

AN ABSTRACT OF THE THESIS OF

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Teachers in Selected Oregon High Schools

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The purpose of this study was to evaluate the professional preparation of teachers of health in selected Oregon high schools.

The accomplishment of this problem was dependent upon (1) determining the standards or content areas for professional education of all high school health teachers and (2) determining the present professional education preparation status of Oregon high school teachers of health.

The standards of preparation for all health teachers were established from the writings of professional health education authorities. The present educational preparation status of Oregon high school teachers of health was determined by a survey of the teachers involved, with the teachers indicating their feelings of adequacy or inadequacy about their preparation in regard to the

standards of preparation of all health teachers.

The academic files of the teachers were also analyzed; then a comparison of actual preparation and the teachers' feelings about their preparation was made.

The data thus collected were submitted to summations and means, correlations, and t-Test of Significance. From these statistical evaluations, the results and conclusions were drawn.

It was determined from this study that Oregon teachers of health were not as well prepared as they thought they were, and not as well prepared as they should have been. Teachers that have been prepared as physical education teachers are doing most of the teaching for health in Oregon high schools. Their preparation for the purpose of teaching health education has been very little.

The younger teachers seem to be better prepared than older teachers. The teachers who received their preparation from an institution of higher learning in the State of Oregon were better prepared than those who received their training outside the State of Oregon.

An Evaluation of the Professional Preparation  
of Health Teachers in Selected Oregon High Schools

by

Oral Behunin

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Typed by Dorothy Behunin for Oral Behunin

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DEDICATION

Dedicated to my wife, Dorothy and sons, Brandt K. and Kelly O.

## LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	Summation and Mean For Years at School Where Now Employed	37
2	Correlation Between Years at School Where Now Employed and Feelings about Preparation in Content Areas N=100	39
3	Correlation Between Years at School Where Now Employed and Actual Preparation in Content Areas N=100	40
4	Summation and Mean for Years Teaching Health	41
5	Correlation Between Years Teaching Health and Feelings About Preparation in Content Areas N=100	42
6	Correlation Between Years Teaching Health and Actual Preparation in Content Areas N=100	42
7	Summation and Mean for Age of Teachers	44
8	Correlation Between Age and Feelings About Preparation in Content Areas N=100	45
9	Correlation Between Age and Actual Preparation in Content Areas N=100	45
10	Summation and Mean for Year Degree Was Granted	46
11	Correlation Between Years When Degree Was Granted and Feelings About Preparation in Content Areas N=100	48
12	Correlation Between Years When Degree Was Granted and Actual Preparation in Content Areas N=100	48
13	Summation for: Is Health Your Main Teaching Interest Data	49
14	Summation For: Is Health Your Main Teaching Assignment Data	49

<u>TABLE</u>	<u>PAGE</u>	
15	Summation and Mean for Percent of Total Teaching Time Per Day Spent Teaching Health	51
16	Correlation Between Percent of Total Teaching Time Spent Per Day Teaching Health and Feelings About Preparation in Content Areas N=100	52
17	Correlation Between Percent of Total Teaching Time Spent Per Day Teaching Health and Actual Preparation in Content Areas N=100	53
18	Summation for Highest Earned Degree	55
19	Summation and Mean for Hours Beyond Highest Degree	56
20	Summation of Major for Undergraduate Degree Data	58
21	A Comparison of Feelings About Preparation for the Four Most Common Majors: Physical Education, Health and Physical Education, Social Studies, and Home Economics	59
22	A Comparison of Actual Preparation for the Four Most Common Majors: Physical Education, Health and Physical Education, Social Studies, and Home Economics	64
23	Summation and Mean for Total Undergraduate Hours Course Work in Health	68
24	Undergraduate Hours Course Work in Health for the Four Most Common Majors	69
25	Correlation Between Total Undergraduate Hours Course Work in Health and Feelings About Preparation in Content Areas N=100	70
26	Correlation Between Total Undergraduate Hours Course Work in Health and Actual Preparation in Content Areas N=100	72
27	Summation of Course Work in Biological Science	75
28	Summation of Course Work in Sociology, Psychology and Chemistry	75

<u>TABLE</u>		<u>PAGE</u>
29	Summation of Workshops Data	77
30	Feelings About Preparation/Actual Preparation	78

## TABLE OF CONTENTS

CHAPTER		PAGE
I.	THE PROBLEM . . . . .	1
	Need for the Study . . . . .	1
	Purpose of the Study . . . . .	2
	Procedure . . . . .	2
	Delimitations . . . . .	4
	Definition of Terms . . . . .	6
II.	REVIEW OF LITERATURE . . . . .	9
	Need for Improvement of Professional Preparation of Health Teachers . . . . .	9
	Guidelines for Improvement . . . . .	11
	Related Studies . . . . .	22
	Survey Method Literature . . . . .	24
III.	METHODOLOGY . . . . .	26
	Experimental Design . . . . .	26
	Statistical Design . . . . .	33
IV.	PRESENTATION AND ANALYSIS OF THE DATA . . . . .	35
V.	SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS . . . . .	82
	Summary . . . . .	82
	Conclusions . . . . .	84
	Recommendations . . . . .	86
	BIBLIOGRAPHY . . . . .	88
	APPENDIX . . . . .	92

## CHAPTER I

### NEED FOR THE STUDY

Many of the critical problems and issues of our day are related to the field of health. To help students find solutions to these problems requires that a health educator have specialized professional preparation. Probably the single most important obstacle in our efforts to improve teaching in the health field is the preparation of teachers (Bland, 1968).

The responsibility of preparing specialized professional health education teachers lies with the institutions of higher learning. The curricula must enable teachers to keep abreast of current problems and thus enable them to meet the needs of students.

The problem lies in what various institutions perceive as the basic essentials for preparation of prospective teachers of health. These range from a minimal undergraduate personal health course to a rather broad health program. It is evident there needs to be continual assessment and re-evaluation of health teacher preparation programs.

A successful school health program consists of more than classroom teaching; it also includes health services and healthful school living. Home and community involvement is required if a maximum contribution is to be made to the students. No single individual should

be responsible for the development of a complete health education program in the school. The individual teacher, however, is the key to the success of any program.

Those teachers responsible for health instruction in a school must have the necessary professional preparation to carry out an effective health education program. Health education in the schools has not had a chance to demonstrate its great potential in many communities, because health education courses were not taught by properly prepared health educators. There are, on the other hand, many examples of well prepared teachers of health who teach successful programs.

One measure of competency of teachers is their professional preparation. Before any improvements for professional preparation can be made, the guidelines for that improvement must be known. The need for this study is to evaluate the professional preparation status of Oregon high school teachers of health.

#### PURPOSE OF THE STUDY

The purpose of this study is to evaluate the professional preparation of teachers of health in selected Oregon high schools.

#### PROCEDURE

The accomplishment of this problem was dependent upon answering the following questions:

1. What are the standards for professional education preparation of high school health education teachers?
2. What is the present professional education preparation status of Oregon high school teachers of health?
3. By comparing the present professional education preparation status of Oregon high school teachers of health with the standards for professional education preparation of high school health teachers, what are the strengths or weaknesses of the professional preparation of Oregon high school teachers of health?
4. What recommendations can be made on the basis of this comparison?

The professional preparation standards for health education teachers were developed from analysis and synthesis of "professional writings of health education authorities." The present professional education status of Oregon high school teachers of health was obtained by analysis of their undergraduate professional preparation. To gain this information, two methods were employed. The first method was an inspection of the academic files of the teachers at the Teacher Certification Office of the State Department of Education in Salem, Oregon. The name and number of all courses the teachers had taken as part of their professional preparation in or pertaining to health education were reviewed and recorded by the investigator. These courses were then included in the content areas needed for professional preparation. The description from the catalog of the school from which the teacher was graduated was used for this purpose.

The second method was to get information concerning how the teachers themselves felt about their professional preparation. This was obtained by the use of a questionnaire sent directly to the teachers. On this questionnaire, the teachers indicated in which of the content areas of preparation they felt adequately prepared, inadequately prepared, or had no previous training.

Approximately 25 percent of the high schools in Oregon were selected for this study. Oregon high schools are classified according to size: A1, A2, and B. Each classification contains eight districts and within each district are varying numbers of schools. Through stratified and random sampling (Good, 1959) teachers from schools in each district of each classification were selected. A total of 57 high schools were involved.

#### DELIMITATIONS

1. The kinds of degrees and number of hours beyond the bachelors degree were recorded, but only the undergraduate professional preparation was used as an evaluation of preparation for this study.
2. No attempt was made to measure or evaluate the knowledge, attitude or achievement of the high school students in health education in the schools involved.
3. Driver education was not included as a general area of professional preparation.

4. Only professional preparation for the health education instruction section of the school health program was evaluated.

5. Only professional health education preparation was evaluated; other professional education courses were not included.

6. The criteria for assigning professional health preparation courses to general content areas was the course description obtained from the catalogs of the institutions from which the teachers received their degree. Over the years some courses and course descriptions may have changed; the validity as represented in the catalog description of course content will be limited to the extent that this factor is operative.

7. Courses which pertain to organization of personal health, administration of school health, and introductory health courses were not classified into one of the areas of preparation. The number of hours these courses constituted were computed in the total number of hours for the given teacher, but were not included in the content area evaluation.

8. This study was limited to the extent that the information returned by the teacher on the questionnaire was representative of the baccalaureate preparation and was not influenced by work or experiences beyond that degree.

## DEFINITION OF TERMS

For the purpose of clarity and consistency, the following definitions apply whenever the terms appear:

1. A Random Sample. A sample in which each individual in a population or universe shall have the same probability of being chosen in the sample as each other individual (Backstrom, 1963).
2. A Stratified Sample. A sample which divides the population into homogeneous subparts (strata) and takes a random sample of each stratum (Backstrom, 1963).
3. Academic Data Sheet. A form used for recording data taken from the academic file of each teacher.
4. Adequate Preparation. As used in the Teacher Preparation Questionnaire, indicated the teacher felt he had enough undergraduate professional preparation in a content area to enable him to teach that area of health effectively.
5. Adequate Preparation. As used in the teachers' course work evaluation, indicated the teacher had taken course work in that subject matter area as part of his undergraduate education.
6. Class A1 High Schools. Schools with enrollment of 600 students or above.
7. Class A2 High Schools. Schools with enrollment of 200-599 students.
8. Class B High Schools. Schools with enrollment of 199 students or less.

9. Health Education. The process of providing learning experience for the purpose of favorably influencing knowledge, attitude and practices relating to individual and group health (Oberteuffer, 1963).

10. Health Instruction. Subject matter taught in the school to fulfill the requirements of accreditation.

11. High Schools. Accredited public senior high schools in the State of Oregon.

12. Inadequate Preparation. The lack of undergraduate professional preparation education in a given subject matter area.

13. In-State Teachers. Teachers who received their professional health education preparation at an institution of higher learning in the State of Oregon.

14. Mean. On questions of summation, the mean indicated which category or group the teachers were in.

15. Out-Of-State Teachers. Teachers who received their professional health education preparation at an institution of higher learning out of the State of Oregon.

16. Professional Health Education Preparation. All course work related to a curriculum of health education with the exception of education courses.

17. Professional Preparation Standards. The guidelines abstracted from the writings of authorities in the health field. They would include the health education courses taken by the teacher while working toward his baccalaureate degree.

18. School Health Program. All the components that contribute to the understanding, maintenance and improvement of the health of pupils and school personnel, including health services, health education, and healthful-school living.

