The Program of Health Education of the Junior High School in the Light of Modern Educational Theory

A Thesis Presented for the Degree of Master of Arts by J. Olline Henders

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Approved

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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Brief History of Health Education with Educational Influences up to the Present Time</td>
<td>1</td>
</tr>
<tr>
<td>II. Current Practices and Trends in the Field of Health Education</td>
<td>18</td>
</tr>
<tr>
<td>III. Objectives of Health Education</td>
<td>36</td>
</tr>
<tr>
<td>IV. An integrated Program of Health Education</td>
<td>50</td>
</tr>
<tr>
<td>V. Summary</td>
<td>66</td>
</tr>
<tr>
<td>Bibliography</td>
<td>68</td>
</tr>
</tbody>
</table>
Chapter I.

Brief History of Health Education with Educational Influences up to the Present Time.

"Since men achieved the first stages of civilization, they have sought consciously or unconsciously to be healthy. When they have been sick there has been nothing they have refused to do to obtain health."

Primitive man manifested a great interest in the health of his group. Disease and ill health were always a great source of fear to him, because he believed them to be the work of evil spirits. In order to avoid illness, primitive people believed that they must at all costs keep from invoking the wrath of the spirits. The belief of the Koreans concerning small pox is a good example of this: "Small pox is supposed by the Koreans to be the work of a malevolent demon, and hence its name among them; viz., Ok-Sin or Plague God. When a child dies of small pox, its body is not buried, but is tied up in straw and hung on the city wall or from a tree. The body is thus hung up because it is believed that there is a chance of the spirit which left it returning to it again. But some say that the deceased child is thus hung up in order to secure a longer life for the next born." Sometimes charms were worn to keep the evil spirits away. This wearing of a fetish is evident in ignorant

(1) Moore, Harvey. Public Health in the United States, p. 3. (2) Uhl, Willis. Secondary School Curricula as taken from Watters, Extract from Korean Customs and Notions. Folklore VI, pp. 82-84.
families today. Similar superstition concerning disease is seen in the Bible, where any plague which spread among the people was said to be due to the wrath of God. Regardless of superstition, some knowledge of preventing disease was shown by the people in the Tigris and Euphrates River valleys. They had some very good ideas of sanitation, as was shown by their use of cess pools.

In ancient history one finds Athens's and Rome's interest in health one of the conspicuous features of their culture. Athens was noted for her glory in physical perfection. Hippocrates, the great physician, wrote three books on hygiene and sanitation. He was the first man to suggest that water be boiled. Rome's sewage systems and aqueducts are considered unusual even today. She conceived the idea of building large aqueducts with which to purify the water that was obtained from the old polluted Tiber. Cloaca Maxima, which was built 2700 years ago, represents one of their ideas of sanitation, and is still in use today.

After the fall of the Roman Empire, the era of asceticism had a great deal to do with hindering any progress in health care. Men were interested in preparing for the future life, and anything concerning the human body was unclean. "The soul was the one object of solicitude, and the body was regarded with contempt. Uncleanliness and physical neglect were not incompatible with intellectual

eminence." These men would expose themselves to cold and ignore even common rules of bodily care. This to some extent was the reason that Europe became such an unclean, unsanitary place, overswept by plagues. The Renaissance caused the people to break away from the influence of the monasteries and revive their interest in health. Martin Luther recommended bodily exercise, and Comenius, a Moravian pastor and teacher, included in his writing the care of one's health along with other routines of the day.

John Locke and Jean Jacques Rousseau, two of the most eminent early educational philosophers, advocated health as an important factor in education. Locke dwells at some length upon the hygiene of childhood, giving rules by which one may obtain a healthy body; plenty of fresh air, a plain diet, and clothing not too warm and strait.

