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A SURVEY OF THE HEALTH EDUCATION PROGRAM OF THE
STATE DEPARTMENT OF EDUCATION OF TEXAS

THESIS

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CHAPTER I

INTRODUCTION

Purpose of the Study

The purpose of this study is to make a survey of the work of the State Department of Education of Texas in promoting school health services in the state. In addition, attention is given to the changing aims of education, the development of school health services throughout the nation, the urgent need for reorientation of subject matter, methods of teaching, and need for greater public financing of health education.

Limitations of the Study

The major part of the discussion will be centered around the work of the State Department of Education in Texas in promoting school health services. Material other than this will include literature dealing with the history of the health education program in the nation's schools and its relation to the Texas program.

Source of Data

Interest in this subject was aroused through the writer's attendance of a school-health workshop conducted on the campus of the North Texas State College at Denton in the summer of

1946. Much of the background literature was explored and collected at that time. The sources of material were the United States Department of Education, the Texas State Department of Education, the Kellogg Foundation, the Texas State Department of Health, and the United States Department of Agriculture. Magazines, bulletins, pamphlets, and newspapers were all utilized in the search for information pertinent to the study.

Method of Procedure

A uniform, practical, factual method of procedure has been attempted. Chapter I states the problem, the limitations, the source of data, and the method of organization of the investigation. A historical background of the development of school health services is given in Chapter II. Chapter III deals with criteria for evaluating a health education program. Literature concerning the objectives, curriculum, and course of study, the place of the teacher in the program, the methods of instruction, and the school environment is examined, and criteria for evaluating a health program are outlined. A survey of the work of the State Department of Education of Texas in promoting school health services is made in Chapter IV. The work in health education is evaluated in the light of the criteria set up in Chapter III. The concluding chapter presents the findings in the study and gives the conclusions gained from the research.

CHAPTER II

HISTORICAL BACKGROUND OF THE HEALTH PROGRAM OF THE STATE DEPARTMENTS OF EDUCATION

There is no mention of education as a federal function in the Constitution of the United States. Education, therefore, was considered a state function, and this position of the Federal Government has resulted in forty-eight differing types of educational set-ups. Some states have made more progress than others; some have woefully lagged behind in providing educational opportunities for their children. There has been no one policy.

In considering the health education program of any State Department of Education, this system of each individual state having jurisdiction over its educational policies should be considered. Each state, on its own initiative and governed only by the educational aims of the time, works out its own program. One state may, by legislative enactment, require certain courses to be taught in the public schools; an adjoining state may ignore altogether such a course of study. In spite of this situation, though, there has been some uniformity in all the states in subject matter and technique of teaching. A survey of the growth of health education in the public schools will illustrate this point.

Traditional education was extremely individualistic in

nature. The country was new and living conditions were hard. The schools which were established were primitive and offered only the fundamentals of learning: reading, writing, and arithmetic. These schools, of necessity, were small ones and widely scattered over the sparsely settled country.

Aside from mastering the ability to use the fundamental tools, the aim of education was a moral or disciplinary one. Latin and geometry were studied, not for any practical value, but for the disciplinary one of required hard work. Discipline in the schools was rigorous. There is no mention found in the educational literature of the time concerning the needs of society or of training for citizenship. The environment or the experiences of the individual were not considered. Living at that time was a comparatively simple affair, and there was opportunity and room for all people to make a living. Social and economic questions did not concern the citizens to any large degree. Thorndike gave succinct expression to the educational aims of the time:

The aim of education should be to make men want the right things, and to make them better able to control all the forces of nature and themselves that they can satisfy these wants.¹

Under such a concept of education, the individual person was the sole concern of the school. Such things as public welfare, the interests of the many versus the few, or the welfare of the group were unknown. It is needless to say that there was no health education program in the schools of the land.

¹E. L. Thorndike, Education, p. 8.

This individualistic aim of education dominated the schools until well into the twentieth century to a large extent. There were a few sporadic attempts such as that of Horace Mann to establish schools wherein citizenship would be stressed, but these were the exception instead of the rule. However, the simplicity of life at that time was, to a large extent, the cause of this type of education. The family was almost independent in its relations with the world. The clothing was made in the home, almost all the food was raised, and there were no great factories, no trains, no great cities. The children learned how to cook, sew, farm, and live with others through their work in helping the family provide for itself. There was no time or need for the great school systems of today.

The invention of the steam engine and other power machinery transformed the United States, as well as other countries, from an agrarian one to a highly industrialized one. This change brought almost revolutionary changes in the way of living, and these changes were reflected in the schools. It became necessary to change education in order for society to adjust itself to a changing civilization. The National Education Association expressed the need for such a change in these words:

If there is to be an adjustment of education to a changing civilization, schools need to direct their efforts toward broader objectives. Education has been primarily concerned with making people literate. Book learning that developed abilities to memorize, to read, to comprehend, and to recite have been of fundamental importance. Schools have been organized, teachers trained, and instruction

materials prepared with book learning as the controlling factor. It is no condemnation of the past to hold that present social conditions and objective knowledge as to the nature of the learner make it necessary for the general philosophy of education to be enlarged. Education arises from, exists in, and will continue to flourish as a part of the surrounding social culture. It cannot be completely isolated from life outside the school.²

Dewey and Childs further emphasized some of the changes that had taken place in the manner of living, and the necessity for new aims and functions in education:

Society has become in fact corporate. Its interests and activities are so tied together that human beings have become dependent upon one another, for good or for harm, to an unprecedented degree. This is a statement of fact, whether the fact be welcomed or deplored. This interdependence is increasing, not lessening. It must be taken into account by education. We must not only educate individuals to live in a world where social conditions beyond the reach of any one individual's will affect his security, his work, his achievements, but we must (and for educational reasons) take account of the total incapacity of the doctrine of competitive individualism to work anything but harm in the state of interdependence in which we live.³

Both educators and citizens gradually became aware of the need for reorganization of the school curriculum to fit the needs of a changed society. It was realized that many new subjects would have to be included if education was to fit the individual for life experiences. In 1916 a committee was appointed to study secondary education and to make

²National Education Association, Modern Social and Educational Trends, Research Bulletin, 1934, p. 284.

³John Dewey and John L. Childs, "Social Factors in Educational Reconstruction", The Educational Frontier, p. 68.

a reorganization of it. This committee's report was published in 1918, and it listed seven aims, which have become widely known as "the seven cardinal principles of education". These aims are health, command of the fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure time, and ethical character.⁴

These objectives sounded a new note in educational aims. Health was an entirely new subject. To some extent, of course, the school had always been concerned with a pupil's health, but not in the sense of teaching health. Here was an entirely new departure. The committee not only listed health as one of the objectives of education, but recommended inclusion of health education into the curriculum of the schools.

Another factor that influenced the beginnings of health education in the schools was the first selective draft program of World War I. In this first compulsory examination of young men, it was found that many adults between the ages of eighteen and thirty-six had physical and mental defects which could have been remedied with early diagnosis and treatment. There had been no agency charged with such an examination; under our system of individualism each family had accepted the responsibility of looking after its own members' health. The findings of the selective service showed that this system had failed in many instances. There

⁴Jessee E. Adams and William S. Taylor, An Introduction to Education and the Teaching Process, p. 577.

began to be a feeling that the schools should inaugurate a program of health education.

The placing of this health program in the public schools was based on a number of factors. The schools, because of compulsory attendance laws, had contact with more of the children and youth for longer periods of time than any other public agency. No other agency except the home had such an opportunity to give instruction in the fundamentals of good health. Children attend school for five hours a day for approximately 175 days a year. The full benefit of education cannot be realized unless the children enjoy optimum health. For these reasons, programs designed to assure healthy children have been inaugurated in the schools. Such programs are concerned with health services, health guidance, health instruction, physical education, and recreation.