19. Significant Correlation. A number below which the relationships measured were not statistically of value. This number for the total group was .167, for the in-state teachers the number was .207, and for the out-of-state teachers the number was .265.

20. Teacher of health. An individual within the high school who has the responsibility for health instruction in that school.

21. Teacher Preparation Questionnaire. The questionnaire sent to each teacher.

22. Total Group. The total sample of teachers involved in the study.

## CHAPTER II

### REVIEW OF LITERATURE

The review of literature was organized into the following four phases: Phase one was the literature investigated which showed a need for the improvement of education of health teachers. In Phase two, the guidelines for improvement of professional education preparation of health education teachers were presented. Related studies that were of close proximity were presented in phase three. The fourth phase was the literature that pertained to the research method used.

#### Need for Improvement of Professional Preparation of Health Teachers

The aim of the school health program is to lead the individual to practice favorable behavior in all situations involving his health or that of others. To achieve this aim requires acquisition of health knowledge, attitudes and practices in the field of health. Knowledge about health is the foundation upon which attitudes and behavior should be based. All are necessary for a complete program (Moss, 1961).

The individual mainly responsible for providing the type of knowledge that will foster favorable attitudes and practices is the health teacher.

Because the teacher has such an important role in the school health program, institutions preparing teachers should provide sufficient opportunities for prospective teachers to acquire necessary and desirable standards in health education covering standards in the three basic areas of school responsibility; namely, healthful school living, school health services, and health education (Byrd, 1964).

Snyder, at a district convention of the American Association for Health, Physical Education, and Recreation, gave several steps necessary for improvement of preparation of future health teachers. The problem as he stated it was, "Poorly educated students become poorly educated teachers who in turn poorly educate their students." According to Snyder, the professional preparation programs should prepare health educators for the schools that should be, rather than those that now exist. Two steps he suggested to be taken by colleges and universities in the development of a sound professional program in health education were as follows:

1. A study and evaluation should be made of the standards for preparation of teachers and leaders that are prepared by State and Federal Government departments, professional institutions and accrediting associations.

2. Survey the area served by the colleges to determine the extent, number and kind of functions performed by health educators and possible future development of health education (Snyder, 1964).

In recent years there has been a greater awareness of the role of the teacher in relation to the school health program and the need for teachers who are better prepared in the field of health education (Kilander, 1969). Administrators have strongly recommended that high school health classes be taught by teachers with specific preparation in the health field.

Concerning the role of educators, Eveden, states, "To improve teacher education is to improve teaching; to improve teaching is to improve schools; to improve schools is to improve the next generation; to strengthen the next generation is a social duty of the first magnitude" (Eveden, 1944).

Haag noted that health instruction is an important function of the high schools. At this educational level many students receive their last contact with scientific health facts. In many schools the teachers assigned health instruction have little or no preparation or enthusiasm for health teaching. A far too common tendency is to have the physical education instructor teach health on a "rainy-day". This hit-or-miss method of teaching health has contributed to the idea that any teacher is capable of teaching health (Haag, 1952).

According to Troster, of the American Association For Health, Physical Education and Recreation, professional preparation is at the very heart of a profession. It molds the leadership, and everything that happens in a profession stems from leadership. In a very real sense, everything good, bad, or indifferent within our area can be traced ultimately to our teacher training institutions (Troster, 1961).

#### Guidelines For Improvement

Interest in improving the professional preparation of health teachers is evidenced by the national, regional, state, and local conferences and workshops that have been held for this purpose (Kilander, 1961), (Glover, 1937).

One of the first organized attempts to establish the criteria for professional preparation in health education was undertaken at a national conference held at Jackson's Mill, West Virginia, under the direction of the American Association for Health, Physical Education and Recreation. The report of this 1948 meeting has done much to influence the curriculum construction for health education in the teacher preparation institutions in the United States.

At this conference the functions of health educators and the standards needed by teachers to execute these functions were determined. The standards were classified into three major areas: knowledge, skills, and attitudes. Those listed under knowledge were:

1. Understanding the biological, physical, and social sciences, which will contribute to comprehension of the human organism interacting with its physical and social environment.

2. Principles concerned with maintenance and improvement of individual health including nutrition and growth, emotional balance, social adjustment, personal appearance, physical activity and rest, recreation, care of the eyes, ears, and teeth, and the organization of these factors for effective daily living.

3. Principles related to hazards of life and health, including communicable and non-communicable diseases, accidents, alcohol and drugs, together with means of prevention and control.

4. Understanding of the problems related to preparation for home and family life including boy-girl relationships, education for marriage, biology of reproduction, sexual differences, and prenatal and infant care.

5. Principles of community health including the values and limitation of community, state, national and world health agencies and organizations and the services they have to offer.

6. Methods by which interests and needs of children and communities can be identified, including individual health records, community surveys, the interpretation of vital statistics, the observation of behavior and appearance which may indicate deviation from normal, the administration of pretests, interest-surveys and similar devices, and the use of student interviews and self-appraisals.

7. Understanding of the principles of evaluation in the light of the objectives of health instruction including measurement devices that may be used to appraise student progress in knowledge, attitudes and behavior; and understanding of how such devices can be used as motivating instruments and as measures of pupil self-evaluation.

8. Wide acquaintance with health teaching materials of many types including criteria for their evaluation with references to both scientific accuracy and educational value.

9. Methods by which teacher-pupil planning can be utilized in the development of curricular units and by which learning experiences can be organized for most effective education in health.

10. Understanding the qualifications and limitations of various health practitioners as a basis for selection of professional health care.

11. Understanding the adequacy and effectiveness of community resources for medical and dental cares including selection of physician, use of clinics, pre-payment hospitalization, medical care plans, welfare funds, Red Cross and other loan funds (The Athletic Institute, 1948).

The shortage of qualified teachers of health education is a problem of major concern to the School Health Division of the American Association for Health, Physical Education and Recreation. One of the Division's efforts toward solution of better qualified health teachers was the National Conference on Teacher Preparation in Health Education. This Washington conference consisted of 150 college and university personnel engaged in professional preparation in health education. They worked together to develop recommended standards for

teachers of health in secondary schools. The standards for certification in health education developed by this conference were as follows:

The basic recommendation is that all teachers of health in the secondary school would be certified in health education as a separate subject. Specifically, it is recommended that the health teachers should meet the general educational requirements for all teachers.

The preparation of the health teacher should include courses in the biological sciences such as human anatomy, biology, physiology, and bacteriology, the physical sciences, especially, chemistry and the behavioral sciences such as psychology and sociology.

Minimum professional preparation requirement for certification in health education should include appropriate study in the following areas:

1. The school health program, including the areas of healthful school environment, health services and health education.
2. Mental, emotional, and social health: drugs, alcohol and tobacco.
3. Dental health, vision and hearing.
4. Emergency care, including first aid.
5. Safety education, including occupational, home and recreational safety.
6. Community health, including such aspects of environmental health as air pollution, water pollution, and radiation; fluoridation; agencies promoting community health; official, voluntary, and professional health agencies and organizations.
7. Nutrition in respect to health education including knowledge of basic food nutrients; wise selection and use of foods; obesity and weight control; food faddism, food fallacies and controversial food topics.
8. Disease prevention and control, including the communicable and degenerative diseases, and chronic health disorders.

9. Family life education, including human sexuality, and the psychosocial and cultural factors promoting successful marriage and family relations.

10. Consumer health, including intelligent selection of health products and services, consumer protection agencies, health misconceptions and superstitions, health insurance plans, and health careers.

11. Study in methods and materials for health instruction.

12. Student teaching in health education (Slocum, 1969).

Haag, (1952) suggested that the health education teacher have some preparation in the following areas: biological sciences, physical sciences, social sciences, professional education courses, methods and materials, student teaching in health and evaluation of narcotic education. Other areas mentioned by Haag were mental hygiene, safety education, social hygiene, disease control and prevention, and consumer health education.

Snyder and Scott, (1954) endeavored to establish a functional program of professional preparation for health, physical education and recreation teachers. They listed the foundations of specialized professional education from which teachers benefit.

Their purpose was to develop an educationally sound point of view to such a degree that guide lines become discernable for undergraduate professional preparation.

The specialized professional education (health education) area listed the problems to be solved, selected standards needed to meet the problem and selected resource areas that could be used to help accomplish this work.

Kilander, (1950) reporting on the Conference on Undergraduate Professional Preparation of Students Majoring in Health Education held in November, 1949, classified health education preparation as that needed by all teachers, that needed by teachers in fields related to health education, and that needed by students majoring in health education. His recommendations were similar to those of the Jackson's Mill Conference.

Avery, (1955) in a summary report from the National Conference on Undergraduate Health Education Minor Program and Desirable Emphasis for the Physical Education Major Program, listed certain topics and subject areas recommended to increase the standards of health education for teachers. Those subject areas suggested were a balance of the biological, physical and social sciences directly related to health. Essential prerequisites were human biology, anatomy, physiology, bacteriology, chemistry, psychology, and sociology. Included in the health area were personal hygiene, community health, vital statistics, epidemiology, nutrition, mental health, care of the sick and injured, home and family health, accident prevention, environmental sanitation and occupational health. Appropriate field work, student teaching, and teaching methods and materials were also included. A minor in health education was suggested as the current minimum qualification for teaching in the field.

In a study of the Perceptions of the Functions and Preparation Guidelines of Secondary School Health Education Teachers, Cook, found real differences in the perceptions between those involved in

instruction and those involved in administration of the school health programs. His study further pointed out a need for health educators to be adequately trained with a background consistent with their responsibilities in all phases of the school health program.

The functions and necessary guidelines for health educators were as follows: Understanding of the biological, physical and social sciences which will contribute to the comprehension of the human organism interacting with its physical and social environment. The remaining guidelines were identical with those of the Jackson's Mill Conference (Cook, 1959).

The National Education Association and the American Medical Association agree closely with other national leaders about what is to be included in the scope of a health program in the school; thus implying that before a subject can be taught, the teacher should have training in that area. From their Suggested School Health Policies Report (Boyd, 1966), they imply that the scope of instruction for a health program should be derived from the identified needs and interests of the students. The following broad subject matter health education areas which were to be taught are as follows: Community health, environmental health, consumer health, exercise, rest and relaxation, personal health, healthy body, health careers and family life.

An appraisal and analysis was made by Bell (1956) of the background of present-day teachers concerning their health education preparation. He surveyed 57 secondary school teachers and found how they felt about the preparation they received to become a health teacher--

his survey showed: Sixty-five percent felt they had not received adequate preparation in school health education. Forty-seven percent stated they did not have any formal preparation at all in the subject matter area.

In a summary of the findings of several national conferences, Kilander (1951, 1968), suggested the minimum preparation for all teachers in the non-health fields at the secondary level should be a general understanding of the overall school health program; and that all teachers should have some preparation in the area of health education. Because of the potential that physical education teachers have for teaching health, Kilander suggested they have a minor in health education in their undergraduate preparation.

Brammell, (1957) studied the results of a survey on health education for prospective teachers. An analysis of course content revealed that most students preparing for secondary certification received little information about growth and development, needs and interests of students and healthful school living. The report emphasized the need for understanding and knowledge of basic areas of preparation for prospective health teachers.

Bank, (1950) in reporting on the National Conference on Graduate Study in Health Education, Physical Education and Recreation, called the "Pere Marquette Conference," gave recommendations and prerequisites for admission to graduate study in health education. The standards mentioned were: basic health sciences, social sciences, introductory studies of health problems, curriculum methods and materials,

cultural foundations and field work.

