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A STUDY OF THE CONTRIBUTIONS TO THE TEXAS
HEALTH EDUCATION PROGRAM MADE BY NORTH
TEXAS STATE COLLEGE AND CO-OPERATING
PUBLIC SCHOOLS

THESIS

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CHAPTER I

INTRODUCTION

Brief History of Health Education

Health education, which was virtually unheard-of only a few years ago, is fast becoming one of the most important subjects in the modern school curriculum. Health education is no longer a local, state, or national problem, but it has become international in scope with the widespread communication and travel among nations and with the recognized interdependence existing between the countries of the world.

The tempo of life is being accelerated with the passing of each year, and this increased intensity of living takes its toll of human life in the same proportion as it increases in rate. No nation, state, or local community can afford to be indifferent and ignore the problem of health, since it is a factor that is all-important in modern society. At the same time, the strength of any nation's health-education movement is dependent upon the individual citizen, since principles of healthful living are personal in application and depend for their enforcement upon the interest and attitude of the individual.

In past centuries each nation dealt with its own particular problems of health according to its own ideas, but today the nation must

develop a health concept and health principles that will appeal to the individual citizen, for only through him can healthful living be attained. As in the case of any widespread need, the schools play a major role in the total problem of health education, and their function in the promotion of sound principles of healthful living is of inestimable importance.

✓ According to Etheredge:

Health is the greatest factor in the progress of mankind. This fact is being recognized by all nations of the world, when millions are living in untold misery and want as undernourished victims of World War II. America is also confronted with more challenging health problems in this atomic age. The pressure of life is increasing, making both mental and physical health ever more important. The leaders in health and health education within a few years will come largely from our college students of today. Knowledge brings light. The student must at least have a glimpse into the past, the present, and the future of health to awaken a challenge within him concerning his own health, the health of his family, his community, and the world. No longer can men and women sit complacently when millions in our own country are ill from preventable diseases, not to speak of those in other countries.¹

It is difficult to realize that only fifty years ago the life span of man was from ten to fifteen years shorter than is the average expectancy of life today.² Progress has been made in many fields of medicine and in techniques for the prevention of communicable diseases, but health education as a subject of study was slow in gaining recognition

¹Maude Lee Etheredge, School Health and Education, p. vii.

²Ibid.

as an appropriate course to be included in the school curriculum. Courses in physiology and anatomy had long been included in many schools among the curricular offerings, but the value of their contributions to all-round health education is open to question.

Today, in the midst of the ravages of human suffering and the spread of disease following in the wake of World War II, society is finally becoming aware of the desperate and critical need for local, national, and international health education. Perhaps the United States had its awakening in the early months of the war when President Roosevelt informed Congress, in a report, that five million young men had been examined and rejected as unfit for military service, and that one and a half million men had been discharged from the armed forces because of mental and physical disabilities that rendered them valueless to the cause of military defense. Texas alone had a rejection rate of 37 per cent, or of thirty-seven men for every one hundred who registered for military service.³

Etheredge comments as follows:

No country can boast of the health of its people until it has been able to control to a large extent all the diseases that are controllable, to protect the nation from invasion of diseases from other nations, provide safe working conditions, comfortable and healthful places to work, and adequate and safe food.⁴

³C. E. Turner, School Health and Health Education, p. 100.

⁴Maude Lee Etheredge, Health Facts for College Students, p. 100.

Americans cannot be concerned solely with their own nation, but they must work toward the upbuilding of an international organization and the formulation of a set of international health laws to prevent the spread of epidemics and communicable diseases from one nation to another. The first place in which to begin a movement in the interest of promoting better health is in the public schools of the nation. To prevent disease among children must be recognized as a major consideration in any health movement.

In 1930 important steps were taken to further the health education movement in Texas. It was in this year that the Texas Legislature enacted laws making health and physical education a statutory requirement in the public schools of the state.⁵ Although the movement was under the supervision and regulation of the State Department of Education, the Legislature did not make financial appropriations for the carrying out of the new regulations concerning the requirement of health and physical education in the schools. Hence, the program was severely handicapped for lack of funds, and its effectiveness in the early years was drastically curtailed. Financing the program became the responsibility of the local schools, most of which were already overburdened with the upkeep of the regular school program and

⁵ Texas State Department of Education, Health and Physical Education in Texas Public Schools, Bulletin, 1930, p. 1.

maintenance. For this reason, many school systems ignored the legislative requirement regarding the teaching of health and physical education or else made only half-hearted and ineffectual efforts toward its enforcement. It was not until 1944 that a financial grant was received from the W. K. Kellogg Foundation of Battle Creek, Michigan, which was to be utilized in developing the Texas School Health Project.⁶ Each year since that date has witnessed the advancement of the health program in the schools of the state, many of which are rapidly incorporating health education as a regular course of instruction. The example of the program developed under the Kellogg grant served to stimulate interest in the need for health instruction in the public schools, and the money obtained from the Foundation enabled many schools to inaugurate a health instruction program which has since been continued under local financial sponsorship from the boards of education.

Our nation was created by people who hoped for freedom of thought and for an opportunity to achieve. Our government was established in the hope that homely virtues might endure, that men might live together peacefully, with liberty and justice for all. From the beginning a democratic way of life had to be learned. The people had to devise new governmental forms and to invent new safeguards for the rights of man because a government almost without precedent was being established. Each individual had to learn new ways for himself. The democratic government which the people created required them to substitute self-discipline for the tyranny under which they had previously

⁶Ibid.

lived. Their children had to be trained for a new way of life and to help create that life.

As was natural, the schools were called upon to play a part. At first the school's role was small, but it has grown much greater as other methods for attaining the democratic ideal have failed. It has finally been recognized that the responsibilities of the school include far more than the mere teaching of subject matter. The child must be prepared for his life in a democracy. He must be taught to develop a healthy body, an educated mind, and a self-disciplined, self-reliant, socially-minded personality. In brief, he must be helped to adjust happily and successfully to the American pattern of living.⁷

Many problems are involved in preparing the child for complete living. The school may help solve some of these problems, among these the basic problem of health. Health is described as a continuing educational problem because in the health program of the modern school in a democracy there are six large basic areas of responsibility, as follows:

1. A healthful environment must be provided. Such an environment is essential in any functioning health program. Creating it involves such things as the health of the teachers, the control of communicable diseases, the elimination of the causes of accidents, the avoidance of conditions harmful to health, and the use of teaching methods which are effective without causing worry or fear.

2. A health guidance program is essential. Day-by-day observations by the teachers, periodic health examinations, and health histories are necessary to discover children who have conditions which are detrimental to themselves or others. Whenever such conditions are found, appropriate steps must be taken to eliminate them.

⁷ American Association of School Administrators, Health in Schools, Twentieth Yearbook, p. 9.

3. Emergency health conditions demand immediate care. No matter how healthful the school environment may be, some illness is certain to develop and some accidents to happen. Both the pupils and the school staff must be prepared to care for such emergencies.

4. Accurate health information should be taught. The child needs to know a great deal about health, and it is a responsibility of the school to instruct him. For example, he needs to know how to develop good health for himself, how to avoid illness and accidents, and how to protect the health of others. Similarly he must understand such things as the difference between an adequate and an inadequate diet, the effect of drugs and stimulants, and the value of vaccination and immunization.

5. Sound health habits and attitudes need to be established. Besides knowing what things are good for one's health, a person needs to establish sound health habits. It is only by the practical, habitual use of one's knowledge that both physical and mental health will be maintained. The program of the school is designed to develop habits such as cleanliness, proper eating, regular elimination, recreation, adequate exercise and rest, and the practice of seeking medical advice when needed.

6. The exceptional child requires a modified school program. In order to achieve the aims of democracy, it has been necessary to educate children in groups. For some exceptional pupils the regular program must be varied. This is particularly true for children who are ill or crippled or who do not see or hear normally. The health program includes the special care that is needed to give these children an educational opportunity comparable with that of normal children.⁸

Instructional programs in health education, physical education, and recreation are comparatively new to the curriculum. These subjects were not recognized as a major responsibility of the schools until physical examinations at the time of the first World War revealed

⁸Ibid., pp. 11-13.

serious health deficiencies among large numbers of America's young men. Progress has been made, but the present programs as a whole still fall short of meeting the basic health needs of many boys and girls.

Health education may be defined as "the sum of all experiences which favorably influence habits, attitudes, and knowledge relating to individual, community, and racial health."⁹ Education in the twentieth century is answering this challenge by developing programs of school health instruction. The basic purpose seems clear: to bring to bear upon the individual life the best in information and service from the scientific world, so as to preserve, protect, and develop that life.

The inter-relationships of specific health instruction, health services, healthful school living, and health and safety instruction largely account for the present trend to combine these programs into the larger administrative term, "health education."

Turner has stated the objectives of school health services and of health education as follows:

To inspire the child with a desire to be well and happy;
To convey to the child a public and personal health ideal, designed to ensure for him the continuation throughout life of wholesome and effective living, physical and mental.

To educate the child, according to a definite plan, in the cultivation of those habits of living which will promote his present and his future health;

⁹Jesse Feiring Williams and Fannie B. Hall, Methods and Materials in Health Education, p. 2.

To impart health knowledge and attitudes to the child so that he will make intelligent health decisions;

To develop in the child a scientific attitude toward health matters, and an understanding of the scientific approach to health problems;

To maintain adequate sanitation in the school, the home, and the community;

To protect the child against communicable and preventable physical defects by providing effective public health control measures, both individual and social, throughout the school and the community;

To bring the child up to his own optimal level of health;

To extend the school health program into the home by obtaining family and community support for the program;

To discover early any physical defects the child may have, secure their correction to the extent that they are remediable, and assist the child to adapt himself to any residual handicap;

To provide healthful school living for the child;

To relate the school health program to the health program in the community so that it may deal with real, current, and practical problems;

To organize effectively not only the program of direct health instruction but the equally important indirect learning experience of the child in the field of health.¹⁰

The increasing responsibility of schools and colleges for health education challenges the attention of persons in administrative and executive positions, as well as teachers and supervisors who assume the task of putting the program into effective operation.

To quote Turner again:

Modern concepts of health education recognize the value of co-ordinating all the resources of the school and community to protect and improve the welfare of youth.¹¹

¹⁰Turner, op. cit., pp. 23-24.

¹¹Ibid., p. 283.

If high-school students are to be educated in matters of health, in keeping with the modern trend and philosophy, the instruction they receive must be carefully co-ordinated and presented in such a purposeful manner that it has a special appeal to them because of its ability to meet real-life interests and to assist them in solving actual problems that confront them personally from day to day.¹²

The Committee on **School Health Policies** of the National Conference for Co-operation in Health Education has suggested that

A well-organized program will give proper emphasis to direct health instruction and to supplementary or incidental instruction in other subject-matter areas. Extra-class activities, auditorium programs, day-by-day healthful school living, and the experiences of students with the various procedures for health protection and promotion should be used.¹³

Health instruction in the secondary school becomes complicated by many conditions peculiar to the secondary school itself. The Committee on **School Health Policies** states:

There is a growing tendency . . . to center attention on the needs of students and to expect each teacher to be interested in students as individuals. In keeping with this trend, home-room and classroom teachers should assume responsibility for the day-by-day health supervision of the students in their charge.

Specific health courses should be provided in the secondary schools and should have a minimum time allotment of a daily period for at least one semester during

¹²David K. Brace, Health and Physical Education for Junior and Senior High Schools, Preface, p. v.