However, a health education program did not happen all at once nor did it lack opposition. Many parents resented the idea of the school teaching health. Some schools tentatively worked out programs, and others gradually followed. As early as 1899 there had been state legislation in Connecticut compelling medical inspection of school children. In the period between 1917 and 1924, twenty-four states passed some kind of legislation providing for health instruction in the schools during this period. In 1941 forty-three states had passed statutes either permitting or requiring the examination of children for physical (and sometimes mental)

defects. In addition, two states permitted or required dental examinations.⁵

These laws present an astonishing variety as to details of requirements or permissions. In thirty states the school-health laws are more or less mandatory. In eleven states, the State Board of Education is responsible for carrying out the law; in seven states the State Board of Health is the responsible agent, and in eleven states the Departments of Education and Health are jointly responsible. However, this responsibility, in the majority of instances, extends merely to the issuance of examination forms. New York is the only state that has a director of medical inspection for the schools, while in five other states some official of the State Department of Education serves in this capacity.

In the beginning of the so-called "health education", the training consisted mostly of physical education. This stressed bodily development and participation in athletic games. But gradually a new concept of health education began to take root in the schools. Healthful living instead of winning teams became the aim. Health education, under the new concept, comprised both physical education and health instruction--healthy pupils enhanced the possibility of winning teams and improved the general welfare of the school and the community at the same time. More and more schools began to schedule classes in health instruction.

⁵James Frederick Rogers, State Wide Trends in School Hygiene and Physical Education, p. 3.

However, any program to be successful requires financial support from some source. One significant factor in the development of the health education program has been the amount of finances made available by the different state governments for carrying it out. In the 1941-42 report of the United States Office of Education, forty-three states reported expenditures for school health services. According to this report, per pupil expenditures for health services for all pupils 5-17 years of age amounted to seventy-eight cents per year--not dollars but cents.⁶ This expenditure ranged from eighteen cents in one state to \$3.07 in another. Ten states reported per pupil expenditures of more than \$1.00, while nineteen states reported spending less than fifty cents per pupil.

These figures are more significant when they are compared with the over-all expenditure for education by the states. The national average per pupil expenditure in 1941-42 was \$94.03. The lowest expenditure per pupil was \$31.23 in Mississippi, and the highest was \$169.00 in New York.⁷ Expenditures for health services by the different states amounted to eight-tenths of one per cent of the annual average educational expenditure per pupil.

The above figures, however, do not mean that these amounts were all that was spent for health service in the schools during that time. Departments of public health,

⁶United States Office of Education, Biennial Survey of Education, p. 33.

⁷Ibid.

both city and county, have for years provided some health services to school children. In a report by Mountain and Flock, 1941, it was stated that in five states the health department had full responsibility for school health services; in one state the education department had full responsibility for health services; in forty-one states health and education departments shared the responsibility; and in three states, in addition to education and health, some other state agency was interested in health services.⁸

Then, too, there have been some other funds available for school health services. These are local funds, federal funds for maternal and child health, and funds available to the state health departments through federal grants-in-aid for general health purposes. The total amount spent for health services, then, can not be accurately counted, but the conclusion is inescapable that it has been pitifully small. There has been little money available for school health services in comparison with expenditures in other fields.

Under such a set-up and supported by such finances, the health education program of the schools of the United States has functioned for the past two decades. Courses of study for health education have been worked out, school plants have been improved, and up until 1942 there was a general feeling that the schools had accomplished much along the lines of improving the general health of the nation.

⁸A.R. Mountain and J.P. Flock, Public Health Service Bulletin, No. 184, 1943, p. 6.

The statistics as revealed by the draft of young men in World War II have furnished a rude jolt to not only the educators but the general public as well. Out of the approximately twenty-two million men of military age, forty per cent, or between eight and nine million, were found to be unfit for military service. Over four million men were rejected and out of this number approximately 700,000 had remediable defects which could have been corrected if diagnosed and treated earlier.⁹ Because the army needed men so badly, a large number were accepted with these defects and treated at the expense of the government. Some idea of the number of defects may be gained from the following figures:

TABLE 1

DEFECT CORRECTIONS BY THE ARMY FROM JUNE 1,
1943 TO MAY 31, 1944¹⁰

Defects	Number
Cases	14,600,000
Fillings.	31,000,000
Bridges and Dentures.	1,400,000
Dentures repaired	196,000
Teeth replaced.	6,000,000
Venereals inducted and treated.	138,000
Hernia operations (1943).	25,900
Illiterates inducted and corrected.	133,000

The tragic part of this picture is intensified when it is stressed that the majority of these soldiers were young men not too far removed from the school room. Repercussions

⁹United States Department of Education, "Health Needs of School-Age Children and Recommendations for Implementation", School Life, November, 1945, p. 7.

¹⁰Ibid.

from this realization are already beginning to be heard. There is a growing conviction that the school health program as it has been conducted and financed has not been too successful. One of the problems of the future is some method of physical examination of all the children with a follow-up program of remedial correction. Such a program will have to run the gauntlet of the opposition of the die-hard individualists of the country who still maintain that the state has no authority nor right to conduct such a program. However, the history of the schools of the country show that they have changed their subject matter and their teaching technique with the changes in society; there is no reason to believe that an adequate health program embracing physical examination and instruction will not eventually be installed as a regular phase of education. Proper administration and handling of the subject on a co-operative of a regimentation basis will, no doubt, succeed even in a democracy.

The next chapter will make a study of criteria for evaluating any school health program.

CHAPTER III

CRITERIA FOR EVALUATING A PUBLIC SCHOOL HEALTH PROGRAM

Criteria for evaluating a public school health program deal with (1) the philosophy and objectives of a school, (2) course of study, (3) place of the teacher, (4) methods of instruction, and (5) the school plant. Criteria are nothing more or less than standards for evaluating the efficiency of such.

It is essential for a public school health program to have a carefully formulated educational philosophy. It should have a definite aim, and this aim should be in line with general educational principles. What then are the objectives of a public school health program, and how do they fit into the general educational aims? An examination of literature on the subject should reveal the answers.

Aims of Health Education

Educators and health workers have for years considered the health of the school children as important in the learning process. The human body is a machine through which the mind works. The quality and quantity of mental work depend upon the condition of the body. The child who is ill-fed, insufficiently rested, or who has defective sense organs will derive less benefit from his teaching. This is not only

unfair to the child, but is unfair to other pupils who are held back by his slower progress; it is a waste of energy for the teacher, and it is a waste of public funds to permit teachers to work with pupils who cannot profit as much by their efforts as might be the case if the bodily condition of the children were improved.

Educators have realized the importance of the health of the child, and within recent years much more research and attention has been given to promotion of health in the school room. The Joint Committee set up by the National Education Association on health problems formulated two main aims of a health education program:

- (1) To instruct children and youth so that they may improve their own health;
- (2) To establish in them the habits and principles of living which throughout their school life and in later years, will aid in providing that abundant vigor and vitality which are the foundation of the greatest possible happiness and service in personal, family, and community life.¹

In these aims, it is seen, there are two main factors: acquisition of knowledge, and putting knowledge into practice.

A sub-committee appointed at a meeting of Federal governmental agencies early in 1946 listed the following health-needs of school-age children:

- (1) A safe, sanitary healthful school environment.
- (2) Protection from infections and conditions which interfere with proper growth and development.
- (3) An opportunity to realize their potentialities for growth and development.

¹Joint Committee on Health Problems, Health Education, National Education Association, 1930, p. 15.

- (4) To learn how to live healthfully.
 (5) Teachers who are equipped by training, temperament, and health not only to give specific instruction but also to help children live emotionally.²

These aims are more concrete than the ones listed by the Joint Committee, but basically they are the same and contain the one central aim: aid the child in preserving, protecting, and conserving his good health to the end that he may be a better, happier citizen, and a more valuable member of society. Inasmuch as this is the cardinal aim of education, it may be seen that the health education aims coincide with the general aims of education.