Rousseau revolted against the tendency of his time to place everything on an artificial basis. Society was artificial, conduct was governed by etiquette, and intellectual learning was placed in the background. Children were treated as adults, that is, they were dressed up like their parents, and their activities were based on those of adults instead of childhood interests. Rousseau advocated the return to Nature for education, and gave to the world the imaginary education of a boy called "Emile." He was sent from the city to the country in order that he might not be

contaminated by civilization. From birth to five years of age Emile's only concern in life was to grow up and be healthy. He was placed under healthful conditions, letting nature take its course. Everything was done through physical activity under hygienic surroundings. From five to twelve years some emphasis was placed on intellectual and moral development, but the greater time was spent in physical activity—learning by actual experience. During his entire education, started from birth and ended at death, he insisted that a healthy body was necessary. "Make him robust and sound in order to make him wise and reasonable." (1)

During this time mind and body were considered as two separate entities. The mind was trained by developing certain faculties; the body was trained by adhering to certain rules of health. Locke and Rousseau bring out that philosophy in their writings. Locke says, "Keep the body in strength and vigor, so that it may be able to obey and execute the orders of the mind." Emile's education showed this dualism also. "The body must needs be vigorous in order to obey the soul." This dualism of mind and body dominated education for a long period of time and there are remnants of it today.

However, Rousseau's contribution was great, for he gave to education the idea of learning through experience. Emile's natural education was undirected and everything was acquired through experience, which is one of the main

(1) Rousseau, J. _Emile_
(2) _Ibid._
essentials in modern education.

His contribution to health instruction, although it was not known by that name, cannot be overestimated, for he placed it as the first essential in the child's training. For a man of Rousseau's prominence to place health above everything else at a time when the three R's were almost the only subjects included in the curriculum, was a great stride. Although his influence was very great in both Europe and America, educators were rather slow in placing in the curriculum any subjects pertaining to health. In 1837, the first physiology textbook was introduced into America.

The nature of the subject matter presented in this text and the way of presenting it showed the influence of formal discipline. The children were expected to memorize the entire circulatory system, digestive system, bones of the body, and other parts of the anatomy. The memorizing of facts would not only aid in the protection of one's health, but would also exercise the memory "faculty." The practical application of subject matter was not even considered in so far as any assistance to the betterment of health was concerned. As Dewey says, subject matter was treated as something "comparatively external and indifferent, its value residing simply in the fact that it may occasion exercise of the general powers." This memorizing of facts in the school predominated throughout the nineteenth and at the beginning of the twentieth century.

However, this era marked a great change in the thinking of men. There was a great development of the physical and biological sciences, which caused a decided turn toward the scientific conception of mind and matter. Probably among the greatest contributions to this scientific attitude were the discoveries of disease in relation to health made by Pasteur and Koch from 1857 to 1871. In so far as real knowledge of health is concerned, their discoveries were the first great step in modern health education. Pasteur's and Koch's discoveries concerning bacteria gave the schools a golden opportunity to educate the younger generation in this newer knowledge; but instead, the old physiology continued to be used with its abstract treatment of knowledge of the body. As Schroeder states, "If the schools had incorporated into the school program in the early stages of health instruction the results of the discoveries of Pasteur, and in addition the newer knowledge gained in respect to nutrition, vitamins, and the like, instead of holding to the subjects of anatomy and physiology which children were required to study, the results would have been, no doubt, very different today."

Another great influence that perpetuated the old abstract physiology in the curriculum was Herbert Spencer. He, like Rousseau, places health as one of the main essentials in education. Spencer advocated that subjects should be classified according to the basis of a preparation for living. He has five essentials that constitute a human life

(1) Payne and Schroeder. Health and Safety in the New Curriculum, p. 15
or a complete living program. They are:

1. "Those activities which directly minister to self-preservation.
2. Those activities which, by securing the necessities of life, indirectly minister to self-preservation.
3. Those activities which have for their end the rearing and discipline of offspring.
4. Those activities which are involved in the maintenance of proper social and political relations.
5. Those miscellaneous activities which make up the leisure part of life devoted to the gratification of the tastes and feelings." (1)

The first essential as listed above, incorporates a very inclusive knowledge of health. However, Spencer's conception of the study of health is purely knowledge concerning the physiology of the body, with no idea of its functional value. A quotation from his book, "Education," illustrates how he stressed a knowledge of anatomy instead of its application.