¹³Committee on **School Health Policies**, National Conference for Co-operation in Health Education, Suggested School Health Policies, Second Edition, p. 16.

either the ninth or tenth grades and a similar amount of time in the eleventh and twelfth grades. . . . Health courses should be given in regular classrooms with classes comparable in size to those in other subject matter areas. ¹⁴

The secondary school represents the most significant place for effective health and safety instruction. Brownell has stated:

Effective health instruction in secondary schools requires well-defined administrative policies. First of all, health instruction deserves a position of prominence at least equal to that accorded other subjects in the curriculum. This indicates a daily period in senior high school for at least one semester, and preferably for two semesters. . . . Only qualified teachers and counselors should assume responsibility for health and safety instruction in secondary schools. ¹⁵

What was the origin of the health-education movement that is now gaining widespread recognition and a place of prominence in the curriculums of schools and colleges? A brief statement of the historical background of health education may prove, at this point, both interesting and helpful in providing an insight into the present emphasis upon health education.

One hundred and fifty years ago—in the year 1799—health education had its inception in Boston, Massachusetts. A series of tragic epidemics in that city aroused public opinion to the necessity for cleaning up the city, and ordinances were enacted compelling residents

¹⁴Ibid., pp. 16-17.

¹⁵Clifford Lee Brownell, Principles of Health Education Applied, pp. 243-244.

to keep their pigs and chickens from roaming freely about the streets of the town and to be more sanitary in regard to the disposal of sewage and garbage. Immediate improvement in the health status of Boston was to be noted, but almost a hundred years later another series of epidemics in that city, in 1894, brought about the first voluntary health work in the United States. More than half of the residents of Boston were ill at one time, and those who were not ill volunteered in large numbers to assist in the care of the sufferers. Doctors were completely overwhelmed, and the best they could do was to provide limited medical supplies and to supervise, in a somewhat inadequate manner, the volunteer workers who were ministering to the sick.

From that date to the present time the movement for some type of health work has received increased emphasis, and many cities throughout the country have become health-conscious for various reasons. In 1895 Chicago promoted an organized medical inspection and clean-up campaign throughout the city, to be followed in similar health-promoting endeavors by New York City in 1897 and by Philadelphia in 1898. Slowly the idea spread to smaller cities and grew rapidly in popular acceptance and public endorsement. In 1902 New York City had the distinction of employing the first school nurse. After this, in 1906, Massachusetts adopted the first state medical examination law, and in 1912 the same state formulated the first plan to be

developed in the United States for the health supervision of the public schools.¹⁶

Trusler comments as follows in regard to the nature and functions of the public-school health program in its present-day interpretation:

The health program has now grown to include more than just medical inspection. It now includes: (1) Health Protection, whereby provisions are made by means of suitable organization for the following phases of student health service: physical examinations, consultation on health matters, dispensary treatments, correction of remedial defects, and hospital matters, or at least infirmary care. Student health protection services are rendered by specially qualified physicians, nurses, dental hygienists, psychiatrists and others on such a basis and in such manner as local conditions permit. Offices and rooms of the service department are equipped with modern scientific apparatus and clerical help. (2) Health Instruction. Since 1918 the term "Health Instruction" has almost entirely replaced the older one of "psychology and hygiene." Hence suitable courses in hygiene, physiology and others for the purposes of teaching and developing a better knowledge of health matters are being organized. (3) Physical Education, where facilities are provided for both in-door and out-door recreation involving desirable activities for the upbuilding of health and organic vigor. The correction of functional defects that respond to physical therapy and the development of desirable skills, habits, and attitudes. It will be noted that, although physical education has something to contribute to the health of those it instructs, it is also interested in many other aspects of the educative experience.¹⁷

¹⁶V. T. Trusler, Fundamentals of Physical Education, p. 2.

¹⁷Ibid.

Although many evidences of progress have appeared in past years, much more improvement and far greater progress should be achieved in future years. The following statements made by L. A. Scheele, Surgeon-General of the United States Public Health Service, in his address at the special health anniversary program held in Boston early in 1949, give evidence of a few of the necessary improvements that should be made:

We already have evidence that the categorical programs themselves are still far from attaining their objectives, despite the money and effort devoted to them. The reason seems clear. In too many parts of the country, there is no qualified organization to bring the new, special services continuously and effectively to the people.

. . . There is one motivating force behind the plans and hopes of the Public Health Service which transcends all special interests. It is a dream that dawned in the minds and hearts of public health workers about 40 years ago. That dream: a local health unit for every community in the United States.

. . . Within the next year an effective plan for insuring complete coverage with local health units must be put into operation. I am convinced that unless definite action is taken by state and local governments to increase organized health services to the people, we shall not be able to advance against the major causes of death and disability in the United States. ¹⁸

It is within this local and state category that the present study finds its particular concern. Organization and work in the field of health education are of vital concern to every individual.

¹⁸ Leonard S. Scheele, "The Past and Future of the Public Health Service," American Journal of Public Health, XXXIX (March, 1949), 296.

Health Education in Texas

As implied previously, health education and health protection were slow to reach into the South. Not until the year 1930 did the Texas Legislature enact laws requiring the teaching of health education and physical education in the public schools of the state.¹⁹ To the State Department of Education was assigned the responsibility of planning and administering the health and physical education programs incorporated in the new legislation. The program was formulated by the Legislature and interpreted and executed by the State Department of Education with two primary aims in view—that of the improvement of the general health of the people, and that of encouraging participation in both intraschool and interschool athletic contests.²⁰ Thus principles were set up for the giving of comprehensive health instruction and rules were formulated for the conduct of athletic competitions, as well as for the giving of general instruction in all phases of physical education.

Since the Legislature made no provision for the financial support of the new program, the State Department of Education was left with no recourse other than to include the required courses in health and physical education in the regular state courses of study.²¹ This step

¹⁹Texas State Department of Education, op. cit., p. 1.

²⁰Ibid., p. 5.

²¹Ibid.

marked the beginning of a general expansion program, and eventually the proposal to offer systematic instruction in health and physical education received statewide consideration. Before the legislative enactment concerning the offering of health and physical education as a regular part of the instructional program of the schools, many schools had been including some work in these fields, especially in physical education; but there were very few comprehensive programs, and the courses and activities offered were made available on an elective basis and therefore tended to appeal only to those students who were naturally inclined toward athletics. Thus the great masses of students took no part in the program of physical education. The new legislative requirement, however, sought to enroll every pupil in classes in health and physical education, and even those who were prevented by physical deficiencies from entering into the standard program of activities were to be given limited participation or enter into remedial or corrective procedures.

From its beginning as a result of the legislation of 1930 through 1943, the statewide program in health and physical education received some financial assistance from the W. K. Kellogg Foundation, which was founded primarily for the purpose of promoting more wholesome health attitudes and practices on the part of the school children of America. The aid received in the early years from this source, however, was not sufficiently large to permit a comprehensive program in

Texas. Although the Kellogg Foundation had already expended over eight million dollars in grants to state, national, and international programs of health education, a part of which had come to Texas, a special project was launched in 1944 whereby states might qualify for large grants from the Foundation to be used in conducting comprehensive programs in health education. Texas was one of the first states to receive such a grant, and thus began the Texas School Health Project.²²

From 1944 until the present time the program expanded rapidly, and the state began to realize the importance of health services and health education. Many school systems, some of which had benefitted from Kellogg grants, began to set up funds for their own self-supported curriculums in health and physical education. In 1946 the so-called "Three-year Plan for Improving Health Throughout the State of Texas" was initiated. The State Department of Education provided the Director of Health Education, and in turn each of five selected colleges in the state provided a co-ordinator of health education to work with the State Director of Health Education and with local schools and communities in their respective areas.²³ The five participating colleges and universities furnished one half of the funds for the program and the remaining funds were furnished by the W. K. Kellogg Foundation. The five

²²W. K. Kellogg Foundation, An Experience in Health Education, Preface, p. vii.

²³Ibid.

colleges in Texas which voted to accept the invitation to participate in the project were North Texas State College, Prairie View Agricultural and Mechanical College, Stephen F. Austin State Teachers College, Texas State College for Women, and the University of Texas.

For the purpose of promoting greater co-operation among the schools participating in the "Three-year Health Plan," a statewide planning group was organized, known as the Texas State Health Education Council. This council was to serve in an advisory capacity to the Texas school and college community health councils working toward the improvement of health education and the advancement of the general level of health among the population. The Texas State Health Education Council was to meet twice each year to report on the functions and services of the state and local agencies.

L. A. Woods, State Superintendent of Public Instruction, made the following comment concerning the plan:

. . . Co-operative planning on common problems enriches health education in schools and communities. Both agencies benefit by broader public understanding and support of their activities.²⁴

Perhaps at this point a brief discussion of the origin of the "Three-year Health Program" and an outline of the work accomplished in other sections of the country as compared to that in Texas will give some idea of the scope of the program.

²⁴L. A. Woods, A Three-year Report of the Texas Health Education Program, Bulletin, State Department of Education, p. 2.

The original health program was launched in Battle Creek, Michigan—the home of the W. K. Kellogg industries—during World War II with the primary purpose of training girls in nursing skills to enable them to render service during the period of national emergency when nursing services were far from adequate to meet the unprecedented need. Soon other phases of community health service were stressed along with the original emphasis upon nursing, and other schools in Michigan began to adopt the plan initiated in Battle Creek, which, although carried out in the schools of that city, was financed wholly in the beginning by the Kellogg Foundation as a contribution to the national defense program. In 1942 the Michigan Department of Public Instruction requested financial assistance from the Kellogg Foundation in setting up a plan for health instruction in the schools of that state, and the Foundation gladly co-operated in the effort. Eventually, as the health program became well established in Michigan and began to attract attention from outside the state, the Kellogg Foundation made grants to twenty-four other states, including Texas. Twenty-two of the original twenty-four states continued to participate in the program for the specified three-year period, and five of this number were chosen to remain in an extended health program for an additional three-year period.

According to the terms of the original grants, funds supplied by the Foundation were to be used to pay the salary of a co-ordinator

from each state department of education, the costs of workshops for teachers and other persons working with the project, and fees for the employment of special consultants. In the second three-year period funds were provided for the salary and expenses of a college health co-ordinator for each of the colleges participating in the project.²⁵ In addition, each state selected for participation in the health program was to establish a state health council including representatives from every department directly concerned with health services. The principal duty of the state health co-ordinator was to promote the voluntary co-operation in the project of local school administrators. In addition to this responsibility, the state co-ordinator was to prepare a detailed budget including funds available for the program and proposals for their expenditure.

The administrative officials of the W. K. Kellogg Foundation felt that with a well-organized staff the three essential phases of school and community health would be developed and advanced. These three essential elements in school and community health are (1) an integrated program of health services, (2) environmental control, and (3) the teaching of health. The main purpose of the state councils was to co-ordinate health-education activities and to supervise the carrying out of these essential phases of school and community health.²⁶

²⁵W. K. Kellogg Foundation, op. cit., pp. 7-8.

²⁶Ibid., p. 8.

In the first few years of the program the schools were confronted with the problem of untrained personnel. This situation, however, was improved steadily by means of the summer health workshops and in-service training programs that are discussed in another section of this study.