The health education program, too, should aim at creating methods of behavior rather than the mere imparting of knowledge. There is a vital distinction between "health knowledge" and "health behavior". Knowledge without the aid of motivating forces has no influence on conduct; the ultimate objective of health instruction is to modify the behavior of the pupils in such a way as to fit them to assume responsibility for their own health. They will need both knowledge and the establishment of good health practices. Subject matter is necessary, but it should be related to the actual experiences of pupils.

The Health Education Curriculum

The nature of the subject matter for the health curriculum is not as clear as that of some other subjects such as

²"Health Needs of School-Age Children and Recommendations for Implementation", School Life, (November, 1945), p. 7.

mathematics or geography. The time to be given the subject, the method of presentation, and many other points need clarification. Literature on the general nature of the curriculum is applicable to a health curriculum. Taba says:

Curriculum thinking should not attempt to provide exact charts for educational experience, nor give any rigid prescription as to the materials to be used in connection with educational activities. Instead it should try to provide principles and materials to think with in a creative manner in dealing with educational practice.³

The desirable thing, then, in a curriculum is to map broad objectives, not make exact charts. The curriculum should be a living thing based on the life experiences of the pupils.

Knowledge, however, has its place in the curriculum.

Moore has this comment:

The great thing is not knowledge...but learning to use one's own mind...Textbooks are important because they suggest to us some things which the race has found it important for us to think about.⁴

Under the concept of a curriculum which contains both aims and knowledge, education is determined by what the student does. If he masters a single subject in such a way that he is able, from his training, to stand on his own feet and use his own mind in solving his individual problems, he has found a real education. The worthwhile curriculum in health, as well as in other subjects, is one that provides knowledge and life experience activities.

³Hilda Taba, Dynamics of Education, p. 249.

⁴Ernest Carroll Moore, What Is Education, p. 18.

Another important aspect of a health curriculum is the person or persons who make the curriculum. In the traditional school, the teacher used the textbook directions almost exclusively. Later, State Departments of Education began to formulate courses of study and outlined the teaching procedures. It was difficult to make a course of study applicable to all situations. The teacher, without any knowledge of the suggested procedures, was often ineffectual. Present-day educational philosophy has departed widely from this practice. The teacher today is one of the important links in curriculum building; it is recognized that she is the one who will have more knowledge of what is needed and more interest in the outcome. Illustrative of this new attitude is the guiding principle of the Fort Worth Public Schools. The following principles for curriculum development have been outlined by this system:

(1) All teachers, supervisors, and administrators affiliated with the school system should have an opportunity to participate in the course of study.

(2) The curriculum shall be constructed by the teachers, supervisors, administrators, and the curriculum director.

(3) The curriculum maker must become a student of the child, of society, and of the accumulated experiences of the race.

(4)⁵ The curriculum cannot be made exactly in advance.

Of what, then, should the health education program consist? How arrange it so that both knowledge and good health practices result? The following guiding statements have been

⁵Fort Worth Public Schools, Language Arts, A Tentative Course of Study for Grade Six. Curriculum Bulletin No. 146, 1935, pp. ii-iii.

recommended as a base for planning the content of the health education program:

- (1) Health insurance should be based on interest and the needs of specific groups.
- (2) Health instruction should be concerned with the whole individual, his home and his community life; it should deal with real problems and real situations.
- (3) Health instruction should realize that health is a resultant of many factors; no single act, no matter how often repeated, results in health.
- (4) Health instruction should be related to the previous experiences of students and their intellectual capacities.
- (5) Health instruction should be based on specific facts and should correct false beliefs and undesirable fads.
- (6) Health instruction should use modern, diversified methods of education.
- (7) Health instruction should contribute to all educational goals: economic efficiency, civic responsibility, and self-realization.
- (8) Health instruction should be coordinated with health guidance and other areas of the curriculum and all community health efforts.⁶

In order to translate these principles into an effective curriculum, it has been recommended that the health education program be divided into the following parts or units:

Development and function of the body
 Personal hygiene
 Healthful and sanitary environment
 Nutrition
 Prevention of disease
 Prevention of accidents⁷

In making such a division, it should not be the aim to teach each one as if it were a separate subject. These topics are so closely related to each other that a study of one must embrace one or many of the others, if not all of them. But

⁶Ibid.

⁷Ibid.

such a division can serve as a guide in setting up a program and determining what shall be taught. For this reason, these divisions and suggested subject matter will be discussed here.

Body development and function.-- There is no definite amount of knowledge of body structure that a pupil in any given grade should know. However, every elementary pupil should learn the location and common names of the various parts of the body and the general interrelationships and functions of all the organs and systems.

Such information will enable the pupils to understand those functions and their relation to the body as a whole, to understand that a person is only healthy when all the parts fulfill their role, and to understand how to protect and take care of the body.

Emphasis should be placed on the body parts, organs or systems which have the most influence on health, such as good mastication of food, proper elimination, and sufficient exercise.

The fact that every part of the body should be able to function completely brings up the important question of physical education, which aims primarily to develop the body in strength, vigor, and neuromuscular coordination. It should be pointed out, however, that physical education will not overcome physical defects or immunize against diseases; it does contribute to an individual's success and his capacity to enjoy life.

Personal hygiene.-- A course in personal hygiene is given for the purpose of aiding each individual in improving his personal health. So it is essential for the teacher to know the health needs of her pupils individually, and these needs can be revealed by health screenings, family history, and personal conferences with the pupils.

The student's health, though, should not be made a deep dark secret to be talked over only in personal conference between the student and his health advisor. There should be formed in class a certain community of interest in the improvement of health habits.

The course in personal hygiene will cover all the habits of the pupils which are considered necessary for good health: sleep; cleanliness; care of teeth, nose and throat, eyes and ears; play; food, digestion and elimination. In dealing with such habits, it is important to recognize the significance of repetition. Children will not form good health habits merely by learning facts but by practicing such habits repeatedly with satisfactory results.

Healthful and sanitary environment.-- In the daily work in the classroom, the teacher has an opportunity to enlist and secure the pupils' participation in the maintenance of an orderly and sanitary environment. Many aspects of the environment can be studied with profit, such as heat, light, sunshine, buildings, grounds, noise, color, form, construction,

water supply, sewage disposal, and place space.⁸ The pupils will naturally be interested in the water supply of the school, the toilet facilities, the washing equipment, the disposal of waste and garbage, recreational facilities, and other related problems. A lesson built on these topics will certainly be more appealing, more instructive, more effective than any reading or lecture given by the teacher.

Such training, if effectively done, will have a transfer carry-over value to the community. The pupil who becomes interested in school sanitation and environment is likely to transfer this interest to his home and his community and be a helpful force in improving it.

Nutrition.--Improvement in dietary practices is the primary aim in teaching food in elementary schools. The major emphasis should be placed on activities rather than on information; pupils have to be taught how to know good food, and good food habits cannot be formed without experience in using good food.

The best opportunity, then, in the average school to teach nutrition is in connection with the school lunch. In rural areas--where food nutrition is most needed--it is difficult to carry out a school lunch program, but it provides an ideal situation for putting health knowledge into practice. Children take an active part in planning and preparing the food, serving the lunch, and cleaning the dishes.

⁸Health Needs for School-Age Children and Recommendations for Implementation, School Life, (November, 1945), p. 8.

Prevention of Disease.-- The prevention of disease is closely related to the habits of nutrition and personal hygiene. Because most of the diseases that occur during the school period of the child's life are communicable, emphasis should be placed on the prevention of such diseases. This means adequate examination and inspection of pupils, teachers, and custodial personnel to detect communicable diseases as well as deviations which impair health. It also means an opportunity for the school to provide necessary immunization and testing procedures.