Abernathy, (1970) gave a summary of results of 22 conferences that have made an identifiable contribution to the development of school health education during the last 20 years. The review was intended to note some of the continuing concerns, to call attention to current views and to suggest issues for discussion and possible resolution. A number of the conferences pertained to the problem of preparation of health teachers.

Foster, (1968) recommends that the school health educator possess specific scientific knowledge and understanding of the biological, social, cultural and ethnic characteristics of people; and to be familiar with and proficient in the use of resources and materials in order to stimulate effective health education programs.

The Oregon Association For Health, Physical Education and Recreation was among the leaders in action taken for improvement of health teachers in the field of health education. Anderson, editor for the association, published some teacher education standards in health education. He detailed the standards and learning experiences health educators should have to perform their functions effectively.

The first nine of the ten areas were listed verbatim from the Jackson's Mill Conference list. The area that was different was as follows: "Understanding the availability of community resources for medical and dental care including selection of a physician, use of clinics, prepayment hospitalization, medical care plans, welfare funds, Red Cross and others" (Anderson, 1954).

The Northwest Council on Teacher Education Standards for Health, Physical Education and Recreation under the editorship of Reeves, made a list of standards for preparation of health teachers. With the intention to make the administration of professional study programs in health education more effective, minimum standards were set for the preparation of teachers of health education.

These standards were made in the form of an evaluation schedule. Any institutions that were applying for membership or any that were members were expected to meet those institutional standards. The member institutions involved at the time were: Oregon State University, University of Oregon, Washington State University, and the University of Washington.

The subject matter areas in this evaluation were as follows: Foundation sciences, breadth and scope of health education, personal health, safety education and first aid, nutrition, mental health, public health agencies, community health, family life education, school health services, school environment, school health instruction, health curriculum, physical growth and development, student teaching and/or community field work (Reeves, 1956).

A policy committee of 17 members was formed representing various medical, educational and health organizations and agencies. Their purpose was to define the functions of health education in the areas of health services, health education and healthful school living. A list of the standards and learning experiences health educators should have in order to perform their functions effectively has been suggested

by Anderson (1954). The Standards developed by this policy committee in health education were: Sciences basic to health application, principles of positive health promotion, principles of health protection, family life education, community health promotion, devices for recognizing health interests and needs, methods, materials and resources in health instruction, and evaluation of health education.

Other standards and recommendations for professional preparation of health education teachers have been suggested by Mayshark and Shaw, (1967).

Improvement of teacher education standards is a concern also of world leaders in the field of health. This is evidenced by their recommendations to improve the standards of teaching and training of the health teacher (Dorolle, 1951 and 1954). To enable the teacher to teach health education successfully and at the same time make an effective contribution to the field, knowledge in five general subject matter areas is considered essential by the World Health Organization (Candau, 1960). These five subject matter areas include: Growth and development, personal health, community health, school health, and methods of health education. The World Health Organization has set up standards for educators and other people in contact with the public. Their concern was verbalized by Dorolle:

If Teachers are expected to develop in their students the health practices and solid informational background conducive to healthful living, they must have the opportunity to learn themselves what to teach about health and how to teach (Dorolle, 1951).

A report written for the World Health Organization indicated that working experience with the students was a vital part of the professional preparation of teachers.

As in other fields of the school curriculum, practice teaching is an essential requirement in the preparation of teachers for health education. Direct participation in health education experiences in the practice schools will enable the student teacher to recognize health as part of the education program, to learn how to teach it, and to develop practical methods and approaches which can be helpful in his future teaching (Turner, 1966).

The field of Public Health has also seen the need for improvement of teachers (Boatman, et al., 1966).

#### Related Studies

The School Health Education Study was a nationwide study on the status and effectiveness of health education programs and instructional practices in the public schools in the United States. A sampling was made representing large, medium, small and very small public school systems. The study consisted of two phases: an instructional practices survey and a student testing program.

The findings of this study revealed strengths and weaknesses in health content areas indicating that health instructional programs were in need of critical review. One of the basic recommendations was that the local school system or individual state should plan and carry out self-evaluation studies of their health instructional programs to determine existing strengths and weaknesses.

The School Health Education Study has been the stimulus for many other studies concerning school health, and has contributed greatly to the field of health education (Sliepcevich, 1964).

The aim of a study conducted by Mills in 1959 was to determine the subject matter included in the health education programs in the public schools of the State of Washington, to determine the extent of the training program in health education offered by colleges and universities in Washington and to investigate the preparation health teachers received in various fields. He found that less than one-third of the teachers in the schools sampled had college course work in the health education area. He also found that three times more teachers taught health and physical education than any other combination of subjects. This dual health and physical education training was a common combination for preparation of those teaching health. Mr Mills was more interested in the number of hours taken in preparation for teaching health and the degree held by the teacher than he was in the actual course work the teachers had taken (Mills, 1959).

Various attempts have been made to identify the people engaged in health instruction. A study by O'Brien, was an investigation of certain high schools in Oregon. Her purpose was to identify the people entrusted with health education in the secondary schools of Oregon. She investigated the status, functions, qualifications, and affiliations of those responsible for health instruction in the secondary schools.

The groups investigated were nurses, deans, vice-principals,

guidance counselors, health education teachers, physical education teachers, science teachers, home economic teachers and social science teachers.

Investigation of the interaction of the professional status, function, qualifications and affiliations with schools and the community revealed the type of person that was entrusted with health teaching. The findings of her study revealed how each of the above mentioned groups were involved in health education. Her study was not directed primarily towards standards of selection or training of specialists for health teaching. She was more interested in the interactions of many variables (O'Brien, 1959).

A study designed to ascertain the status of health education in the public schools of Oregon was conducted by Schlaadt and Phelps, (1971). The findings for the high school section of their study indicated there were very few separate health education classes, most were integrated or correlated with some other subject. Most of the teachers were physical education majors, and most programs were not following recommended instruction.

Two other Oregon studies related to instructional practices, but not concerned specifically with professional preparation, have also been conducted (Fast, 1959), (Lewis, 1969).

### Survey Method Literature

A major aspect of any investigation is the method employed to gather information about the population being studied. The method best suited to this study was the survey method of investigation which

was suggested from the literature (Good, 1936), Backstrom 1963), and (Best, 1959).

The survey method gathers data from a relatively large number of cases at a particular time, but is not concerned with characteristics of individuals as individuals. The survey method is concerned with the generalized statistics that result when data are abstracted from a number of individual cases. Survey results can be inferred from a study of a sample group.

A survey is a systematic collection, analysis, interpretation and report of pertinent facts concerning an enterprise or some aspect thereof. The purpose of the survey is to determine present practices, conditions, or the effectiveness of the enterprise in order to furnish guidance in the justification or improvement of present status (Best, 1959).

## CHAPTER III

## METHODOLOGY

Experimental Design

The purpose of this study was to evaluate the professional preparation of teachers of health in selected Oregon high schools.

The accomplishment of this purpose was dependent upon answering the following questions:

1. What are the standards for professional education preparation of high school health education teachers?
2. What is the present professional education preparation status of Oregon high school teachers of health?
3. By comparing the present professional education preparation status of Oregon high school teachers of health with the standards for professional education preparation of high school health teachers, what are the strengths or weaknesses of the professional preparation of Oregon high school teachers of health?
4. What recommendations can be made on the basis of this comparison?

Question I

What are the standards for professional education preparation of high school health education teachers?

To answer this question the investigator established a list of content areas in which teachers should have acquired basic knowledge from their college undergraduate health education courses. This list was composed of content areas agreed upon by professional health education authorities in the field. The authorities whose works were considered were those with basic common agreements and those whose writings were consistent with the position of the American Association for Health, Physical Education, and Recreation. Over the years, the information in these content areas might have changed, and at times different content areas have received special emphasis, but the content areas themselves have remained the same. The list of content areas agreed upon are as follows:

1. Sciences basic to health applications. The preparation of the health teacher should include courses in the biological sciences including human anatomy, physiology, and bacteriology; the physical sciences, especially chemistry; and the behavioral sciences including psychology and sociology. These sciences will contribute to comprehension of the human organism interacting with its physical and social environment.

2. Principles of personal hygiene: dental health, vision, hearing, physical activity and rest.

3. Principles of health protection-safety education: occupational safety, home safety, recreational safety, and first aid.

4. Principles of community health promotion: environmental health, State, National and World health agencies, voluntary health

agencies and organizations.

5. Principles of nutrition: knowledge of basic food nutrients, selection and use of foods, obesity and weight control, food fads and fallacies.

6. Principles of mental health: mental health, alcohol use and abuse, drug use and abuse, and smoking and health.

7. Principles of family life education: boy-girl relationships (adjustment to members of the opposite sex), preparation for marriage (dating, courtship and family planning), biology of reproduction, and social and cultural factors.

8. Principles of disease prevention: communicable diseases, non-communicable diseases, and geriatrics.

9. Principles of consumer health: selection of health products, selection of health services, consumer protection agencies, health misconceptions and superstitions, and health careers.

10. Methods for recognizing health interests and needs of students: conducting and analyzing interest surveys, interpretation of individual health records, interpretation of vital statistics, and observation (techniques, signs and symptoms).

11. Methods and materials for health instruction: methods for health instruction, materials for health instruction, curriculum development, principles of evaluation of health teaching, and student teaching in health education.

The arrangement of these items in the questionnaire is shown in the Appendix A, Page 92.

## Question II

What is the present professional education preparation status of Oregon high school teachers of health?

Two sources of information necessary to answer this question were available; one, the teachers themselves, and two, the teachers' undergraduate college transcripts.

To obtain the information from the teachers, a questionnaire was developed. The questionnaire as opposed to an interview was needed because of the large geographical area of the state to be covered and the time that would be required for conducting interviews.

The questionnaire consisted of two parts: first, personal information such as the number of years at school where now employed, number of years teaching health, teaching interest, teaching assignment and the percent of total teaching time spent per day teaching health. The second part of this questionnaire contained a list of the 39 content areas. (See Appendix A).

Since some of the questions on the questionnaire dealt with personal information, an assurance of anonymity was given the teachers. No individual school or teacher was identifiable in the results of this study. The recognition of personal items, specific teachers or specific high schools was lost in the general treatment and classification of the data.

Before the questionnaire was sent to the teachers, it was tested in a pilot study involving 25 people, including colleagues, teachers

and students at Oregon State University. Their suggestions and advice were used to develop the final draft of the questionnaire.

A letter of introduction was sent to the teachers with instructions of how to fill out the questionnaire. (See Appendix B). For their convenience in returning the questionnaire, a stamped, self-addressed envelope was included. Ten days after the questionnaire had been sent, a follow-up telephone call was made to the teachers involved that had not yet returned the questionnaire.

A total of 135 teachers of health was employed in the 57 selected high schools. Each teacher was asked to respond to the questionnaire, the number responding was 104 or 77.05 percent. Of this number, 100 of the responses were usable. The total return of usable questionnaires was 74.00 percent.

Sixty of the 100 subjects in this study were in-state trained. The institutions within the state of Oregon represented were Linfield College, University of Oregon, Oregon State University, Pacific University, Oregon College of Education, Willamette University, and Lewis and Clark College.

The remaining 40 subjects received their undergraduate training from a total of 20 institutions outside the State of Oregon. Fifty-nine of the teachers were male and 41 were female.

A second source of data to solve question two was the transcript of each teacher obtained at the Teacher Certification Office in the State Department of Education, at Salem, Oregon.