✓ The Kellogg Foundation formulated the following statement regarding this situation:

It should not be inferred that in the appointment of college health co-ordinators there was any intent to slight the importance of the position. There were not enough professionally trained persons able to inaugurate a new concept in teacher education. No disparagement is intended of the faithful services rendered by the great majority of the college health co-ordinators within the limitations they faced. They merit sincere admiration. . . . Some college administrators, recognizing the importance of this appointment, deferred any selection for a year or more in an effort to find the kind of person desired.²⁷

The states of Nebraska, New Mexico, and Florida accomplished some outstanding results in their programs which were of particular interest, since the students had a major part in the planning and development of the programs in those areas.²⁸ The manner in which the students accepted the program usually meant the success or failure of the final outcome of the community projects in health education. Many other states, including Texas, had similar success in their health programs under the sponsorship of the W. K. Kellogg Foundation.

²⁷Ibid., p. 12.

²⁸Ibid., pp. 20-28.

Statement of the Problem

The problem undertaken in this study was that of making an investigation of the nature of the contributions of the North Texas State College and the co-operating public schools under its supervision to the Texas Health Education Program during the three-year period from December, 1946, to December, 1949.

Purpose of the Study

The writer's purpose in making this study was to determine, in so far as was possible, the accomplishments made by the North Texas State College and the co-operating public schools under its supervision toward the advancement of health education in the particular area served by this college and this group of schools during the three-year period of special emphasis upon health under the joint sponsorship of the college and the W. K. Kellogg Foundation. Another purpose of this study was to make available to administrators and co-ordinators of health education a concise report of the contributions made by the participating college and the group of public schools carrying out the project under its supervision. This study should provide a source of worth-while information for other colleges and universities that may plan to develop a similar program in the field of health education either now or in the future.

Limitations

This study was limited to a consideration of the participation in, and the contributions to the Texas Health Education Program made by North Texas State College and the group of co-operating public schools carrying out the project under the supervision of that college. This study covers a period of three years, from the time when the program was initiated in December of 1946 to December of 1949. Primarily, however, the emphasis is upon the last two years of the special health project, as the first year was devoted to orientation, organization, and planning for carrying out the program. Specifically, the study was limited to eleven public schools or public-school systems, all but two being located within a radius of twenty-five miles of the North Texas State College, situated at Denton. The original co-operating public schools participating in the health project under the sponsorship of North Texas State College were those of Sweetwater, Pilot Point, Denton County rural schools, and the Denton city schools. In the final year of the program the following independent schools in Denton County were added to those already participating in the project: Justin, Sanger, Krum, Lewisville, Ponder, and Roanoke.

Sources of Data

The sources of data used for this study were both documentary and human. Documentary sources included professional literature,

professional periodicals, and previous studies and reports in the field of health education. Human sources included visiting consultants, specialists in the field of health and physical education, and administrators of the co-operating public schools who assisted in the collection of data for this study by granting interviews with the investigator, during which simple questionnaire forms were filled out.

Organization

The present chapter has included a discussion of the historical background of health education, the growth of health education in Texas, and the contributions of the W. K. Kellogg Foundation to the promotion of health education. Also, the purpose of the study, its limitations, and the sources of data have been mentioned.

Chapter II deals with the organization of the health education program in the eleven co-operating public schools working under the joint sponsorship of the North Texas State College and the W. K. Kellogg Foundation.

Chapter III presents a discussion of the achievements made by the eleven school systems working co-operatively with the North Texas State College in carrying out the health project. Tabulations indicate tangible results of the program.

Chapter IV presents conclusions and recommendations which appear to be justified by the outcomes of this study.

CHAPTER II

THE ORGANIZATION OF A HEALTH EDUCATION PROGRAM BY THE NORTH TEXAS STATE COLLEGE AND ELEVEN CO-OPERATING PUBLIC SCHOOLS

The need for an organized statewide health education improvement program has been in evidence for many years, and is now being recognized as a necessary step that Texas must take in order to improve the health education and health service in all of the schools. In accordance with this need, the "Three-year Health Program" was planned and organized in co-operation with the W. K. Kellogg Foundation of Battle Creek, Michigan.

In September, 1946, the State Superintendent of Public Instruction held a meeting in Dallas, Texas, to which he invited the presidents of all four-year colleges and universities in the state, together with a representative from the State Department of Health. The colleges were advised in advance as to the nature of the conference and the scope and expense of the project in which they were invited to participate. Consequently, a number of colleges receiving initial invitations to this preliminary conference declined to send representatives for

financial or other reasons. The colleges participating in this conference were North Texas State College, Prairie View Agricultural and Mechanical College, Stephen F. Austin State Teachers College, Texas State College for Women, and the University of Texas.¹ The purpose of the conference was to discuss ways and means of improving the health education program in the schools of the state, and to consider co-operation with the Kellogg Foundation in a special health project in Texas. Following this meeting the directors of health and physical education in the five participating colleges were called to a conference in Austin, Texas, where they assisted in formulating the "Three-year Plan" which was to be submitted to the Kellogg Foundation for approval or revision. The plan as formulated was approved by the Foundation, and the three-year period was organized so as to begin on December 16, 1946.²

Each of the five colleges or universities participating in the program was selected from a list of such institutions which had made application to co-operate in the project, and also which operated laboratory or demonstration schools in their respective areas of the state. The State Department of Education appointed a Director of Health Education who was to work in co-operation with the colleges and universities

¹"Annual Achievement Report of Texas Extended School and Community Health Education Program" (mimeographed), p. 3.

²Ibid., p. 4.

through their health co-ordinators and also with the local school and community co-ordinators included in the program.³ Each participating college or university was expected to meet the following requirements: (1) appoint a school co-ordinator of health education, (2) utilize consultant services, (3) organize a community health council, (4) survey local health needs and problems, (5) develop a series of practical health projects, and (6) plan a program of community education in the utilization of health services.⁴

Despite the fact that many public schools wished to participate in the special health project, only five schools were to be included in the health education program sponsored by each college. Every school that was interested in participating in the health education program was required to present written application and approval from its respective board of education before it would be considered as a prospective participant in the program. Because of the fact that Texas State College for Women and North Texas State College, both located in Denton, were included together in the program, six co-operating schools were permitted for this particular area. Although each school was given authority to plan its own program, the over-all plan of the six co-operating schools was similar in all respects. The laboratory or "pilot" schools were expected to work in close co-operation

³Ibid.

⁴W. K. Kellogg Foundation, op. cit., p. 112.

with North Texas State College. Meetings for the consideration of plans and reports were to be held at regular intervals. The health co-ordinator from North Texas State College visited the participating schools frequently and freely assisted the school health co-ordinators. In addition to his regular visits to the schools, the college co-ordinator was subject to call at all times by any of the participating schools under the supervision of this particular college, and often made special trips in response to expressed need for assistance and counsel. Consultation services were available from the various state departments concerned with the health education program.⁵

One of the preparatory steps in the organization of the school-community health education program was a summer workshop in child development and health, sponsored as a joint project by North Texas State College and Texas State College for Women. In session for a six-week period, this workshop was attended by teachers, nurses, school administrators, and other persons interested in health education work. Workshop members submitted problems for special consideration and research during the workshop session. The planning of possibilities for future development was the goal set up by workshop leaders and participants. Instruction received during the first summer workshop in health education was very valuable to the development of

⁵Ibid., p. 115.

the health program in each pilot school during the following year, when the actual work in health education began following the preliminary year of planning and preparation.⁶

As a part of the program for training teachers in the field of health education, a College Health Council was organized at North Texas State College. The personnel of this council consisted of both faculty members and students, who co-operated in conducting a survey of health training courses offered in the college curriculum.⁷ A survey of the lighting facilities throughout the campus was conducted, and remedial measures were taken in sixty per cent of the defective cases in which inadequate illumination was noted. The addition of two courses in health and physical education—No. 412, "Community Health Problems," and No. 413, "Organization and Administration of Health Education"—completed a total of forty-one semester hours of college work in health education offered in the curriculum of North Texas State College.

In November, 1947, a conference in behalf of the Texas Health Education Program was held in Denton. This meeting was conducted by Hugh B. Masters, Educational Director for the W. K. Kellogg Foundation (formerly an administrative officer in the Denton schools and at North Texas State College), and Lewis Spears, Director of

⁶"Annual Achievement Report of the Texas Extended School and Community Health Education Program" (mimeographed), p. 11.

⁷Ibid., p. 9.

Health Education, Texas State Department of Education. This meeting was attended by superintendents, principals, health co-ordinators, members of health councils in pilot schools, members of in-service education classes, and teachers from the Denton city and county schools.⁸

A report from the W. K. Kellogg Foundation includes the following comment on the health education program conducted jointly by North Texas State College and Texas State College for Women:

The city of Denton, Texas, was the site of two of the colleges participating in the program. This fact may be responsible for the vigor and effectiveness of the services in that general area, which are unmatched elsewhere. The dean of the school of education of North Texas State Teachers College had given active leadership to the original projects, especially in planning outstanding workshop facilities, from 1945 on. He assisted the co-ordinator in selecting five co-operating school centers, which included the Denton city schools and the Denton county schools. On behalf of the Texas State College for Women, the college health co-ordinator used the county of Wise, adjoining on the north [should read "west"], as her main territory and enlisted seven pilot schools as demonstration and practicing centers.⁹

Concerning the work of the health co-ordinator, the report continues:

In perhaps no other general locality have the functions of a school health coordinator been so clearly defined and so well executed as in the Denton area. Every building has a health council, usually including pupils. Every pilot-school community has its health council, which looks to the co-ordinator for suggestions for new undertakings. Unity of

⁸Ibid.

⁹W. K. Kellogg Foundation, op. cit., p. 115.

purpose in health matters on the part of the school staff is perhaps the most certain evidence of able and tactful leadership.

In the Denton city schools there is a lively interest in health from primary grades to high school, and the co-ordinator has shown great skill in suggesting ways of utilizing the natural interests of children and in helping devise activities related to health that the pupils find satisfaction in doing. A visit to a group of schools where such things are happening suggests the thought that the training of competent health coordinators for the schools may be potentially one of the best contributions to better health teaching.¹⁰

This study is concerned only with the development of the health education program initiated and carried out by the North Texas State College and the eleven co-operating public schools working under its sponsorship and direction. The initial co-operating schools were Mesquite, Pilot Point, Denton County rural schools, Denton city schools, and Sweetwater. During the final year of the program the following independent schools in Denton County were added to the list of co-operating schools included in the project: Justin, Sanger, Krum, Lewisville, Ponder, and Roanoke.

Chapter III will consist of reports from the individual schools participating in the health education program under the sponsorship of North Texas State College. A group of projects that were used as a guide for the program in the schools was a direct outgrowth of materials appearing in workshop bulletins and health education reports.

¹⁰Ibid., pp. 116-117.

In some instances each project was initiated in the school health education program. A few of the schools were unable to conduct a complete program. This was due to unequalized equipment, lack of cooperation between the school and the community, and indifferent interest in carrying out the health education program. However, in most instances the communities, administrators, and teachers were found to be most co-operative and eager to assist in the development of a successful program.