"Nature has provided efficient safeguards to health, lack of knowledge makes them in a great measure useless. If anyone doubts the importance of an acquaintance with the fundamental principles of physiology as a means to complete living, let him look around and see how many men and women he can find in middle or later life who are thoroughly well... Sarcely is there one to whom you put the question who has not, in the course of his life, brought upon himself illnesses which a little knowledge would have saved him from. Here is a case of heart disease consequent on a rheumatic fever that followed reckless exposure... Men who would blush for saying 'Iphegenia' instead of 'Iphigenia,' or would resent as an insult any imputation of ignorance respecting the fabled labours of a fabled demi-god, show not the slightest shame in confessing that they do not know where the eustachian tubes are, what the actions of the spinal cord are, or how the lungs are inflated. While anxious that their sons should be well up in the superstitions

(1) Spencer, H. Education, p. 15.
of two thousand years ago, they care not that they should be taught anything about the structure and functions of their own bodies—nay, would even disapprove such instruction." (1)

Professor Dewey says of Spencer that he believes scientific knowledge to be most valuable, but assumes that this knowledge can be given in "ready-made form." "There is no magic attached to material stated in technically correct scientific form. When learned in this condition it remains a body of inert information. Moreover, its form of statement removes it further from fruitful contact with everyday experiences than does the mode of statement proper to literature." (2)

Some progress was made during the latter part of the nineteenth century in the content of physiology. Some practical application of the subject matter was given space along with the technical material. Frank Overton in his physiology for intermediate grades shows the effect of alcohol and tobacco on various organs in the body. However, the technical knowledge had no direct connection with the application, so the subject had very little value for health instruction.

The doctrine of formal discipline dominated education for so many generations that to undermine its influence meant a scientific approach through experimentation and investigation. However, before this was done, several educators and philosophers exposed the fallacies in faculty psychology.

Herbart considered the soul as a unity, with no faculties

at birth, but acquiring ideas by "entering into relation 
with its environment through the nervous system. Ideas be-
come active through relation to one another in a system of 
mental states or strains. He applied the term "apperception"
to the mind or soul, which gives it the ability to understand 
its experience in terms of previous experience. He focused 
attention upon the content of subject matter, thus making it 
possible to enrich the program.

William James in approaching the theory of formal discip-
line from a scientific angle brings the biological phase of 
mind under consideration. The idea that mind and body are 
two separate entities is a fallacy when considered biologic-
ally. He says:

"The slightest reflection shows that phenomena have 
absolutely no power to influence our ideas until 
they have first impressed our senses and our brain. 
The bare existence of a past fact is no ground for 
our remembering it. Unless we have seen it, or 
somehow undergone it, we shall never know of its 
having been. The experiences of the body are thus 
one of the conditions of the faculty of memory being 
what it is. And a very small amount of reflection 
on facts shows that one part of the body, namely, 
the brain, is the part whose experiences are direct-
ly concerned. If the nervous communication be cut 
off between the brain and other parts, the experi-
ences of those parts are non-existent for the mind. 
The eye is blind, the ear deaf, the hand insensible 
and motionless...The delirium of fever, the altered 
self of insanity, are all due to foreign matters 
circulating through the brain, or to pathological 
changes in that organ's substance...Our first con-
clusion, then, is that a certain amount of brain 
physiology must be presupposed or included in psy-
chology."(1)

After bringing in the physiological evidence relating 
to mind and body, he endeavored to refute the old conception,

(1) James, W., Psychology, Volume I, p. 4.
that each faculty could be trained by merely exercising it and that it would transfer to other fields. James questioned actors concerning their memorizing various parts, to ascertain whether practice had improved their memory and it was found that their memory had not improved, but the practice had increased their ability to study a part systematically.