An adequate program of examination and inspection of the health of the children should be a part of the health curriculum of the school. It should not be cursory and there should be some means of care as well as examination to find defects. The medical examination should be something more than a "screening" for minor defects. Modern public health methods have and are utilizing the Wasserman test, the tuberculin test, the paper or micro-film X-ray, the audiometer, the Snellen test and others.⁹

Physicians and nurses well-qualified in public health and education are needed to organize, supervise, and interpret such examinations, and to aid in securing treatment for the discovered defects. Special medical facilities are needed also for many other problems, such as malnutrition, orthopedic conditions, defective hearing, poor vision, and emotional

⁹Ibid.

abnormalities. Health services for school children require adequate nursing and medical skill in order to function properly.

Safety Instruction.-- Safety instruction of children consists in giving them training that enables them to act adequately in the place of threatened or actual danger. It is primarily a problem of controlling behavior in dangerous life situations by encouraging safety habits and attitudes.

Safety can be taught, not by memorizing facts and figures, but by proper activities: exercises, demonstrations, how to cross streets, how to prevent fires, how to handle tools, and such related subjects. These activities may be integrated with other phases of the school curriculum, but care should be taken not to make the integration forced or unnatural.

The Place of the Teacher in the Health Program

A key person in the school health service is the teacher. A major requirement of a health education program is day-to-day supervision, which can only be achieved through the aid of the classroom teachers. Few of these teachers, however, are qualified through pre-service or in-service training in recognizing the characteristics of healthy, normal children, or in detecting deficiencies. It is becoming a recognized fact that the teacher needs training in health procedures as well as the children, and teacher-training institutions are setting up courses in such. The United States Office of Education has outlined the following steps for teaching

teachers how to observe physical traits of children:

(1) A general presentation of the subject, with special attention to the relations of body and mind, and of the hampering effects upon the individual child, and upon all concerned, of physical disabilities.

(2) Features to be observed in physical examinations: General appearance, behavior, gait, carriage, nutrition, influence of heredity, methods of weighing and measuring, and the meaning and uses of limitations of height and weight tables and averages.

(3) Common diseases of the scalp, hair, and skin; where and how to examine for them; demonstrations of cases if possible or use of pictures.

(4) Anatomy and physiology of the eye, especially of visible parts; theory of accommodation and causes of strabismus, myopia, hyperopia, astigmatism; effects of eyestrain; explanation of Snellen letters and E chart and of the effect of the lenses on vision; diseases of lids, conjunctiva, cornea, and lachrymal apparatus. Members of training classes may be used for demonstration of the parts of the eye to be observed and in the use of vision charts.

(5) Relations of nose, throat, and ear, and their diseases; causes of deafness; methods of testing hearing; demonstrations of tests of hearing.

(6) Description of development and eruption of teeth, causes of decay, etc., observation of teeth.

(7) Anatomy and physiology of lymphatic glands and thyroid gland with demonstration by pictures and by cases.

(8) The common deformities of the chest, back, and extremities, with their causes.

(9) Communicable diseases, their methods of transmission, and their symptoms.

(10) The relation of the teacher to the school nurse and physician and to the parent.¹⁰

Even a cursory survey of the information that could be obtained by a teacher in such a course shows the possibilities of the program. A teacher would be much more qualified in observation of the pupils with such information a part of her training. Teacher-education for health education, it is clear, should be a must of any health program.

¹⁰James Frederick Rogers, What Every Teacher Should Know About the Physical Condition of Her Pupils, United States Office of Education, Pamphlet No. 68, 1945, pp. 18-19.

The place of the teacher, then, in the health education program is one of great importance. It could be said that the efficiency of any health education may be measured to some extent by the degree with which the teacher-training institutions train its students in health procedures. The classroom teacher is the key figure in establishing, maintaining, and carrying out a statewide health education program.

Methods of Instruction

When health instruction was first begun in the schools, the work was done as a part of the daily program and no specific place or time was allotted to the health period. Accepted educational standards of today call for a specific period of instruction in health plus integration with other studies, the same as practiced in different subject categories. Perrin says:

Health rules made by the class are far more likely to be practiced than those learned from a book....

But do not imagine that this can be a hit-or-miss procedure, or what is called the 'incidental' method of imparting health instruction. Frequent opportunities present themselves during the school days for application of health truths in an incidental way, and every subject in the curriculum can be counted on to make a contribution, but there must be some one coordinator, and a recognized place on the time schedule for this definite instruction in matters pertaining exclusively to health, whether it be called health education, or hygiene, physiology, or what not. It must be handled with the usual care for content and method adjusted to age levels.¹¹

¹¹Ethel Perrin, "A Health Program for Texas Teachers," The Texas Outlook, IX (January, 1935), 35.

The methods of instruction in health matters are all important, but they are not cut and dried. By using initiative, imagination, and the resources of the school and community, an alert teacher can expose children to experiences in which their knowledge will be tried and tested. The program for healthful living is not dependent solely upon what is done during the health education period. Since all experiences of the child condition his behavior, health education must be thought of as a product of a great variety of experiences in home, school, and community. The organization and atmosphere of the entire school has a bearing on healthful living. All teachers who come in contact with the child exert an influence which must be considered. Not only is the provision of opportunities basic for good health practices but actual pupil participation is necessary.

Health teaching refers to the use of ideas, philosophy, and practice of that personal conduct that conserves and promotes health. The emphasis here is not in telling children how to act but in giving them opportunity to act. It is here that the dining room, the science laboratory, the health office, and the playground become places where much systematic, incidental health teaching takes place.¹²

School Plant

To be acceptable from the modern educational view, a school plant should have three essential conditions: healthy,

¹²Fred C. Ayres and Others, Healthful Schools, p. 11.

attractive, safe. Every part as well as the whole should be judged in the light of these three standards.

The physical environment of the school plant includes the school site, a playground, a building, ventilating system, sufficient lighting, sanitary facilities, and water. Some kind of standard should be used in the selection of these.

School site.--According to Ayres, Williams and Wood, the best site is one which is centrally located, not more than two miles from the most distant home if the children walk and not more than six if they ride.¹³ The site should be a quiet place, free from noise, dust and unpleasant odors, and immoral or disturbing influences.

Playground.--The playground should be large enough for the number of children expected to enroll, and should be exempt from any danger. Fifty feet per child has been set as a minimum for play room by some authorities, but others give a limit of thirty square feet for each child.¹⁴

Building.--A comfortable and clean school building is required. It should be of adequate size for the number of children enrolled, of attractive construction, nicely decorated and furnished, and with seats movable and adjusted to the size of the pupil. The recognized standards for classrooms are 200 cubic feet per child. No teacher should be required to have classes exceeding thirty pupils.

¹³Herman Rosenau, Preventive Medicine and Hygiene, p. 1280.

¹⁴Ibid.

Heating System.-- There should be a good heating system; in the case of a common stove, pupils who sit close should be protected against too much heat.

Ventilation.-- Ventilation of the school room is very important, because bad air affects both physical and mental work and lowers the resistance to communicable diseases. Good ventilation adds to comfort and health. There are many systems of ventilation, some of which are artificial. The best natural one is the window gravity when it is properly designed, installed, and operated.

Lighting.-- The common standards for lighting are at least 20 foot candles on every desk.¹⁵ The working surface of the childrens' desks should be free from glare. The glass area, to give sufficient lighting, should be from 1/2 to 1/5 of the floor area. However, the way in which classrooms are decorated and painted add much to the lighting. The most modern system of lighting makes use of diffusers and reflectors in the windows.

Drinking facilities.-- If there is a fountain with running water, the mouths of the children should not come in contact with the outlet. If there is not running water, a closed fountain and individual drinking cups should be used.

Washing facilities.-- There should be washbowls, soap, and towels--preferably paper--in the washroom.

¹⁵D.B. Harmon, Light on Growing Children, p. 79.