CHAPTER III

PROJECT ACHIEVEMENTS OF NORTH TEXAS STATE COLLEGE AND CO-OPERATING PUBLIC SCHOOLS IN THE TEXAS HEALTH EDUCATION PROGRAM

This chapter presents the actual work accomplished by North Texas State College and the co-operating public schools in the Texas Health Education Program. It should be remembered that the first year of the three-year project was devoted to organization and planning, whereas the actual health program was not put into effect until the second year of the total project and extended through the third year as well. North Texas State College conducted an annual child development and health workshop and assisted in the in-service programs for teachers. The college health co-ordinator carried on a complete supervisory schedule with each of the participating schools. North Texas State College also supplied the following materials to the pilot schools:

1. Vision screening machine.
2. Audiometer.
3. Consultants.
4. In-service training.

5. Equipment for posture clinic.

6. Literature.

The college health co-ordinator and graduate students from health classes at North Texas State College assisted the teachers of the pilot schools in conducting these tests. The college furnished materials and guidance for all other phases of the program at the request of the teachers and administrators from the co-operating schools.

The health co-ordinator of each co-operating school worked under the supervisory guidance of the health co-ordinator of North Texas State College. Plans and projects were jointly worked out through the co-operation of the college and the pilot schools. In most instances the school health co-ordinator received assistance from the superintendent and the entire faculty and student body. The desire for better school and community health was demonstrated by the co-operation of local organizations and citizens of each community.

Through the assistance of various educational agencies, health teachers, and authorities in the field of health and physical education, the following basic four-point program was adopted:

1. Health instruction.
2. Health screening.
3. Health environmental control.
4. Health nutrition.

These four basic points were used in tabulating the results from the reports concerning the health education program in each co-operating school.

Schools with a Two-year Program

Health education program in the Denton city schools. —At the time of this study the Denton Public School system consisted of one senior high school with an enrollment of 550 students, one junior high school with an enrollment of 225 students, three elementary schools (white) with a combined enrollment of 865 students, and one Negro school with an enrollment of 256 students. The total enrollment of the entire Denton Public School system was approximately 1,896 students.

As a preliminary step in the organization of plans for the health education program in the Denton school system, the superintendent employed a full-time health co-ordinator and two additional teachers in the physical education department. The superintendent provided for equipment and material that was necessary in establishing the health education program. Two periods per month were designated for in-service training of teachers. The superintendent appointed three councils and a publicity committee. The advisory council was composed of the superintendent, the president of the Denton County Medical Association, directors of the two college demonstration schools, the

health co-ordinators in the two local colleges, and the health co-ordinator for the Denton Public Schools. The school health council was composed of the superintendent, the principals of the public schools, the school health co-ordinators, the cafeteria directors, and representatives from the Parent-Teacher Associations, health committees, student bodies, the Kiwanis Children's Glinic, the Denton County Tuberculosis Association, and social welfare groups. Each individual school organized a health council that was composed of representative parents, teachers, and students. The publicity committee was composed of representatives from all local and school organizations.

With this organization completed, the following health education program was developed in the Denton Public School system:

1. A physical examination was given to every student beginning with the second year of the program.
2. Immunization program.
 - a. Every student was required to present a smallpox vaccination certificate. Smallpox vaccine was given to 1,038 students.
 - b. Diphtheria inoculations were given to 859 students.
3. The Massacusetts Vision Test was given to 1,698 students and nineteen cases were referred to a specialist.
4. The audiometer hearing test was given to 1,500 students and sixty-nine cases were referred to a specialist.

5. Dental examinations were given to 1,698 students and forty-two per cent of this number were referred to a specialist.
6. Chest X-rays were given to 425 students above fifteen years of age.
7. Building improvement program.
 - a. Towel service was provided.
 - b. Soap was provided.
 - c. Foot disinfectant was provided in the gymnasiums.
 - d. An electric washer and dryer was provided for the physical education department.
8. Ground improvement program.
 - a. Playground equipment was purchased for all elementary schools.
 - b. Wire fences were placed around the elementary school grounds.
9. Lunchroom program.
 - a. The lunchrooms were placed under the direct supervision of vocational home economics classes from the Texas State College for Women.
10. Health education classes were added to grades nine and ten.
Posture classes were conducted.
11. Field trips were conducted.
12. A nutrition survey was conducted.

13. A series of radio programs was prepared and presented on radio station KDNT.

This health education program that was conducted by the Denton Public School system was rather extensive. The civic organizations and parent clubs were in sympathy with the program and gave their time and co-operation to make the health education program a success. The Denton public school health education program was ranked among the first in effectiveness and comprehensiveness for the entire general program for Texas.

Health program in the Denton County rural schools.

—The Denton County rural school system consisted of twelve schools with an approximate enrollment of six hundred students. The faculty was composed of thirty-one members. The Denton County school system had never conducted a health program; however, many of the county teachers had participated in the summer health education workshop held at North Texas State College.

A case history of every rural-school student was prepared through the use of a questionnaire and by personal interviews with parents. From these case-history tabulations the health education plans were formulated. The valuable assistance from the North Texas State College Health Co-ordinator and the splendid co-operation of physicians, dentists, and nurses made the following program a reality:

1. Physical examinations were given to every student. Of the 367 defective cases found, forty-five were considered urgent.
2. Immunization program.
 - a. Smallpox vaccine was given to every student enrolled.
 - b. Diphtheria inoculations were given to every student enrolled.
 - c. Tetanus and whooping cough serum were given to the entire enrollment. The serum was furnished by the Denton Kiwanis Club and the serum was administered by the nurse from the Denton County Tuberculosis Association.
3. Daily observations and periodic health check-ups were made by the teachers.
4. Every student was weighed monthly and measured three times during the year.
5. Dental examinations were given by local dentists. Of the 564 students examined, 288 had cavities, eighty-three needed extractions, eighty-nine had malocclusions, and 117 needed their teeth cleaned.
6. Visual tests were given by graduate students of North Texas State College.

7. Audiometer hearing tests were given by graduate students from North Texas State College.
8. Building improvement program.
 - a. The walls were painted a lighter color.
 - b. Indoor rest rooms were installed.
 - c. The kitchens were modernized and improved.
 - d. Furniture and floors were painted in lighter colors.
 - e. Drinking fountains were installed.
 - f. All broken furniture was removed from the buildings.
9. School grounds improvement program.
 - a. The playground was drained and leveled.
 - b. Safety signs were placed on highway crossings.
 - c. Playground equipment was installed.
 - d. The school grounds were cleaned and beautified.

From the preceding report it is evident that the Denton County rural schools conducted a more or less comprehensive health education program. One of the future objectives is a health unit for the county.

Health education program in the Mesquite Public School. — The Mesquite Public School in 1947-1948 had an enrollment of approximately 1,081 students. The school had a centralized plant consisting of a primary building for the first three grades, an elementary building for the fourth grade through the eighth grade, and a high-

school building for the ninth grade through the twelfth grade. The auditorium was located in the high-school building and was used by the entire school. The cafeteria was located in the primary building. The gymnasium, music hall, and workshop were separate buildings of the school plant.

The faculty was composed of thirty teachers, the superintendent, and his secretary. The health education program was introduced in the Mesquite school system with a three-day in-service training institute for the entire faculty at the beginning of the school year. This in-service program was conducted by Rhea Williams, Health Co-ordinator of North Texas State College. Lectures and discussions were given by J. C. Matthews and Florence Scouler of North Texas State College; Don Morris of Southern Medical College; W. R. Bodine of the Texas State University; J. H. Pickard, F. M. Garvin, Rose Marquette, M. L. McDonald, and E. W. Sudderth of the Dallas County Health Unit.

During the regular school year Rhea Williams gave individual service consultation during his periodic visits. From time to time group meetings were held with the teachers. The local school health co-ordinator always met with the primary and elementary teachers for consideration of plans and suggestions concerning each new activity in the health program.

A high-school health council, composed of six members from the health classes and one representative from each home room, was

organized. This group was sponsored by the homemaking teacher, the coach, the health instructor, the high-school principal, and the health co-ordinator. The primary- and elementary-school health councils were sponsored by the principals of the respective schools. The high-school council met twice each month, the elementary-school health council met once each week, and the primary-school health council met once each month. Committees were appointed for a general clean-up program that was conducted during the year. Members of an organized community health council included the president of the Lions Club, the president of the Junior Womans Club, a representative from the Chamber of Commerce, a representative from the City Council, the superintendent of schools, the health co-ordinator, and a representative from each of the following groups: Senior Womans Club, Ministers Association, Parent-Teacher Association, the local medical association, and the local dentists. These members all formed the executive committee for the Community Health Council.

The Texas Mesquiter, a local weekly newspaper, and the Skeeter, the high-school newspaper, co-operated in every way possible and gave space liberally for announcements and articles concerning the health program in the schools and the community. Additional parent enthusiasm and participation were created through the interest displayed by civic clubs in and around Mesquite. Pastors of local churches co-operated in splendid fashion by urging the citizens to realize the

importance of community health by taking every advantage of the program. Speakers were provided for the Lions Club, the Parent-Teacher Association, and Radio Station KSKY. Several neighboring communities became interested and sought information and guidance from the school health co-ordinator.

The Mesquite program included five major projects, namely: (1) health screening tests, (2) health instruction, (3) health environmental control, (4) physical examinations, and (5) health nutrition. The Lions Club took the responsibility for the first project and purchased a Massachusetts Vision Screen Machine. At the outset of the program 338 students were given the vision screening test during a concentrated period of testing. The test showed eighty-four students to have defective vision. The parents were notified and requested to take the children to specialists for further examination. Some of the corrections were made during the last term of that school year, while the remainder were made during the following summer. Another examination was made the succeeding year. Those students who were not financially able to have the corrections made were given assistance by the Lions Club.

The City Health Council conducted a pre-school clinic and immunization program for all pre-school children, and serums were supplied at no cost to the parent. Seventy-eight pre-school children

were vaccinated. After the opening of the regular school session the health education program was initiated and the following projects were carried out:

1. Physical examinations were given to one third of the total school enrollment.
2. Vision screening tests were given to 338 pupils, or approximately one third of the total enrollment.
3. Audiometer tests were given to 783 children enrolled in grades three to twelve, inclusive.
4. Dental examinations were given to one thousand students, and 268 of this number were referred for treatment.
5. Immunization program.
 - a. Smallpox vaccination was given to 208 students.
 - b. Diphtheria shots were given to 109 children under the age of ten years.
 - c. Typhoid shots were given to one thousand individuals including eighty-one adults and pre-school children.
6. A lighting survey was conducted and the following improvements were made as a result:
 - a. Diffusers were placed at the windows.
 - b. Better lighting was obtained by re-arranging the seats.
 - c. All single-drop lights were replaced with indirect fixtures.

- d. The walls, woodwork, floors, and desks were repainted with a lighter color.
7. Other needed improvements were made during the year, as follows:
 - a. Three new drinking fountains were installed.
 - b. One lavatory each was installed in the boys' and girls' rest rooms.
 - c. Containers intended for waste towels were installed in all rest rooms.
 - d. Thermometers were installed in every room in the building.
 8. Health projects were conducted as follows:
 - a. Water tests were made in the community.
 - b. The circulation of a health-habit questionnaire was conducted in the community.
 - c. A study was made of waste disposal.
 9. A nutrition survey was conducted.
 - a. Mid-morning lunch was furnished for children in the first three grades.
 - b. A health drama was presented in assembly each week.
 10. Pupils were weighed regularly.
 11. Field trips were made from time to time.

12. A posture clinic was conducted by Beulah H. Harriss, professor in the Department of Physical Education at North Texas State College.
13. The following demonstrations were conducted by teachers and specialists for the health classes:
 - a. Good grooming.
 - b. First aid.
 - c. Artificial respiration.
 - d. Red Cross home-nursing class.
 - e. Baby care.

