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OHIO SCHOOL HEALTH EDUCATION STUDY: STATUS OF THE SCHOOL HEALTH INSTRUCTION PROGRAM IN OHIO'S PUBLIC SECONDARY SCHOOLS

DISSERTATION

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

By
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The Ohio State University
1973

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CHAPTER I

INTRODUCTION TO THE STUDY

Curriculum reform has been taking place in our country for more than two decades. Even though the initial emphasis in curriculum change has been confined to the so-called basic subjects, many other areas have felt its impact. Health education is one of those areas. The School Health Division of the American Association for Health, Physical Education, and Recreation recently published its position on Health Education.

We subscribe to the idea that "the health of a nation depends upon the health of its individual citizens." More than the "mere absence of disease or infirmity," more than "a state of complete physical, mental and social well-being," health is a condition which enables the individual to realize and utilize his full potential and capabilities. The healthy person is a whole person--a unity of multidimensional components each of which contributes to the integrated whole.... Health is seen not as a goal or end in itself but rather as a means toward achievement of life's goals.

---


Kaplan goes on to say that "health education should be achieved through education which provides individuals with insights into the complexities and interrelationships of the human condition. We need to provide the kinds of learning experiences that can help students to solve real problems and to cope with unsolvable ones."\(^3\) We need to assess whether or not we are, in fact, providing these kinds of learning experiences and if changes need to be made.

The Ohio School Health Education Study provides an avenue for documentation of needed change. A description of the events and influences in Ohio's schools which have given impetus to the study adds further evidence to the need for such an investigation. Change comes about very slowly, and it is imperative for the accomplishment of the goals of health education that this change process be accelerated.

This study of the health instructional practices in Ohio's public secondary schools is a further attempt to document the need for reform and, as a result of its conclusions and recommendations, to urge health educators to promote changes and improvements in their particular settings.

Background of the Study

It has long been recognized that good health is a fundamental

\(^3\)ibid., p. 9.
quality of life that provides the potential for human productivity. It has long been recognized also that favorable health practices must be learned. Relevancy in learning has been a key concern to educators throughout our country. We are looking for satisfying experiences and motivating learning opportunities that are going to provide meaning to today's youth. A sound health education program in our schools is imperative if the acquisition of this essential knowledge is to take place.

In 1961 the School Health Education Study, Inc., funded by the Bronfman Foundation and conducted by an interdisciplinary advisory committee, was begun. This was a nationwide study which attempted, in Phase I of its design, to assess the health instructional practices in grades kindergarten to twelve. A second phase of the study included the administration of health behavior inventories to students in the sixth, ninth, and twelfth grade levels of selected schools from throughout the nation. Several pertinent recommendations came from the results of that study. One such recommendation states that "...local school systems or individual states should plan and carry out self-evaluation studies of their health instruction programs to determine existing strengths and weaknesses." This recommendation gave some of the


5Ibid., p. 13.
initial impetus and background to the present Ohio Study.

A further aspect of the background of the Ohio Study centers around the fact that even though health instruction has existed at least to some extent in Ohio schools for over fifty years, no research of similar magnitude to that of the School Health Education Study, Inc. has been done in Ohio. Further review of related literature indicates that some research has been conducted concerning selected aspects of health instruction in Ohio, but an overall assessment of a current status of health instruction in the public secondary schools of Ohio has not been attempted.

Another facet of this study's background provides justification for the investigation. Prior to January 1, 1972, teacher certification was granted jointly in health and physical education; however, only seven of the twenty-four semester hours were required to be in health education courses per se for the Provisional High School Certificate. Thus, teachers were being sent to schools to teach health with a minimum amount of professional preparation to do so. Although a teaching certificate for health only was available which required twenty-four semester hours in health education, the person who was legally certified to teach health education by virtue of his physical education concentration was

---

often the one being employed for the health education position also.

On January 1, 1972, a revision of this certification law became effective. Health education certification can now be obtained by one of the following two methods:

1. completing the requirements of a special certificate in health education--thirty semester hours, or

2. by completing the requirements prescribed for the health teaching field--twenty semester hours. 7

No longer will a student with a major in physical education be certified as a health educator without declaring health education as an area of concentration and completing the prescribed courses. In other words, health education and physical education now have completely different courses of study in professional preparation programs.

This study could reveal the professional preparation of those teaching health in the schools of Ohio. Is this preparation in health education or is it in fact in physical education? It can also be a basis for further research into the actual effects of the recent teacher certification revision.

Statement of the Problem

In all areas of education, Ohio is concerned with the

achievement of the highest standards of quality. The purpose of this study is to determine the current practices in health instruction in the public secondary schools of Ohio. It is also the purpose of this study to compare these practices with accepted guidelines for effectiveness in health education and to establish a baseline for future planning and curriculum development.

Before such a baseline can be established, certain basic areas of the present health education programs need to be examined and their status ascertained. These include:

1. the organization of health instruction
2. student grouping and size
3. provision of instructional time
4. credit given for health instruction
5. teacher qualifications
6. facilities and textbooks used
7. content of health instruction

These are the basic areas that make up the health instructional program. The amount of time given to health instruction, the preparation of the teacher, the size of the class, all have a direct influence on the quality of instruction. Strengths and weaknesses in these areas need to be revealed in order for changes to be made. The role that health instruction plays in the schools can be determined by an assessment of the status of these factors.
Since the model for this research design will be similar to the one used in Phase I of the School Health Education Study, Inc., certain comparisons will also be made with instructional practices in health education in the nation at that time.

Delimitations of the Study

Certain delimitations have been made regarding this study. They are:

1. The sample will be limited to the 624 school districts listed by the Research Division of the Ohio Education.

2. School districts have been divided into very small, small, medium, and large as prescribed in the School Health Education Study, Inc.

3. Materials were sent to the principals of the sample high schools as listed in the 1972 Ohio Education Directory. This could be limiting in that someone more directly involved with health instruction might be able to more accurately respond.

4. A lack of adequate response to the questionnaire could be a limitation; however, follow-ups were a planned part of the study to insure as high a return percentage as possible.
5. This study was limited to assessment of the health instructional practices in the public secondary schools of Ohio.

6. An interpretation of the terminology used could be limiting in that perception of terms might be different to various respondents to the instrument.

7. The .01 level of confidence was used in the statistical procedures instead of .05 or a higher level.

Definition of Terms

1. School district - one of the 624 divisions of schools in Ohio. These are listed in the Ohio Educational Directory. Each district may contain one, or many individual schools.

2. Population of school districts - the total enrollment of all schools, elementary and secondary, within a specific district.

3. High school - schools listed as "high school" in the Ohio Educational Directory. Some have grades 7-12, others have 8-12, 9-12 or 10-12. 8

4. Health education - the process of providing and utilizing experiences for favorably influencing understandings, attitudes, and practices relating to individual, family and community health. 9

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5. Health instruction - the planned and incidental imparting of formal and informal health knowledge.

Summary

This chapter has presented a brief background of the Ohio School Health Education Study by identifying some of the factors which have given the study its impetus. The assessment of the health instructional practices in Ohio's public high schools has been described as the study's major purpose. Certain delimitations and definitions of the study have been listed so that an accurate picture of the scope of the study is presented.

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CHAPTER II

REVIEW OF THE RELATED LITERATURE

The identity of health education can be seen clearly throughout the literature as a separate discipline that is struggling for recognition both philosophically and practically by the administrative leaders in education. One of the main avenues through which the goals of health education can be achieved is the instructional phase of the total school health program.

Because it may be assumed that health behavior can be learned and that learning about health can take place effectively in a classroom situation, much of our attention needs to be focused on the assessment of the instructional practices that are subscribed to in our nation's schools. The literature reveals concern for improvement and continued innovation in some of the specific areas of instructional practices; namely, health content or subject matter, professional preparation, and methodology.

We no longer can be content to plod along with the "fact" approach to the teaching of health. Our teaching must be geared toward relevancy and meaningfulness and a continued assessment and evaluation
of instructional practices is imperative if effectiveness is to be achieved.

The focus of this chapter is a review of the assessment process that has taken place thus far. The review begins with a look at the broad research which depicts a nationwide trend. The one project which has been done on a national level is the School Health Education Study, Inc. with its implications for individual states.

The chapter then describes a review of what has been done on the state levels. State studies are reviewed which have assessed health instructional practices in their respective high schools. The state of Ohio is specifically emphasized in order to bring the past research into full review. This will enable a clear picture to be painted for the basis of the present Ohio study.

The School Health Education Study, Inc.

Whereas the literature can reveal thought and insight into health instruction in our country, only research of a specific nature can give a statistically accurate picture. A topic of professional concern for many years has been the actual effectiveness and status of health education programs. Most of the research has been confined to more local areas and it has been the general consensus among health educators that before further recommendations toward curriculum improvement could be made, a study of instructional practices was
needed.  

The School Health Education Study, Inc. was initiated in September, 1961 for the purpose of improving health instruction programs in schools. An interdisciplinary advisory committee of nationally recognized leaders from the fields of medicine, public health, school and college health education, and school administration gave direction and guidance to the project. Between September, 1961 and December, 1965, the following activities of the study were completed:

1. A monograph summarizing the research related to health instruction was publicized.

2. A status study of large, medium, and small size school districts was done to determine health instruction program practices.

3. A survey was taken of the health behavior of students in grades 6, 9 and 12.

4. A conceptual framework for a health education curriculum (grades K-12) was developed and two sample sets of instructional materials were prepared.

5. Curriculum materials were experimentally tested in four school tryout centers.  

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It is with the status study phase that this review is mainly concerned, four out of this study came the first research based statistics as well as recommendations for nationwide program assessment.

The sampling procedure used for the instructional practice phase of the study was devised with the help of the Research Division of the National Education Association. In it school districts throughout the nation were divided according to student enrollment as follows:

- Large - 25,000 or more
- Medium - 3,000-25,000
- Small - 300-3,000
- Very small - 1-300

A random sample was taken from each size district giving a total of 135 districts participating in the study—12 large, 23 medium and 100 small systems. The Summary Report describes the instrument used and percentage of return.

Two survey form questionnaires, one for elementary grades and the other for secondary grades, were designed to obtain information about prevailing practices related to health instruction. The chief administrative officer of each of the school systems, that agreed to participate in the study, was asked to provide the information for the grades included in the district under his jurisdiction.

Responses were received from 94.4 per cent of the school systems with elementary grades and 93.6 per cent of those with secondary grades. The findings in this phase of the study represent 1,101 individual elementary schools with
a total enrollment of 529,656 students, and 359 secondary schools with 311,176 students.  

Space does not permit a duplication of all the findings of that study in this review. Several of the findings will be reported later in this study in table form. However, one of the major conclusions made from the survey was that health instruction and health content needed improvement and organization.

A summary of some of the recommendations resulting from that study provides us with further insight into the status of health instruction in our nation's school programs.

1. Local school systems or individual states should plan and carry out self-evaluation studies of their health instruction programs to determine existing strengths and weaknesses.

2. Critical appraisal of all aspects of health instruction is urged. Some facets of the program that should be examined are:

a. professional preparation in health education and teaching effectiveness of staff assigned to health instruction.

b. nature and extent of responsibilities other than classroom teaching that are expected of those designated as health instructors.

c. in-service opportunities available to teachers for strengthening and expanding their professional competencies in health education.

d. scheduling practices and time allotment for health education.

e. organizational patterns and administrative factors affecting the health instructional program.

f. factors in the teaching-learning environment related to instruction and student health practices.

g. repetition of learning experiences and omission of health content areas.

3 ibid., p. 5.
h. policies related to the teaching of subject matter considered to be controversial.

i. placement and sequential development of health concepts by grade levels.

j. methodology and teaching approaches.

k. scientific accuracy and grade level appropriateness of instructional materials.

l. interpretation to the school staff, parents, and community of the need for health education, its objectives, and its unique characteristics.

m. parent education programs in health education to assure reinforcement of what is learned in schools.

n. evaluation procedures.

3. Faculty members and administrative staff in teacher preparation programs should review the findings of this study for implications relating to the preparation of all teachers who will be expected to assume any responsibility for health instruction in schools.

4. A person with specialized professional preparation in health education and who possess other desirable attributes should be designated to assume responsibility in each school system for the overall coordination of the health instruction program and to provide supervisory assistance.

5. Communities should seek to develop local curriculum guides, or adapt state guides and materials produced on a national level to meet local needs and problems. Professional authoritative assistance of other disciplines outside of the educational field should be enlisted to help validate the accuracy of health content of instructional materials.

6. Needs for research, experimentation, and evaluation expressed throughout this study should be considered by school systems, graduate departments of colleges and universities, public agencies, private organizations, foundations, and others who are interested in research activities. Efforts should be made to become acquainted with existing sources of support for research in school health education and to stimulate interest in the provision of assistance from yet untapped resources.\(^4\)

Even though the extent of the impact made by the School Health Education Study, Inc. on specific curriculum revision cannot at this time be fully realized, its influence can be noted throughout the literature and in our professional preparation institutions. Continued research needs to be done to ascertain its direct influence on school districts throughout the nation. The phase of the Study dealing with pupil health behavior can be a very real incentive for continued improvement in curriculum development. Impetus for more localized research has already been gained through the recommendations of this very important study. A discussion of some of the specific state studies adds evidence to this fact.