Toilet facilities.--These should be clean and odorless, whatever system is used, and in adequate numbers. The adequacy of toilet seats may vary between states, but there should be one seat for fifteen girls, and one for twenty-five boys, and one urinal for fifteen boys.

Summary of Criteria

Criteria for evaluating the efficacy of any health program may be summarized as follows:

1. The program should have a definite aim which should be in accordance with established educational aims.
2. The course of study should include both knowledge and activities; it should meet local as well as general aims; and the teacher should have some part in making it.
3. Teacher-training in health education is as necessary as health education for children.
4. The classroom teacher is the key figure in the health program.
5. The methods of instruction should be dynamic, not static, and be based on pupil participation rather than pupil recitation.
6. The school plant should conform to established standards for securing maximum pupil health.

In the following chapter, the health education program of the State Department of Education of Texas will be studied and the results examined in the light of the criteria set up here.

CHAPTER IV

A SURVEY OF THE HEALTH EDUCATION PROGRAM OF THE TEXAS PUBLIC SCHOOLS

Health has always been a considered factor in any Texas school program, but it has only been within the past few decades that it has become a part of the regular curriculum of the school. Physical education courses in the public schools of the state were made mandatory by statutory enactment in 1930. The bill authorizing such a program reads as follows:

Section 1. That instruction in physical education shall be established and made part of the course of instruction and training in the public elementary and secondary schools of the State by September first, nineteen hundred and thirty.

Section 2. The State Superintendent of Public Instruction shall prepare courses of instruction for the public schools of the State for the purpose of carrying out this act.¹

This was the extent of the State of Texas' participation in the health program. The State Legislature authorized it, and the State Superintendent of Education was commissioned to prepare a course of study for the teachers to follow. There were no financial provisions, no supervision provided for in-service training, no mention made of the need for trained teachers in the field. The matter was simply left

¹State Department of Education, Texas Public Schools, Health and Physical Education, August 1, 1930, p. 1.

up to the State Department of Education, and it, in turn, could only pass it on to schools which already had crowded curricula and over-worked personnel--personnel that too often knew little or nothing about health education themselves. It is true there had been physical education taught in the schools before this time, and that there were trained instructors for it in almost all the larger schools, but the physical education herein required by legislative decree was something more than the traditional idea of the subject. Marrs, State Superintendent of Education, in the tentative course of study which was hurriedly worked out and issued, made this distinction in his statement of the aims of the program:

One of the aims of the course is to set up minimum standards and point out in a general way the methods of attainment in such a way as to accomplish the objectives of health education. The program submitted here should be adapted to the local school situation, to the time of the year, and to the need of the individual child. The selection of material from this outline must be determined by prevailing conditions, such as: length and number of periods, gradation of classes, place designated for the activities, equipment, trained or untrained teachers, and other local conditions.

A second aim in the preparation of this course of study has been to outline a program of physical education which will include every child in school. The commonly accepted practice has been to have physical training for a few in order to have winning teams. Our claim is that, with physical education for all, the general welfare of the school, community, and future generations is improved, and at the same time material for winning teams is being built up. We further claim that it is the burden of the school to give the child something practical which can be carried into and actually used in later life.²

²Ibid., p. 5.

Under this concept, physical education was a thing for all the children with the ultimate aim as the improvement of general good health with winning teams a secondary consideration. Schools were not only to instruct the children in the fundamentals of learning but were to safeguard their health, teach good health habits and attitudes.

Superintendent Marrs was well aware of the fact that such a program would be the work of the classroom teacher as well as the physical education trained instructor and that Texas classroom teachers were poorly equipped to do this type of teaching. He said:

In order to develop the educational possibilities of physical education to their fullest extent, teachers are needed who are adequately trained. Such training calls first of all for the right attitude toward physical education. Fundamental principles and aims must be understood so that physical education is not viewed as athletics only, but as a broad educational program of activities. Teachers must clearly understand just what objectives they may expect to achieve through their program. They must understand modern educational method and be prepared to be not drill masters but leaders in securing pupil participation in purposeful activities through development of initiative and choice.

To view the program in this light and to guide pupil participation in this way calls for sound grounding in the natural sciences, in psychology, in educational method as well as in the theory and practice of activities taught.³

This philosophy of Superintendent Marrs, it is seen, was clearly in accord with modern thought along health educational lines. He saw that teachers trained in health

³Ibid., pp. 7-8.

observation were a necessity of the program, and that health practices had a solid foundation in the other subjects and activities of the school room. Whatever it lacked in its early days in other phases, the health program of the State Department of Education of Texas was powered by an educational philosophy which was dynamic, constructive, and practical.

Superintendent Marrs divided the health program into three phases: health supervision, health service, and health instruction.

Health supervision included physical examinations of the children, follow-up-work, and sanitation of the school plant and grounds. This, it is seen, dealt mainly with the physical make-up of both the pupil and the school environment. As the initial step in the program it was strongly recommended that every child be given a thorough, complete physical examination either before enrollment or within the first month of school. Wherever possible, it was recommended, the examination should be given by the school physician or some regular practicing physician. However, it was stated that the examination might be given by a nurse, the physical education director, or even the classroom teacher. The teachers were asked to keep the records of such examinations. If the examination was given by a physician, the following items were to be noted in the report:

- Weighing and measuring
- Testing for vision and hearing
- Examination of the teeth and mouth generally
- Notations of posture
- Orthopedics
- Noting signs of mouth breathing

Examination of the nose, throat, and tonsils
 Enlarged glandular conditions
 Testing of the heart and lungs
 General nervous condition
 Notation of immunization against certain diseases
 Spine (shoulder position, curvature)
 Genitals
 Abdominal
 Thyroid⁴

When the examinations were made by any person other than a physician, the following differences from the above were noted:

Lack of definite information about the nose and throat
 Delicate glandular conditions not noted
 No testing of heart or lungs
 Certain orthopedic conditions not noted
 No examination under last three headings listed above.⁵

These examinations were in line with current educational practices, and would meet the aims of accepted literature on the subject. According to Wood's Health Education, there are two main purposes of the health examination: detect infection or contagious diseases and protect other pupils against them, and discover physical defects and chronic ailments, in order that limitations of the pupils might be understood and that curable defects and disorders might receive appropriate attention.⁶ Such an examination as the one recommended should achieve these results.

Stress was placed on the statement that the health examination in no way infringed upon the work of the regular practitioner. The schools were not to undertake remedial work in the case of ailments of importance but were only to

⁴Ibid., p. 28.

⁶Ibid., p. 27.

⁵Ibid., p. 28.

refer such information to the parents of the child, who, in turn, it was hoped would consult a regular physician.

A corollary of the physical examination of the child was the evaluation of the sanitation of the school plant and the environment. The State Legislature in 1913 had specified standard heating and lighting equipment for the public school buildings of Texas and such equipment was to be expected. However, the school environment, even where state specifications had been met, could be made more attractive and healthful through the cooperation of the school and the community.

The second phase of the health program--daily inspection -- was left a great deal to the discretion and tact of the classroom teacher.

Actual instruction in health education was given the following recommendations:

In the elementary and grammar grades health instruction consists largely of instruction in health habits and should be correlated with the other subjects in the curriculum. In the high school, however, a different situation exists. To a large extent health instruction can and should be considered in connection with other subjects, but since the study of health in the high school involves the study of physiological and biological factors, it should be incorporated as a separate and distinct course in the curriculum. In any case health instruction should be made to function in the life of the child; otherwise there is no excuse for adding it to an already overcrowded curriculum.⁷

In the physical education program, play--games, sports,

⁷Ibid., p. 54.

and athletics-- , dancing and dramatics, and gymnastics were recommended.

The remainder of the bulletin, Texas High Schools, Health and Physical Education was given over to suggested program by grades, plays and games, and related discussions. It was repeatedly stressed that the worthwhileness of the program depended on the teacher and the extent to which pupils participated in health activities.