The foregoing report gives evidence that the Mesquite public school system conducted one of the most complete and comprehensive health programs in the co-operating school group. A dental clinic was conducted and every student in the school was given a physical examination. The immunization program, the vision screening tests, and the hearing tests were successfully carried out.

In the beginning of the health program there was the usual community opposition to anything pertaining to change. There was a lack of interest on the part of some citizens, but it was not long before the value of the program to the school and to the community was recognized. The community health council conducted a general city clean-up campaign and accomplished much toward improving the community

health. Through the continued efforts of North Texas State College, the Red Cross, local establishments, and Dallas County health agencies, periodic demonstrations were conducted in first aid, home nursing, baby bathing, artificial respiration, and good grooming.

A planned in-service program for teachers was conducted twice a month and all of the projects outlined in the beginning of the health program were initiated. The five major projects suggested for the co-operating schools were established in the Mesquite public school system and much was accomplished toward a complete health education program.

Health education in the Pilot Point Public School.

—The Pilot Point Public School was a consolidated school with the majority of the students coming from the rural communities. The members of the community were either of German or Bohemian descent. They were not staunch believers in education. The school enrollment was approximately 379 students.

Prior to the beginning of the health education program the school had maintained some health records and had evinced slight interest in the health of the student enrollment. However, a health program had not been planned.

Under the guidance and assistance of Rhea Williams, health coordinator from North Texas State College, plans for a health education program were formulated. Williams met with the superintendent and

the faculty for a general discussion of the proposed health program. Later, he met with representatives from the two women's clubs to outline plans for their assistance in the community health program.

The Pilot Point school system had made no provision for the services of a school nurse; consequently, those duties evidently were allotted to some extent to the home-room teachers. The following program was initiated with the available facilities:

1. A free dental clinic was conducted and examinations were given to 374 students and 173 of this number were referred for treatment.
2. A general physical education examination was not included in this program. The very evident cases were referred to parents for examination by the family physician.
3. The screening test for vision was given to 305 students, and 118 of this number were recommended to further treatment or diagnosis by specialists.
4. The hearing test was given to 281 students, nine of whom were recommended for treatment.
5. Immunization program.
 - a. The smallpox vaccine was given to 109 students.
 - b. Diphtheria shots were given to 108 pupils.
6. The Tuberculosis mobile unit made chest X-rays for 123 students above fifteen years of age. Chest X-rays were made for 527 adults in the community.

7. A lighting survey was conducted by the school improvement class.
 - a. The classrooms were repainted in a lighter color.
 - b. Diffusers were installed in ten of the twelve rooms.
 - c. The remaining classrooms were equipped with bowl reflectors and larger bulbs were installed.
 - d. The bookroom was rearranged and cleaned.
 - e. An arrangement was made for the disposal of the waste.

 8. Other needed improvements were made as follows:
 - a. Two heaters were purchased for the gymnasium.
 - b. All broken and unsafe playground equipment was removed.
 - c. The drinking fountains were cleaned.
 - d. The rest rooms were provided with mirrors and waste containers.

 9. The school for the first time was equipped with a first-aid room furnished by donations of individuals and the two local clubs.
 - a. First aid was available each period of the day.
 - b. Students maintained the first-aid room and posted the records.
-

10. A community health council was organized.
 - a. A lunchroom committee was appointed by the council.
 - b. The lunchroom committee conducted field trips for the investigation of lunchrooms.
11. A lunchroom was established in the school.
12. Other health activities of the program.
 - a. A three-day safety course was conducted by the Red Cross.
 - b. A driver safety campaign was conducted by the American Legion and the school was furnished with zone signs.

The Pilot Point school health education program was confronted with stubborn community opposition. Since education beyond the seventh grade did not have full community sympathy, school and community health education had not been considered a necessary part of the school curriculum. Despite this opposition, the health education program was launched, and shortly thereafter received co-operation from the community as the citizenry came to realize the value of health education in school, home, and community. The women's clubs co-operated willingly and through their efforts many improvements were added to the school-community health education program.

The dental clinic, the immunization program, and the hearing and vision screening tests were successfully conducted. Through the

efforts of the school health council and local clubs, a first-aid room was furnished and maintained.

Perhaps the most outstanding project was the establishment of a school lunchroom. The majority of the school enrollment were from rural areas and a lunchroom had been needed for some time. The community health council was responsible for the successful outcome of this project.

The college health co-ordinator conducted in-service programs and assisted in the administration of the vision and hearing tests. Although the **Pilot Point** school health education program was not as complete in scope as the programs of some of the other co-operating schools, the community was interested and worked with sincerity toward the accomplishment of a more thorough and permanent health education program.

Health education program in the Sweetwater Public Schools. — The **Sweetwater Public School** system was composed of one senior high school, one junior high school, three elementary schools (for white children), one Latin-American school, and one Negro school. The school health co-ordinator worked in co-operation with the health co-ordinator from North Texas **State College**. The **Sweetwater Public Schools** were fortunate in receiving the assistance and co-operation of an organized **County Health Unit**. Through the

combined efforts of the Sweetwater school health co-ordinator and the County Health Unit, the following program was conducted:

1. Immunization program.
 - a. Smallpox vaccine was given to 378 students.
2. The Massachusetts Vision Test was given to the entire enrollment.
3. The students were weighed and measured once each month.
4. Daily observation checks were made in the elementary schools.
5. A lunchroom nutrition program was conducted by the health education classes.
6. First aid was practiced by principals and teachers.
7. A cumulative individual health card was maintained.
8. Safety patrols were provided for the junior high school and the three elementary schools.
9. Building improvement program.
 - a. The building was given as much consideration as possible in the program for healthful living, and worthwhile improvements were made to enhance the healthful environment of the schools.

Schools with a One-year Program

At the beginning of the third or final year of the Texas Health Education program six additional schools in Denton County entered

the project under the supervision of North Texas State College. These schools had not had the benefits of the first year of orientation to the program, and their planning was not so adequate as that of the schools which had participated in the program throughout its three-year duration; nevertheless, some commendable strides were made in these communities in the promotion of school and community health, some of which will be noted in the succeeding pages.

Health education program in the Justin Public School. — The Justin Public School had an enrollment of approximately two hundred students. A regular health co-ordinator was appointed by the superintendent early in the year. The entire faculty attended the conference conducted in Denton by the W. K. Kellogg Foundation for a discussion of the Denton County Health Program.

The first step in the Justin school health education program was the compilation of a student health card on which health data were to be collected for each pupil enrolled. The second step was the organization and launching of the following program:

1. The immunization program.
 - a. Smallpox vaccine was given to 110 students.
 - b. Diphtheria inoculations were given to twenty-one students.
2. The Keystone visual test was given to 198 students, and the

forty-six defective cases discovered were referred for further examination.

3. The tuberculosis patch test was given to 120 students.
4. A chest X-ray was given to all students over fifteen years of age.
5. The grade-school students were weighed and measured regularly.
6. The school grounds were cleaned and cleared of shrubs for additional light in the building.
7. A nutrition program was conducted.
 - a. A food survey was conducted and each grade-school room planned menus for two weeks.

The Justin Public School health co-ordinator succeeded in arousing the interest and co-operation of the entire faculty. Through their efforts the school health education program was conducted. Six of the suggested projects were initiated in the school health program. Plans were formulated for a continuation of the health program to include all of the necessary projects for a complete school-community health education program.

Health education program in the Krum Public School. — Under the guidance of the co-ordinator of health education of North Texas State College, a health education program was begun in

the Krum school district. In co-operation with the Krum school faculty, the college health co-ordinator based the program on three major points: (1) a comprehensive health survey of the school and the community, (2) the organization of a health council to plan and project the program, and (3) a health program that was supported by members of the entire community.

The health council was organized and a health survey was conducted by means of questionnaires. The information was tabulated for use in the development of other projects. A health record card was set up with case history information and a record of vaccination and immunization.

This health survey was the basis on which the following work was initiated:

1. Immunization program.
 - a. Smallpox vaccine was given to 175 students.
 - b. Diphtheria shots were given to fifteen students.
2. Vision test.
 - a. The Massachusetts Vision Test was given to 190 children and twelve of this number were recommended for treatment.
3. Hearing test.
 - a. The audiometer test was conducted by the health co-ordinator and graduate students from North Texas

State College. These tests were given to all students above the third grade. One student from the group was referred to a physician for examination.

4. All students were weighed and measured each month.
5. The tuberculosis patch test was given to all students under fifteen years of age. Seven positive cases were found and recommended for examination.
6. One chest X-ray was given. The expense was borne by the Kiwanis Club of Denton.
7. Regular health council meetings were held for a discussion and evaluation of the program with the college health co-ordinator.

From this report it was evident that the Krum School system was interested in promoting a health education program. Four of the suggested projects for the co-operating schools were conducted by the Krum health council and the Krum school co-ordinator of health education. The college health co-ordinator and the Krum school health co-ordinator held regular meetings with the community health council and succeeded in arousing some community interest. Several of the major projects necessary for a complete health education program were not included in the Krum health program. A physical examination for the pupils was not required by the school, and a dental clinic

was not conducted. However, the tests and examinations that were conducted gave the school and the community a working background for further organization and development of a complete health education program.

Health education program in the Lewisville Public School. — The Lewisville Public School plant consisted of one old three-story brick building and one two-room concrete building located on a one-block area. The school plant, at the time the school entered the health education project, was not of sufficient size to care adequately for the increased enrollment, although plans were nearing completion for a modern new school plant which would be adequate and up-to-date in every respect. Every teacher had heavy class loads. On account of these conditions the administration of the Lewisville Public School desired to make only a modest beginning in a health education program, which would be materially broadened in scope when the new building was ready for occupancy. However, the following program was conducted:

1. A health clinic was conducted by the health co-ordinator of North Texas State College.
2. A health survey was made of the school and the community.
3. Vision tests were given to 325 students.
4. Chest X-rays were given to the students.

5. Tuberculosis patch tests were given to 325 pupils, with positive showings found in ninety cases.
6. The students participated in a radio program, "Healthy Living in Denton County."

Due to the conditions mentioned in the report, the Lewisville Public School system was unable to devote the necessary time to a health education program. The health co-ordinator of North Texas State College, with the co-operation of a few teachers, succeeded in conducting a small program. The projects were few in number but important as ground work upon which to build a more extensive program as time and facilities would permit.

Health education program in the Ponder Public School. —Prior to the opening of the regular school session the superintendent of the Ponder Public School met with his school board and received permission to participate in the health education program pending approval of administrative officials to give consultant services.

Shortly after the opening of school the health co-ordinator from North Texas State College and the Denton County supervisor met with the Ponder school faculty for a discussion of plans for the organization of a health education program. A health council was selected as a result of this meeting. The council was composed of the Ponder

school faculty, the president of the school board, the president of the Parent-Teacher Association, student representatives, the lunchroom director, the janitor, and one bus driver. This council constituted a very representative group for the guidance of both the school and the community health education program that followed. A regular school health co-ordinator was appointed and a community health council was organized. The community health council included members of the school health council, representatives from community clubs, room mothers, and several other interested parents.

The first project undertaken by the Ponder school health council was a health survey. From the use of these case histories the following program was initiated in the Ponder school system:

1. Immunization program.
 - a. Smallpox vaccine was given to 110 students.
 - b. Diphtheria inoculations were given to twenty children.
2. The Massachusetts Vision Test was given to the students and the defective cases were re-screened with the telebinocular machine.
3. The audiometer hearing test was given to 118 students above the third grade.
4. The tuberculosis patch test was given to one hundred students with positive reactions indicated in four cases.