State Studies--Doctoral Dissertations

Several state studies to determine practices in health instruction have been conducted. Some were done prior to the School Health Education Study, Inc. and some as a result of it.

In 1952, Dratz took a survey of health education in public secondary schools of six selected states, namely, Montana, New Jersey, Iowa, Michigan, California, and Florida. This study indicated that none of the states surveyed except New Jersey offered a separate course in health instruction.  

Sinacore, in 1956, studied the health education programs in the public secondary schools of Long Island, New York, using the following nine areas for evaluation: teacher preparation, time allotment, needs and interests, course content, methodology, facilities and equipment, community resources, coordination of programs, and administration. From the study he concluded that personnel were unqualified according to state standards, time allotment was inadequate, the relationships of biology to health education and physical education were confused, and that only a small number of schools attempted correlation of any kind in health education.  

The health instruction in public secondary schools in thirty-two states was evaluated by Manthey in 1962, as a base for improvement of health instruction in the public secondary schools of Lincoln, Nebraska. Findings indicated that in these states formal courses in grades ten and eleven with five fifty-five minute periods per week for one semester was the general practice, that physical educators were the ones teaching the class, that the lecture-discussion method was the one most often used, and that most evaluation was done through teacher constructed tests. Recommendations from this study included the following: philosophy of health education should be stated in the curriculum guide, periodic studies

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should determine content and desired outcomes of health course, health education should be coordinated at all grade levels, and the teacher of health instruction should possess a major in health education.\(^7\)

Kennison reported from his study of Kentucky's public schools that the typical Kentucky school had a year's health course at the ninth grade level using a two-three plan alternating with physical education and reversing the two and three each semester. The typical class contained an average of twenty-eight students, was segregated, fifty-five minutes in length, and contained content designed by the teacher. He recommended an attempt be made to achieve a balance in the health instruction program and that similar research be done in a few years.\(^8\)

In a study of health instruction in fifteen Texas public schools, Dees evaluated preparation and attitude of teachers, course content, compliance with Texas Education Agency Requirements, facilities and equipment, and library materials. Of a possible forty-five points, no district received more than thirty four and one-half points and low ratings were received on fifteen of the items. He found that a majority of schools


did not comply with the requirements for health education. 9

Levy, through the use of his own questionnaire, studied the health instructional practices of the public secondary schools of New Jersey. The recommendations of this study included new state requirements with a minimum of one semester of health education for one semester, five days per week in the seventh, ninth, tenth and twelfth grades, health specialists to teach classes, and classes to be made co-educational. 10

Two states have used the research model of the School Health Education Study, Inc. to study the health instructional practices. In Tennessee, Huntsinger administered the School Health Education Study, Inc. questionnaire to twenty school districts. From a summary of the conclusions, the following recommendations were made for Tennessee's schools.

1. A state-wide committee be organized to develop a curriculum guide.

2. Health instruction requirement be stated in minutes/period, periods/week, and semesters/year for all grade levels.


3. Change state requirements from one to two semesters.

4. Better coordination of health content areas and inclusion of more areas.

5. In-service programs concerning contemporary areas in health curriculum.

6. A study be made in Tennessee to determine health knowledge and practices. 11

In Missouri, Taylor surveyed the public schools and teacher training institutions to determine the status of the school health education programs. He found that in Missouri teacher training institutions are producing practically no health educators. He recommended that high integration of health content areas in the curriculum be maintained and that separate required classes are both ineffective in increasing health knowledge and do not provide adequate substitutes for integration. He recommended that high integration of health content areas in the school curriculum be established and maintained before required or offered separate health courses are provided. 12


Loehner, in determining the status of health instructional practices in Colorado, concluded that even though health education was seen as a valuable part of the general education program, there was little evidence of quality programs in the State. Health education was considered relatively trivial and superficial subject matter and most administrators seemed to have an inadequate concept of health education. He also concluded that health education in the public secondary schools of Colorado needed critical re-evaluation and revision. 13

In a study of grades one to twelve in the Kansas public schools, Dorsch found that health education in secondary schools is taught by a teacher who is not a specialist or who has a dual major. Responses indicated that secondary students are less enthusiastic about health education than are elementary students. Recommendations included requiring health education at both junior and senior high school levels and making mandatory at least four courses in health education for every prospective teacher. 14


The Rhode Island School Health Education Study

Funded by the United States Office of Education, the Rhode Island School Health Education Study was probably the most extensive state study done since the School Health Education Study, Inc., due to state and federal funding and school participation. Modeled after the School Health Education Study, Inc. in both the behavior and instructional phases, its purpose was that of establishing a baseline for future planning and curriculum development. The findings were not dissimilar to the National Study, but they belong uniquely to the Rhode Island schools. These included: state support for health education in Rhode Island was weak; heavy responsibility for curriculum decisions rests with individual teachers; and there was little uniformity in course titles or content. The Rhode Island Study revealed that educators in the state had a keen perception of the problems in health education, thus could provide suggestions for improvement of the status of health education in its state.  

In summary, the state studies reveal the need for much improvement and for further study of the specific areas of health instruction. However, they also reveal an interest and re-awakening on the part of health educators in bringing health education up to a level with other courses, not for competitive purposes, but because of

a basic belief in the inherent value of this kind of behavior that can be learned effectively through adequate health instruction.

In June of 1971, Leigh reported from a nationwide survey of health instruction the following items:

1. Thirty-two of the reporting forty-four states have curriculum guides.

2. The ten most frequently recommended for instruction were (in order) family living, nutrition, mental-emotional health, diseases, safety, consumer health, drugs and narcotics, alcohol, community health, and dental health.

3. Thirty-two of the reporting states have accessory materials available in health instruction.

4. Thirty-one states have statutes requiring some form of health.

Health Instruction in Ohio

In 1950, Mackey studied the health instruction practices for boys in the public secondary schools of Ohio. Prior to this study none other in Ohio had been done. As a result of Mackey's study, the following were among the conclusions which indicate that status of health instruction.

1. ... the schools in this study generally required a course in health education. Size appeared to be a definite factor

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involved for the large schools more frequently required health than did the small schools.

2. With respect to the Ohio State Department of Education standard for time spent in health instruction, it appeared that a considerable number of the senior and junior-senior high schools failed to meet the minimum requirements...

3. The majority of schools were found to teach health as a separate course and in addition some schools taught it as units in other courses and integrated in the curriculum...

4. Apparently homogeneous grouping in health education classes was not considered very important, for grade was the primary means of classifying students for assignment to health classes.

5. There was little evidence of common practice with respect to segregating boys and girls for health instruction. Apparently locally established policies determined the practice with regard to this aspect of the program.

6. Although the Ohio State Department of Education has recommended that one-half credit in health education be required for graduation from high schools, there was little evidence of standard procedure in regard to the credit requirement.

7. The methods of granting credit for health education were to combine the credit with physical education or to grant credit separate from any other course.

9. In general the health teaching in the schools in this study was based on courses of study prepared by individual teachers...

10. Audio-visual and other types of instructional equipment are used extensively in health education classes...

12. In general, little is being done to gear the health instruction to the students' needs and interests...

16. The teacher-constructed health test was the primary means of measuring student achievement in health education.

19. The vast majority of the health teachers whose background
and training was reported in this study held at least a Bachelor's degree and some specialized training in health education.  

Another study was done by Marcum in Ohio in 1960. The participants of this study were limited to high schools in exempted villages in Ohio. Sixty-two principals and 324 teachers were interviewed. Marcum found that a definite health class which alternates with physical education seemed to be favored, that the high schools have not accepted the recommendations to initiate health courses that are on par with other curricular offerings, and that learning and instruction appears to be dependent upon increased supervisory and coordinating assistance for the teachers of various subject matter areas. Six basic recommendations for Ohio's schools came from this study.

1. An annual report covering the school health program should be made by each school.

2. Increased supervision should come from the state level.

3. Teacher certification requirements should be changed to include at least a minor in health.

4. A health coordinator should be utilized.

5. Health courses should be on a par with other courses.

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6. Status studies should be done every three to five years.\textsuperscript{18}

In 1964 the Ohio Department of Education sent a questionnaire to principals of all junior and senior high schools in Ohio. One of the purposes of this questionnaire was to determine the status of health and physical education programs in Ohio's schools relative to (a) certification of health and physical education teachers and athletic coaches, (b) subjects taught in combination with health and physical education, and (c) major teaching assignments of coaches of interscholastic teams.\textsuperscript{19}

Regarding health education, the following four questions were asked:

1. What percent of their teaching load do your health teachers devote to the teaching of health?

2. In what other areas do your part-time health teachers teach besides health education?

3. How many of your science teachers teach health as a separate course?

4. How many of your science teachers teaching health are not certified to teach health?\textsuperscript{20}


\textsuperscript{20}Ibid., p. 2.
The answers to these questions were compiled in chart form and the following general conclusions can be drawn from the study.

1. The largest percentage of men and women who teach health who replied to the survey devote less than one-half of the time of their teaching load to the teaching of health.

2. Part-time health education teachers have more teaching responsibilities in physical education than in any other area. Science and biology was the next most often checked area.

3. Forty-five men and twenty-four women replying to the survey are not certified to teach health.

This study was not too revealing as far as the status of the health instructional practices in Ohio's schools is concerned. The major emphasis of the study was physical education and not health education.

An overview of the current Ohio health instructional practices indicates:

1. There is a curriculum guide in use (1967) and accessory materials available along with state laws written regarding health instruction.\(^{21}\)

2. Ohio's laws require the following topics to be taught:

   alcohol, drugs, safety, and first aid with a suggestion

3. One semester of health education is required to be taken any time during grades nine through twelve.

4. Based on the certification requirements of the past and the results of the studies done to this point, the amount of preparation of those teaching health is less than the recommended guidelines.

5. There are wide and varied practices in health instruction throughout the state.

It is with this appraisal in mind of the total research done concerning health instruction in Ohio, that the present study is undertaken. Before improvement in curriculum can be made, before health instruction can realize its full potential in the mind of students, we need to know where to start. This study can give us that information.

Summary

This chapter has reviewed the literature relevant to the aspects of this study. The School Health Education Study, Inc. is the major national study that has assessed the instructional practices in public schools. Some states have also carried out assessment procedures in the form of research. The majority of these studies have

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22Ibid., pp. 35-40.

23Ibid.
either been doctoral dissertations or master's theses. Whereas each state's problems and strengths are uniquely their own, a knowledge of these can be beneficial to those who wish to make an assessment of the health instructional practices in their own state or locality.

Although not extensive, the research and literature relevant to the state of Ohio do provide baseline information for the present Ohio study.
CHAPTER III

PROCEDURES FOR THE STUDY

This chapter describes the procedures used in collecting the data for the study. It includes a description of the sample and how it was obtained, the instrument and its design, the endorsement of the study and its value, and a discussion of the percentage of the return.

The Sample

The model for the design of this study was the one used in Phase I of the School Health Education Study. As in the School Health Education Study, it was clear that the only feasible, practical way to conduct the Ohio research was to study a sample of the total group. In the first stage of the sampling, the 624 school districts in Ohio were divided into four enrollment classifications: large - 25,000 and over, medium - 3,000 to 25,000, small - 300 to 3,000, and very small - 1 to 300. This information was obtained from the Research Division of the Ohio Education Association. ¹ Table 1 gives the total number of school districts in Ohio and their enrollment.

Table 1
Ohio's School Districts

<table>
<thead>
<tr>
<th>Strata</th>
<th>Strata Enrollment and Size</th>
<th>Number of Systems</th>
<th>% of Systems</th>
<th>% of Pupils Enrolled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>25,000 and over</td>
<td>8</td>
<td>1.3</td>
<td>30</td>
</tr>
<tr>
<td>Medium</td>
<td>3,000 to 25,000</td>
<td>210</td>
<td>33.6</td>
<td>45</td>
</tr>
<tr>
<td>Small</td>
<td>300 to 3,000</td>
<td>400</td>
<td>64.1</td>
<td>24</td>
</tr>
<tr>
<td>Very small</td>
<td>1 to 300</td>
<td>6</td>
<td>1.0</td>
<td>1</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>624</td>
<td>100.0</td>
<td>100</td>
</tr>
</tbody>
</table>

The school districts were listed and numbered. A random sample of fifty per cent of each classification was taken by selecting numbers from a box and selecting the corresponding school district from the list as a participant for the study. Table 2 shows the number of school districts used in this study as a result of the random sample selection procedure.

The Instrument

The questionnaire from Phase I of the School Health Education Study was used as a model and changes were made where appropriate to this study. It was thought that if the instrument could be reduced in size and length, perhaps a greater response could be obtained; this was accomplished.