James gives an example of a man who increased his capacity to memorize by repeating to his wife at the end of the day all that happened. At first he was unable to recall more than a few incidents, but after some practice, he could repeat each happening. James says it was not due to increase in memory, but to concentration on the events of the day. If he had not paid any attention to the various incidents, he would not have retained them any longer than before the practice. "All improvement of memory consists, then, in the improvement of one's habitual method of recording facts."

"Of two men with the same outward experiences and the same amount of mere tenacity, the one who thinks over his experiences most and weaves them into systematic relations with each other, will be the one with the best memory."

In order to further question the transfer of memory, James conducted an experiment on himself. He memorized one type of poetry, Victor Hugo's "Satyr," then a part of "Paradise Lost," and returned to the former. His results showed that before training, it took him 50 seconds to memorize

(1) James, op. cit., Vol. I., p. 66
(2) Ibid., p. 652.
a line, and after training it took 57 seconds. The exact opposite of the theory was the result. Since he was quite fatigued when he conducted the experiment, he felt that his conclusions might not be accurate; so he asked Dr. Burnham, one of his colleagues, to try it. The latter learned 16 lines of "In Memoriam" for 8 days—the time was 14-17 minutes, daily average 14\(\frac{1}{2}\) minutes. Schiller's translation of the second book of the Alzaid into German was used for the second trial. He learned 16 lines daily for 20 days. Then he returned to "In Memoriam." The maximum time was 30 minutes, minimum time 10 minutes, and average 142 7/48. Dr. Burnham thought conditions were not as favorable as the first time he memorized "In Memoriam," so he waited until conditions were almost identical, and then tried it again. The result was minimum time 8 minutes, maximum 19\(\frac{1}{2}\), and average 14 3/48. The results did not indicate any remarkable advancement in increasing one's memory capacity. The experiments of these men overthrew the doctrine of formal discipline by depicting some of its fallacies; but it was left to Thorndike to really explode the theory.

Instead of training the memory, reason, and other faculties, he insisted that instincts and original tendencies were the starting place for education. Experiments were conducted with animals in various complicated situations, and the famous S\(\rightarrow\)R bond theory was the result.

According to Thorndike, everyone started with the same instincts, such as fear, hunger, and thirst. All learning
was reduced to situations and responses--situations created from original instincts--responses which were governed by the situation. A certain noise will cause the instinct of fear to respond. "Original nature, for Thorndike, is reducible to inherited specific connections between stimuli and responses; and learning or acquired behavior is explained in terms of specific stimuli and special responses related in the lifetime of the individual."

As Thayer points out, it has been found that instincts are much more flexible than was commonly supposed, and more adaptable to environment. Children's instincts are all different, and the response to a situation would not be the same for two people. "The 'instincts' of two children are never found to be identical; they differ both as regards the objects that constitute the 'situation' and the behavior which is termed the 'response.'" As Professor Dewey explains,

"It is customary to suppose that there is a single instinct of fear, or at most a few well-defined sub-species of it. In reality, when one is afraid, the whole being reacts, and this entire responding organism is never twice the same. In fact, every reaction takes place in a different environment, and its meaning is never twice alike, since the difference in environment makes a difference in consequences. It is only mythology which sets up a single, identical psychic force which 'causes' all the reactions of fear, a force beginning and ending in itself...There is no such thing as an environment in general; there are specific changing objects and events." (3)

(1) Thayer, V. T., Passing of the Recitation, p. 100.
(2) Ibid., p. 101.
There is the whole secret of education—a changing environment as a basis for education. Heretofore man has been educated according to custom to enable him to fit into a static society which allowed for no change and caused education to lag far behind in relation to other activities of the world.