In such fashion and motivated by such philosophy and aims, the health education program of Texas was inaugurated in the public schools, September 1, 1930. As stated previously, there were no provisions made by the State Legislature for any funds for the project, but the work was merely assigned to the State Department of Education. The teachers, naturally, were not trained for such work, and since no help was provided them save a course of study, it is to be expected that not too much was accomplished all at once.

The necessity for additional aid in teaching health education evidenced itself more and more as the work progressed. Many schools in Texas requested the State Department of Education to expand and revitalize the health education program and physical fitness program in the rural, elementary, and secondary schools of the state. Since the State Department of Education had no legislative appropriation to develop this program, the requests could not be granted. Finally, as a last resort, application was made to the W.K. Kellogg Foundation, Battle Creek, Michigan, for

funds to carry on this work. The Kellogg Foundation made a substantial financial grant to the State Department of Education which made possible the undertaking of the Texas School Health Project.⁸ Under this project the major progress that has been made in Texas in teaching health education has occurred.

Before any attempt is made to appraise the work of the Texas School Health Project, some attention should be given the aims of the Kellogg Foundation and the reasons why the funds were allotted to the State Department of Education.

Will Kellogg, as a boy in school, was regarded as slow-witted. He had difficulty in learning to read. He was twenty years old before he learned that it was his need for glasses that had retarded his early work in school. He was nearsighted. Once he realized his defect and what it had meant to him, he began to dream of trying to make a fortune so that he could aid children in the schools and prevent the misery that he had suffered.

Kellogg, in middle age, founded the great company that bears his name, and realized his ambition for a fortune. At the age of sixty-five he found himself many times a millionaire, and he established the Battle Creek Foundation with available funds of \$46,000,000. Kellogg, in setting up the fund, asked that expenditure further child health, recreation, and character-building, and so influence the child that health

⁸Report on Texas Public School Health Project, p. 1.

education might in turn penetrate the school, the home, and the community. He told Dr. Pritchard, whom he induced to act as Director of the Foundation, to use the money as he pleased just so long as it promoted the health, happiness, and well-being of children.⁹

For two years after the Foundation was established, Dr. Pritchard did nothing but study the work of other large foundations and endowments. Out of this two years of study and six ensuing years of experiments he came to the following conclusions:

1. Paternalism is intolerable to the average American system.

2. In the typical rural community, a policy of patronage will fail where a program of participation and cooperation will succeed.

3. The average community is already possessed of all the resources necessary to insure health, happiness, and a measure of prosperity. No army of "experts" need to be imported from the outside. Nothing is required except intelligent leadership, encouragement, and the provision of opportunity for all groups to acquaint themselves with modern thought affecting health, education, and recreation.¹⁰

"The development of intelligent leadership" is the keynote of the entire program, and it is on this basis that the Foundation granted aid to the Texas State Department of Education in its effort to better the health of the children of the state. The whole child in his composite environment was to be studied. Dr. Pritchard thought that it was a

⁹Allen Shoenfield, W. K. Kellogg Foundation, p. 2.

¹⁰Ibid., p. 3.

waste of money and effort to try to cure obvious defects without attempting to discover and eliminate causative factors. Here, in a nutshell, was the dominating philosophy of the Health Service Project--discover and eliminate causative factors of poor health.

The Public School Health Project got under way in Texas in 1944 and was financed by the Kellogg Foundation. The State Department of Education, under the direction of the Superintendent of Public Education, served as official sponsor of the Project. As such, the State Superintendent has:

1. Served as general supervisor of the project.
2. Appointed, in cooperation with the Texas State Department of Health, all members of the Statewide Public School Health Improvement Committee.
3. Appointed a Consultant in Health Education to serve as Project director.
4. Received the financial subsidy from the W.K. Kellogg Foundation and distributed same according to the budget.¹¹

The first move of the Project was to obtain "Intelligent leadership". The State Superintendent of Public Instruction, in cooperation with the State Health Officer, Director of the State Department of Health, appointed a Statewide Public School Health Service Improvement Committee to serve as advisory council to the project. Included in the membership were representatives from the Texas Inter-Professional Commission on Child Development. The functions of this Committee were to advise the heads of the Project

¹¹Report On Texas Public School Health Project, p. 1.

regarding problems and procedures, the formulation of policies, and to advise with teacher-training institutions, and teachers of health education and physical education concerning methods of content of courses.

The State Consultant in Health Education, acting as project director, has served as administrator of the project. Dr. D.B. Harmon, Director, Educational Services Division, Texas State Department of Health, has aided the project director. With the assistance and guidance of various educational and health agencies as well as health teachers, the following basic policies for a Seven-Point Health Services Program were adopted:

1. Control of communicable diseases through immunization, and through isolation of diseased pupils, after daily observance by the classroom teacher for detection of communicable diseases and acute health difficulties.
2. Minimize non-communicable defects by periodic teacher observation and, in as far as possible, through therapeutic treatment.
3. Provision of minimum health essentials in classroom environment.
4. Provision of adequate activity for students to promote their physical fitness.
5. Inclusion of sufficient health education in the curriculum to promote insight into personal hygiene, local health hazards, and participation in community efforts for promotion of health.
6. Inclusion of adequate nutrition supervision and instruction in the curriculum.
7. Integration of school health programs with the community health program in such a way that they not only connect with the life of the school child, but provide continuity with what has gone in the pre-school period in Well-Child Conferences.¹²

Reference to the criteria set up previously shows that

¹²Ibid., p. 2-3.

the two main aims of a health education program, according to the Joint Committee of the National Education Association, are to instruct students so that they may improve their own health, and to establish good health practices. The aims of the Health Services Program in Texas, then, are in line with those worked out and established by the National Education Association.

One of the first needs recognized in the new health education program in Texas was a new course of study. The previous course of study had been mostly concerned with physical education. There was a felt need for a vital health curriculum applicable to all the health needs of the child. Significant of the new trend in education whereby the teacher became an integral part of the creative process of writing the curriculum, the State Department enlisted the aid of the teachers in service in mapping a new course of health education. Arrangements were made by the State Department of Education with the University of Texas to initiate a health education workshop for the purpose of developing courses of study in health education.

Forty-two teachers participated in this first health education workshop. Thirty-five of these were selected teachers of health education and physical education from over the state. The Chairman of the Health and Physical Education Department of the State University had charge of the

Department of Education, the United States Office of Education, the American Red Cross, the United States Army, the University of Texas, and the Texas Health, Physical Education and Recreation Association.¹³

This first summer workshop was mostly explorative in nature. The whole field of health education was surveyed, and a tentative course of study worked out. Some of the questions that came up for discussion were the place of health education in the curriculum, the emphasis to be placed on physical education, and the many perplexing questions concerning organization and administration. In the short period of eight weeks there could not be much individual study given to all these phases, but a beginning was made.

The workshop recommended that the course in health instruction be given a definite place in the curriculum, and the course of study worked out recommended units for developing various phases of health education. Teaching was through functional activities rather than the lecture method. The tentative course of study was sent out to the teachers and they were asked to study it critically and to measure the results attained wherever possible. Achievement standards were set up and a variety of objective learning experiences outlined.

¹³Ibid., p. 4.

In the field of physical education, the Handbook set up an outline for a physical examination:

Part Three of the Handbook, which consists of a course of study in physical education, was planned to give students an inventory of their own physical fitness status and lead them to participate in vigorous physical fitness status and lead them to participate in vigorous physical activities which will develop physical fitness, and at the same time will develop attitudes, knowledge, motor skills, related health habits, safety procedures, and habits of social conduct which will promote the general ends of education. This part of the Handbook is not considered to be a finished piece of work. Over one hundred physical education teachers in Texas...agreed, during the year 1944-45, to keep records of pupil achievement, according to achievement standards set up in each unit, to submit these to the State Department of Education, together with suggestions or recommendations for revision and improvement of the Handbook at a later date.¹⁴

The classroom teacher, it is seen, was taken into partnership with higher authorities in the matter of working out and applying a health education program.