Since the purpose of the study was to assess the status of health instructional practices in Ohio's public secondary schools, participants
Table 2
Ohio's School Districts Used in This Study

<table>
<thead>
<tr>
<th>Strata</th>
<th>Strata Enrollment and Size</th>
<th>Number of Districts</th>
<th>No. of Districts in this study</th>
<th>High Schools in Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>25,000 and over</td>
<td>8</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Medium</td>
<td>3,000 to 25,000</td>
<td>210</td>
<td>105</td>
<td>126</td>
</tr>
<tr>
<td>Small</td>
<td>300 to 3,000</td>
<td>400</td>
<td>200</td>
<td>201</td>
</tr>
<tr>
<td>Very small</td>
<td>1 to 300</td>
<td>6</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Totals</td>
<td>624</td>
<td>312</td>
<td>386</td>
<td></td>
</tr>
</tbody>
</table>

were asked to respond to items regarding a variety of areas. Participants were asked to: check in order of priority the reasons for offering health instruction in their school, indicate the amount of time spent in health instruction, reply as to whether or not credit was given for health instruction, describe the emphasis of specific content included in health instruction in each grade, indicate the preparation and responsibilities of the teaching personnel, and describe class size and make up. Open-ended questions were included in which the participants were asked to list or describe specific problems they encounter in their health instruction program.

Questionnaires were printed on green, pink, yellow, and blue paper and sent in color groups according to size of districts to facilitate tabulation organization. A copy of the questionnaire used in the study can be found in Appendix A.
Endorsement of the Study

Since a good percentage of return was of concern and importance, it was thought that some kind of endorsement of the study from the Ohio State Department of Education might aid in increasing the return percentage. Mr. Robert Holland, Chief of Drug and Health Education in Ohio, was consulted about such an endorsement. Although he could not give "official" endorsement as coming from the Ohio State Department of Education, he gave permission to use his name as personally supporting the project. A copy of that letter can be found in Appendix B.

The Health Education Faculty of The Ohio State University was also used as endorsing agents in the cover letter (Appendix B) sent with each questionnaire. The good percentage of return can perhaps be attributed, at least in part, to these endorsements. Whereas the Ohio State Department of Education did not officially give permission to use them as endorsement, they did express interest in the study and in obtaining the results from it.

The Return

The questionnaire with a cover letter and a return envelope was sent to the principals of 386 high schools from the selected school districts with a request for return in three weeks. Principals were asked to either respond to the questionnaire themselves or give it to
someone directly involved with health instruction. Approximately forty-five per cent responded to the first mailing. A second copy of the questionnaire and a different cover letter (Appendix B) were sent to those schools not responding to the first request. Table 3 shows the final return in each classification. Of this response 55.1 per cent of the questionnaires was returned by the principal and 44.9 per cent by someone more directly involved with health instruction.

Table 3
School Districts Responding to Study

<table>
<thead>
<tr>
<th>Strata</th>
<th>Number of Questionnaires Mailed</th>
<th>Number of Questionnaires Returned</th>
<th>% of Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>56</td>
<td>36</td>
<td>64.3</td>
</tr>
<tr>
<td>Medium</td>
<td>126</td>
<td>99</td>
<td>71.0</td>
</tr>
<tr>
<td>Small</td>
<td>201</td>
<td>162</td>
<td>75.6</td>
</tr>
<tr>
<td>Very small</td>
<td>3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>386</td>
<td>297</td>
<td>77.0</td>
</tr>
</tbody>
</table>

As in the School Health Education Study, Inc., the "very small" classification was not included in the tabulation; although questionnaires were sent to these schools, none was returned. It was learned from the Ohio State Department of Education that these school districts are in the process of being consolidated into larger districts. By the time of completion of this study, it was estimated that there would be only two
or three of these systems in existence.

Statistical Treatment

Statistical tabulations were made of the entire sample to show the status of health instructional practices in all schools without regard to size. It was also the purpose of the statistical procedures to show relationship of response among the three school district sizes. Not all items were given the same statistical treatment because of the nature of the question, the form of the question, and the possibilities existing for statistical analysis. Personnel from the Statistics Department of the College of Mathematics and Physical Sciences of The Ohio State University in Columbus, Ohio were consulted in determining the statistical procedures to be used on each item of the questionnaire. The coding systems were devised to correspond with the type of computer program used. For clarity, a description of the statistical procedures for each item follows.

In Item A a coding system of 1, 2, 3 and 5 was used to put the responses on computer cards. One (1) indicated most important, two (2) next important, and three (3) third important. If responses were labeled four (4) or more, five (5) was the code used. Using the code of five (5) was interpreted as not being important to the respondents. The BMDO5M program of discriminant analysis was used to test the hypothesis that the mean values were the same in all three groups for six variables.
In items B and G a homogeneity of distributions by the chi-square test using the contingency table test was used.

Items C, D, E, H, J were tabulated by compiling simple percentages in each school district classification. These can be noted in tables in Chapter IV.

Item K was treated by using discriminant analysis to test the hypothesis that the mean values were the same for all three groups for seven variables. The majority of respondents did not rank the variables as was requested; therefore, no discrimination on the computer was made between items. All were treated with equal importance.

In item F only the reasons for separate classes were considered, not the grade distribution. This was done because of the variety of response related to what grade health education was offered. A coding system of 1 and 0 was used. One (1) indicated a check for any of the reasons and zero (0) indicated no response. The BMDO5M computer program of discriminant analysis was used to test the hypothesis that the mean values were the same in all the three groups for four variables.

Item I was also treated by means of the computer. The coding system was similar to the one used in item F, using one (1) for response in any item and zero (0) for no response. The BMDO5M program of discriminant analysis was used to test the hypothesis that the mean values were the same in all three groups for five variables.
The answers to the open-ended questions, III and IV, were compiled and where several schools responded with similar statements these were noted and observations made.

Summary

This chapter has described the procedures used for securing the data for the study. The sample and how it was obtained was discussed and tables depicting the makeup of the sample were given. The questionnaire and its design and origin was described. The percentage of return and the value of the endorsement to the study were emphasized. Statistical procedures and the methods for treating the data were described.
CHAPTER IV

PRESENTATION OF THE DATA

This study focuses on determining the status of health instruction in Ohio's public secondary schools. To assess the status an instrument was designed to investigate the various aspects of health instruction. It is the purpose of this chapter to present and describe the data and its statistical treatment. Interpretations and conclusions will be discussed in following chapters. Following are the questions as they appeared in the questionnaire with the data received from 297 respondents.

Question A. Please give the reasons why health education is being taught in your school. Rank each item (1, 2, 3, etc.) using 1 for the most important.

In this item only the first three rankings were used in the tabulation. In putting the results on computer cards, (1) indicated most important, (2) next important and (3) third important. If responses were labeled four or more, (5) was the code used. This coding system was used since very few respondents ranked more than three items. Five (5) was interpreted as not being important to the respondents. Discriminant analysis was used to test the hypothesis that the mean values
were the same in all three groups for six variables. Table 4 shows the results of that analysis.

Table 4

Mean Sizes of Sample, By Response to the Statement: Please Give Reasons Why Health Instruction is Taught in Your School (Question A)

<table>
<thead>
<tr>
<th>Variables</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>1. To comply with State standards</td>
<td>1.81818</td>
</tr>
<tr>
<td>2. To comply with requirements of local school system</td>
<td>2.63636</td>
</tr>
<tr>
<td>3. Fulfill objectives of educational program</td>
<td>1.68182</td>
</tr>
<tr>
<td>4. Solve administrative problems</td>
<td>5.00000</td>
</tr>
<tr>
<td>5. Course for college preparatory student</td>
<td>5.00000</td>
</tr>
<tr>
<td>6. Additional elective</td>
<td>4.90909</td>
</tr>
</tbody>
</table>

\[ X^2 = 12.54786, \ dF = 12, \ P < 0.01 \]

\( X^2 \) represents chi-square with twelve degrees of freedom (\( dF \)).

This was found not to be significant at the .01 level of confidence. In other words, there is no significant difference in response to the six variables among the three school districts. To comply with state standards
and to fulfill objectives of the educational program were the two reasons given by all three school districts to be the most important reason for teaching health education. To comply with requirements of the local school system was the reason judged second in importance for offering health education. The reasons judged least important for teaching health education were to solve administrative problems, to provide a course for the college preparatory student, and to provide an additional elective.

Question B. May Carnegie Credit for graduation be earned for the health education course?

For this question homogeneity of distributions by the chi-square test using the contingency table test was used. Table 5 shows the results of the response to this item.

Table 5

Number and Percent of Sample by Response to the Question: May Carnegie Credit be Earned for the Health Instruction Course (Question B)

<table>
<thead>
<tr>
<th></th>
<th>LARGE</th>
<th>MEDIUM</th>
<th>SMALL</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Percent</td>
<td>No.</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>23</td>
<td>74</td>
<td>79</td>
<td>88</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>26</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>31</td>
<td>100</td>
<td>90</td>
<td>100</td>
</tr>
</tbody>
</table>

\(X^2 = 3.187\), \(dF = 2\), \(P < .01\)
\( \chi^2 \) represents chi-square of 3.187 with two degrees of freedom (dF). This was found not to be significant at the .01 level of confidence. There was no significant difference in response among the small, medium and large size schools.

Eighty-four per cent of the respondents indicated that credit could be earned for health education and 16 per cent indicated it could not be earned. The large school district schools had the lowest percentage of affirmative responses to the item (74 per cent).

**Question C.** If credit is given, indicate how it appears on the student's record.

Simple percentages of each variable were compiled for each of the three school district sizes for both junior and senior high schools. Table 6 shows the results of the response to that question.

Sixty-three per cent of the junior high schools and 90.7 per cent of the senior high schools indicate that credit appears for health specifically. In the large districts 75 per cent of the junior high schools and 86.9 per cent of the senior high schools show credit for health specifically. For the medium districts this percentage is slightly higher with 80.9 per cent of the junior high schools and 94.9 per cent of the senior high schools giving credit for health specifically. The junior high schools in the small school districts show the only higher percentage in the "combined with another subject" response. Fifty-five per cent of the
Table 6

Number and Percent of Sample by Response to the Statement
If Credit is Given, Indicate How It Appears on the Student's Record
(Question C)

<table>
<thead>
<tr>
<th>How Credit Appears</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Jr Hi</td>
</tr>
<tr>
<td>Per No.</td>
<td>Per Cent</td>
</tr>
<tr>
<td>As Credit for Health Specifically</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Combined with Another Subject</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>Totals</td>
<td>4</td>
</tr>
</tbody>
</table>
junior high schools show credit for health as combined with another subject. Eighty-eight per cent of the senior high schools in the small school districts show credit for health specifically.

Question D. Indicate the number of semesters health instruction is required, the number of periods per week it is given, and the length of periods in minutes.

Table 7 deals only with number of semesters required. In compiling simple percentages, the grade levels of required semesters were not tabulated. The response was varied as to the grade level of the semesters required because the majority of schools gave students the choice of when to take the health course. Table 7 shows the results of the response to the semester part of Question D.

Fifty-one per cent of the total respondents indicated that one semester of health education was required. The highest percentage of schools requiring one semester was in the medium school districts (57 per cent), while the lowest percentages of schools requiring one semester was in the small school districts (47 per cent).

Twenty-nine per cent of the schools require two semesters of health education. The small school district schools have the highest percentage requiring two semesters (32 per cent), while the large size school districts show the lowest percentage of schools requiring two semesters (20 per cent). There was one small school with grades
Table 7

Number and Per Cent of Sample by Response to the Statement: Indicate the Number of Semesters Health Instruction is Required (Question D)

<table>
<thead>
<tr>
<th>Semesters Required</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>No.</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>19</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>35</td>
</tr>
</tbody>
</table>
seven through twelve that required health instruction twelve semesters, or every semester, Four, or 1.6 per cent of the total sample indicated that there was no health education course required in their school. Of this number two were in the large school district and one in each of the other school districts.

The number of periods per week that health instruction was scheduled can be seen by referring to Table 8. The response shows that of the total sample 54.2 per cent of the schools responding indicate that health instruction is given five periods per week. The large schools responded that 66 per cent gave health instruction five days per week, the medium school districts 58 per cent, and the small, 50 per cent.

Two of the medium and seven of the small indicated that health instruction was scheduled only one period per week. The remainder of the responses fell into the two, two and one-half and three periods per week variables.

Sixty per cent of the total sample responded that the length of the periods were from forty to forty-nine minutes. Seventy per cent of the small schools responded to this variable while only 36 per cent of the large schools indicated this as the length of the periods.