Education should be conceived as follows: the child is born with impulses to activity, but how they will respond will depend upon a factor which was pointed out above as extremely important—a changing environment. Since each individual's instincts and impulses are different, the reaction will depend upon the environment at the time. Each time the situation is changed, there will be a reorganization of activities. In short, environment largely controls our lives. Education, to be of value, must recognize this fact. "The self is not something a child starts with and carefully preserves intact throughout the vicissitudes of life. It is rather the product of a fruitful intercourse between inner and outer conditions." (1)

Education, recognizing this change in the material world, should provide situations which are ever changing, in order to be of value to the child. Impulses and interests are all that a child has at the beginning, and these are both governed by his surroundings. For this reason, it is necessary for education to provide the environment which will form attitudes that make for desirable responses. It

It becomes an education wherein the child is given a chance to adjust his behavior through new situations and free interplay with the group instead of having a cut and dried response. Education with this ideal in mind would mean that the individual's behavior would grow out of his association with the group, and through his experience and shared interest make it a social contribution from within and not an external force. All activity is governed by this internal urge which is directed by the shared interests and actions of those participating. The whole educative process must be a social situation.

With the philosophy of education changing so rapidly within the last twenty-five years, resulting in the enriched curriculum and change in method, health education found itself in a sad predicament. Up to the time of the World War, but few changes had been made in the old physiology—changes so slight that they were scarcely noticeable. The subject was a failure, because the material did not attempt to interest the child, but merely taught him the dry facts of anatomy and physiology with no idea of its use or value.

The need for revising the old physiology was brought to the attention of educators when one-third of the men examined for military duty during the World War were unable to meet the health requirements for active service. On the other hand, it was found that ninety per cent of the babies born in America had only normal physical defects. What had happened to these men from birth to manhood? Most of the
defects discovered could have been prevented possibly, if the right type of health instruction and physical education had been conducted in the schools.

Health Education, to be of value to the child, must be conceived in terms of social outcomes, and opportunity must be given to develop healthful habits and attitudes. Personal habits and practices in relation to the prevention of disease becomes not only a personal hygienic problem, but also involves matters in public health. An individual guides his conduct for the best contribution to the social group.

Since the child is the primary interest, he should be considered first. Instruction in health, to be of value to him and society, should create an inward desire for healthful habits, and not take the form of a compelling external force. He begins to form physical habits from the time he is born. As his experience in this world increases and "intelligent self-direction" begins, it must be kept in mind that habits formed with no appreciation of their value will not make for desirable health habits that are permanent. "In all that we do we must consider the child's physical well being, but always our aim must be to build as best we can a progressive self-direction, which unceasingly considers and decides on the consciously sought and carefully weighed merits of the alternatives before one."(1)

Realizing that the teaching of anatomy and physiology

(1) Kilpatrick, W., Reconstruction Theory of Education, XXXII, Teachers' College Record, March, 1931.
did not function in the child's life as given in the traditional manner, a change in subject matter was made. The name of physiology gave way to that of health education. The anatomical approach was replaced by a study of health in terms of life functions. Instead of learning the technical names of all the teeth, instruction was given in mouth hygiene. Tooth brushes were used in class, and drills were invented to teach their use and to create a healthful habit. Stars were given to each pupil who used the tooth brush daily for a period of weeks. The feeling of cleanliness which accompanies the cleaning of one's teeth will be experienced by the individual, thus stimulating a desire to continue the habit. An attitude of cleanliness towards personal habits can be created.

The study of health seemed to attract the attention of the public and it has become one of the most talked about subjects in the curriculum. In the last ten years it possibly has had as much, if not more, publicity than any other subject. Many fads have been introduced under the name of health education, some of which are fanciful and useless, while others have had their place. Advertisements claiming miraculous cures are of little value, while the craze for sun baths as an aid to health has made its contribution. There have been so many ideas and suggestions on the subject, that a discrimination must be made, and it is the school's responsibility to assist the child in doing this.

The child finds himself in many conflicting situations,
and each one leaves its mark on his personality. His ability to adjust himself to the best social outcomes depends considerably on his past experience or education. Mental hygiene has come to play a great part in this adjustment. Formerly a child who seemed to be maladjusted to his environment was called queer or peculiar. However, it may be found that some former experience has caused the whole difficulty; and with the proper direction and instruction his whole mental attitude is changed. Health Education can assist the child in this adjustment by creating healthful habits and attitudes. The subject of sex may be handled to mean one of the finest elements in the child's life, or, again, it may be dealt with in such a way as to cause his destruction.

