out of a possible 181, 48 county school districts out of a possible 58, and 39 exempted village school districts out of a possible 60. There were 176 questionnaires in all returned out of a possible 537 mailed.
### TABLE IV

**THE NUMBER OF RESPONDING OHIO SCHOOL DISTRICTS INDICATING THE EXISTENCE OF AND/OR THE CONTEMPLATION OF INVOLVEMENT WITH SCHEDULE CHANGES AS PUBLIC SECONDARY SCHOOL PRACTICE AS OF JUNE, 1962**

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Subject Area (A—Operating; B—Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition:</strong> Schedules are more flexible because of modifications which affect the length and/or number of periods, lengthen the school year, or provide for new types of activities.</td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Districts Reporting</td>
</tr>
<tr>
<td>1. Classes are scheduled for longer than normal periods, but for fewer times per week.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>2. Extra periods for specialised large-group instruction have been created.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>3. The school day is divided into 15-, 20-, 25-, or 30-minute time units with classes scheduled for different numbers of units (modules).</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>4. The regular schedule may be changed for an individual student on any given day.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
<tr>
<td>5. A summer school is operated to provide special opportunities for all students who wish to attend.</td>
<td>City</td>
</tr>
<tr>
<td></td>
<td>County</td>
</tr>
<tr>
<td></td>
<td>Exempted Village</td>
</tr>
<tr>
<td></td>
<td>All</td>
</tr>
</tbody>
</table>

*The above responses were tallied from questionnaires returned by 88 city school districts out of a possible 151, 49 county school districts out of a possible 86, and 39 exempted village school districts out of a possible 68. There were 176 questionnaires in all returned out of a possible 307 mailed.*
TABLE V


<table>
<thead>
<tr>
<th>Subject Area (A—Operating; B—Contemplated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Reporting english</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>1. TV programs are received over one or more TV sets available in the building. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>2. Facilities are available to receive &quot;airborne&quot; broadcasts. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>3. Overhead projectors are used. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>4. The reading classes use such devices as reading telescopes. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>5. An electronically equipped laboratory is utilized (e.g., language). City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>6. Closed circuit TV is utilized for large-group instruction. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>7. &quot;Teaching machines&quot; are available for use as self-teaching devices in independent study or regular classroom instruction. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>8. Tape recorders are systematically used. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>9. Data processing equipment is used in preparing student class schedules. City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
<tr>
<td>10. Data processing equipment is used in preparing student class schedules (e.g., cumulative records, attendance reports, report cards, etc.) City</td>
</tr>
<tr>
<td>County</td>
</tr>
<tr>
<td>All</td>
</tr>
</tbody>
</table>

"The above responses were tallied from questionnaires returned by 50 city school districts out of a possible 191, 49 county school districts out of a possible 305, and 30 exempted village school districts out of a possible 66. There were 176 questionnaires in all returned out of a possible 307 mailed."
BIBLIOGRAPHY
BIBLIOGRAPHY

Books


Pamphlets


Periodicals


Ten Hoor, Marten. "Before Us, the Deluge" Liberal Education, XLVII (October, 1961), pp. 421-36.

I, Lorella Almeda McKinney, was born near Lafayette in Allen County, Ohio, June 7, 1925. Grades one through twelve were attended at Auglaize Rural School, Harrod, Ohio. Undergraduate training was taken at Ohio Northern University, Ada, Ohio; there I received the Bachelor of Science in Education degree in 1947. The Master of Arts degree was received in 1950 from the Ohio State University where I had held the Westminster Foundation Fellowship for two years. While in residence there for two years, I was Assistant Head Resident of Westminster Hall. In the summer of 1954, I attended Purdue University on a General Electric Fellowship. I attended Carnegie Institute of Technology in the summer of 1955 on a Westinghouse Fellowship. For the summer of 1956, I received a duPont Fellowship to attend Case Institute of Technology. The three summers' work consisted of graduate study in mathematics, physics, and chemistry. From September, 1960, to June, 1962, I was an Instructor in the Department of Secondary Education, the Ohio State University, while pursuing requirements for the Doctor of Philosophy degree. Summers of 1961 and 1962 were spent teaching graduate courses in the Division of Teacher Education at Emory University, Atlanta, Georgia.

I have accepted a position as visiting Instructor at Emory University for the summer, 1963. I shall return in September, 1963, to an administrative position in the Willoughby-Eastlake City Schools from which I am on leave of absence.