The large schools that responded indicated that 61 per cent had periods of health instruction fifty to sixty minutes. One large school responded that they taught health instruction in thirty to thirty-nine
## Table 8

Number and Per Cent of Sample by Response to the Statement: Indicate the Number of Periods per Week Health Instruction is Given (Question D)

<table>
<thead>
<tr>
<th>Periods Per Week</th>
<th>School Districts</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
<td>Medium</td>
<td>Small</td>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per No.</td>
<td>Per No.</td>
<td>Per No.</td>
<td>Per No.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cent</td>
<td>Cent</td>
<td>Cent</td>
<td>Cent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>3.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>8</td>
<td>12</td>
<td>23</td>
<td>7.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-1/2</td>
<td>2</td>
<td>18</td>
<td>29</td>
<td>49</td>
<td>16.7</td>
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<td>3</td>
<td>3</td>
<td>11</td>
<td>30</td>
<td>44</td>
<td>15.7</td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td>57</td>
<td>79</td>
<td>158</td>
<td>54.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>33</td>
<td>98</td>
<td>160</td>
<td>291</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
minute periods. Seventy per cent of the small schools also indicated the use of the forty to forty-nine minute health instruction period to be their practice. Table 9 gives the results of the item on the length of periods for health instruction.

Table 9

<table>
<thead>
<tr>
<th>Minutes in Periods</th>
<th>School Districts</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large Per No.</td>
<td>Medium Per No.</td>
<td>Small Per No.</td>
<td>Totals Per No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
<td>Per Cent</td>
<td></td>
</tr>
<tr>
<td>30 - 39</td>
<td>1 3</td>
<td>0 0</td>
<td>1 1</td>
<td>2 .6</td>
<td></td>
</tr>
<tr>
<td>40 - 49</td>
<td>12 36</td>
<td>52 53</td>
<td>112 70</td>
<td>176 60.3</td>
<td></td>
</tr>
<tr>
<td>50 - 60</td>
<td>20 61</td>
<td>46 47</td>
<td>48 29</td>
<td>114 39.1</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>33 100</td>
<td>98 100</td>
<td>161 100</td>
<td>292 100.0</td>
<td></td>
</tr>
</tbody>
</table>

Question E. Are boys and girls scheduled in the same class or in separate classes?

Simple percentages were compiled for this item for each grade and separate tables made for boys and girls in same classes and boys and girls in separate classes. Table 10 illustrates the response to how many schools have boys and girls in the same classes. The large schools
Table 10
Number and Per Cent of Sample by Response to the Statement: Indicate if Boys and Girls are Scheduled in the Same Classes (Question E)

<table>
<thead>
<tr>
<th>Grades</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td></td>
<td>Per No.</td>
</tr>
<tr>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Totals</td>
<td>25</td>
</tr>
</tbody>
</table>
responded that 59.5 per cent scheduled boys and girls in the same class. In a breakdown by grade response indicated that about 30 per cent of all size schools scheduled boys and girls in the same classes in the ninth and tenth grades.

In the medium size schools 64.1 per cent scheduled boys and girls in the same class and in the small size schools 43.9 per cent scheduled boys and girls in the same class.

Scheduling in separate classes was reported in 228 cases. Of the large schools 40.5 per cent responded that boys and girls are scheduled in separate classes while 35.9 per cent of the medium and 56.1 per cent of the small schools scheduled boys and girls in separate classes. Of all the responses to this question, over 50 per cent of all schools except the small scheduled boys and girls in the same classes for health instruction. Table 11 gives the breakdown by grade and school size concerning separate scheduling.

**Question F.** If classes are taught with boys and girls separated, please check reason why for each grade level.

A coding system for the tabulation of this item was used to put the responses on computer cards. If the respondents checked any of the variables a "1" was punched on the card. If any of the variables were left unchecked a "0" was used. Grade distribution was not considered, again, because there were few specific grades where health
Table 11

Number and Per Cent of Sample by Response to the Statement: Indicate if Boys and Girls are Scheduled in Separate Classes (Question E)

<table>
<thead>
<tr>
<th>Grades</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per No.</td>
<td>Per No.</td>
<td>Per No.</td>
<td>Per No.</td>
</tr>
<tr>
<td></td>
<td>Cent</td>
<td>Cent</td>
<td>Cent</td>
<td>Cent</td>
</tr>
<tr>
<td>7</td>
<td>0 0</td>
<td>5 36</td>
<td>11 50</td>
<td>16 7.1</td>
</tr>
<tr>
<td>8</td>
<td>0 0</td>
<td>7 23</td>
<td>15 68</td>
<td>22 9.8</td>
</tr>
<tr>
<td>9</td>
<td>8 50</td>
<td>24 45</td>
<td>72 67</td>
<td>104 45.7</td>
</tr>
<tr>
<td>10</td>
<td>7 70</td>
<td>19 36</td>
<td>39 51</td>
<td>65 28.0</td>
</tr>
<tr>
<td>11</td>
<td>2 25</td>
<td>4 20</td>
<td>7 34</td>
<td>13 5.8</td>
</tr>
<tr>
<td>12</td>
<td>0 0</td>
<td>3 20</td>
<td>5 29</td>
<td>8 3.6</td>
</tr>
<tr>
<td>Totals</td>
<td>17 40.5</td>
<td>62 35.9</td>
<td>149 56.1</td>
<td>228 100.0</td>
</tr>
</tbody>
</table>
was taught. Students were allowed to choose the grades when health was taken. Discriminant analysis was used to test the hypothesis that the mean values were the same in all the three groups for four variables. Table 12 shows the response to this question. Chi-square \((X^2)\) was 21.23401 with eight degrees of freedom (dF). This was found to be significant at the .01 level of confidence.

Table 12

Mean Scores of Sample by Response to Statement:
If Classes are Taught with Boys and Girls Separated, Please Give Reasons Why (Question F)

<table>
<thead>
<tr>
<th>Reasons</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>Space</td>
<td>0.07692</td>
</tr>
<tr>
<td>Staff</td>
<td>0.07692</td>
</tr>
<tr>
<td>Scheduling Factors</td>
<td>0.53846</td>
</tr>
<tr>
<td>Nature of Subject Matter</td>
<td>0.38462</td>
</tr>
</tbody>
</table>

\[ X^2 = 21.23401, \text{ dF} = 8, \text{ } P < .01 \]

It can be noted that for the large and small schools scheduling factors was the most often checked reason for separation of boys and girls in class. For the medium size schools, the nature of the subject matter was the most frequent response for separation of boys and girls.
Question G. What is the average size of each class?

Statistical treatment of this question involved the use of the homogeneity of distribution by the chi-square test using the contingency table test. Chi-square ($X^2$) was found to be 6.448 with four degrees of freedom (dF). There was found to be no significance at the .01 level of confidence.

Table 13 shows that for the total sample 81.8 per cent of classes in health instruction have 21 to 35 students enrolled. Seventeen per cent of the large schools responded to the 36 to 50 class size while six per cent of the large schools responded to the 15 to 20 class size. The medium and small schools responded similarly in the 15 to 20 and 36 to 50 size.

Table 13

Number and Per Cent of Sample by Response to the Question: What is the Average Size of Each Class?
(Question G)

<table>
<thead>
<tr>
<th>Class Size</th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
</tr>
<tr>
<td>15-20</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>21-35</td>
<td>27</td>
<td>77</td>
<td>86</td>
<td>87</td>
</tr>
<tr>
<td>36-50</td>
<td>6</td>
<td>17</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Totals</td>
<td>35</td>
<td>100</td>
<td>99</td>
<td>100</td>
</tr>
</tbody>
</table>

$X^2 = 6.448$, dF = 4, P < .01
Question H. Who teaches the health education class?

Simple percentages were compiled for each of the school sizes for each grade. The response of the large school districts can be seen on Table 14. Sixty-four per cent of the responses of the large schools are found in the "combined major" variable, while 12.5 per cent are found in the "major in health education only." It should be kept in mind here also that health instruction is taught in many different grade levels.

The response of the medium schools is shown on Table 15. Again, the largest percentage of response is found in the "combined major" variable -- 66.5 per cent. The "major in health education only" variable received 11.5 per cent response from the medium size schools.

Response from the small size schools is shown on Table 16. Twelve per cent of the response fell into the "major in health only" variable and 62.4 per cent was in the "combined major" category. The top three areas of preparation for the total sample in order of percentage of response were: (1) combined major in health and physical education; (2) major in health education only; and (3) minor in health education only.

Question I. What responsibilities other than teaching do the teachers generally assigned to health education have?

A program of discriminant analysis was used to test the hypothesis that the mean values were the same in all three groups for five variables. Chi-square was computed to be 14.58786 with ten degrees of
<table>
<thead>
<tr>
<th>Area of Preparation</th>
<th>Grade 7</th>
<th></th>
<th>Grade 8</th>
<th></th>
<th>Grade 9</th>
<th></th>
<th>Grade 10</th>
<th></th>
<th>Grade 11</th>
<th></th>
<th>Grade 12</th>
<th></th>
<th>Totals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
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<td>1</td>
<td>25</td>
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<td>0</td>
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<td>14</td>
<td>0</td>
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<td>64</td>
<td>9</td>
<td>65</td>
<td>8</td>
<td>47</td>
<td>7</td>
<td>100</td>
<td>41</td>
<td>64.0</td>
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<tr>
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<td>0</td>
<td>0</td>
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<td>0</td>
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<td>7</td>
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<td>6</td>
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<td>Nurses</td>
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</tr>
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<td>7</td>
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<td>11</td>
<td>0</td>
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<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>Totals</td>
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<td></td>
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</tr>
<tr>
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<td>0</td>
<td>10</td>
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<td>7</td>
<td>7</td>
<td>10</td>
<td>3</td>
<td>10</td>
<td>2</td>
<td>9</td>
<td>17</td>
<td>8.1</td>
</tr>
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<td>62</td>
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<td>70</td>
<td>47</td>
<td>66</td>
<td>19</td>
<td>63</td>
<td>16</td>
<td>71</td>
<td>139</td>
<td>66.5</td>
</tr>
<tr>
<td>Major in physical education only</td>
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<td>0</td>
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<td>1</td>
<td>5</td>
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<td>3</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>3.8</td>
</tr>
<tr>
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<td>5</td>
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<td>3</td>
<td>38</td>
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<td>5</td>
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<td>2</td>
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<td>3</td>
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<td>30</td>
<td>100</td>
<td>23</td>
<td>100</td>
<td>209</td>
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</table>
Table 16

Number and Percent of Sample of Small School Districts by Response to the Question: Who Teaches the Health Education Class?
(Question H)

<table>
<thead>
<tr>
<th>Area of Preparation</th>
<th>Grade</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
<td>Per Cent</td>
<td>No.</td>
</tr>
<tr>
<td>Major in health education only</td>
<td></td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>18</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Minor in health education only</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>Combined major in health and physical education</td>
<td></td>
<td>16</td>
<td>56</td>
<td>14</td>
<td>48</td>
<td>90</td>
<td>69</td>
<td>57</td>
</tr>
<tr>
<td>Major in physical education only</td>
<td></td>
<td>1</td>
<td>3</td>
<td>1</td>
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<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Biology teacher and/or general science</td>
<td></td>
<td>7</td>
<td>24</td>
<td>9</td>
<td>32</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Nurses</td>
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<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
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<td>29</td>
<td>100</td>
<td>133</td>
<td>100</td>
<td>84</td>
</tr>
</tbody>
</table>
freedom (dF). It was found to be of no significance at the .01 level of confidence. There was no significant difference in response among the three school districts. Table 17 shows the total results of the response to this question.

Table 17

Mean Scores of Sample by Response to the Question:
What Responsibilities Other Than Teaching Do the Teachers Generally Assigned to Health Education Have?
(Question I)

<table>
<thead>
<tr>
<th>Responsibilities Other Than Teaching</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>None</td>
<td>0.20000</td>
</tr>
<tr>
<td>Coaching</td>
<td>0.68571</td>
</tr>
<tr>
<td>Guidance</td>
<td>0.5714</td>
</tr>
<tr>
<td>Intramural supervisor</td>
<td>0.22857</td>
</tr>
<tr>
<td>Health coordinator</td>
<td>0.11429</td>
</tr>
</tbody>
</table>

\[ X^2 = 14.58786, \text{dF} = 10, \ P < .01 \]

For all three school districts coaching was the one most often assigned responsibility to health education teachers. Supervising intramurals was also a frequent additional responsibility for health education teachers in all three school districts.
Question J. Please rate the following content areas taught at each of the secondary levels according to the degree of emphasis in the health education course. Mark as follows: 1 - major emphasis, 2 - moderate emphasis, 3 - minor emphasis.

In compiling the results of this question, "major" or "moderate" emphasis were considered. Percentages were compiled to determine which areas were emphasized by 50 per cent or more of the respondents. Those topics showing "emphasis" by 50 per cent or more of the respondents are summarized in Table 18.

Alcohol and tobacco, drugs and narcotics, were two health topics emphasized by all school districts and every grade level. Health careers and consumership were not emphasized by any of the small schools and health careers by only one of the medium schools. The other content areas listed were emphasized by each school district at least once during grades 7-12. Family living, environmental health, and mental health were not emphasized by small schools in grades 7-8.

Question K. Which sources are consulted in your school for suggestions of what to study in health education? If more than one, please use rankings of 1, 2, and 3 as suggested in Item J.