The work started at the University of Texas has been continually expanded since its inception. In the summer of 1944 workshop courses in health education were conducted at the seven teacher-training institutions for white teachers and two teacher-training institutions for Negro teachers in Texas. In 1945 fifteen such institutions in the state sponsored functional workshop courses in health education, in cooperation with the State Department of Education and the State Department of Health. In the school year of 1945-46, the twenty-four supervisory districts of the state were

¹⁴Ibid., p. 4.

designated as health study centers and a program of teacher-training and experimentation was carried on at some central school in each area.

The workshop in health education, as carried on at the North Texas State College in the summer of 1946, is illustrative of the advancement that has been made in the work. The orientation course at the University of Texas in 1943 could only chart the way; the subsequent courses undertook the work of training the classroom teacher in the health procedures that she would actually have use for in her schoolroom. The name of the course was "A Guide to Healthful Living in the Elementary School", and teachers actively teaching in the schools were selected to take the course. A grant from the Kellogg Foundation aided the teachers and made it possible for many of them to attend the workshop.

The workshop was not held in one of the college classrooms, but was set up at one of the ward schools in Denton near the campus of North Texas State College. Here all phases of the health education program were examined--theory and practices. Members of the State Department of Education in cooperation with members of the education faculty of the college conducted the workshop.

The teachers selected for the training were not specialists in the field of physical education. School administrators were told by the Kellogg Foundation administrators that they had found that "any good ... school teacher could teach the health education course, with the advice and

assistance from time to time, of the staff of consultants".¹⁵ The purpose of the workshop was to give this practical training to the classroom teacher.

Reference to the criteria previously set up for the evaluation of a health program shows that they favor participation of "all teachers, supervisors, and administrators ... in making the course of study" and that the "curriculum maker must become a student of the child". The Public School Health Project of Texas, in its effort to train the teachers-in-service, has met the requirements in many respects. The Project has only been under way for three years, and there are a large number of schools in the state whose teachers will have to be reached.

The underlying principle of the School Health Project, as previously stated, was discover and remedy causes of diseases. Such a concept called for functional methods of teaching--participation of the school children in life activities. It is clear that causes of diseases could not be learned merely by reading about them. The suggested courses of study in health education outlined the life experiences of the pupils as the base for study. Student participation instead of student recitation was stressed.

Perhaps the most important work of the School Health Project has been done in its study of the effect the school environment has on the health of the pupils. Heretofore,

¹⁵Ibid., p. 5.

most health programs had been corrective in nature; in line with the Foundation philosophy, the project director began an intensive research program to see if some causes of pupil ill health could be discovered and eliminated within the school environment itself.

When the School Health Project got under way in Texas there was already available evidence that inadequate lighting in the classroom had tended to handicap pupils with respect to their normal growth, their learning opportunities, and their health and behavior attitudes in general. Mindful of evidence secured by research in other localities, the project director instituted a series of tests wherein 1774 Anglo-American, Latin-American, and Negro children in both urban and rural areas were examined for health deficiencies. The tests revealed some very significant relationships existing between children's visual ability and other physical and mental defects.¹⁶ In over 4,000 classrooms examined, it was found that the children evidencing the most physical defects were seated in the portions of the classrooms having the least and poorest light.

In November, 1942, a lighting experiment was conducted in the same school where it had been making the intensive studies. The children in the school were given thorough medical and nutritional examinations, and visual, psychological, educational and other tests. Immediately following

¹⁶D.B. Harmon, Lighting and Child Development, p. 204.

the examinations and tests of these children, the twenty-one classrooms in their building were rearranged to reduce sky glare as much as possible, and redecreated to secure a better redistribution of natural light. The seating arrangements in the room were also changed in order to reduce glare on the working surfaces of the desks. A control school comparable to the first was set up, and six months after the experiment was started, the same examinations and tests were given the pupils in both schools. The students in the modified school surpassed those in the control room in educational achievement and physical health.

These results were encouraging to the extent that the experiments were continued. Illuminating engineers were in- to aid the health education program and in 1945 they set up a demonstration school in Texas. The modifications worked out by these engineers have served as a pattern for the use of other schools.

During the school year of 1945-46, nine lighting experiments were conducted in Texas schools. In the summer of 1946, workshops stressed the lighting modification program, and schools all over the state are modifying lighting conditions in their classrooms. The Dallas school system alone appropriated \$250,000 to redecreate every classroom in the system. Dr. Harmon states that in schools tested, lighting modifications have slashed functional visual difficulties sixty-six per

cent, nutrition-energy problems forty-four per cent, and susceptibility to infection thirty per cent.¹⁷

The Health Project, through its utilization of scientific research, meets educational criteria to a high degree.

The work of the administrators of the Texas Public Schools Health Program has been discussed in the various phases of the program. In principle and in deed, they conform to the accepted educational standards of the present.

Another phase of the health education program is nutrition. The larger school systems in Texas have already worked out and put into operation school lunch programs for their pupils. However, many children, perhaps the ones that needed them most, have been unable to buy hot lunches. Rural areas, in many instances, have not had the funds to install equipment and buy supplies. The State Department of Education has had no funds for the project. However, the Federal Government has offered financial aid. On June 4, 1946, President Truman signed the National School Lunch Act which said:

It is ... declared to be the policy of Congress as a measure of national security, to safeguard the health and well-being of the Nation's children, and to encourage the domestic consumption of nutritious agricultural commodities and other food, by assisting the States, through grants-in-aid and other means, in providing an adequate supply of foods and other facilities for the establishment, maintenance, operation, and expansion of nonprofit school-lunch programs.¹⁸

¹⁷Helen Bullock, "School Lunch Plan Lauded", The Dallas Morning News, II, November 3, 1946, p. 1.

¹⁸United States Department of Agriculture, National School Lunch Program, p. 2.

The provisions of this Act now make it possible for the schools of Texas of all sizes to have hot lunches for all the children. The State Department of Education has accepted the aid in the same manner in which it accepted Federal Aid in vocational education; it is contingent on the ability of the school to match Federal funds.

Safety education is a part of health education, but it is not taught as a part of the Public School Health Project. A separate course of study has been worked out for Safety Education, and it is now a distinct part of the school curriculum, being taught for the most part in the eighth grade. Like the suggested course of study for the physical education program, the safety course of study merely recommends activities for the teachers and the pupils. The course is not compulsory, has no supervision, and is dependent altogether on the teachers of the state for its presentation.

There are other phases of the Public School Health Project, but the ones that most intimately concern this study have been presented. Since the work in health education, until recently, has been merely class instruction and games, there are no factual results that can be shown. However, a resume of the health program of the State Department in comparison with the criteria set up for the study, will give some indications of the work that has been done in health education in Texas.

In the first place, the State Department of Education in Texas has not until recently allotted any definite place

in the curriculum to health education. No funds have been available for research, for in-service training for the teachers, or for supervision. In so doing, it has merely followed the practice and philosophy of the period; it was not until 1918 that the National Educational Association outlined "health" as one of the cardinal aims of education. It is the history of curriculum change that has been slow.

The State Department of Education, as manifested in the courses of study and outlined objectives, has met the standards in educational aims of the criteria. The aim, as expressed by the State Department, was the improvement of the general welfare and health of all the people.

The Public School Health Project is the first organized attempt by the State Department to institute, carry on, and improve a health education program in the public schools. Its suggested course of study includes both knowledge and activities. Children should learn the basic fundamentals of health. The outline says that there is no definite amount of knowledge of body structure that a child should know at any age or in any given grade, but that every elementary pupil should know the location and common names of the various parts of the body and the general interrelationship and functions of all the organs and systems. This knowledge, it further stated, was not to be gained by reading altogether, but through the daily life activities of the pupils. The extent to which the teachers of the state have carried out this suggested course of study can not be

measured in actual figures. The plan of teaching and the suggested technique, however, are in accord with the recommended criteria.