5. Chest X-rays were given to all students over fifteen years of age.
6. The students were weighed and measured once each three months.
7. A school and community health council was organized.
8. School buildings were improved.
 - a. The desks and woodwork were finished in lighter colors.
 - b. Walls, doors, halls, and rest rooms were cleaned.
 - c. Electric clocks were purchased for the building.
 - d. One room in the gymnasium was redecorated.
9. A school ground improvement program was conducted.
 - a. The grounds were beautified by the planting of flowers and shrubs.
 - b. Lights for the ball field were purchased.

The Ponder Public School district launched its program with the organization of a school health council and a community health council to work in co-operation with the health co-ordinator from North Texas State College. These agencies conducted a rather complete vision and hearing test program and chest X-rays and tuberculosis patch tests were given to a large percentage of the students of the school. Despite the fact that all of the major health education projects were not included in the program, the Ponder Public School had the basic

foundation for the development of a thorough and complete health education program.

Health education program in the Roanoke Public Schools. — The Roanoke school superintendent appointed a regular health co-ordinator who worked in close conjunction with the North Texas State College health co-ordinator. Their school health program covered the following projects:

1. Immunization program.
 - a. Smallpox vaccine was given to 136 students.
 - b. Diphtheria shots were given to twenty-one students.
2. The Massachusetts Vision Test was given to all students.
3. An audiometer hearing test program was conducted.
4. Tuberculosis patch tests were given to all students.
5. A school and community health council was organized. This combined council conducted in-service training programs.

In the beginning of its program, the Roanoke Public School appointed a regular health co-ordinator. The health co-ordinator worked in co-operation with the North Texas State College health co-ordinator and conducted a limited school health education program. This program included only three of the suggested projects for a school-community health education program. Although the program was rather narrow and limited and did not include many of the major factors

necessary for a complete health education program, the school and the community realized the need for a health program and succeeded in getting a nuclear program organized for future development.

Health education program in the Sanger Public School. —Preceding the inauguration of the health education program in the **Sanger Public School**, the superintendent and the school board appointed a regular school health co-ordinator and completed plans for her to attend the health education workshop at North Texas State College. Several weeks before the opening of the regular school session the superintendent held a faculty meeting for a discussion of plans relative to the organization of the health education program.

A community health council was organized and was composed of representatives from various clubs, three physicians, the school superintendent, and the school health co-ordinator. Following this, a school health council was organized. This council was composed of representatives from each of the twelve grades, the teachers from the first three grades, the janitor, one bus driver, the superintendent, and the school health co-ordinator.

One week prior to the opening of the regular school session an in-service health education program was conducted with three representatives present from the **State Department of Health**, the supervisor of **Denton County schools**, and the health co-ordinator of North Texas

State College. Upon completion of this organization, the following was accomplished:

1. Immunization program.
 - a. Smallpox vaccine was given to 284 students including students in the Negro school.
 - b. Diphtheria inoculations were given to thirty-five students.
2. Vision tests were given by the health co-ordinator of North Texas State College assisted by members of a college health class. The sixty-three defective cases were recommended for examination by a specialist.
3. Hearing tests were given by a health class from North Texas State College. The twelve defective cases were referred to a specialist.
4. Tuberculosis patch tests were given to 235 students.
5. Chest X-rays were given to fifty-two students.
6. Every student was weighed once each month and measured three times during the year.
7. Cumulative health records were filed for each student in the school.
8. A Red Cross first-aid, water safety, and accident prevention series was given.

9. Building improvement program.
 - a. Window curtains were made and installed.
10. Ground improvement program.
 - a. A ground clean-up campaign was conducted.
 - b. A baseball diamond was prepared.
 - c. The walks were graveled at all exits.
 - d. The school ground benches were repaired.
 - e. A fence was erected on the highway side of the school grounds.
 - f. The damaged playground equipment was repaired.
 - g. All shrubs and trees were pruned.
11. Health improvement classes were included as a part of the course of study for each grade.

The Sanger Public School system conducted a rather extensive and comprehensive health education program. One major factor given particular attention in the Sanger school health program was personal health improvement. Every student enrolled in the Sanger school system attended classes in health improvement.

Although the Sanger school system did not complete or initiate the entire suggested health program, it made an excellent beginning in a health education program. In points accomplished the Sanger school system ranked among the highest of the group of co-operating

schools in the Texas Three-year Health Education Program. With a continuation of the present health program for the next few years, the Sanger school system should have an adequate school health program and a functioning community health program.

From the preceding summary of reports it is found that each co-operating school participating in the Texas Three-year Health Education Program under the supervision of North Texas State College conducted a health education program in its school and community. A few of the co-operating schools conducted a limited health program and several of the co-operating schools conducted a more detailed and comprehensive program. Regardless of the scope of any of the programs, in each individual community and school the program that was carried out definitely brought to the attention of the people the importance of healthful living and of personal and community health. Therein lay the greatest significance of the special project in health education.

Summary of Accomplishments

From the progress report in Table 1 it may be seen that three of the co-operating schools included a physical examination in their health programs. The Denton city schools originally planned to give a physical examination once every three years; however, in the second year of the health program, this plan was changed and a physical examination is now given every year. The entire group of co-operating

TABLE I

**PROGRESS REPORT OF CO-OPERATING SCHOOLS IN VISION
AND HEARING TESTS AND IN DENTAL AND
PHYSICAL EXAMINATIONS**

Co-operating School	Physical Examination	Vision Screening Test	Audiometer Test	Dental Examination
**Mesquite	599	676	1,566	2,000
**Pilot Point	...	713	689	379
*Krum	...	220	180	...
*Lewisville	...	564	564	...
*Roanoke	...	243	243	...
*Justin	...	198	200	...
*Ponder	...	118	118	118
*Sanger	...	382	382	...
**Denton County rural schools	613	924	868	913
**Denton city schools	978	1,698	1,698	1,698
**Sweetwater	2,750	4,350	4,350	2,750

*Entered health program at beginning of third year.

**Participated in health program during both second and third years.

schools conducted a vision screening test. Ponder, Sanger, and Sweetwater did not include the number of tests given in their report but each of these systems gave a test, and the number of pupils receiving such tests was approximated by the school superintendents. Four of the co-operating schools included dental clinics in their programs, and dental examinations were given each year; two other schools encouraged pupils to have dental examinations by their own dentists and kept records of the number of children complying with this request.

Table 2 presents the progress report from each of the co-operating schools in regard to their immunization programs and tuberculosis tests. Every school in the co-operating group either gave smallpox vaccine to the students or else required that they present a vaccination certificate before being permitted to enroll in the school. Two school systems did not include diphtheria inoculations in their immunization programs. The Mesquite school was the only one which carried out a fairly comprehensive program of immunization against typhoid as part of its health project. All but one school reported some degree of administration of the tuberculosis patch test to younger pupils and of chest X-rays for pupils over fifteen years of age; but most of the schools reported only a relatively small percentage of their total enrollment benefiting from these services.

TABLE 2
**PROGRESS REPORT OF CO-OPERATING SCHOOLS IN
 REGARD TO THEIR IMMUNIZATION PROGRAMS
 AND TUBERCULOSIS TESTS**

Co-operating School	Smallpox	Diphtheria	Typhoid	Chest X-ray	Tuberculosis Patch Test
**Mesquite	416	218	666	311	1,600
**Pilot Point	109	108	...	123	...
*Krum	185	70	...	60	160
*Lewisville	...	...	...	130	325
*Roanoke	136	22	...	40	139
*Justin	110	21	...	50	120
*Ponder	110	20	30	35	100
*Sanger	284	38	...	74	278
**Denton County rural schools	276	193	130	25	778
Denton city schools	1,038	859	...	425	*
Sweetwater	378	...	...	****	***

*Entered health program at beginning of third year.

* *Participated in health program in second and third years.

*** Given to all pupils under fifteen years of age.

**** Given to all pupils over fifteen years of age.

Table 3 presents the progress report from the co-operating schools in relation to physical equipment for the health education program. This report included building improvements, ground improvements, and first-aid and lunchroom facilities. Three co-operating schools furnished and maintained a first-aid room as one of the health education projects. The majority of the co-operating schools maintained a lunchroom and afforded lunchroom facilities. Those schools

TABLE 3
PROGRESS REPORT OF CO-OPERATING SCHOOLS IN
CONNECTION WITH SECURING, IMPROVING, AND
MAINTAINING PHYSICAL EQUIPMENT

Co-operating School	First-aid Room	Lunch-room	Building Program	Grounds Program
**Mesquite	No	Yes	Yes	No
**Pilot Point	Yes	No	Yes	Yes
*Krum	No	Yes	No	Yes
*Lewisville	Yes	Yes	Yes	Yes
*Roanoke	No	Yes	No	No
*Justin	No	Yes	No	Yes
*Ponder	No	Yes	Yes	Yes
*Sanger	Yes	Yes	Yes	Yes

TABLE 3—Continued

Co-operating School	First-aid Room	Lunch-room	Building Program	Grounds Program
**Denton County rural schools	No	Yes	Yes	Yes
**Denton city schools	No	Yes	Yes	Yes
**Sweetwater	Yes	Yes	Yes	No

*Entered health program at beginning of third year.

**Participated in health program during second and third years.

offering no lunchroom service included that project in the health education program and furnished lunchroom facilities as a phase of the special project. The report showed a majority of the co-operating schools with an effective improvement program in the buildings and on the grounds.

Table 4 presents a composite report regarding certain health agencies operated in the co-operating schools. Only one school in the group failed to appoint a school health co-ordinator. Three co-operating schools did not appoint a health council or a community health council. The Sweetwater school system was fortunate in having

TABLE 4

**PROGRESS REPORT OF CO-OPERATING SCHOOLS IN
RELATION TO CERTAIN HEALTH AGENCIES**

Co-operating School	Health Co-ordinator	School Health Council	School Nurse Service	Community Health Council
**Mesquite	Yes	Yes	No	Yes
**Pilot Point	Yes	Yes	No	Yes
*Krum	Yes	Yes	No	No
*Lewisville	Yes	No	No	No
*Roanoke	Yes	Yes	No	Yes
*Justin	Yes	No	No	No
*Ponder	Yes	Yes	Yes	Yes
*Sanger	Yes	Yes	No	Yes
**Denton County rural schools	Yes	Yes	Yes	No
**Denton city schools	Yes	Yes	No	Yes
**Sweetwater	Yes	No	No	Yes

*Entered health program at beginning of third year.

**Participated in health program in second and third years.

a County Health Unit co-operate in its health education program. The Denton County rural schools secured the services of the Denton County Tuberculosis Association's health nurse during the first year of the health education program.

Many of the projects considered essential to a complete health education program were not practiced in the entire group of co-operating schools, but every co-operating school initiated some phase of the general program in health education. The students and citizens of every community in which a participating school was located came to realize the unlimited value of a health education program. The splendid co-operation of the participating schools and the North Texas State College made possible many phases of the program that would otherwise have been neglected.

The W. K. Kellogg Foundation made the following statement in a report regarding North Texas State College and the co-operating public schools developing the health program under the supervision of the health co-ordinator from that college:

No fair judgment can yet be passed on the various procedures now under way in the **Extended School-Community Health Project**. For that it may be necessary to wait beyond the three-year period, when students who are now beginning their teacher education have time to prove themselves in the field.¹

¹W. K. Kellogg Foundation, An Experience in Health Education, p. 117.