Discriminant analysis was used to test the hypothesis that the mean values were the same for all three groups for seven variables. If more than one, please use rankings of 1, 2, and 3 as suggested in Item J.
Table 18

Health Content Areas Given Major or Moderate Emphasis in Grades 7-12 by 50 Per Cent or More of Respondents in Sample Group of School Districts (Question J)

<table>
<thead>
<tr>
<th>Health Content Areas</th>
<th>Grade Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Accident prevention and first aid</td>
<td>m s</td>
</tr>
<tr>
<td>Alcohol and tobacco</td>
<td>m s</td>
</tr>
<tr>
<td>Drugs and narcotics</td>
<td>m s</td>
</tr>
<tr>
<td>Dental health</td>
<td>m s</td>
</tr>
<tr>
<td>Family living</td>
<td>m</td>
</tr>
<tr>
<td>Cleanliness and grooming</td>
<td>m s</td>
</tr>
<tr>
<td>Community health</td>
<td>s l</td>
</tr>
<tr>
<td>Environmental health</td>
<td>l m</td>
</tr>
<tr>
<td>Exercise, rest and sleep</td>
<td>m s</td>
</tr>
<tr>
<td>Health careers</td>
<td>l l</td>
</tr>
<tr>
<td>Nutrition</td>
<td>m s</td>
</tr>
<tr>
<td>Consumership</td>
<td>l</td>
</tr>
<tr>
<td>Communicable disease</td>
<td>m s</td>
</tr>
<tr>
<td>Non-communicable disease</td>
<td>s l</td>
</tr>
<tr>
<td>Mental health</td>
<td>m l m</td>
</tr>
</tbody>
</table>

1 = large; m = medium; s = small
Rankings were disregarded in this item because the majority of the respondents did not rank but merely checked the sources they used. Chi-square was computed to be 20.73964 with fourteen degrees of freedom (dF). This was found not to be significantly different at the .01 level of confidence. There was no significant difference in response among the three school districts. The results of Question K is found in Table 19.

Table 19

Mean Scores of Sample by Response to the Question:
Which Sources are Consulted in Your School for Suggestions of What to Study in Health Education (Question K)

<table>
<thead>
<tr>
<th>Sources</th>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>School Health Education Study</td>
<td>0.14286</td>
</tr>
<tr>
<td>Ohio Course of Study</td>
<td>0.22857</td>
</tr>
<tr>
<td>Local curriculum guide</td>
<td>0.28571</td>
</tr>
<tr>
<td>Individual teacher decision</td>
<td>0.74286</td>
</tr>
<tr>
<td>Student-Teacher planning</td>
<td>0.20000</td>
</tr>
<tr>
<td>Health textbooks</td>
<td>0.57143</td>
</tr>
<tr>
<td>Needs, interests, problems of students</td>
<td>0.77143</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 20.73964, \quad dF = 14, \quad P < .01 \]
Individual teacher decision was found to be the most frequently used source by respondents from all three school districts. There was a slightly higher reliance on the needs, interests and problems of students in the large district than in the other districts, but not significantly so. Health textbooks were also marked as being a frequently used source. There seemed to be more use of a local curriculum guide in the small and medium size schools than in the large schools. Comparatively little student-teacher planning was found in any of the three districts.

Question III. Has the recent change in certification of health teachers affected your health education course?

In response to this question, 29 of the large schools responded. Of this response 96 per cent indicated that the change in certification has had no effect. Four per cent indicated that certification had affected the courses but gave no specific areas of the effect.

Of the 99 respondents in the medium size schools, 96 per cent indicated no effect on classes while four per cent stated that the effect could be seen in course content and attempts to separate health and physical education.

From the small schools 141 responses were received of which 95 per cent indicated no effect of certification on their health courses. Of the five per cent who responded affirmatively there were no indications of this this effect was realized.
Question IV. What are some of the problems you see in regard to health instruction in secondary schools?

Problems listed were categorized and tabulation was made on the basis of the problems cited by two or more of those responding. There were 10 large schools that responded to this question, 35 medium schools, and 75 small schools. The most often cited problem by all three school districts was inadequate amount of time. Too much repetition and outdated textbooks were problems felt by small schools while using health as a "catch all" and inadequate materials were felt by respondents from large schools. Table 20 illustrates the problems cited by the total respondents from all three school districts.

Summary

This chapter has presented the results of the response to the instrument used to assess the status of health instructional practices in Ohio's public secondary schools. This presentation was made both in tabular form and also by describing the response.

With the items treated by use of the chi-square discriminant analysis test, it is shown that, with the exception of the item regarding reason for separation of boys and girls in classes, statistically there was no significant difference in response to the questionnaire among the three school districts. In the items treated by compilation of simple percentages, the results on most items were also similar.
Table 20
Problems in Regard to Health Instruction in Secondary Schools as Seen by Large, Medium and Small Size School Districts in Sample

<table>
<thead>
<tr>
<th>Problems</th>
<th>Number of Schools Responding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>Too much repetition</td>
<td>17</td>
</tr>
<tr>
<td>Too much overlap with other courses</td>
<td>5</td>
</tr>
<tr>
<td>Outdated textbooks</td>
<td>10</td>
</tr>
<tr>
<td>Poor teaching methods</td>
<td>6</td>
</tr>
<tr>
<td>Use of health as a &quot;catch-all&quot; (scheduling problems, size of class)</td>
<td>5</td>
</tr>
<tr>
<td>Inadequate amount of time</td>
<td>2</td>
</tr>
<tr>
<td>Inadequate amount of materials</td>
<td>5</td>
</tr>
<tr>
<td>Inadequate use of available outside sources</td>
<td>6</td>
</tr>
<tr>
<td>Lack of community support</td>
<td></td>
</tr>
<tr>
<td>Inadequate health instruction in elementary school</td>
<td>8</td>
</tr>
<tr>
<td>Inadequate preparation of teachers</td>
<td>3</td>
</tr>
<tr>
<td>Totals</td>
<td>15</td>
</tr>
</tbody>
</table>
among the three school districts. A profile of each school district here
might serve to give a clearer picture of the status of health instructional
practices before further interpretation and comparisons are made.

The large school districts offer health instruction to fulfill the
objectives of the educational program and to comply with state standards.
The solving of administrative problems was not seen to be of importance
in regard to the reason for offering health instruction. Seventy-four
per cent of the large schools do offer Carnegie Credit toward graduation
for their health course and this credit appears in most cases as credit
for health specifically. Large schools responding to the questionnaire
require one or two semesters of health instruction with the higher
percentage being one semester. To correspond with the one semester
requirement, the response revealed that the large schools indicated
that their health course was held five days per week for 50 to 60
minutes. Thirty-six per cent of the large schools also indicated
40 to 49 minute periods. In grades eight, nine, eleven and twelve
in the large schools boys and girls are scheduled in the same classes
according to over 50 per cent of the responses. Where classes are
separated, scheduling factors was given as the primary reason. The
size of the classes in the large size school districts was 21 to 35
pupils and classes were taught primarily by teachers with combined
majors in health and physical education. Coaching was the primary
added responsibility given to health teachers. The large schools emphasized the areas of health content at least once during grades seven through twelve. Consumership was the one area that was emphasized only one time. Individual teacher decision and use of textbooks were the primary sources in the large schools for determining health content. Large schools did not basically feel the effect of the change of the certification laws and those that responded cited inadequate amounts of time and materials to be problems to be contended with.

The medium size schools offer health instruction to fulfill educational objectives and to meet state standards. Credit is given toward graduation in the majority of medium schools. Generally this credit appears for health specifically. One or two semesters is required by most of the medium schools with classes meeting five or two and one half days per week for either 50 to 60 minutes or 40 to 49 minutes. Well over 50 per cent of all respondents from medium schools indicate classes with both boys and girls in grades seven through twelve. Where classes are separate the primary reason given was nature of subject matter with scheduling factors being the next reason. The average size of the classes in the medium schools was 21 to 35 pupils and classes are taught by teachers with a combined major in health and physical education. Coaching is the primary added responsibility given to the health teacher. Content is determined
mostly by individual teacher decision and use of textbooks. Health
careers and consumership are two typical areas almost non-existent
in the health curricula of medium schools, while the other content
areas listed were emphasized several times during grades seven
through twelve. The major problem cited by the medium school
respondents was inadequate amounts of time.

The small schools offer health instruction to fulfill the
objectives of the educational program and to comply with state stan-
dards. Credit toward graduation is given and it appears as credit for
health specifically at the high school level, but is more often combined
with another subject in junior high. One or two semesters of health
instruction is required with classes meeting five, three, or two and
one-half times per week for 40 to 49 or 50 to 60 minutes. In grades
seven and twelve there are more classes with boys and girls scheduled in
the same class than separate, but only 43.9 per cent of the responses
of the total small school sample indicated classes with boys and girls
in the same class. The primary reason given for separate classes
was scheduling factors with nature of subject matter being second.
Average class size for small schools was 21 to 35 with classes taught
by teachers with a combined major in health and physical education.
Coaching was the chief added responsibility of teachers. Content
was determined by individual teacher decision and by use of textbooks.
Weakly emphasized content areas for the small school are family living (not taught in seventh and eighth grade), health careers and consumership. Problems cited by respondents from small schools are too much repetition, outdated textbooks, and inadequate amounts of time.

This profile of the three school districts shows some of the probable strengths and weaknesses of health instructional practices in the state of Ohio. Interpretation of the data along with comparisons and recommendations follow in Chapters V and VI.
CHAPTER V

INTERPRETATIONS AND COMPARISONS

The purpose of this study is to assess the status of the instructional practices in health instruction in Ohio's public secondary schools and to compare these practices with accepted guidelines for effectiveness in health education. To do this an instrument in the form of a questionnaire was devised to collect data from a sample group of public high schools. The excellent response to this questionnaire can perhaps be an indication of an interest in Ohio in health instruction. The presentation of the data was given in Chapter IV.

This chapter involves an interpretation of the data presented. Each item on the questionnaire will be interpreted in light of statistical procedures used. Comparisons will be made within the three school districts and with guidelines for effectiveness in health instruction which have been established. Implications and recommendations for the future of health education in Ohio can be made from an interpretation of the data.

Question A. Reasons for teaching health education

The reason for teaching health education in schools can be very
indicative of the practices which are used. In this study all three school
districts responded primarily that health education was taught to fulfill
the objectives of the educational program and to comply with state
standards. The study reveals a possible inconsistency with this
response. If, in fact, to fulfill the overall general objectives of the edu-
cational program is the primary reason for offering health instruction,
certain practices such as time allotted to health instruction, teacher
qualification, and scope of content should back this up. This study
does not show this to be so.

The meeting of state standards, however, does seem to be a
more consistent reason for offering health education; these standards, as
set forth by the Ohio State Department of Education, state that a
semester course or its equivalent is required. Equivalent to a semester,
that is, one semester of instruction, five days per week, would be a
combination of instruction in two semesters, two days in one semester
and three days in the other. The results of the study are supportive
of the stated reason that health instruction is offered to meet state
standards.

Questions B and C. May Carnegie credit for graduation be earned for the
health education course and how does it appear on the student's record?

The study shows that the majority of schools give credit toward
graduation for the health education course. This could be interpreted as
evidence of the fact, as revealed also in the School Health Education Study, Inc., that health instruction is viewed as an important part of the total education program.

A further evidence of the importance placed on health education might be seen in the fact that the credit given for health instruction is shown as credit specifically for health. The only part of the sample that indicated that, for the majority, this was not the case was the junior high schools in the small districts. Here the majority of the responses indicated that the credit was combined with another subject. An interesting comparison should be noted here. The School Health Education Study, Inc. revealed on the national scene that credit appeared in combination with physical education in the majority of the total sample. This could be interpreted as meaning that either Ohio's schools view health instruction as being more important to the total educational program than did the schools participating in the national study, or that state standards in Ohio are stated more specifically than were the majority of the national study's sample, thus making credit for a specific health education course more logical.

Question D. Semesters, periods per week, and length of periods of health instruction.

The Ohio State Department of Education requires one semester or its equivalent of health instruction in secondary schools. It does not
state in what grade the course should be taught; therefore, most schools allow the students to choose, as much as possible, the year in which they take the course. There were four or 1.6 per cent of the sample that did not meet this requirement; however, the rest of the sample did fulfill this requirement.

A survey of the raw data indicates that the more semesters required by the schools, the fewer times per week the class meets and the fewer semesters required, the more times per week the classes meet. The schools that require only one semester are basically the same schools where the class meets five days per week and the schools that require two semesters are the schools where the class meets two or three times per week. Many schools are meeting the state requirement of one semester or "its equivalent" in different ways.

The national study revealed that once or twice a week class meetings are detrimental to maintaining interest and continuity in learning. Whereas the majority of schools in the Ohio Study offer health instruction five days per week for one semester, it should be noted that this majority is just over 50 per cent and that many of Ohio's schools offer health instruction only two or three times per week. Periods of 40 to 49 minutes were the most frequently used. There was no indication that these periods were different in length than those used for other curricular offerings.
Question E. Are boys and girls scheduled in the same or separate classes?