The subjects for this study were teachers of health from randomly selected high schools in the State of Oregon. The schools selected were representative of A1 (600 or more enrollment), A2 (200-599 enrollment), and B (199 or less enrollment) schools. Twenty-five percent of each classification of schools were selected. The number of schools from each classification was 21, 18, and 21 respectively. Following is a list of the schools selected:

A1	A2	B
Astoria	Banks	Bonanza
Beaverton	Brookings	Colton
Churchill	Burns	Corbett
Clakamas	Clatskanie	Crow
Cleveland	Coquille	Echo
Corvallis	Elmira	Gaston
Estacada	Gladstone	Glendale
Forest Grove	Glide	Griswold
Hermiston	Lakeview	Harper
Jefferson	Reedsport	Huntington
Klamath Falls	Scio	McEwen
Lake Oswego	Seaside	Monroe
North Salem	Sherman County	Oakland
Parkrose	Stayton	Prospect
Redmond	Sutherlin	St. Paul
Reynolds	Vale	Ukiah
Roosevelt	Vernonia	Umatilla
Sheldon	Yamhill Carlton	Union
Thurston		Wallowa
Wilson		Wasco County
Wy'East		Wheeler

A form was made for collecting information from the academic file of the teachers. This form was then tested on a trial basis at the Teacher Certification Office. From this testing, the Transcript Data Sheet was developed. (See Appendix C).

The data taken from the academic files included the following: Age and sex of the teacher, the highest earned degree, number of hours beyond highest degree, major for undergraduate work, total undergraduate hours of course work in health, biological and social science, course work in chemistry, kinds of workshops, and date baccalaureate degree was obtained. A list of the courses each teacher had taken in health education during his undergraduate preparation was also obtained.

Basic personal health and hygiene courses were not included in these standards. To qualify as a course which would give adequate preparation, it was necessary that the catalog course description state or imply that such information would be provided by the course. For example, a course titled Safety Education with a catalog description, "Safety problems in the home, school and community" would have qualified the teacher in all areas of Principles of health protection-safety education, with the exception of first aid. A course of Epidemiology with a course description of "Basic principles underlying the study and control of communicable and organic diseases in the general population" would have qualified the student in all areas of principles of disease prevention.

The course descriptions came from 173 different courses, and covered a time span from 1927-1969.

The information enabled the investigator to answer question two: What is the present professional education preparation status of Oregon high school teachers of health? By comparing the data of question one with the data of question two, it was possible to determine the str-

engths or weaknesses of the professional preparation of Oregon high school teachers of health (question three). Recommendations could also be made (question four).

### Statistical Design

The data collected from the Teacher Preparation Questionnaire and information obtained from the academic files were submitted to the following statistical evaluations:

1. Summation and Means:

A. Summation and Mean of teacher responses were found for questions 1-5 on the Teacher Preparation Questionnaire.

(See Appendix A).

B. Summation of items 6-45 (content areas) on the Teacher Preparation Questionnaire were the teachers' feelings about their preparation. Their response was either "A" indicating adequate preparation, "I" indicating inadequate preparation, or "N" indicating no formal course work in the subject matter area. For statistical analysis, the "N" was recorded as inadequate preparation. (See Appendix A).

2. Point Bi Serial Correlation: Correlations were made between each question on the Teacher Preparation Questionnaire and the 39 content areas in the following manner:

A. Correlation between questions 1-5 on the Teacher Preparation Questionnaire and the teachers' feelings about their preparation in the 39 content areas. These correlations

were recorded for the total group of teachers.

B. Correlations between questions 1-5 on the Teacher Preparation Questionnaire and their actual preparation in the 39 content areas. This information was recorded for the total group of teachers, the in-state and out-of-state teachers.

(See Appendices A and C).

C. Correlation between questions 1-17 on the Transcript Data Sheet and the teachers' actual preparation in the 39 content areas. These correlations were recorded for the total group of teachers. (See Appendix C).

D. Correlation between questions 1-17 on the Transcript Data Sheet and the teachers' feelings about their preparation in the 39 content areas. These correlations were recorded for the total group, the in-state and out-of-state teachers. (See Appendices A and C).

3. T-Test of Significance: The t-Test of Significance is a measure which evaluates the statistical difference between two means. The means of the in-state and out-of-state teachers were compared on measures from the Teacher Preparation Questionnaire and the Transcript Data Sheet.

## CHAPTER IV

## PRESENTATION AND ANALYSIS OF THE DATA

The purpose of this study was to evaluate the professional preparation of teachers of health in selected Oregon high schools.

The accomplishment of this purpose was dependent upon answering the following questions:

1. What are the standards for professional education preparation of high school health education teachers?

2. What is the present professional education preparation status of Oregon high school teachers of health?

3. By comparing the present professional education preparation status of Oregon high school teachers of health with the standards for professional education preparation of high school health teachers, what are the strengths or weaknesses of the professional preparation of Oregon high school teachers of health?

4. What recommendations can be made on the basis of this comparison?

The data were treated by the following methods:

1. Summation and Means.
2. Point Bi Serial Correlation.
3. T-Test of Significance.

The data contained in Tables 1-6 and 13-17 pertained to questions 1-5 from the Teacher Preparation Questionnaire. (See Appendix A).

The data contained in Tables 7-12 pertained to questions 1 and 14 of the Transcript Data Sheet. (See Appendix C).

These data were thus included because of their close relationship to questions 1 and 2 of the Teacher Preparation Questionnaire. Both questions 1 and 14 are supportive data showing the influence of the older teacher. (See conclusions, page 84).

Tables 18-29 were compiled from data pertaining to the remaining questions on the Transcript Data Sheet. Information relative to question 2 on the Transcript Data Sheet was included in a description of the subjects in Chapter 3. (See page 30).

The data in Table 30 is a comparison of the teachers' feelings about their preparation in the content areas, and their actual preparation in the content areas.

#### Question One

"Years at school where now employed, 1-3, 4-6, 7-9, 10-12, 13 & over."

The number of teachers in each of these employment-duration categories is indicated in Table 1, page 37. Fifty-one percent had been at the school where presently employed less than 4 years. Eighty percent had been at their present school 6 years or less. Nine percent had been at the school where presently employed 10 or more years. There was no significant statistical difference between the means for the in-state and out-of-state teachers for the number of years at the school where now employed.

TABLE 1

SUMMATION AND MEAN FOR YEARS AT SCHOOL WHERE NOW EMPLOYED

Group Size	Years Employed										Mean Of Groups
	1----3		4----6		7----9		10----12		13 & over		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	51	51	29	29	11	11	5	5	4	4	1.82
In-State Teachers n=60	33	55	15	25	7	12	4	7	1	2	1.75
Out-of-State Teachers n=40	18	45	14	35	4	10	1	3	3	8	1.92

Correlations between the number of years at school where now employed and the teachers' feelings about their preparation in the content areas is given in Table 2, page 39. All measures were positively correlated with the exception of the content area preparation for marriage (dating, courtship and family planning). Correlation between the number of years at school where now employed and the teachers' actual preparation is found in Table 3, page 40. All of these correlations were significantly negative.

#### Question Two

"Years teaching health 1-3, 4-6, 7-9, 10-12, 13 & over."

Table 4, page 41 gives a summation of the total number of years the teachers had taught health. Only 10 teachers had taught health 13 or more years. Forty-eight of the teachers had taught health from 1-3 years. In-state teachers had taught health less time than out-of-state teachers. Seventy-seven percent of the in-state teachers had taught health from 1-6 years as compared to 63 percent of the out-of-state teachers.

In Table 5, page 42 is shown the correlation between the teachers' feelings about their preparation in the content areas and the number of years they had taught health. The only significant negative correlation was the content area of preparation for marriage (dating, courtship and family planning). In Table 6, page 42 all significant correlations were negative and all pertained to family life education.

TABLE 2

CORRELATION BETWEEN YEARS AT SCHOOL WHERE NOW EMPLOYED AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation <sup>*</sup>
13	First aid	92	8	.191
26	Preparation for marriage (dating, courtship and family planning)	48	52	-0.287
29	Communicable diseases	18	82	.189
30	Non-communicable diseases	78	22	.181
38	Interpretation of individual health records	36	64	.184
43	Curriculum development	56	44	.227
44	Principles of evaluation of health teaching	45	55	.171

\* The correlations included in this table are submitted as supportive evidence of the influence of the age of the teacher. See Conclusions page 84.

TABLE 3

CORRELATION BETWEEN YEARS AT SCHOOL WHERE NOW EMPLOYED AND  
ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation <sup>*</sup>
27	State, national and world health agencies	31	69	-0.190
28	Social and cultural factors	32	68	-0.185
49	Conducting and analyzing interest surveys	26	74	-0.177
50	Interpretation of individual health records	26	74	-0.177
52	Observation (techniques, signs and symptoms)	24	76	-0.190

\* The correlations included in this table are submitted as supportive evidence of the influence of the age of the teacher. See conclusions page 84.

TABLE 4

## SUMMATION AND MEAN FOR YEARS TEACHING HEALTH

Group Size	Years										Mean of Groups
	1-----3		4-----6		7-----9		10--12		13 & over		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	48	48	23	23	11	11	8	8	10	10	2.09
In-State Teachers n=60	31	52	15	25	8	13	2	3	4	7	1.88
Out-of-State Teachers n=40	17	43	8	20	3	8	6	15	6	15	2.40

TABLE 5

CORRELATION BETWEEN YEARS TEACHING HEALTH AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
17	Knowledge of basic food nutrients	83	17	.169
18	Selection and use of foods	80	20	.183
26	Preparation for marriage (dating, courtship and family planning)	48	52	-0.169
38	Interpretation of individual health records	36	64	.307
39	Interpretation of vital statistics	26	74	.181

TABLE 6

CORRELATION BETWEEN YEARS TEACHING HEALTH AND  
ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
37	Boy-girl relationships (adjustment to members of the opposite sex)	13	87	-0.181
38	Preparation for marriage (dating, courtship and family planning)	13	87	-0.181
39	Biology of reproduction	13	87	-0.181
40	Social and Cultural factors	13	87	-0.181

Question One\*

"Age, 22-30, 31-35, 36-40, 41-45, 46 & over."

According to the data contained in Table 7, page 44, 11 percent of the teachers were over 46 years of age. Forty-four percent were less than 30 years old, and 81 percent of the teachers were not over 41 years of age. The data also indicate that out-of-state teachers were older than the in-state teachers. A comparison of the means of the two groups by the t-Test indicated a significant difference in age at the .07 percent level of significance.

Table 8, page 45 indicates two content areas that were negatively correlated with age and the teachers' feelings about their preparation in these content areas. One area was food fads and fallacies, and the other was preparation for marriage (dating, courtship and family planning).

The correlations between age of the teacher and their actual preparation in the content areas can be found in Table 9, page 45. All significant relationships between age and actual preparation were negative.

Question Fourteen\*

"Year when degree was granted, 27-34, 35-42, 43-50, 51-59, 60-69."

In Table 10, page 46 information can be found relative to summation and mean of years when degree was granted. Sixty percent of the teachers had received their degree after 1960, and 87 percent

\*See explanation, page 36 .