Leaders in modern accepted educational practices today favor teacher-in-service training. A Report of Education in Texas in 1924 has this comment:

The success or failure of the course of study in stimulating the pupil's educational growth depends primarily on the classroom teacher. No course of study, no matter how carefully constructed or how sound the underlying philosophy, can be a successful instrument in guiding educational progress, unless the classroom teacher, upon whom the responsibility for putting it into operation rests, understands and accepts this philosophy and is sympathetic toward the means, materials, and methods suggested for carrying it out.¹⁹

The Public School Health Project, in its attempt to train the classroom teachers in health instruction, is meeting the accepted techniques of modern education. Without any special funds for the work, the State Department is limited in the amount of work it can do.

The project, too, by its stress on teacher-training, has shown that it regards the classroom teacher as the key figure in the health education program. Any "good teacher" can teach health education if she has the knowledge and technique needed for this type of instruction.

The recommended course of study for a health program stresses life activities. The extent to which such activities are included in the curriculum on the

¹⁹Texas Educational Survey Report, p. 162. (Texas Educational Survey Commission, Austin, Texas, 1924).

initiative and interest of the teacher. As long as there is a democratic government, the teachers will not be forced to do certain things in a certain way. The health program, it is stressed, should meet the needs of the local communities. It will and should vary with the community.

Much has been accomplished in the past three years by the State Department of Education in improving school plant environment, especially in the lighting of the schoolroom. Research and experimentation have marked this phase of the health program, and it is being constantly expanded at this time.

The ultimate goal of a health education program is outlined in a recent statement by the United States Office of Education. According to this report a health program in the school is truly preventive when it recognizes, prevents, or corrects conditions which impair the present or future health and fitness of the child. It is further stated that every school-age child, with respect to health service, needs:

- a. Immunization against smallpox, diphtheria, and in some instances pertussis, tetanus, and typhoid.
- b. Protection against exposure to such diseases as tuberculosis through examination of teachers and other personnel with whom children come in contact in school.
- c. Dental care--examination and treatment of any dental abnormality.
- d. Screening procedures for vision, hearing, and other defects and conditions.
- e. Medical care--examination and treatment of any physical and mental abnormality.
- f. Health supervision--while the child is in school, day-to-day observation by teachers for signs of good health or illness and protection from injury.

- g. Mental health service.
- h. Nutrition--to assure well-nourished children.²⁰

Such a program embraces a complete health service by the school, including health examinations and corrective measures. Decidedly it is an ambitious program and one that will require much financial support and additional trained personnel.

If the health education program of the State Department of Texas is compared with this recommended program, the conclusion is inevitable that the State Department has not accomplished a great deal. The large city school systems, in a great many instances, have organized and developed many such health services as physical examinations and immunization programs. But the questions of medical care of the children in the school, mental health service, and adequate nutritional facilities are mostly subjects for discussion. There is a decided difference between groups on the functions of the school in this respect. Many people are genuinely opposed to what they call "socialism" in the school. Regardless of the merits or demerits of the case, the fact remains that in the majority of the schools in Texas there has been little accomplished, until recently, in the way of health education except in teaching physiology and the basic rules of health. Too often, this teaching has been done in the

²⁰"Health Needs of School-Age Children and Recommendations for Implementation", School Life, November, 1945, p. 7.

traditional manner and the subject not related to the life activities of the students.

In these respects, the health education program of the State Department of Education may be considered as impotent. However, these things may be said of it: (1) the State Department of Education has recognized that its health program has not been meeting the needs of the school children; it saw the need for more funds, for better trained teachers, for research, and for teacher-training-in-service; (2) the State Department of Education asked for and received a grant from an educational foundation for funds for an education program in health for the public schools; and (3) it has done the following things:

- a. Set up an administrative staff for health education;
- b. Inaugurated an active program of teacher-in-service training;
- c. Worked out, with the aid of teachers, courses of study;
- d. Carried on an active, continuous program of research on school environment to discover causes of student ill health;
- e. Aided schools in setting up and carrying out health clinics.

In these various activities, the State Department of Education is conforming to established modern practices and principles of education. It is seeking better health practices for Texas school children by attacking the problem at

the top and working down--training the teachers and enlisting their aid. Any program of education is slow in developing; it, especially in a democracy, must overcome much opposition. When the size of Texas is considered, and the number of schools to be aided is counted, the task of the State Department of Education is seen to be a large one. Perhaps the most that can be said is that a beginning has been made.

CHAPTER V

FINDINGS AND CONCLUSIONS

The survey that has been made here of the development of health education in Texas, the historical background of its development in the United States, and the literature concerning the subject has brought some very definite conclusions as well as findings.

The findings may be listed under the following headings:

1. Each state in the United States plans and executes its own education program. There is no one universal system.

2. Traditionalistic education was individualistic in nature; the schools were supposed to teach the young how to read, write, spell, and figure. Unless the pupil was going to study for a profession, that was all that he needed to know. The home would teach him a trade, show him how to provide for his needs, and take care of his health.

3. Modern education considers the whole life of the pupil. A complex, mechanized society has called for cooperation instead of individualism. Anything that affects the lives of the pupils, good or adverse, is a concern of the school.

4. The results of health examinations in World War I called the attention of the country to the many health

deficiencies of the draftees; deficiencies that probably could have been corrected if detected at an early age.

5. Health education has been gradually accepted as a part of the school curriculum. However, it has been inadequately financed in most states, and has merely been placed in the course of study.

6. The health defects revealed among the draftees in the recent World War II has renewed attention to a health program in the public schools.

7. A health program should be based on accepted educational aims and objectives.

8. Both knowledge and activities should be included in health education.

9. The teacher who is to administer the program should have some voice in selecting what is to be in it.

10. The classroom teacher is the key figure in health education.

11. The methods of instruction should be dynamic and not static.

12. School plants should be studied for health hazards and for prevention of same.

13. Research in better health is a necessary part of any school health education curriculum.

14. Physical education, which under its new meaning includes health education, was required by statute in the Texas public schools, beginning September 1, 1930.

15. The only provision made for health education by the

State was for the State Superintendent to work out a course of study for the schools.

16. Texas teachers had insufficient health-education training; none was provided by the State at that time.

17. The course of study in health education, as outlined by the State Superintendent of Public Instruction, was modeled after that of other states, and conformed closely to established educational objectives and aims.

18. The health education program, because it was left almost altogether up to untrained teachers--in health education--who already had a crowded curriculum, made slow progress.

19. The State Department of Education received many requests for an expansion of health education. Application was made to the Kellogg Foundation for a grant of money with which to finance such an expansion, and the Texas Public School Health Project was organized.

20. The Project has given attention mainly to the following phases of health education:

a. Health workshops have been established at teacher-training institutions for training teachers and for study in writing new courses of study.

b. Publication of courses of study to aid the classroom teacher and of pamphlets for physicians and local committees who aid in health work in the schools.

c. Direction for an aid in establishing health clinics for detection and prevention of communicable diseases.

d. Wide research in environmental conditions that are the causes of child ill-health.

Unfortunately there are no cut-and-dried ways of measuring the adequacy of the health education program of the State Department of Education. Most of the work undertaken has been done within the past five years. If nothing else came out of the entire program except better-lighted school rooms, the program could not be said to have failed. This is one result already apparent. There is no reason to believe that a sound basis for a health education program has not been laid. Sufficient funds are needed to carry it on. Lack of such funds is one reason why little has been accomplished. All these factors should be considered in any evaluation of the health services to the schools by the State Department of Education.

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