Boys and girls scheduled in the same class seems to be the pattern or trend in all schools except, perhaps, the small schools. The ninth and tenth grades seem to be the grades where the segregation appears most frequently. This study reveals no content areas taught at these levels that might account for this, but it does reveal scheduling problems to be the main stated reason for the segregation.

It is interesting to note that the small schools record the lowest total percentage of integration and state scheduling factors as the reason. The medium schools record the highest percentage of integration and state nature of subject matter to be the reason for what segregation of boys and girls in classes they do have.

Another frequently checked reason for segregation in the small schools was nature of subject matter. Community control could certainly be an influence on this in small schools. The smaller community where more involvement is sometimes present could be an influencing factor on separating boys and girls.

The national study pointed out that separation of boys and girls was the major practice of the sample schools, but further, that grouping boys and girls separately for health instruction for any reason cannot be viewed as an acceptable practice any more than it could be for any other subject in curriculum. Ohio's practice of separating boys and girls is
not an acceptable practice. Since there are many schools that do segregate boys and girls, a trend toward integration could be interpreted from the results of response from this study.

**Question G. Average Size of Classes**

The fact that average class size is 21 to 35 can be interpreted as an indication that for the most part schools are attempting to keep class sizes within a reasonable number and efforts to solve scheduling problems do not seem to include increasing class size. The classes seemed to be a little larger in the large schools, but this is probably due to more student enrollment.

**Question H. Who teaches the health education class?**

This facet of the study contains one of the most revealing insights into the status of health instructional practices. First of all, it should not be interpreted that the statistics indicate the number of separate teachers but rather that the same teacher probably teaches more than one grade. What the data show is that just over 60 per cent of the classes in health instruction in all three school district sizes are taught by teachers with a major in health and physical education. The purpose of this question was not to discover necessarily how many health teachers there are, but rather what preparation those who do teach the health class have.

It could be accurately stated that the majority of teachers of
health instruction in the sample were certified to teach before the certification laws regarding separating health and physical education were changed. Therefore, it is probable that the majority of their preparation was in physical education and not health education. The findings of this study could further serve to make administrators and teachers aware of the need to employ teachers with specific preparation in health education. The change in the certification laws in the coming years will make this not only feasible but necessary.

The National School Health Education Study, Inc. supported the view that the teacher is the key person in the successful realization of the objectives for such instruction. If the teacher is not adequately prepared, the realization of the objectives will be thwarted. The fact that most of the teachers have preparation mainly in physical education could account for lack of necessary content, lack of time allotment, and inadequate materials and teaching aids.

Further studies might indicate a possible trend toward using teachers with preparation with a concentration in health education rather than physical education. The small schools indicated that more classes were taught by a health specialist than did the other school districts. Again, this should not be interpreted as meaning that there are more health specialists in small schools proportionately, but could be interpreted as meaning that teachers in small schools teach more classes of health than do teachers in medium and large schools. This
would possibly be true due to difference in enrollment.

**Question I. Other responsibilities of health teachers**

It is obvious why the major responsibility of health teachers is coaching since the majority of them are primarily physical educators. Many health teachers are also given responsibilities in guidance and in supervision of intramurals. The whole area of teacher preparation in the study points out rather vividly that most teachers teaching health instruction in Ohio's public secondary schools do so as a second area of interest. Health teaching is assigned to them because of the long standing lack of separation of health and physical education and the certification change has not been in effect long enough to show any noticeable change.

**Question J. Content areas emphasized**

The areas of health education that are emphasized further could be indicative of the type of or even the inadequate preparation on the part of those teaching. Alcohol and tobacco and drugs and narcotics are the only two areas emphasized in every grade by 50 per cent or more of all respondents. These two areas are very "popular" content areas within the social structure of our society at this time. It is not surprising that these are emphasized to this degree. Family living is not emphasized in the seventh and eighth grades at all in the small schools; again, perhaps this is due to the small protective community concept
and further to the lack of health specialists doing the teaching. Perhaps the omission of health careers and consumership can again be attributed to lack of knowledge at least of the total scope of the body of knowledge of health education on the part of those teaching.

Although the study indicates what areas are emphasized, it does not reveal scope and sequence of the areas. Further study needs to be done in all content areas to assess whether scope, sequence, and appropriate grade placement are being considered. The national study pointed out that in the last years of the secondary school, emphasis should continue on sound choices of health behavior for immediate needs and future roles as adults and parents. The Ohio study does not reveal this as being done to any extent in Ohio's schools.

The Ohio Department of Education lists the following health content areas that should be included in health instruction courses in Ohio's public secondary schools: food and nutrition; dental health; rest and sleep; exercise and relaxation; care of the eyes and ears; disease prevention and control; safety and first aid; alcohol, smoking and drugs; community and world health; consumer health, including medical care; emotional health; family living; sex education, survival and disaster; and health careers. The results of this study indicates a wide response to this content area. The scope or depth to which these are taught cannot be determined, but the one semester requirement would certainly limit depth to any significant degree.
Question K. Sources consulted as to what to study in health education course

Individual teacher decision, use of textbooks, and needs, interests and problems of students are the three prominent determinants of what content is included in the health course. Those who listed the title and year of the textbook in use indicated in the majority of cases that the book was at least five years old. Fragmented structure in the health courses could result if the stated determinants of content are the only ones used.

All three school districts indicated that basically the same content areas are being emphasized in their health education courses. Unless one is willing to say that students' needs, interests and problems are the same in all these schools, there is no real evidence to show that students' needs are, in fact, used to any great degree in content determination.

Lack of use of the findings and the curriculum materials of the School Health Education Study, Inc. could indicate an inadequate system of getting these findings to health educators. Also, this lack of use could be a further evidence that physical educators, whose interests are not primarily with health education, are not keeping up to date with current curriculum designs in health education. Local curriculum guides were also used very sparingly by some school districts probably due to the fact that there are few in existence.
Questions III and IV. Effects of certification change and problems cited

It is not surprising to note the little effect of the certification change by respondents. Since the change has only been in operation for two years, not many schools will have experienced its effects or perhaps even know about it. Additional study could provide further insight into any effects this change could be having on the hiring of teaching personnel.

The problems cited by the respondents indicate an awareness on the part of those teaching health of the vast amounts of information contained in health education. The frustration that is felt by a health teacher when he realizes the tremendous scope of health content and when he is given only one semester in which to cover it all, can cause discouragement and lack of motivation. Inadequate amounts of materials and textbooks are further indications that in many cases health instruction is not considered on a par with other curricular offerings.

Summary

This chapter has interpreted the data presented in Chapter IV and has compared it, in part, to the findings of the national study and also to state requirements. The one area that seems to affect every other area of the study is the health teacher, per se. Since it can be seen that almost every aspect of health instruction can in some way be
linked to the teacher, this gives impetus to needed improvements in instructional practices.

There seems to be an interest on the part of those involved in health instruction to see some changes made. This is evidenced by the problems which are cited. An indication of an awareness that health instruction is not treated as other curricular offerings also gives support of the desire to make necessary changes. The study does reveal that most of Ohio's public schools are meeting minimum standards for the health education requirement as set forth by the Ohio State Department of Education if one keeps in mind that an "equivalent" phrase is also part of the picture.
CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The interpretation of the data regarding the status of health instructional practices in Ohio's public secondary schools would mean little if basic conclusions and recommendations concerning the future of health education in Ohio were not made. The purpose of this chapter, then, is to cite the main conclusions that can be drawn from this study and on the basis of these conclusions to make some recommendations regarding health education in Ohio. The conclusions from the study are based on the data received. The purpose of the study has been to assess the status of instructional practices in health education, not the quality, although implications for quality are present with certain aspects of the study.

Conclusions from the Study

The following are basic conclusions that can be drawn as a result of the response to the study questionnaire:

1. Health instruction is viewed as an important part of the total educational process by those responding, even though its time in many areas is not equal with other curricular
offerings.

2. There is a required separate course in health instruction and credit is given for it toward graduation.

3. The majority of Ohio schools are fulfilling the State Department of Education's minimum requirement of one semester or its equivalent.

4. Most schools fulfill this requirement by requiring one semester of health instruction which meets five days per week.

5. Most schools schedule boys and girls in the same class; however, there is more separation of the sexes in small schools than any other size. Except for the medium size schools, scheduling factors is the reason for separation of boys and girls. Medium size schools separate boys and girls more because of subject matter.

6. Less separation of boys and girls in health classes occurs in Ohio's public secondary schools than was reported to have occurred as a national practice in the School Health Education Study.

7. Class size seems to be commensurate with class size of other courses.

8. Ninety per cent of the teachers of health are certified under the previous law and are not necessarily prepared
specifically in health education.

9. Of those who teach health, most have added responsibilities in coaching.

10. In general, content areas are emphasized more than once during grades seven through twelve. Exceptions include health careers, consumership and family living.

11. Health courses, in general, are based on individual teacher constructed courses with some consultation of the textbook used.

12. There is basically no significant difference in response among the three school districts to the majority of items, thus indicating the same basic practices being used in all size schools in Ohio.

13. Teachers of health in Ohio are aware of the need for more time, for updated materials, and to avoid too much repetition of content.

Recommendations for the Future of Health Education in Ohio

The following recommendations are made as a result of the findings of this study and are strongly suggested for each school and school district.

1. Even though schools are meeting minimum state standards, these standards for health instruction in Ohio's high schools
should be revised and become commensurate with other curricular offerings as recommended by the School Health Education Study, Inc.

2. Requirements should be increased from one to two semesters with daily classes scheduled in grades seven and eight, and two semesters, daily classes scheduled for grades nine, ten, eleven or twelve. This practice would be more commensurate with other curricular offerings and would be more consistent with research findings that indicate that daily meetings maintain interest and motivational effectiveness to a greater degree than do two or three meetings per week.

3. Each school system should be strongly encouraged to conduct an in-depth evaluation of their present health education program and prepare a written set of statements on program, philosophy, goals, and means by which these are being put into practice. This statement should be filed by the school administration and be available upon request.

4. All health instruction classes should be coeducational. The prevalent practice of homogeneous sex grouping should be formally discarded in health classes even though there may be isolated situations that would warrant separation of sexes.

5. In the future only teachers with a state certification in health should be employed to teach health. This is viewed as
one of the most important recommendations coming from this study and not only complies with state requirements, but is more in keeping with acceptable standards coming from recent research and conferences on the professional preparation of health teachers.

6. Teachers already engaged in teaching health without adequate preparation should be strongly encouraged to attend clinics, workshops, and conferences on a regular basis to supplement their preparation. Released time for such activities is strongly encouraged.

7. Curriculum studies need to be conducted on local levels to determine scope, sequence, and placement of health content. This should be based on community need, student need, interests and problems and not on teacher-decision or available resources. The results of such studies should take the form of curriculum guides and should be available upon request through the school administration.

8. Each school system should have at least one person designated as Health Coordinator to insure the conduct of the health education program in regard to methodology, content, etc. This could help to insure less repetition and broader coverage of pertinent health content.
9. Further areas for research both on a state and local level should include the following: philosophy of the program, in-depth curriculum studies, methodology of instruction, student attitude and interest, scheduling problems, and professional preparation of teachers.

10. A status study of this type should be repeated every five to ten years to determine progress.
APPENDIX A
Ohio School Health Education Study

Status of the School Health Instruction
Program of Public Secondary
Schools (Grades 7-12)

This questionnaire has been designed to provide information which will indicate the status of the health instructional practices in the State of Ohio. The form has been so constructed that a "yes" or "no" or a " " can be used to answer most of the questions. Please answer the questions as accurately and as completely as possible. Return the form in the enclosed stamped addressed envelope.

I. General Information:

A. Name of School ____________________________________________

B. Address of School __________________________________________

C. Name of Superintendent _____________________________________

D. Name of Person Completing This Form _________________________

E. Title of Person Completing This Form __________________________

F. Total Enrollment in School ________________________________

G. Check the grades included in your school:
   7____ 8____ 9____ 10____ 11____ 12____

II. Organization and Administration of the Instructional Program

A. Please give the reasons why health education is being taught in your school. RANK each item (1-2-3, etc.) using 1 for the most important.

   ______ 1. To comply with state standards
   ______ 2. To comply with requirements of local school system
   ______ 3. To fulfill the objectives of the educational program
   ______ 4. To solve an administrative problem; (e.g.) offered on alternate days when physical education does not meet or when free periods are to be filled
5. To provide a course for students not enrolled in a college preparatory curriculum
6. To provide an additional elective for students
7. Are there other reasons? Please write in reasons and rank in order of importance.

---

B. May Carnegie Credit for graduation be earned for the health education course? (Please check) Yes No

C. If credit is given, indicate how it appears on the student's record.

<table>
<thead>
<tr>
<th></th>
<th>As credit for health specifically (check)</th>
<th>Combined with another subject (specify subject)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior High School</td>
<td>_______________________</td>
<td>_______________________</td>
</tr>
<tr>
<td>Senior High School</td>
<td>_______________________</td>
<td>_______________________</td>
</tr>
</tbody>
</table>

D. Indicate the number of semesters health instruction is required, the number of periods per week it is given, and the length of the periods in minutes.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Semesters Required</th>
<th>Periods/Week</th>
<th>Length of Period/Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
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<td></td>
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<tr>
<td>8</td>
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<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
E. Are boys and girls scheduled in the same classes or in separate classes? (Please check below in the column that applies for each grade.)