Table 5 lists certain phases of health instruction which were or were not being provided in the five public-school systems which cooperated in the Texas Health Education Program during its second and third years of sponsorship by the North Texas State College. The picture presented by these five school systems during the second year of the health program was very encouraging and commendable, as indicated by the table. For instance, in-service training of teachers, school health councils, health co-ordinators, community health councils, and health field trips were reported for all five of the school systems. The one provision in which all of the schools were lax was that of a school health nurse, since none of the schools had such a staff member. This was the only phase of health instruction listed which was not provided by the Denton city schools, but all of the other schools had one or more additional shortcomings. In addition to the lack of a school nurse, the Denton County schools did not sponsor a posture clinic, the Mesquite school lacked a first-aid class, the Pilot Point school lacked a posture clinic and a special health class, and the Sweetwater school failed to provide for a pre-school clinic and a posture clinic.

During the third year of the special health project, Denton city schools remained the same as during the second year in regard to instructional facilities, with a school nurse being the only one of those provisions listed which was not being met. The Mesquite school also

TABLE 5

**PHASES OF HEALTH INSTRUCTION WHICH WERE OR WERE NOT
PROVIDED FOR IN THE SCHOOLS OF THE AREA THAT
PARTICIPATED IN THE TEXAS HEALTH EDUCATION
PROGRAM DURING THE SECOND AND THIRD
YEARS OF THE PROJECT**

Health Instruction	Schools									
	Denton City		Denton County		Mes- quite		Pilot Point		Sweet- water	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Second Year

In-service training	x		x		x		x		x	
School health council	x		x		x		x		x	
Health co- ordinator	x		x		x		x		x	
Community health council	x		x		x		x		x	
Pre-school clinic	x		x		x		x			x
School nurse		x		x		x		x		x
Health field trips	x		x		x		x		x	

TABLE 5—Continued

Health Instruction	Schools									
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Posture clinic	x			x	x			x		x
First-aid class	x		x			x	x			x
Special health class	x		x		x			x		x

Third Year

In-service training	x		x		x			x		x
School health council	x		x		x		x			x
Health coordinator	x		x		x			x		x
Community health council	x			x	x		x			x
Pre-school clinic	x			x	x		x			x
School nurse		x	x			x		x		x

TABLE 5—Continued

Health Instruction	Schools									
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Health field trips	x		x		x		x		x	
Posture clinic	x			x	x			x	x	
First-aid class	x			x		x	x		x	
Special health class	x			x	x			x	x	

maintained its status unchanged, lacking in the third year, as in the second, a school nurse and a first-aid class. Sweetwater was the only school which had fewer negative responses in the third year of the study than in the second. This school, by the beginning of the third year of the program, had made provisions for a school nurse, a pre-school clinic, and a posture clinic; but now it lacked a school health council and a community health council, both of which had functioned during the preceding year. Denton County schools and the Pilot Point

school each had five negative responses in the third year, whereas they had made two and three such responses, respectively, during the second year of the project. One of the most significant indications of progress was that the Denton County schools and Sweetwater had employed school nurses for the third year of the program. It is difficult to explain the evidences of regression in the instructional facilities in health offered by these schools in the third year of the project in comparison with the second. Perhaps enthusiasm had waned in some respects, and financial considerations may have exerted an influence. Though some notable improvements were made in the final year, the over-all health instruction provisions were more commendable during the second year of the project.

Table 6 lists certain factors in environmental control and indicates whether they were being provided by the five school systems which co-operated with North Texas State College during the second and third years of the health education project. In both years, Denton city schools and the Sweetwater schools made provision for all of the environmental control factors listed in the table. The Denton schools, however, were removing stationary playground equipment from the school grounds in order to afford more room for group games. Mesquite lacked a first-aid room during the second year of the project, but this had been provided by the beginning of the third year. During both years, the Denton County schools lacked adequate drinking

TABLE 6

ENVIRONMENTAL CONTRAL FACTORS WHICH WERE OR WERE
NOT PROVIDED FOR IN THE SCHOOLS OF THE AREA THAT
PARTICIPATED IN THE TEXAS HEALTH EDUCATION
PROGRAM DURING THE SECOND AND THIRD
YEARS OF THE STUDY

Environmental Control Factors	Schools									
	Denton City		Denton County		Mes- quite		Pilot Point		Sweet- water	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No

Second Year

Window dif- fusers	x		x		x		x		x	
Furniture re- arrangement	x		x		x		x		x	
Light-fixture adjustment	x		x		x			x	x	
Renovation of classrooms	x		x		x		x		x	
Improvement of grounds	x		x		x		x		x	
Adequate drinking facilities	x			x	x			x	x	

TABLE 6—Continued

Environmental Control Factors	Schools										
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Adequate rest-room equipment	x			x	x				x	x	
Safe playground equipment	*		x		x			x		x	
First-aid room	**			x		x		x		x	

Third Year

Window dif-fusers	x		x		x			x		x	
Furniture re-arrangement	x		x		x			x		x	
Light-fixture adjustment	x		x		x				x	x	
Renovation of classrooms	x		x		x				x	x	
Improvement of grounds	x		x		x			x		x	

TABLE 6—Continued

Environmental Control Factors	Schools									
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Adequate drinking facilities	x			x	x			x		x
Adequate rest-room equipment	x			x	x			x		x
Safe playground equipment	*		x		x			x		x
First-aid room	**			x	x			x		x

*Stationary equipment was removed from school grounds to provide more needed space for group games.

**Teacher's lounge is used for first-aid room.

facilities, adequate rest-room equipment, and first-aid rooms. During both years, **Pilot Point** reported lack of adjustment of light fixtures, inadequate drinking facilities, and inadequate rest-room facilities; and in the third year of the program, in addition, **Pilot Point** reported the need for renovation of some of the classrooms. This school was making plans for the erection of a modern new school plant, and perhaps for

this reason certain environmental conditions were permitted to deteriorate or to remain inadequate. On the whole, however, the schools evidently were making satisfactory provisions for the control of environmental factors which influence health.

Table 7 indicates health services and the degree to which the schools were providing these services during the second and third years of the health education project. Only the Denton city and the Denton County schools reported that vision, hearing, dental, and physical examinations were given under school sponsorship to all pupils enrolled in the schools during the second year of the project. During the third year, the city schools gave vision and hearing tests only to those students who were newly enrolled in the school or to those who needed to be re-checked; and provisions were made to require the pupils' own dentists and physicians to give their respective examinations and to provide the schools with certificates as to the results of such examinations. The Denton city schools required smallpox and diphtheria immunizations before students were permitted to enroll in school. Apparently, this was the usual policy in the other schools, also. Tuberculosis patch tests were given rather extensively in all of the schools to children under fifteen years of age, whereas chest X-rays were required of those pupils over fifteen years old. The five schools appeared to be caring adequately for the health services indicated, with the exception of typhoid

TABLE 7

NUMBER OF STUDENTS WHO PARTICIPATED IN THE HEALTH
SERVICES ADMINISTERED BY SCHOOLS OF THE AREA
WHICH CO-OPERATED IN THE TEXAS HEALTH
EDUCATION PROGRAM DURING THE SECOND
AND THIRD YEARS OF THE STUDY

Health Services	Schools				
	Denton City	Denton County	Mesquite	Pilot Point	Sweetwater
Second Year					
Vision	1,698	613	338	305	2,750
Hearing	1,698	613	783	281	2,750
Dental examination	1,698	613	1,000	379	2,750
Physical examination	A	613	243	...	2,750
Smallpox vaccine	B	173	208	109	B
Diphtheria toxin	B	193	109	108	...
Tuberculosis patch test	C	451	800	...	C
Typhoid serum	...	130	666	...	...
Chest X-ray	D	20	311	123	D
Enrollment	1,698	613	1,081	379	2,750

TABLE 7—Continued

Health Services	Schools				
	Denton City	Denton County	Mesquite	Pilot Point	Sweet-water
Third Year					
Vision	E	311	338	408	1,607
Hearing	E	255	783	408	1,607
Dental examination	A	300	1,000	...	...
Physical examination	A	...	356	...	...
Smallpox vaccine	B	103	208	F	B
Diphtheria toxin	B	E	109	F	...
Tuberculosis patch test	C	327	800	...	C
Typhoid serum	...	E	E	...	...
Chest X-ray	D	5	E	F	D
Total enrollment	1,950	576	1,059	408	2,802

A—Examined by own dentist and physician.

B—Required before entering school.

C—Given to boys and girls under fifteen years of age.

D—Given to boys and girls over fifteen years of age.

E—All new students and those needing a re-check.

F—Some were given, but no records were kept.

serum, which was not given at all in three of the schools and to only a small proportion of the total enrollment in the other two schools.

In Table 8 are indicated provisions that were made for certain factors of nutrition in the five schools which co-operated with North Texas State College in the second and third years of the Texas Health Education Program. During the second year the Denton city schools

TABLE 8
NUTRITION AND OTHER HEALTH FACTORS WHICH WERE OR WERE NOT PROVIDED FOR IN THE SCHOOLS OF THE AREA THAT PARTICIPATED IN THE TEXAS HEALTH EDUCATION PROGRAM DURING THE SECOND AND THIRD YEARS OF THE STUDY

Nutrition Factors	Schools									
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Second Year										
Periodic check-ups of weight and measurement	x		x		x		x		x	
Mid-morning nutrition	x			x	x		x		x	
Lunchroom	x		x		x			x	x	

TABLE 8—Continued

Nutrition Factors	Schools										
	Denton City		Denton County		Mes- quite		Pilot Point		Sweet- water		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Milk available to all stu- dents	x		x		x				x	x	
Students assist in menu planning	x		x		x				x		x
Food study	x		x		x			x			x
Health clubs	x		x		x				x		x

Third Year

Periodic check- ups of weight and measure- ment	x		x		x				x		x
Mid-morning nutrition	x			x	x				x		x
Lunchroom	x		x		x				x		x
Milk available to all stu- dents	x		x		x				x		x

TABLE 8—Continued

Nutrition Factors	Schools										
	Denton City		Denton County		Mesquite		Pilot Point		Sweetwater		
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Students assist with menu planning	x		x			x	x			x	
Food study	x		x		x		x			x	
Health clubs	x		x		x			x			x

and the Mesquite school were providing for all of the factors listed, but in the third year the Mesquite school no longer employed student help in the planning of menus for the cafeteria. All other factors were still in practice. In both years the Denton County schools failed to provide for mid-morning "snacks" but all other nutrition factors were in operation in those schools. In the second year the Pilot Point school did not have a lunchroom, did not have milk available to all students, did not make provisions for students to assist in menu planning, and did not have a health club. In the third year, however, Pilot Point had installed a cafeteria and consequently had milk available to all

students and used student help in the planning of menus. There was still no health club in this school. For the second year the Sweetwater schools did not use student help in the planning of menus, did not provide for food study, and did not have a health club; but in the third year the health club was the only nutrition factor not being provided for. Thus, on the whole, commendable improvement was made in these five schools in making provisions for the factors of nutrition that are here being considered. In both years, weight and measurement of pupils were checked and recorded in all schools.