TABLE 7

SUMMATION FOR AGE OF TEACHERS

Group Size	Age in Years									
	22--30		31--35		36--40		41--45		46 & over	
	#	%	#	%	#	%	#	%	#	%
Total Group n=100	44	44	22	22	15	15	8	8	11	11
In-State Teachers n=60	32	53	12	20	6	10	5	8	5	8
Out-Of-State Teachers n=40	12	30	10	25	9	23	3	8	6	15

TABLE 8

CORRELATION BETWEEN AGE AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
20	Food fads and fallacies	67	33	-0.193
26	Preparation for marriage (dating, courtship and family planning)	48	52	-0.273

TABLE 9

CORRELATION BETWEEN AGE AND  
ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
47	Health misconceptions and superstitions	10	90	-0.171
49	Conducting and analyzing interest surveys	24	76	-0.203
50	Interpretation of indiv- idual health records	26	74	-0.171
51	Interpretation of vital statistics	22	78	-0.219
52	Observation (techniques, signs and symptoms)	24	76	-0.203

TABLE 10

SUMMATION AND MEAN FOR YEAR DEGREE WAS GRANTED

Group Size	Years										Mean of Groups
	27--34		35--42		43--50		51--59		60-----69		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	2	2	5	5	6	6	27	27	60	60	4.38
In-State Teachers n=60	2	3	2	3	2	3	13	22	41	68	4.48
Out-of-State Teachers n=40	0	0	3	8	4	10	14	35	19	48	4.22

since 1951. A comparison of the in-state and out-of-state teachers indicate that 20 percent more of the in-state teachers received their degree in the 1960-1969 year span, however, there was no statistical difference between the means of the two groups.

Table 11, page 48, shows the relationship between the year when the degree was granted and the teachers' feelings about their preparation in the content areas. Two content areas were significantly correlated with the teachers' feelings about their preparation. There was a negative correlation for the content area of knowledge of basic food nutrients, a positive correlation in the area of preparation for marriage (dating, courtship and family planning).

The correlations between the teachers' actual preparation and the year the degree was granted can be found in Table 12, page 48. All of the measures were positively correlated.

#### Question Three

"Is health your main teaching interest?" Yes, No

#### Question Four

"Is health your main teaching assignment?" Yes, No

Data concerning questions 3 and 4 are given in Tables 13 and 14, page 49. Seventy-four percent of the teachers were teaching in an area (health) which was not their primary interest. Twenty-four percent of the teachers were teaching health as their main teaching assignment. Thirty-three percent of the in-state teachers had health as their main teaching interest, but only 28 percent were able to teach

TABLE 11

CORRELATION BETWEEN YEARS WHEN DEGREE WAS GRANTED AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
17	Knowledge of basic food nutrients	83	17	-0.184
26	Preparation for marriage (dating, courtship and family planning)	48	52	.249

TABLE 12

CORRELATION BETWEEN YEARS WHEN DEGREE WAS GRANTED AND  
ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
25	First aid	52	48	.217
27	State, national and world health agencies	31	69	.188
46	Consumer protection agencies	12	88	.177
47	Health misconceptions and superstitions	10	90	.183

TABLE 13

SUMMATION FOR: IS HEALTH YOUR MAIN TEACHING INTEREST DATA

Group Size	Yes		No	
	#	%	#	%
Total Group n=100	26	26	74	74
In-State Teachers n=60	20	33	40	67
Out-of-State Teachers n=40	7	18	33	83

TABLE 14

SUMMATION FOR: IS HEALTH YOUR MAIN TEACHING ASSIGNMENT DATA

Group Size	Yes		No	
	#	%	#	%
Total Group n=100	24	24	76	76
In-State Teachers n=60	17	28	43	72
Out-of-State Teachers n=40	7	18	33	83

health as their main teaching assignment. Eighteen percent of the out-of-state teachers had health as their main teaching interest, and that same number with health as their main teaching assignment.

#### Question Five

"Percent of total teaching time spent teaching health, 0-20, 21-40, 41-60, 61-80, 81-100."

Table 15, page 51, indicates that 45 percent of the teachers taught health less than 20 percent of their total teaching time per day. Only 9 percent of the teachers were teaching health 81-100 percent of their time. A comparison of the in-state and out-of-state teachers revealed no significant difference in the means of the two groups even though the mean for the in-state teachers was higher.

Analysis of the correlations between the percentage of total time spent per day teaching health and the teachers' feelings about their preparation in the content areas as shown in Table 16, page 52, revealed a number of positive correlations. Those of most significance were the areas of state, national and world health agencies, principles of evaluation of health teaching, and student teaching in health education. Two negative correlations in the content areas of food fads and fallacies and social and cultural factors were also indicated

Table 17, page 53, contains the correlation data between percentage of total time spent per day teaching health, and the actual preparation of the teachers as indicated in their transcripts. All

TABLE 15

SUMMATION AND MEAN FOR PERCENT OF TOTAL TEACHING TIME PER DAY SPENT TEACHING HEALTH

Group Size	Percent of Teaching Time										Mean of Groups
	0---20		21--40		41--60		61--80		81-----100		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	45	45	25	25	12	12	9	9	9	9	2.12
In-State Teachers n=60	23	38	14	23	10	17	8	13	5	8	2.30
Out-of-State Teachers n=40	22	55	11	28	2	5	1	3	4	10	1.85

TABLE 16

CORRELATION BETWEEN PERCENT OF TOTAL TEACHING TIME SPENT PER DAY TEACHING HEALTH AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
8	Hearing	57	43	.172
15	State, national and world health agencies	44	56	.226
20	Food fads and fallacies	76	33	-0.227
28	Social and cultural factors	38	62	-0.213
43	Curriculum development	56	44	.173
44	Principles of evaluation of health teaching	45	55	.239
45	Student teaching in health education	39	61	.223

TABLE 17

CORRELATION BETWEEN PERCENT OF TOTAL TEACHING TIME SPENT PER DAY  
TEACHING HEALTH AND ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
18	Dental health	71	29	.209
19	Vision	71	29	.209
20	Hearing	71	29	.209
21	Physical activity and rest	71	29	.209
39	Mental health	18	82	.195
41	Communicable diseases	31	69	.169
43	Geriatrics	27	73	.167
44	Selection of health products	12	88	.177
48	Health careers	13	87	.215
50	Interpretation of indi- vidual health records	26	74	.171
53	Methods for health instruction	27	73	.185
54	Materials for health instruction	27	73	.185
55	Curriculum development	27	73	.185
56	Principles of evalu- ation of health teaching	22	78	.264
57	Student teaching in health education	34	66	.288

15 significant content areas were positively correlated.

Tables 18-29, contain information taken from questions 3-13, 15-17 of the academic Data Sheet (See Appendix C). Data pertaining to questions 1 and 14 have been included with data pertaining to the Teacher Preparation Questionnaire (See explanation, Page 36). The data on question 2 was included in a description of the subjects (See page 30).

#### Question Three

"Highest earned degree, Bachelors, Masters, Doctorate, non-degree."

Table 18, page 55, indicates that only 2 teachers had doctorate degrees and none were in the "non-degree" category. The out-of-state teachers held more master's degrees than the in-state group. Sixty-seven percent of the total group of teachers held bachelors degrees and 31 percent held a master's degree. Correlations were not included for this question because only undergraduate work was evaluated in this study.

#### Question Four

"Hours beyond highest degree, 3-12, 13-19, 20-28, 29-35, 36 and over."

Table 19, page 56, revealed that eighty-two percent of the in-state teachers had only 3-12 hours beyond their highest degree. For the out-of-state teachers this number was only 58 percent. Eighty-nine percent of the teachers had 19 hours or less work beyond their

TABLE 18

SUMMATION FOR HIGHEST EARNED DEGREE

Group Size	Bachelors		Masters		Doctorate		Non Degree	
	#	%	#	%	#	%	#	%
Total Group n=100	67	67	31	31	2	2	0	0
In-State Teachers n=60	42	70	17	28	1	2	0	0
Out-of-State Teachers n=40	25	63	14	35	1	3	0	0

TABLE 19

## SUMMATION AND MEAN FOR HOURS BEYOND HIGHEST DEGREE

Group Size	Hours										Mean of Groups
	3---12		13--19		20--28		29--35		36 & over		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	72	72	17	17	10	10	1	1	0	0	1.40
In-State Teachers n=60	49	82	6	10	4	7	1	2	0	0	1.28
Out-of-State Teachers n=40	23	58	11	28	6	15	0	0	0	0	1.57

degree. Correlations were not included for this question because only undergraduate work was evaluated.

#### Question Five

"Major for undergraduate degree, health education, physical education, health and physical education, biological science, social studies, language arts, industrial arts, home economics and physical science."

In Table 20, page 58, are found the summations for the number of teachers with each major. Only one teacher held a degree with a health education major. Twenty-three percent of the teachers held a combination health and physical education degree. Physical education was the major for 50 percent of the teachers.

A social studies major was held by 13 percent of the out-of-state teachers and 7 percent of the in-state teachers. A home economics major was held by 7 percent of the in-state teachers and 8 percent of the out-of-state teachers.

Only one teacher held a major in language arts and only 2 in industrial arts. Four teachers held a major in biological science and 3 in physical science.

Table 21, page 59, contains data concerning the 4 majors of undergraduate degrees most often selected by the teachers of health in the high schools. This table compares the teachers feelings about the adequacy of their preparation in the content areas. This information is found for the majors of physical education, health and physical education, social studies and home economics.

TABLE 20

## SUMMATION OF MAJOR FOR UNDERGRADUATE DEGREE DATA

Major	Total Group		In-State Teachers		Out-of-State Teachers	
	#	%	#	%	#	%
Health Education	1	1	1	2	0	0
Physical Education	50	50	28	47	22	55
Health and Physical Education	23	23	19	32	4	10
Biological Science	4	4	2	4	2	5
Social Studies	9	9	4	7	5	15
Language Arts	1	1	1	2	0	0
Industrial Arts	2	2	1	2	1	3
Home Economics	7	7	4	7	3	8
Physical Science	3	3	1	2	2	5

TABLE 21

A COMPARISON OF FEELINGS ABOUT PREPARATION FOR THE FOUR MOST COMMON MAJORS:  
PHYSICAL EDUCATION, HEALTH AND PHYSICAL EDUCATION, SOCIAL STUDIES, AND HOME ECONOMICS

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Dental health	29	21	19	4	5	4	2	5
Vision	32	18	17	6	5	4	3	4
Hearing	29	21	15	8	5	4	1	6
Physical activity and rest	43	7	21	2	6	3	3	4
Occupational safety	25	25	12	11	3	6	1	6
Home safety	35	15	16	7	5	4	4	3
Recreational safety	37	13	18	5	6	3	2	5
First aid	49	1	21	2	9	0	3	4
Environmental health	25	25	17	6	2	7	1	6
State, national and world health agencies	18	32	16	7	2	7	2	5
Voluntary health agencies and organizations	22	28	17	6	3	6	2	5

TABLE 21 (continued)

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Knowledge of basic food nutrients	40	10	21	2	8	1	6	1
Selection and use of foods	38	12	19	4	8	1	6	1
Obesity and weight control	33	17	19	4	8	1	6	1
Food fads and fallacies	29	21	19	4	7	2	6	1
Mental health	28	22	15	8	6	3	4	3
Alcohol use and abuse	35	15	15	8	7	2	1	6
Drug use and abuse	28	22	7	16	4	5	0	7
Smoking and health	31	19	13	10	6	3	3	4
Boy-girl relationships (adjustment to members of the opposite sex)	21	29	7	16	4	5	3	4
Preparation for marriage (dating, courtship and family planning)	23	27	9	14	6	3	4	3
Biology of reproduction	45	5	15	8	5	4	2	5

TABLE 21 (continued)

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Social and cultural factors	20	30	5	18	5	4	3	4
Communicable diseases	45	5	20	3	5	4	3	4
Non-communicable diseases	43	7	19	4	5	4	4	3
Geriatrics	12	38	8	15	2	7	3	4
Selection of health products	18	32	8	15	5	4	2	5
Selection of health services	25	25	14	9	4	5	2	5
Consumer protection agencies	17	33	7	16	1	8	2	5
Health misconceptions and superstitions	23	27	12	11	5	4	1	6
Health careers	18	32	11	12	3	6	0	7
Conducting and analyzing interest surveys	7	43	1	22	2	7	0	7

TABLE 21 (continued)

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Interpretation of individual health records	15	35	7	16	6	3	2	5
Interpretation of vital statistics	13	37	4	19	3	6	0	7
Observation (techniques, signs and symptoms)	16	34	8	15	4	5	1	6
Methods for health instruction	30	20	14	9	5	4	3	4
Materials for health instruction	30	20	15	8	5	4	3	4
Curriculum development	29	21	13	10	4	5	3	4
Principles of evaluation of health teaching	24	26	8	15	4	5	3	4
Student teaching in health education	23	27	9	14	4	5	0	7

In Table 22, page 64, can be found data concerning the 4 majors of undergraduate degrees most often selected by the teachers of health. These data indicate the actual preparation in the content areas. Data for this table were taken from the Academic Data Sheet, (See Appendix C).