<table>
<thead>
<tr>
<th>Grade</th>
<th>Combined classes of boys &amp; girls</th>
<th>Separate classes of boys and girls</th>
<th>Combined classes except for some units (indicate units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
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<tr>
<td>8</td>
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</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F. If classes are taught with boys and girls separated, please check why for each grade level.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Space</th>
<th>Staff</th>
<th>Scheduling Factors</th>
<th>Nature of Subject Matter</th>
<th>Other-Please Specify</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
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<td>8</td>
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<td>12</td>
<td></td>
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</tr>
</tbody>
</table>

G. What is the average size of each class?

<table>
<thead>
<tr>
<th>15-20</th>
<th>21-35</th>
<th>36-50</th>
<th>Over 50</th>
</tr>
</thead>
</table>

H. Who teaches the health education class? (Please check each grade level where classes are taught.)

1. Teachers with major in health education only

2. Teachers with minor in health education only

3. Teachers with combined major in health and physical education

<table>
<thead>
<tr>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Teachers with major in physical education only
5. Biology teachers and/or general science teachers
6. Nurses
7. Other (Please specify)

I. What responsibilities other than teaching do the teachers generally assigned to health education have?

1. None
2. Coaching
3. Guidance
4. Intramural Supervisor
5. Health Coordinator
6. Other (Specify)

J. Content areas for the separate health education course—Please rate the following content areas taught at each of the secondary levels according to the degree of emphasis in the health education course. Mark as follows:

1-Major emphasis: 2-Moderate emphasis; 3-Minor emphasis

1. Accident prevention and first aid
2. Alcohol and tobacco
3. Drugs and narcotics
4. Dental health
5. Family living
6. Cleanliness and grooming
7. Community health
8. Environmental health
9. Exercise, rest and sleep
10. Health careers
11. Nutrition
12. Consumership
13. Communicable disease
14. Non-communicable disease
15. Mental health
K. Which of the following source(s) are consulted in your school for suggestions of what to study in health education? If more than one, please use rankings of 1, 2, and 3 as suggested in Item J.

1. The School Health Education Study (Tri-M)
2. Ohio Course of Study
3. Local Curriculum Guide (Name & Date)
4. Individual teacher decision
5. Student teacher planning
6. Health textbooks (Name & Date)
7. Needs, interests, and problems of students
8. Other (Please specify)

III. Has the recent change in certification of health teachers affected your health education courses? If not, do you anticipate any such change in the future?

IV. What are some of the problems that you see in regard to health instruction in secondary schools? Do you have any recommendations regarding these problems?

V. Check here if you would like the results of this study!

-THANK YOU FOR YOUR COOPERATION-
APPENDIX B
November 15, 1972

Miss Maryalyce Jeremiah
Assistant Professor
Division of Health and
Physical Education
Cedarville College
Cedarville, Ohio 45314

Dear Miss Jeremiah:

I am writing in reply to your letter of October 13, 1972 requesting that the Ohio Department of Education endorse your study regarding health education programs throughout the state. Our office is very much interested in the results of your study and feel that the findings discovered in such a study would help to interpret the status of school health education programs in Ohio.

Our office cannot, technically, endorse a study other than those that are being conducted by the use of state funds. However, our office is definitely interested in ascertaining the status of health education in Ohio's public secondary schools. We encourage you to continue your study and we will be happy to serve you as consultants and/or in any way that you desire.

Since we are not permitted to specifically endorse your study, we would like to state that we would strongly urge each school administrator in the state to participate in your study by responding to your questionnaire. I am sure that you will find that teachers of school health education throughout the state are definitely interested in your study and will be willing to cooperate with you in this worthwhile endeavor.

Thank you for informing us of your study and as I stated earlier, we will be very much interested in the findings and recommendations that will be discovered as a result of your efforts.

Sincerely,

Robert L. Holland
Chief
Drug and Health Education

RLH/b
Dear Administrator:

In recent years educators have begun to recognize the need for "significance" in the experiences that we provide for our school-age youth. Quality programs of health education are dependent to a large extent upon such significant experiences. It is because of these basic beliefs that an extensive study is being conducted to determine the status of health instruction in Ohio's public secondary schools. The study is being done in cooperation with the Health Education faculty of The Ohio State University and with the support of Mr. Robert Holland, Chief of Drug and Health Education, Ohio Department of Education.

We are asking that you join us in this endeavor. Will you kindly complete the enclosed questionnaire regarding health instruction in your school and return it to me in the enclosed stamped envelope by January 29, 1973. If it would be more convenient for you to pass the questionnaire on to someone else on your staff who is directly involved with health instruction, asking them to complete it, please feel free to do so. If there are items on the form that do not apply to your school situation, respond accordingly.

We need your response so that the results of this study will reflect realistically the quality of the health instruction programs in our state. Your cooperation and prompt attention to this matter will be greatly appreciated.

Sincerely yours,

(Miss) Maryalyce Jeremiah
Asst. Professor of Health & Physical Education

MJ:jk
Dear Administrator:

As you may recall, you received in the mail at the first of this year a questionnaire concerning health instruction in your school. This questionnaire is the data-collecting instrument for the Ohio School Health Education Study, a research project endorsed by the Ohio State University Health Education faculty and supported by Mr. Robert Holland, Chief of Drug and Health Education in our state.

The first response to the study was very encouraging. Due to the time of year or perhaps increased responsibilities, some did not return the form. I am, therefore, enclosing another questionnaire and am asking that either you or a member of your health education faculty complete the form and return it to me by March 26.

We need your participation to make this study valuable to the continued progress of health instruction in Ohio. Thank you for your interest and cooperation.

Sincerely,

(Miss) Maryalyce Jeremiah

MJJ: JK

Enclosure
APPENDIX C
PARTICIPANTS IN THE STUDY

**LARGE**

1. **Cleveland City**
   - a. Collingwood High School  
     Cleveland 44110
   - b. John Hay High School  
     Cleveland 44106
   - c. John Marshall High School  
     Cleveland 44111
   - d. South High School  
     Cleveland 44105
   - e. West Technical High School  
     Cleveland 44102

2. **Columbus City**
   - a. Adult Day High School  
     Columbus 43215
   - b. Brookhaven High School  
     Columbus 43229
   - c. Central High School  
     Columbus 43215
   - d. Columbus Evening High School  
     Columbus 43215
   - e. East High School  
     Columbus 43205
   - f. Eastmoor High School  
     Columbus 43213
   - g. Lincoln-McKinley High School  
     Columbus 43211
   - h. Marion-Franklin High School  
     Columbus 43207
   - i. Mifflin High School  
     Columbus 43219
   - j. Mohawk High School  
     Columbus 43215
   - k. North High School  
     Columbus 43202
   - l. Northland High School  
     Columbus 43229
   - m. South High School  
     Columbus 43206
   - n. Walnut Ridge High School  
     Columbus 43227
   - o. Whetstone High School  
     Columbus 43214
LARGE (Cont.)

3. Toledo City
   a. Bowsher High School
      Toledo  43614
   b. Libbey High School
      Toledo  43609
   c. Rogers High School
      Toledo  43615
   d. Spencer Sheerpless
      High School
      Toledo  43528
   e. Start High School
      Toledo  43613
   f. Waite High School
      Toledo  43605
   g. Woodward High School
      Toledo  43608
   h. Patterson High School
      Dayton  45402
   i. Roosevelt High School
      Dayton  45417
   j. Stivers High School
      Dayton  45402
   k. Wilbur Wright
      High School
      Dayton  45403

4. Dayton City
   a. Belmont High School
      Dayton  45420
   b. Colonel White
      High School
      Dayton  45405
   c. Dunbar High School
      Dayton  45408
   d. Fairview High School
      Dayton  45406
   e. Kiser High School
      Dayton  45405
MEDIUM

1. Ohio Valley Local
   a. Manchester High School
      Manchester  45144
   b. North Adams High School
      Seaman  45679
   c. Peebles High School
      Peebles  45660
   d. West Union High School
      West Union  45693

2. Lima City
   a. Lima High School
      Lima  45804

3. Elida Local
   a. Elida High School
      Elida  45807

4. Ashland City
   a. Ashland High School
      Ashland  44805

5. Conneaut Area City
   a. Conneaut High School
      Conneaut  44030

6. Geneva Area City
   a. Geneva Area High School
      Geneva  44041

7. Buckeye Local
   a. Edgewood High School
      Ashtabula  44004

8. Athens City
   a. Athens High School
      Athens  45780

9. Martin's Ferry City
   a. Martin's Ferry High School
      Martin's Ferry  43935

10. Middletown City
    a. Freshman High School
       Middletown  45042
    b. Middletown High School
       Middletown  45042
    c. Monroe High School
       Monroe  45050

11. Fairfield Local
    a. Fairfield High School
       Fairfield  45014

12. Lakota Local
    a. Lakota High School
       W. Chester  45069

13. Urbana City
    a. Urbana High School
       Urbana  43078

14. Mad River Green Local
    a. Greenon High School
       Springfield  45502
15. New Carlisle-Bethel Local
   a. Tecumseh High School
      New Carlisle 45344

16. West Clermont Local
   a. Amelia High School
      Amelia 45102

17. East Liverpool City
   a. East Liverpool
      High School
      East Liverpool 43920

18. Galion City
   a. Galion High School
      Galion 44833

19. Cleveland University Hts.
   a. Heights High School
      Cleveland Hts. 44118

20. Lakewood City
   a. Lakewood High School
      Lakewood 44107

21. Mayfield City
   a. Mayfield High School
      Cleveland 44143

22. North Almsted City
   a. North Almsted
      High School
      N. Almsted 44070

23. Rocky River City
   a. Rocky River High School
      Rocky River 44116

24. Shaker Hts. City
   a. Shaker Hts. High School
      Shaker Hts. 44120

25. South Euclid-Lyndhurst City
   a. Brush High School
      Lyndhurst 44124

26. Strongsville City
   a. Strongsville High School
      Strongsville 44136

27. Warrensville Hts.
   a. Warrensville Hts.
      High School
      Warrensville Hts. 44128

28. Delaware City
   a. Rutherford B. Hayes
      Delaware 43015

29. Lancaster City
   a. Lancaster High School
      Lancaster 43130
MEDIUM (Cont.)

30. Miami Trace Local
   a. Miami Trace High School
      Washington C.H. 43160

31. Scioto Darby City
   a. Hilliard High School
      Hilliard 43026

32. Upper Arlington City
   a. Upper Arlington High School
      Columbus 43221

33. Gallipolis City
   a. Gallia Academy
      Gallipolis 45631

34. Chardon Local
   a. Chardon High School
      Chardon 44024

35. Fairborn City
   a. Fairborn Park Hills
      High School
      Fairborn 45324

36. Indian Hill Ex. Village
   a. Indian Hill High School
      Cincinnati 45242

37. Northwest Local
   a. Colerain High School
      Cincinnati 45239

38. Findlay City
   a. Findlay High School
      Findlay 45840

39. Napoleon City
   a. Napoleon High School
      Napoleon 43545

40. Logan City
   a. Logan High School
      Logan 43138

41. Bellevue City
   a. Bellevue High School
      Bellevue 44811

42. Buckeye Local
   a. Brilliant High School
      Brilliant 43913

   b. Dillonvale High School
      Dillonvale 43917

   c. Warren Consolidated High School
      Tiltonsville 43963

   d. Yorkville High School
      Yorkville 43971
43. Edison Local
   a. Jefferson Union High School
      Richmond 43944
   b. Springfield High School
      Amsterdam 43903
   c. Stanton High School
      Irondale 43932

44. Indian Creek Local
   a. Wintersville High School
      Wintersville 43952

45. Mount Vernon City
   a. Mount Vernon High School
      Mt. Vernon 43050

46. Mentor Ex. Village
   a. Mentor High School
      Mentor 44060

47. Madison Local
   a. Madison High School
      Madison 44057

48. Newark City.
   a. Newark High School
      Newark 43055

49. Bellefontaine City
   a. Bellefontaine High School
      Bellefontaine 43311

50. Elyria City
   a. Elyria High School
      Elyria 44035

51. North Ridgeville City
   a. North Ridgeville High School
      N. Ridgeville 44039

52. Sheffield-Sheffield Lake
   a. Brookside High School
      Lorain 44054

53. Amherst Ex. Village
   a. Marion L. Steele High School
      Amherst 44001

54. Avon Lake Local
   a. Avon High School
      Avon 44011

55. Maumee City
   a. Maumee High School
      Maumee 43537

56. Oregon City
   a. Clay High School
      Oregon 43616

57. Washington Local
   a. Whitmer High School
      Toledo 43613
58. Poland Local
   a. Poland Seminary High School
      Poland 44514