Table 9 presents data on health instruction provisions reported by the six independent schools in Denton County which did not begin to participate in the health program until the third year. These schools included those of Justin, Krum, Lewisville, Ponder, Roanoke, and Sanger—all independent school districts in Denton County which had only one year of participation in the program. It should be borne in mind throughout the succeeding discussion that these schools did not have the advantage of the preliminary planning conferences such as those in which the other schools had participated during the first year of the special health project. Thus they began their co-operation in the program with little or no previous preparation, and thus appears the explanation, perhaps, for the unfavorable conditions that existed in some of the schools. Justin, for instance, was making provision for

TABLE 9

**PHASES OF HEALTH INSTRUCTION WHICH WERE OR WERE
NOT PROVIDED FOR IN THE SCHOOLS OF THE AREA
THAT ENTERED THE TEXAS HEALTH EDUCATION
PROGRAM AT THE BEGINNING OF THE THIRD
YEAR OF THE STUDY**

Health Instruction	Schools											
	Justin		Krum		Lewisville		Ponder		Roanoke		Sanger	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
In-service training		x	x		x		x		x		x	
School health council		x		x		x	x		x		x	
Health co-ordinator	x		x		x		x		x		x	
Community health council		x	x			x		x	x		x	
Pre-school clinic		x		x	x		x			x	x	
School nurse		x		x		x	x			x		x
Health field trips		x	x		x		x		x		x	
Posture clinic	x			x	x		x			x		x

TABLE 9—Continued

Health Instruction	Schools											
	Justin		Krum		Lewisville		Ponder		Roanoke		Sanger	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
First-aid class		x		x		x		x			x	x
Special health class		x		x		x		x			x	x

only two of the ten listed facilities for health instruction—this school had a health co-ordinator and it conducted a posture clinic. All other health-instruction provisions were neglected. The Krum school, at the same time, was providing for only four of the ten health-instruction facilities: in-service training of teachers, a health co-ordinator, a community health council, and health field trips. Lewisville was meeting all of the provisions except three: nothing had been done about the organization of a school health council, a community health council, or the employment of a school nurse. Ponder, lacking only a community health council, was the highest-ranking school among the six in terms of provisions for health-instruction facilities. Sanger, however, was a

close second with only two inadequacies in regard to provisions for health instruction; this school lacked a health nurse and a posture clinic. Thus, for the most part, the schools which entered the special health project in its third year needed to make considerable improvement in their facilities for health instruction, especially in regard to such items as school health councils, community health councils, school health nurses, and special health classes.

Table 10 indicates the degree to which the six schools which cooperated with North Texas State College in the third year, only, of the Texas Health Education Program were making provisions for certain factors in environmental control. By the time they entered the health program at the beginning of the third year of the project, Lewisville and Sanger had modern new school plants which, according to the reports of the administrators, were meeting all of the provisions for environmental control that are contained in the table. Justin was meeting only four of the nine suggested provisions for environmental control, since this school lacked window diffusers, the adjustment of light fixtures, the improvement of grounds, adequate drinking facilities, and adequate rest-room equipment. The Krum school, which was not equipped with window diffusers and which did not provide for the adjustment of light fixtures, was meeting the remaining recommendations for the remaining seven environmental-control factors satisfactorily.

TABLE 10

ENVIRONMENTAL-CONTROL FACTORS WHICH WERE OR WERE
NOT PROVIDED FOR IN THE SCHOOLS OF THE AREA THAT
ENTERED THE TEXAS HEALTH EDUCATION PROGRAM
AT THE BEGINNING OF THE THIRD YEAR

Environmental Control Factors	Schools											
	Justin		Krum		Lewis- ville		Ponder		Roan- oke		Sanger	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Window dif- fusers		x		x	*			x		x		*
Furniture re- arrangement	x		x		*		x		x			*
Light-fixtue adjustment		x		x	*		x			x		*
Renovation of classrooms	x		x		*		x			x		*
Improvement of grounds		x	x		*		x		x			*
Adequate drink- ing facilities		x	x		*		x		x			*
Adequate rest- room equip- ment		x	x		*		x		x			*

TABLE 10—Continued

Environmental Control Factors	Schools											
	Justin		Krum		Lewisville		Ponder		Roanoke		Sanger	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Safe playground equipment	x		x		*		x		x		*	
First-aid room	x		x		*		x		x		*	

*These schools had new buildings.

Ponder was providing for eight of the nine factors in environmental control, lacking only window diffusers. The Roanoke school did not have window diffusers, did not make provisions for adjusting light fixtures, and did nothing toward renovating the classrooms, but it was meeting the remaining six environmental-control provisions satisfactorily.

Thus the Lewisville and Sanger schools, with their new buildings, were fulfilling all requirements in the nature of environmental control. All of the other schools, with the exception of Justin, were meeting all but from one to three of the nine provisions relating to environmental control. The Justin school, however, was meeting only four of the nine

provisions and hence was falling far short of recommended standards in this particular area.

Table 11 indicates that all of the schools gave vision and hearing tests to all pupils enrolled. Ponder gave dental examinations to all of the pupils, and Lewisville made some dental examinations, but the number made was not on record. The four other schools which entered the health program in its third year did not give any dental examinations, and none of them gave physical examinations except Lewisville, where the number given had not been recorded. Most of the pupils in all of the schools had had smallpox vaccine, but in no case was the number thus vaccinated equivalent to the total enrollment of the school. Diphtheria toxins had been given to only small numbers of pupils in each school, and four schools had not given typhoid serum to any pupils, whereas the remaining two schools had immunized small numbers of pupils. The tuberculosis patch test had been given to approximately two thirds of the enrollment in all of the schools, but chest X-rays were reported for comparatively small numbers of children, even for those individuals over fifteen years of age. In all probability, the health services of which only small numbers of children had availed themselves were not sponsored by the schools and universally administered to the student bodies, but rather were matters of individual and family concern. Perhaps the school encouraged parents and children to have

TABLE 11

NUMBER OF STUDENTS WHO PARTICIPATED IN THE HEALTH SERVICES ADMINISTERED BY SCHOOLS OF THE AREA WHICH CO-OPERATED IN THE TEXAS HEALTH EDUCATION PROGRAM AT THE BEGINNING OF THE THIRD YEAR.

Health Services	Schools					
	Justin	Krum	Lewisville	Ponder	Roanoke	Sanger
Vision	198	220	564	118	243	382
Hearing	200	180	564	118	243	382
Dental examination	...	...	F	118	...	...
Physical examination	...	...	F	...	...	...
Smallpox vaccine	110	185	F	110	136	284
Diphtheria toxin	21	70	F	20	22	38
Tuberculosis patch test	120	160	325	100	139	278
Typhoid serum	...	...	F	30	...	...
Chest X-ray	50	60	130	35	40	74
Enrollment	200	220	564	118	243	382

F—Some were given, but the number was not recorded.

such examinations and immunizations performed, but did not put into effect any plan which would make compliance universal among the student body. Except for the testing of vision and hearing, provisions for health services were inadequate among this group of schools which entered the health project at the beginning of its third year.

Table 12 presents information concerning certain factors of nutrition in the six schools which entered the health program in its third year under the sponsorship of North Texas State College. Mid-morning "snacks" were provided by all of the schools, but only for pupils in the first, second, and third grades. Although inadequate in its scope, this nutrition factor of the mid-morning lunch is considered to have been provided by all of the schools. Justin was making provision for all of the nutrition factors except that of a health club. Likewise, the lack of a health club was the only recommended nutrition factor not being provided for in the Krum school. Lewisville, Ponder, and Sanger were providing for all of the factors listed, but Roanoke lacked the availability of milk to all students and provisions for food study. Thus, on the whole, the nutrition factors being considered were provided for satisfactorily in this group of six schools which entered the health program at the beginning of its third year.

TABLE 12

NUTRITION AND HEALTH FACTORS WHICH WERE OR WERE
NOT PROVIDED FOR IN THE SCHOOLS OF THE AREA
THAT ENTERED THE TEXAS HEALTH EDUCATION
PROGRAM AT THE BEGINNING OF
THE THIRD YEAR

Nutrition Factors	Schools											
	Justin		Krum		Lewis- ville		Ponder		Roan- oke		Sanger	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Periodic check- up of weight and measure- ment	x		x		x		x		x		x	
Mid-morning nutrition	*		*		*		*		*		*	
Lunchroom	x		x		x		x		x		x	
Milk available to all stu- dents	x		x		x		x			x	x	
Students assist with menu planning	x		x		x		x		x		x	
Food study	x		x		x		x			x	x	
Health clubs		x		x	x		x		x		x	

* Available for first, second, and third grades only.

CHAPTER IV

SUMMARY OF FINDINGS AND RECOMMENDATIONS

Summary of Findings

On the basis of the contributions made by North Texas State College and its co-operating public schools to the Texas Health Education Program, the following findings are significant:

1. Some type of health education program was set up and conducted by each of the eleven public schools participating in the Texas Health Education Program under the supervision and sponsorship of North Texas State College, although the programs were not identical, and emphasis was placed upon different phases in the respective school systems.
2. The co-ordinator of health education of North Texas State College co-operated with the participating schools by affording assistance and guidance in the various phases of the program.
3. Citizens of the communities in which the co-operating schools were located realized the importance of health education in their everyday living and gave assistance to the program by means of time, money, and equipment.

4. Both co-operating schools and their surrounding communities became health-conscious and should continue to benefit for a long period of time as a result of the health education program that was conducted in the respective communities.

5. The school health education programs conducted by three of the schools were so well planned, organized, and carried out that they were designated as "model programs" by the W. K. Kellogg Foundation and by the Texas State Department of Education.

6. Every school in the group of eleven participating schools appointed a school health co-ordinator.

7. Two of the school systems employed a school health nurse during the period of the health project, and in two of the other co-operating schools nurses from the county health unit assisted in immunization programs during the third year of the program.

8. All participating schools included vision screening tests in their health education programs. Seventy-five per cent of the co-operating schools administered hearing tests. The majority of these tests were conducted by the health co-ordinator of North Texas State College, assisted by graduate students enrolled in the college.

9. A complete dental clinic was sponsored by four of the co-operating schools. Corrections were made in a majority of the cases.

10. Four of the co-operating schools failed to include chest X-rays and tuberculosis patch tests in their school health education programs.

11. The degree to which the co-operating schools made provisions for first-aid rooms was very low, as only four of the eleven schools made such provisions.

12. All co-operating schools included a lunchroom project as a major factor in education for better health.

13. The co-operating schools made extensive improvements in buildings and grounds. The building-improvement program placed special emphasis on better lighting. Many deficiencies in illumination were corrected.

14. Three co-operating schools added health instruction courses to their curriculums as a result of the special emphasis upon health education brought about by the Texas Health Education Program.

15. The health co-ordinator of North Texas State College was available for consultation services throughout the duration of the health program. Regularly scheduled visits to the co-operating schools were made during the first two years of the project, and he was subject to call at other times and made many special trips for planning conferences and counseling.

Recommendations

In the light of the data contained in these reports from the co-operating public schools and North Texas State College, the following recommendations are made:

1. The co-operating schools should give more consideration to physical examinations. An annual physical examination should be a requirement in all school health education programs.
2. A dental clinic should be included as a part of the physical examination.
3. First-aid rooms should be provided in every co-operating school, as in all other schools as well.
4. Instruction in health education should be included in the curriculum of every school. The course in health should be at least one semester in length, and preferably two semesters.
5. A trained school health co-ordinator should be appointed in every school.

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