#### Question Six

"Total Undergraduate hours course work in health, 0-10, 11-20, 21-30, 31-40, 41 and over."

Table 23, page 68, indicates that 61 percent of the health teachers had 10 hours or less of undergraduate course work in health. Only 5 teachers had 31-40 hours and only 1 teacher had 41 or more hours undergraduate course work in health. Forty-five percent of the in-state as compared to 85 percent of the out-of-state teachers had 10 hours or less course work in health.

Table 24, page 69, contains data concerning the 4 most common majors and how many hours of undergraduate course work in health had been taken by each group. Only the health and physical education majors had more than 20 hours of undergraduate course work in health. Seven out of 8 teachers with a social studies major, and 6 out of 7 with a home economics major had 10 hours or less course work in health education.

In Table 25, page 70, can be found the correlations between the teachers' feelings about their preparation in the content areas versus the number of hours of undergraduate course work in health. There were positive correlations in all but one of the content areas, that area was social and cultural factors pertaining to family life.

TABLE 22

A COMPARISON OF ACTUAL PREPARATION FOR THE FOUR MOST COMMON MAJORS :  
 PHYSICAL EDUCATION, HEALTH AND PHYSICAL EDUCATION, SOCIAL STUDIES, AND HOME ECONOMICS

Content Area	Phy. Ed.*		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Dental health	38	12	23	0	3	6	1	6
Vision	38	12	23	0	3	6	1	6
Hearing	38	12	23	0	3	6	1	6
Physical activity and reat	38	12	22	0	3	6	1	6
Occupational safety	11	39	6	17	0	9	1	6
Home safety	10	40	6	17	0	9	1	6
Recreational safety	10	40	7	16	0	9	1	6
First aid	26	24	14	9	4	5	2	5
Environmental health	23	27	17	6	2	7	1	6
State, national and world health agencies	12	38	13	10	2	7	1	6
Voluntary health agencies and organizations	12	38	14	9	2	7	1	6

\* A=Adequate I=Inadequate

TABLE 22 (continued)

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Knowledge of basic food nutrients	20	30	14	9	2	7	7	0
Selection and use of foods	21	29	14	9	2	7	7	0
Obesity and weight control	21	29	14	9	2	7	7	0
Food fads and fallacies	21	29	12	11	2	7	7	0
Mental health	10	40	5	18	1	8	1	6
Alcohol use and abuse	2	48	10	13	0	9	0	7
Drug use and abuse	2	48	9	14	0	9	0	7
Smoking and health	2	48	9	14	0	9	0	7
Boy-girl relationships (adjustment to members of the opposite sex)	4	46	3	20	2	7	3	4
Preparation for marriage (dating, courtship and family planning)	4	46	3	20	2	7	3	4
Biology of reproduction	4	46	3	20	2	7	3	4

TABLE 22 (continued)

Content Area	Phy.	Ed.	Hlth. & P.E.		Soc. Std.		Home	Ec.
	A	I	A	I	A	I	A	I
Social and cultural factors	4	46	3	20	2	7	3	4
Communicable diseases	13	37	15	8	1	8	0	7
Non-communicable diseases	15	35	15	8	1	8	0	7
Geriatrics	11	39	14	9	1	8	0	7
Selection of health products	4	46	7	16	0	9	0	7
Selection of health services	5	45	7	16	0	9	0	7
Consumer protection agencies	4	46	7	16	0	9	0	7
Health misconceptions and superstitions	3	47	6	17	0	9	0	7
Health careers	4	46	7	16	0	9	0	7
Conducting and analyzing interest surveys	11	39	10	13	2	7	0	7

TABLE 22 (continued)

Content Area	Phy. Ed.		Hlth. & P.E.		Soc. Std.		Home Ec.	
	A	I	A	I	A	I	A	I
Interpretation of individual health records	11	39	11	12	2	7	0	7
Interpretation of vital statistics	11	39	9	14	1	8	0	7
Observation (techniques, signs and symptoms)	10	40	11	12	2	7	0	7
Methods for health instruction	10	40	16	7	0	9	0	7
Materials for health instruction	10	40	16	7	0	9	0	7
Curriculum development	10	40	16	7	0	9	0	7
Principles of evaluation of health teaching	10	40	11	12	0	9	0	7
Student teaching in health education	20	30	9	14	2	7	0	7

TABLE 23

SUMMATION AND MEAN FOR TOTAL UNDERGRADUATE HOURS COURSE WORK IN HEALTH

Groups	Hours--By Category*										Mean Of Groups**
	1		2		3		4		5		
	#	%	#	%	#	%	#	%	#	%	
Total Group n=100	61	61	27	27	6	6	5	5	1	1	1.58
In-State Teachers n=60	27	45	22	36	6	10	4	7	1	2	1.83
Out-of-State Teachers n=40	34	85	5	13	0	0	1	3	0	0	1.20

\* The numbers below each category of hours indicates the number and percent of teachers in that category of hours.

\*\* The mean of groups, i.e., 1.58 indicates that the mean number of hours course work in health for the total group was more than 10 hours but less than 21 hours. It was 1.58 categories of hours.

TABLE 24

UNDERGRADUATE HOURS COURSE WORK IN HEALTH  
FOR THE FOUR MOST COMMON MAJORS

Major	0-10	11-20	21-30	31-40	41 & over
Physical Education	37	13	0	0	0
Health and Physical Education	0	12	6	5	0
Social Studies	8	1	0	0	0
Home Economics	6	1	0	0	0

TABLE 25

CORRELATION BETWEEN TOTAL UNDERGRADUATE HOURS COURSE WORK IN HEALTH AND  
FEELINGS ABOUT PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
6	Dental health	59	41	.202
7	Vision	65	35	.197
8	Hearing	57	43	.181
15	State, national and world health agencies	44	56	.330
16	Voluntary health agencies and organizations	50	50	.181
17	Knowledge of basic food nutrients	83	17	.176
28	Social and cultural factors	38	62	-0.187
33	Selection of health services	51	49	.168
45	Student teaching in health education	39	61	.217

Table 26, page 72, shows the relationship of the number of hours of course work in health to the actual preparation in the content areas. All content areas were positively correlated but those of lowest correlation were in the area of family life.

Questions Seven, Eight, Nine and Ten

"Course work in Biological Science, Biology, Anatomy, Bacteriology, and Physiology."

Table 27, page 75, contains data pertaining to the number of teachers in the 4 most common majors that had taken biology, anatomy, bacteriology, and/or physiology. Other than for the teachers with a home economics background, bacteriology was the science taken least often. There was no statistical difference between the in-state and out-of-state teachers in the biological sciences taken. Anatomy and physiology were the sciences taken most often by the physical education majors.

Questions Eleven, Twelve, and Thirteen

"Course work in Sociology, Psychology, and Chemistry."

Table 28, page 75, shows the number of teachers in each of the 4 most common majors who had taken sociology, psychology and/or chemistry. The subject taken least often by all groups was chemistry. Psychology was the course taken most often by all groups with the exception of the social studies majors who had taken sociology most often.

TABLE 26

CORRELATION BETWEEN TOTAL UNDERGRADUATE HOURS COURSE WORK  
IN HEALTH AND ACTUAL PREPARATION IN CONTENT AREAS N=100

Number	Content Area	Adequate	Inadequate	Correlation
18	Dental Health	71	29	.369
19	Vision	71	29	.369
20	Hearing	71	29	.369
21	Physical activity and rest	70	30	.380
22	Occupational safety	21	79	.577
23	Home safety	20	80	.576
24	Recreational safety	21	79	.577
25	First aid	52	48	.336
26	Environmental health	46	54	.483
27	State, national and world health agencies	31	69	.367
28	Voluntary health agen- cies and organization	32	68	.350
29	Knowledge of basic food nutrients	44	56	.466
30	Selection and use of foods	45	55	.475
31	Obesity and weight control	45	55	.475
32	Food fads and fallacies	43	57	.435
33	Mental health	18	82	.281
34	Alcohol use and abuse	13	87	.553
35	Drug use and abuse	12	88	.558

TABLE 26 (continued)

Number	Content Area	Adequate	Inadequate	Correlation
36	Smoking and health	12	88	.558
37	Boy-girl relationships (adjustment to members of the opposite sex)	14	86	.224
38	Preparation for marriage (dating, courtship and family planning)	14	86	.224
39	Biology of reproduction	14	86	.224
40	Social and cultural fac- tors	14	86	.224
41	Communicable diseases	31	69	.562
42	Non-communicable diseases	33	67	.573
43	Geriatrics	27	73	.568
44	Selection of health products	12	88	.523
45	Selection of health services	13	87	.468
46	Consumer protection agencies	12	88	.488
47	Health misconceptions and superstitions	10	90	.497
48	Health careers	13	87	.553
49	Conducting and analyzing interest surveys	24	76	.637
50	Interpretation of indi- vidual health records	26	74	.616

TABLE 26 (continued)

Number	Content Area	Adequate	Inadequate	Correlation
51	Interpretation of vital statistics	22	78	.497
52	Observation (techniques, signs and symptoms)	24	76	.610
53	Methods for health instruction	27	73	.467
54	Materials for health instruction	27	73	.467
55	Curriculum development	27	73	.467
56	Principles of evaluation of health teaching	23	77	.394
57	Student teaching in health education	35	65	.235

TABLE 27

## SUMMATION OF COURSE WORK IN BIOLOGICAL SCIENCE

Major	Biology	Anatomy	Bacteriology	Physiology
Physical education	36	48	2	40
Health and physical education	17	18	4	18
Social studies	4	3	1	3
Home economics	1	1	4	2

TABLE 28

SUMMATION OF COURSE WORK IN  
SOCIOLOGY, PSYCHOLOGY AND CHEMISTRY

Major	Sociology	Psychology	Chemistry
Physical education	32	46	19
Health and physical education	12	22	12
Social studies	9	8	4
Home economics	7	5	5

Questions Fifteen, Sixteen, and Seventeen

"Workshops, Smoking, Sex Education, Drugs and Alcohol."

In Table 29, page 77, the data indicate only 4 teachers had taken any workshops in smoking. Three were physical education majors, one was a health and physical education major. Seven physical Education teachers had taken a sex education workshop as compared to 1 health and physical education and 1 social studies major. Four out of the 7 teachers taking a drugs and alcohol workshop were health and physical education majors. Home economics majors had not taken any workshops.

Table 30, page 78, is a comparison of the teachers feelings about their preparation and the actual preparation in the content areas for the in and out-of-state teachers.