59. Brunswick City
   a. Brunswick High School
      Brunswick 44212

60. Medina City
   a. Medina High School
      Medina 44256

61. Meigs Local
   a. Meigs High School
      Pomeroy 45769

62. Piqua City
   a. Piqua High School
      Piqua 45356

63. Centerville City
   a. Centerville High School
      Centerville 45459

64. Miamisburg City
   a. Miamisburg High School
      Miamisburg 45342

65. Northmont Local
   a. Northmont High School
      Clayton 45315

66. Northridge Local
   a. Northridge High School
      Dayton 45414

67. Morgan Local
   a. Morgan High School
      McConnelsville 43756

68. Crestwood Local
   a. Crestwood High School
      Mantua 44255

69. Field Local
   a. Field High School
      Mogadore 44260

70. Twin Valley Local
   a. Twin Valley South High School
      W. Alexandria 45381

71. Fremont City
   a. Fremont Ross
      Fremont 43420

72. Clyde Ex. Village
   a. Clyde High School
      Clyde 43410
MEDIUM (Cont.)

73. Portsmouth City
   a. East High School
      Portsmouth 45662
   b. Portsmouth High School
      Portsmouth 45662

74. Tiffin City
   a. Columbian High School
      Tiffin 44883

75. Louisville City
   a. Louisville High School
      Louisville 44641

76. Plains Local
   a. Glenwood High School
      Canton 44709
   b. Oakwood High School
      N. Canton 44721

77. Doner City
   a. Doner High School
      Doner 44622

78. New Philadelphia City
   a. New Philadelphia High School
      New Philadelphia 44663

79. Lebanon City
   a. Lebanon High School
      Lebanon 45036

80. Marietta City
   a. Marietta High School
      Marietta 45750

81. Wooster City
   a. Wooster High School
      Wooster 44691

82. Bowling Green City
   a. Bowling Green High School
      Bowling Green 43402

83. Springfield City
   a. Springfield North High School
      Springfield 45503
   b. Springfield South High School
      Springfield 45505

84. Bedford City
   a. Bedford High School
      Bedford 44146

85. Willoughby - East Lake City
   a. North High School
      Eastlake 44094
   b. South High School
      Willoughby 44094
SMALL

1. Delphos City
   a. Jefferson High School
      Delphos 45833

2. Bluffton Ex. Village
   a. Bluffton High School
      Bluffton 45817

3. Allen East Local
   a. Allen East High School
      Lafayette 45854

4. Bath Local
   a. Bath High School
      Lima 45801

5. Spencerville Local
   a. Spencerville High School
      Spencerville 45887

6. Hillsdale Local
   a. Hillsdale High School
      Jeromesville 44840

7. Mapleton Local
   a. Mapleton High School
      Ashland 44805

8. Grand Valley Local
   a. Grand Valley High School
      Orwell 44076

9. Jefferson Area Local
   a. Jefferson Area High School
      Jefferson 44047

10. Federal-Hocking Local
    a. Federal Hocking High School
        Stewart 45778

11. Trimble Local
    a. Glouster High School
       Glouster 45732

12. Minster Local
    a. Minster High School
       Minster 45865

13. New Bremen Local
    a. New Bremen High School
       New Bremen 45869

14. Waynesfield-Goshen Local
    a. Waynesfield High School
       Waynesfield 45896

15. Barnesville Ex. Village
    a. Barnesville High School
       Barnesville 43713
SMALL (Cont.)

16. Union Local
   a. Union Local High School
      Belmont 43718

17. Georgetown Ex. Village
   a. Georgetown High School
      Georgetown 45121

18. Fayetteville-Perry Local
   a. Fayetteville High School
      Fayetteville 45118

19. Ripley-Union-Lewis Local
   a. Ripley-Union-Lewis High School
      Ripley 45167

20. Western Brown Local
   a. Mt. Orab High School
      Mt. Orab 45154

21. Graham Local
   a. Graham High School
      St. Paris 43072

22. Triad Local
   a. Triad High School
      N. Lewisburg 43060

23. West Liberty-Salem Local
   a. West Liberty-Salem High School
      W. Liberty 43357

24. New Richmond Ex. Village
   a. New Richmond High School
      New Richmond 45137

25. Batavia Local
   a. Batavia High School
      Batavia 45103

26. Felicity-Franklin Local
   a. Felicity-Franklin High School
      Felicity 45120

27. Blanchester Local
   a. Blanchester High School
      Blanchester 45107

28. Clinton-Massie Local
   a. Clinton-Massie High School
      Clarksville 45113

29. Crestline Ex. Village
   a. Crestline High School
      Crestline 44827

30. Colonel Crawford Local
   a. Colonel Crawford High School
      Bucyrus 44856
31. Cuyahoga Hts. Local
   a. Cuyahoga High School
      Cleveland 44125

32. Mississinawa Valley Local
   a. Mississinawa Valley
      High School
      Union City 47390

33. Ayersville Local
   a. Ayersville High School
      Defiance 43512

34. Central Local
   a. Fairview High School
      Sherwood 43556

35. Northeastern Local
   a. Tinora High School
      Defiance 43512

36. Big Walnut Local
   a. Big Walnut High School
      Sunbury 43074

37. Buckeye Valley Local
   a. Buckeye Valley
      High School
      Delaware 43015

38. Berlin-Milan Local
   a. Edison High School
      Milan 44846

39. Bloom-Carroll Local
   a. Bloom Carroll
      High School
      Carroll 43112

40. Pickerington Local
   a. Pickerington High
      School
      Pickerington 43147

41. Grand View Hts. City
   a. Grand View Hts.
      High School
      Grand View Hts. 43212

42. Washington Local
   a. Dublin High School
      Dublin 43017

43. Wauseon Ex. Village
   a. Wauseon High School
      Wauseon 43567

44. Archbold Area Local
   a. Archbold High School
      Archbold 43502

45. Evergreen Local
   a. Evergreen High Sch.
      Metamora 43540

46. Pike-Delta-York Local
   a. Delta High School
      Delta 43515
SMALL (Cont.)

47. Swanton Local
   a. Swanton High School
      Swanton 43558

48. Southwestern Local
   a. Southwestern High School
      Patriot 45658

49. Cardinal Local
   a. Cardinal High School
      Middlefield 44062

50. Kenston Local
   a. Kenston High School
      Chagrin Falls 44022

51. Newbury Local
   a. Newbury High School
      Newbury 44065

52. Cedar Cliff Local
   a. Cedarville High School
      Cedarville 45314

53. Madison Consolidated Local
   a. Madison High School
      Lore City 43755

54. Zane Trace Local
   a. Zane Trace High School
      Old Washington 43768

55. Lockland City
   a. Lockland High School
      Lockland 45215

56. North College Hill City
   a. North College Hill
      High School
      Cincinnati 45239

57. Arcadia Local
   a. Arcadia High School
      Arcadia 44804

58. Liberty-Brenton Local
   a. Liberty-Brenton
      High School
      Findlay 45840

59. McComb Local
   a. McComb High School
      McComb 45858

60. Van Buren Local
   a. Van Buren High School
      Van Buren 45889

61. Vanlue Local
   a. Vanlue High School
      Vanlue 45890

62. Kenton City
   a. Kenton High School
      Kenton 43326
63. Hardin Northern Local
   a. Hardin Northern High School
      Dola 45835

64. Riverdale Local
   a. Riverdale High School
      Mt. Blanchard 45867

65. Upper Scioto Valley Local
   a. Upper Scioto Valley High School
      McGuffey 45859

66. Conotton Valley Union Local
   a. Conotton Valley High School
      Bowerston 44695

67. Holgate Local
   a. Holgate High School
      Holgate 43527

68. Liberty Center Local
   a. Liberty Center High School
      Liberty Center 43532

69. Patrick Henry Local
   a. Patrick Henry High School
      Hamler 43524

70. West Holmes Local
   a. West Holmes High School
      Millersburg 44654

71. Monroeville Local
   a. Monroeville High School
      Monroeville 44847

72. New London Local
   a. New London High School
      New London 44851

73. South Central Local
   a. South Central High School
      Greenwich 44837

74. Western Reserve Local
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      Collins 44826

75. Wellston City
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      Wellston 45692

76. Perry Local
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      Perry 44081

77. Chesapeake Union Ex. Village
   a. Chesapeake High School
      Chesapeake 45619
SMALL (Cont.)

78. Fairland Local
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      Proctorville 45669

79. Rock Hill Local
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      Ironton 45638

80. South Point Local
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      South Point 45680

81. Heath City
   a. Heath High School
      Heath 43055

82. North Fork Local
   a. Utica High School
      Utica 43080

83. Wellington Ex. Village
   a. Wellington High School
      Wellington 44090

84. Clearview Local
   a. Clearview High School
      Lorain 44052

85. London City
   a. London High School
      London 43140

86. Madison Plains Local
   a. Madison Plains
      High School
      London 43140

87. Campbell City
   a. Memorial High School
      Campbell 44405

88. Canfield Local
   a. Canfield High School
      Canfield 44406

89. Jackson Milton Local
   a. Jackson Milton
      High School
      N. Jackson 44451

90. Sebring Local
   a. McKinley High School
      Sebring 44672

91. Elgin Local
   a. Elgin High School
      Marion 43302

92. Southern Local
   a. Southern High School
      Pomeroy 45769

93. Marion Local
   a. Marion High School
      Maria Stein 45860
SMALL (Cont.)

94. Parkway Local
   a. Parkway High School
      Rockford 45882

95. St. Henry Consolidated Local
   a. St. Henry High School
      St. Henry 45883

96. Bradford Ex. Village
   a. Bradford High School
      Bradford 45308

97. Covington Ex. Village
   a. Covington High School
      Covington 45318

98. Milton Union Ex. Village
   a. Milton Union High School
      West Milton 45383

99. Tipp City Ex. Village
   a. Tippecanoe High School
      Tipp City 45371

100. Bethel Local
    a. Bethel High School
        Tipp City 45371

101. Miami East Local
    a. Miami East High School
        Casstown 45312

102. Newton Twp. Local
    a. Newton High School
       Pleasant Hill 45359

103. Oakwood City
    a. Oakwood High School
       Dayton 45419

104. Brookville Local
    a. Brookville High Sch.
       Brookville 45309

105. Jefferson Local
    a. Jefferson High School
       Dayton 45418

106. Valley View Local
    a. Valley View High School
       Germantown 45327

107. Cardington-Lincoln Local
    a. Cardington High Sch.
       Cardington 43315

108. Northmor Local
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       Galion 44833

109. East Muskingum Local
    a. John Glenn High Sch.
       New Concord 43762
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125. Continental Local
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126. Kalida Local
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127. Leipsir Local
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      Leipsir 45856

128. Miller City-New Cleveland Local
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      Miller City 45864

129. Lucas Local
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      Lucas 44843

130. Lakota Local
   a. Lakota High School
      Kansas 44841

131. Woodmore Local
   a. Woodmore High School
      Elmore 43416

132. Botkins Local
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      Botkins 45306

133. Fairlawn Local
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      Sidney 45365

134. Fort Loramie Local
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      Ft. Loramie 45845

135. Lake Local
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      Uniontown 44685

136. Minerva Local
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      Minerva 44657

137. Osnaburg Local
   a. East Canton High School
      E. Canton 44730

138. Sandy Valley Local
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      Magnolia 44643

139. Tuslaw Local
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      Massillon 44646
140. Twinsburg City Local
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      Twinsburg 44087

141. Newton Falls Ex. Village
   a. Newton Falls High School
      Newton Falls 44444

142. Bristol Local
   a. Bristol High School
      Bristolville 44402

143. Joseph Badger Local
   a. Badger High School
      Kinsman 44428

144. Labrae Local
   a. Labrae High School
      Leavittsburg 44430

145. McDonald Local
   a. McDonald High School
      McDonald 44437

146. Southington Local
   a. Chelker High School
      Southington 44470

147. Garaway Local
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      Sugarcreek 44681

148. Indian Valley Local
   a. Indian Valley South
      High School
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149. Strasburg-Franklin Local
   a. Strasburg-Franklin
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      Strasburg 44680

150. Ohio City-Liberty Local
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      Ohio City 45874

151. Rittman Ex. Village
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152. Chippewa Local
   a. Chippewa High Sch.
      Dayestown 44230

153. Dalton Local
   a. Dalton High School
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154. Green Local
   a. Smithville High Sch.
      Smithville 44677
155. North Central Local
   a. Nowayne High School
      Creston 44217

156. Triway Local
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      Wooster 44691

157. Edgerton Local
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      Edgerton 43517

158. Edon-Northwest Local
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      Edon 43518

159. Rossford Ex. Village
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160. Otsego Local
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      Tontogany 43565

161. Mohawk Local
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      Sycamore 44882

162. St. Bernard City
   a. St. Bernard High School
      St. Bernard 45217

163. Stryker Local
   a. Stryker High School
      Stryker 43557
BIBLIOGRAPHY
BIBLIOGRAPHY

Books


Periodicals


**Unpublished Materials**