Both the in-state and the out-of-state teachers felt better prepared than they actually were. For the in-state teachers, thirteen were better prepared than they thought themselves to be, one was as well prepared as he felt, and 46 were not as well prepared as they felt. Thirty-eight of the out-of-state teachers were not as well prepared as they felt, 1 was as well prepared as he felt, and 1 was better prepared than he felt himself to be.

The T-Test of Significance indicated that the in-state teachers were significantly better prepared in the content areas than the out-of-state teachers. This was significant at the .001 level of confidence.

TABLE 29

## SUMMATION OF WORKSHOPS DATA

Major	Smoking	Sex Education	Drugs & Alcohol
Physical education	3	7	2
Health and physical education	1	1	4
Social studies	0	1	1
Home economics	0	0	0

TABLE 30

## FEELINGS ABOUT PREPARATION/ACTUAL PREPARATION

Content Area	In-State				Out-of-State			
	Feeling		Actual		Feeling		Actual	
	A	I	A	I	A	I	A	I
Dental health	37	23	47	13	22	18	24	16
Vision	40	20	47	13	24	16	24	16
Hearing	35	25	47	13	21	19	24	16
Physical activity and rest	50	10	46	14	32	8	24	16
Occupational safety	27	33	14	46	20	20	6	34
Home safety	39	21	13	47	28	12	6	34
Recreational safety	40	20	14	46	31	9	6	34
First aid	55	5	33	27	37	3	18	22
Environmental health	32	28	33	27	21	19	13	27
State, national and world health agencies	28	32	21	39	15	25	10	30
Voluntary health agencies and organizations	28	32	22	39	21	19	10	30

TABLE 30 (continued)

Content Area	In-State				Out-of-State			
	Feeling		Actual		Feeling		Actual	
	A	I	A	I	A	I	A	I
Knowledge of basic food nutrients	51	9	34	26	32	8	10	30
Selection and use of foods	48	12	35	25	32	8	10	30
Obesity and weight control	43	17	35	25	29	11	10	30
Food fads and fallacies	41	19	33	27	26	14	10	30
Mental health	37	23	15	45	23	17	3	37
Alcohol use and abuse	42	18	12	48	23	17	1	39
Drug use and abuse	22	38	11	49	14	26	1	39
Smoking and health	37	23	11	49	24	16	1	39
Boy-girl relationships (adjustment to members of the opposite sex)	25	35	10	50	14	26	3	37
Preparation for marriage (dating, courtship and family planning)	31	29	10	50	17	23	3	37
Biology of reproduction	44	16	10	50	30	10	3	37

TABLE 30 (continued)

Content Area	In-State				Out-of-State			
	Feeling		Actual		Feeling		Actual	
	A	I	A	I	A	I	A	I
Social and cultural factors	20	40	10	50	18	22	3	37
Communicable diseases	42	8	28	32	30	10	3	37
Non-communicable diseases	49	11	30	30	29	11	3	37
Geriatrics	17	43	26	34	11	29	1	39
Selection of health products	21	39	11	49	17	25	1	39
Selection of health services	31	29	11	49	19	21	2	38
Consumer protection agencies	16	44	11	49	13	27	1	39
Health misconceptions and superstitions	31	29	19	41	16	24	0	40
Health careers	22	38	12	48	15	25	1	39
Conducting and analyzing interest surveys	7	53	20	40	8	32	4	36
Interpretation of individual health records	22	38	22	38	13	27	4	36

TABLE 30 (continued)

Content Area	In-State				Out-of-State			
	Feeling		Actual		Feeling		Actual	
	A	I	A	I	A	I	A	I
Interpretation of vital statistics	16	44	18	42	9	31	4	36
Observation (techniques, signs and symptoms)	25	35	20	40	9	31	4	36
Methods for health instruction	28	22	19	41	21	19	8	32
Materials for health instruction	39	21	19	41	20	20	8	32
Curriculum development	36	24	19	41	21	19	8	32
Principles of evaluation of health teaching	27	33	14	46	17	23	8	32
Student teaching in health education	27	33	26	34	11	29	8	32

## CHAPTER V

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to evaluate the professional preparation of teachers of health in selected Oregon high schools.

The accomplishment of this purpose is dependent upon answering the following questions:

1. What are the standards for professional education preparation of high school health education teachers?
2. What is the present professional education preparation status of Oregon high school teachers of health?
3. By comparing the present professional education preparation status of Oregon high school teachers of health with the standards for professional education preparation of high school health teachers, what are the strengths or weaknesses of the professional preparation of Oregon high school teachers of health?
4. What recommendations can be made on the basis of this comparison?

The standards for professional education preparation for high school health education teachers have been established. The literature dealing with this can be found in Chapter II.

The present professional education preparation status of Oregon

high school teachers of health was determined by the use of a questionnaire sent directly to the teachers (See Teacher Preparation Questionnaire, Appendix A) and by an investigation of the transcripts of the teachers (See Transcript Data Sheet, Appendix C).

There were 100 teachers of health selected at random from the high schools. This number represented 25 percent of the A1, A2 and B schools. Each teacher completed a questionnaire asking information relative to number of years at school where now employed, years teaching health, teaching interest and teaching assignment, percent of total time per day spent teaching health. The teachers also indicated their feelings of adequacy or inadequacy in 39 content areas of preparation. (See Appendix A).

The transcript file of each teacher contained information relative to age, sex, degree held, hours beyond highest degree, major for undergraduate work, courses in biological sciences, courses in social and physical sciences, years when degree was granted and workshops in smoking, sex education and drugs and alcohol. It was possible from the transcript file of each teacher to determine actual adequacy or inadequacy of preparation in the 39 content areas.

The data were treated by the following methods:

1. Summation and means.
2. Point Bi Serial Correlation.
3. T-Test of Significance.

## Conclusions

From the data contained in this study, the following conclusions can be made:

1. The questions pertaining to age of the teacher, years at school where now employed, year degree was granted and years teaching health are in reality measuring the influence of the age of the teacher. The curriculum for most of the older teachers were centered around matters of primary importance at the time of their education in health subjects. Therefore, few of the older teachers felt adequately prepared in content areas pertaining to family life education. Thus, the longer the teacher had taught health, the longer the teacher had been employed at that school, the earlier their degree was granted, and the older the age, the less adequately they felt their preparation to be in content areas pertaining to family life education. The older the age of the teacher, the less adequate was their actual preparation in content areas pertaining to family life education.

2. Most of the teachers were less than 41 years of age, had received their degree in the years 1960-1969 and had been employed at their present place of employment six years or less.

3. The out-of-state teachers were older than the in-state teachers and had taught health more years.

4. The higher the number of hours course work in health, the better prepared the teachers felt, and the better they actually were in the content areas.

5. Health is not the main teaching assignment of most of the teachers of health.

6. Health teaching is being assigned to teachers who do not have health teaching as their primary interest. This seems to indicate that health education does not hold much significance in many high schools.

7. A higher percentage of in-state teachers had an interest in teaching health than did the out-of-state teachers.

8. The present Oregon high school teachers of health do not have adequate undergraduate professional preparation for teaching health.

9. Teaching for health in the Oregon high schools is not being accomplished due to lack of qualified teachers being hired.

10. There is a lack of health education majors teaching health.

11. Half of the teaching for health is being accomplished by teachers with physical education majors; these teachers felt well prepared to teach health, but actually were not well prepared.

12. With the exception of the one health education major, the teachers who were best prepared to teach health were the teachers with a health and physical education major.

13. Teachers with health and physical education majors had taken more hours course work in health than teachers with any other major.

14. Teachers with a social studies major were not well prepared for the purpose of teaching health. Most often their undergraduate course work in health was less than 10 hours.

15. Teachers with a home economics major were well prepared in content areas pertaining to food and nutrition, but were not otherwise well prepared for the purpose of teaching health. Their undergraduate course work in health was 10 hours or less.

16. The teachers that were spending a high percent of their teaching time per day teaching health were better prepared than those teaching a small percentage of their time.

17. The in-state teachers were spending a higher percent of their time per day teaching health.

18. Fewer teachers had taken bacteriology than any of the biological sciences. The background of all teachers was similar in reference to the biological sciences.

19. More course work is needed by the teachers of health in the biological and social sciences, and in chemistry.

20. All teachers felt better prepared in the content areas than they actually were.

21. In-state teachers were significantly better prepared in the content areas than out-of-state teachers.

22. Most teachers had from 3-12 hours course work beyond their highest degree, but few teachers are taking workshops in smoking, sex education or drugs and alcohol as part of those hours beyond the degree.

### Recommendations

The following recommendations can be made from this study:

1. Administrators insist that teachers of health have the

necessary preparation, they should be able to meet the State of Oregon Certification requirements and recommendations. This could be accomplished by either inservice training or pre-teaching preparation. A health education teacher would be best qualified.

2. Administrators take measures necessary to bring up the level of preparation of existing health teachers, or get qualified ones.

3. Teachers of health take more in-service training in the form of workshops and similar courses. The in-service training has been very slight for most of the teachers.

4. Administrators give health education the recognition it should have by hiring better prepared teachers and updating curriculums.

5. When administrators are seeking a qualified health teacher, they should seek the graduate of an institution of higher learning that offered a strong undergraduate health curriculum.

6. Include more bacteriology and chemistry in the health education curriculum. These two courses of study seem to be the ones that are least often taken by those teaching health.

7. That administrators accept and enforce the new certification standards in regard to the teaching of health in the public schools of Oregon. By following these standards, adequate preparation could be obtained.

## BIBLIOGRAPHY

- Abernathy, R. Teacher preparation in health education; yesterday, today, and tomorrow. *School Health Review*, February, 1970. p. 26-35.
- Anderson, C. L. Oregon teacher education standards in health education. *Journal of School Health* 24:280-285. 1954.
- Anderson, C. L. (ed). Teacher education standards in health education. Oregon Association For Health, Physical Education and Recreation. 1954. 47 p.
- Avery, E. A. Health education steps forward. *Journal of Health, Physical Education and Recreation* 26:25-27. 1955.
- Backstrom, D. H. and G. Hursh. Survey research. Northwestern University Press, 1963. 192 p.
- Bank, T. P. (ed). A report of the national conference on graduate study in health education, physical education and recreation. Pere Marquette State Park, Chicago, Illinois, The Athletic Institute, 1950. 34 p.
- Bell, E. T. An analysis and appraisal of pre-service preparation in school health education. *Journal of School Health* 26:255-258, 1956.
- Best, J. W. Research in education. New Jersey, Prentice-Hall, Inc., 1959. 320 p.
- Bland, H. B. Health instruction and the concept approach. *Journal of School Health* 38:50-53. 1968.
- Boatman, R. H., L. S. Levin, B. J. Roberts, and M. E. Rugen. Professional preparation in health education in schools of public health. New York, Health Education Monographs, Number 21. Society of Public Health Educators, Inc., 1966. 35 p.
- Boyd, A. V. Suggested school health policies, national committee on school health policies of the NEA and the AMA. Chicago, American Medical Association, 1966. 54 p.
- Brammell, P. R. National conference on college health: health education for prospective teachers: A guide to action. Washington, D. C., American Association For Health, Physical Education and

- Recreation, 1957. 25 p.
- Byrd, O. E. School health education. 2d ed. New York, McGraw-Hill Company, 1964. 491 p.
- Candau, M. G. Expert committee on school health. Report Number 193. Geneva, World Health Organization, 1960. 19 p.
- Cook, C. T. Perceptions of the functions and competencies of secondary school health educators. *Journal of School Health* 29:50-60. 1959.
- Dorolle, D. Improved standards of teaching and training. Report Number 31. Geneva, World Health Organization, 1951. 36 p.
- Dorolle, D. Expert committee on school health services. Report Number 30. Geneva, World Health Organization, 1951. 17 p.
- Dorolle, D. Expert committee on health education of the public. Report Number 89. Geneva, World Health Organization, 1954. 41 p.
- Eveden, E. W. Teachers for our times. Washington, D. C., American Council on Education, 1944. 94 p.
- Fast, C. G. A study of the present practices of health instruction in selected public senior high schools in Oregon. Unpublished Doctoral Dissertation, University of Oregon, 1959. 272 p.
- Foster, J. C. The teaching of health education. Columbus, Ohio, Charles E. Merrill Publishing Company, 1968. 272 p.
- Good, C. V., A. S. Barr, and D. E. Scates. The methodology of educational research. New York, D. Appleton-Century Company, 1936. 882 p.
- Good, C. V. Dictionary of education. 2d ed. New York, McGraw-Hill Company, 1959. 150 p.
- Grover, D. L. (ed). The second national conference on college hygiene. New York, National Tuberculosis Association, 1937. 112 p.
- Haag, J. H. The need for secondary school health education. *Journal of School Health* 22:283-287, 1952.
- Kilander, H. F. Conference on the undergraduate professional preparation of students majoring in health education. Washington, D. C., Federal Security Agency, Office of Education, 1950. 10 p.

- Kilander, H. F. Preparing teachers in school health education. *Journal of School Health* 21:173-176. 1951.
- Kilander, H. F. (ed). Preparing the health teacher, recommendations from five national conferences on professional preparation. Washington, D. C., American Association for Health, Physical Education and Recreation, 1961. 71 p.
- Kilander, H. F. School health education. New York, The MacMillan Company, 1969. 527 p.
- Lewis, M. A. Survey of selected administrative and curricular factors of health instruction in the public secondary schools of Oregon. Unpublished Master's Thesis, University of Oregon, 1969. 44 p.
- Mayshark, C. and D. D. Shaw. Administration of school health programs, its theory and practice. St. Louis, The C. V. Mosby Company, 1967. 483 p.
- Mills, C. A. A study of certain phases of the health education programs of the public secondary schools of the state of Washington. Unpublished Doctoral Dissertation, University of Washington, 1959. 189 p.
- Moss, B. R. (ed). Health education. 5th ed. Washington, D. C., National Education Association, 1961. 429 p.
- Oberteuffer, D. Health education terminology. *Journal of School Health* 33:119-122. 1963.
- O'Brien, E. M. An investigation of persons engaged in health education in selected high schools in Oregon with emphasis on status, functions, qualifications and affiliations. Unpublished Doctoral Dissertation, University of Oregon, 1959. 159 p.
- Reeves, S. G. Teacher education standards in health education. The Northwest Council on Teacher Education Standards for Health, Physical Education, and Recreation, 1956. 42 p.
- Schlaadt, R. G. and D. Phelps. Highlights of the Oregon school health education study. A Research Monograph, 1971. 12 p.
- Sliepcevich, E. M. School health education study. Washington, D. C., 1964. 74 p.

- Slocum, H. M. Teacher preparation in health education. *The Journal of Health, Physical Education and Recreation* 40:31-38. 1969.
- Snyder, R. A. Professional preparation in health education. *Journal of School Health* 24:222-229. 1954.
- Snyder, R. A. and H. A. Scott. Professional preparation in health, physical education and recreation. New York, McGraw-Hill Company, 1954. 420 p.
- The Athletic Institute. The national conference on undergraduate professional preparation in physical education, health education and recreation. Jackson's Mill, West Virginia, 1948. 40 p.
- Troster, C. A. (ed). Preparing the health teacher. *Journal of the American Association for Health, Physical Education and Recreation*. 1961.
- Turner, C. E. Planning for health education in schools. New York, Longmans Company, 1966. 157 p.

APPENDIX A

Teacher Preparation Questionnaire

Please complete the necessary information and return as soon as possible to: Oral Behunin, Department of Health, Oregon State University, Corvallis, Oregon 97331.

Your Name \_\_\_\_\_ Name of School \_\_\_\_\_

Institution from which bachelors degree was granted \_\_\_\_\_

Place an X on the line that best represents your position.

1. Years at school where now employed.      1-3      4-6      7-9      10-12      13 & over

2. Years teaching health.      1-3      4-6      7-9      10-12      13 & over

3. Is health your main teaching interest?      Yes      No

4. Is health your main teaching assignment?      Yes      No

5. Percent of total teaching time spent teaching health.

     0-20      21-40      41-60      61-80      81-100

For the following health content areas, place an X in the column under "A" if you feel you received adequate preparation in your undergraduate work in the subject matter for the purpose of teaching health. Place an X in the column under "I" if you feel you received inadequate preparation in the subject matter. Place an X in the column under "N" if you had no formal course work in this subject matter area. Make only one response (A, I, or N) to each area.

		"A"	"I"	"N"
<u>Principles of Personal Hygiene:</u>				
6	Dental Health . . . . .	<u>    </u>	<u>    </u>	<u>    </u>
7	Vision. . . . .	<u>    </u>	<u>    </u>	<u>    </u>
8	Hearing . . . . .	<u>    </u>	<u>    </u>	<u>    </u>
9	Physical Activity and rest . . . . .	<u>    </u>	<u>    </u>	<u>    </u>

<u>Principles of Health Protection-Safety Education:</u>		"A"	"I"	"N"
10	Occupational Safety . . . . .	_____	_____	_____
11	Home safety . . . . .	_____	_____	_____
12	Recreational Safety . . . . .	_____	_____	_____
13	First Aid . . . . .	_____	_____	_____
<u>Principles of Community Health Promotion:</u>		"A"	"I"	"N"
14	Environmental Health . . . . .	_____	_____	_____
15	State, national and world health agencies .	_____	_____	_____
16	Voluntary health agencies and organizations	_____	_____	_____
<u>Principles of Nutrition:</u>		"A"	"I"	"N"
17	Knowledge of basic food nutrients . . . . .	_____	_____	_____
18	Selection and use of foods. . . . .	_____	_____	_____
19	Obesity and weight control . . . . .	_____	_____	_____
20	Food fads and fallacies . . . . .	_____	_____	_____
<u>Principles of Mental Health:</u>		"A"	"I"	"N"
21	Mental Health . . . . .	_____	_____	_____
22	Alcohol use and abuse . . . . .	_____	_____	_____
23	Drug use and abuse . . . . .	_____	_____	_____
24	Smoking and Health . . . . .	_____	_____	_____
<u>Principles of Family Life Education:</u>		"A"	"I"	"N"
25	Boy-girl relationships (adjustment to members of the opposite sex). . . . .	_____	_____	_____
26	Preparation for marriage (dating, courtship and family planning) . . . . .	_____	_____	_____
27	Biology of Reproduction . . . . .	_____	_____	_____
28	Social and cultural factors . . . . .	_____	_____	_____
<u>Principles of Disease Prevention:</u>		"A"	"I"	"N"
29	Communicable diseases . . . . .	_____	_____	_____
30	Non-communicable diseases . . . . .	_____	_____	_____
31	Geriatrics . . . . .	_____	_____	_____
<u>Principles of Consumer Health:</u>		"A"	"I"	"N"
32	Selection of health products . . . . .	_____	_____	_____
33	Selection of health services . . . . .	_____	_____	_____
34	Consumer protection agencies . . . . .	_____	_____	_____
35	Health misconceptions and superstitions . .	_____	_____	_____
36	Health careers . . . . .	_____	_____	_____
<u>Methods for Recognizing Health Interests and Needs of Students:</u>		"A"	"I"	"N"
37	Conducting and analyzing interest surveys .	_____	_____	_____
38	Interpretation of individual health records	_____	_____	_____
39	Interpretation of vital statistics . . . . .	_____	_____	_____
40	Observation (techniques, signs and symptoms)	_____	_____	_____

<u>Methods and Materials for Health Instruction:</u>		"A"	"I"	"N"
41	Methods for health instruction. . . . .	_____	_____	_____
42	Materials for health instruction. . . . .	_____	_____	_____
43	Curriculum development. . . . .	_____	_____	_____
44	Principles of evaluation of health teaching	_____	_____	_____
45	Student teaching in health education . . .	_____	_____	_____

May 14, 1970

A state wide study is now being conducted by the Department of Health Education at Oregon State University to determine the general professional preparation of health teachers in the Oregon high schools. The information thus obtained will be used to make recommendations to institutions involved in the preparation of prospective health teachers.

One-fourth of the high schools in Oregon have been selected for this study. Your school was chosen by random selection and is representative of other high schools throughout the state. Your response, therefore, will be representative of teachers in schools not selected.

Information you supply for this study will remain confidential and will in no way be used to evaluate your specific preparation or your school. No individual person or school will be identifiable in the final results of this study.

Enclosed is a checklist questionnaire that will take approximately five minutes of your time. Would you please fill out the questionnaire and return it in the stamped self-addressed envelope.

So that the results of this study can be recorded before school is out for the summer, your cooperation in supplying the necessary information, and returning this questionnaire at your earliest convenience would be appreciated.

Results of this study will be available at the Department of Health Education at Oregon State University.

Thank you for your cooperation in this study.

Sincerely,

Mr. Oral Behunin  
Study Investigator

Dr. Gordon W. Anderson  
Study Supervisor

OB/dbr

Enclosures 2

## APPENDIX C

## ACADEMIC DATA SHEET

Name of Teacher \_\_\_\_\_

1. Age: 22-30 31-35 36-40 41-45 46 and over2. Sex: Male Female3. Highest earned degree: Bachelors Masters Doctorate Nondegree4. Hours Beyond highest degree: 3-12 13-19 20-28 29-35 36 & over

5. Major for undergraduate degree: \*

Health EducationBiological ScienceIndustrialPhysical EducationSocial ScienceArtsHealth and Physical EducationLanguage ArtsHome Econ-  
omicsPhysical  
Education

6. Total Undergraduate hours course work in health:

0-10 11-20 21-30 31-40 41 and over7. Biology8. Anatomy11. Sociology9. Bacteriology12. Psychology10. Physiology13. Chemistry

COURSES IN BIOLOGICAL SCIENCE

COURSES IN:

14. Years when degree was granted:

27-34 35-42 43-50 51-59 60-69

Workshops:

15. Smoking

17. Drugs and Alcohol

16. Sex Education

\* List of courses in Health Education

18. Dental Health
19. Vision
20. Hearing
21. Physical Acitivity and rest
22. Occupational Safety
23. Home Safety
24. Recreational Safety
25. First Aid
26. Environmental Health
27. State, National and World Health agencies
28. Voluntary health agencies and organizations
29. Knowledge of basic food nutrients
30. Selection and use of foods
31. Obesity and weight
32. Food fads and fallacies
33. Mental Health
34. Alcohol use and abuse
35. Drug use and abuse
36. Smoking and Health
37. Boy-girl relationships (adjustment to members of the opposite sex)
38. Preparation for marriage (dating, courtship and family planning)
39. Biology of Reproduction
40. Social and cultural factors
41. Communicable diseases
42. Non-communicable diseases
43. Geriatrics
44. Selection of health products
45. Selection of health services
46. Consumer protection agencies
47. Health misconceptions and superstitions
48. Health careers
49. Conducting and analyzing interest surveys
50. Interpretation of individual health records
51. Interpretation of vital statistics
52. Observation (techniques, signs and symptoms)
53. Methods for health instruction
54. Materials for health instruction
55. Curriculum development
56. Principles of evaluation of health teaching
57. Student teaching in health education