It is evident that health education must determine what type of work will best assist in this integration of the child in society. "Deeply felt purposes, wisely chosen, well thought through, and successful conducted, work clearly for integration."

(1) Kilpatrick, W., Reconstruction Theory of Education,
CHAPTER II.

This chapter includes a summary and interpretation of a questionnaire which was sent out to various cities in the country for the purpose of finding the current practices in Health Education. Approximately one hundred and fifty copies were distributed. Out of this number, only forty replies were received. However, even this small number gives us some indication of what is being done in the field of health education in America, inasmuch as the replies were received from cities located in the different sections of the country. Following is a summary of the information which the questionnaire yielded.

A. Health Education Requirements.

I. Compulsory Health Education

a. 35 Systems require it in the schools.
b. 2 Systems do not require it.
c. 3 Systems limit the time allotment so much as to make the requirement of no consequence.

II. General Practices

a. 17 Systems require it once a week.
   9 Systems require it twice a week.
   3 Systems require it three times a week.
   2 Systems require it every day.
   9 Systems do not designate periods required.

b. Conducted as a special subject.

  15 Systems—a special subject.
  17 Systems—a part of physical education.
  7 Systems—a part of science and home economics.
  1 System—no special classes.

c. Who conducts health education classes?

  24 Systems—physical education instructor.
  3 Systems—special health education teacher.
  2 Systems—an academic teacher was responsible.
  4 Systems—physical education teacher, special health teacher, and academic teacher.
2 Systems--physical education and health teacher
5 Systems--teachers not reported

d. In what grades required?

23 Systems in 7th, 8th, and 9th grades.
6 Systems in 7th and 8th grades.
1 System in 9th grade.
1 System in 7th and 8th, and in the 9th grade
   have home nursing.

1 does not require it except when time is available.
7 include it in other subjects.

B. Physical Examinations in the School.
I. Required for Girls.
a. 6 school systems require a physical examination
   upon entrance into junior high school.
b. 11 Systems annually
c. 2 Systems semi-annually.
d. 1 System in 8th grade only.
e. 2 Systems in 7th and 9th grades only.
f. 1 System in 7th grade only.
g. 1 System uses elementary school records.
h. 4 Systems have physical education teacher give
   the examination (superficial one only).
i. 7 Systems none.
j. 5 Systems indefinite.

C. Staff and Duties

I. School Nurses.
a. 30 Systems have nurses.
   5 Systems do not have nurses.
   1 System has a matron.
   1 System gives no examination.

b. Time spent at each building ranges from half a day
   per week to full time.

c. Duties while at each school.
   1. First aid assistance.
   2. Home contacts
   3. Supplementary instruction in health, cooperating
      with physical education instructor.
   4. Assist doctor in routine examinations.
   5. Accept or reject excuses for absence.
   6. Help remedy physical defects.
   7. Check all problems presented to her by the health
      teacher, who also acts as health counsellor,
      and any problems from the office.
8. Talks at assembly and Parent-Teachers' Association meetings upon definite health topics.
9. Weighing and measuring children, and inspection of head and eyes.

II. School Doctors.

a. 34 Systems have school doctors.
   6 Systems do not have school doctors.

b. The time spent at each building
   1. Varies from 2 hours to 2 days per week.
   2. Some systems make him subject to call only.
   3. One system has him report to Board of Education
      Building one hour per day, and all pupils are
      brought in at that time.

D. Defects of Children.

I. how discovered?

a. Thorough examination by Doctor.
b. Thorough examination by physical director or
   nurse (superficial only)
c. Reports from office or members of faculty which
   are checked by nurse, doctor, or physical director.

II. Methods of Checking for Results.

a. Referred to family physician--if unable to pay,
   sent to dispensary.

b. Notes sent home and parent consultation requested.
c. Sent to physical director or dispensary and checked
   on from time to time to see if corrections have
   been made.

d. Checked by nurse during monthly inspection.

e. Health counsellor.--a teacher in the system who
   does all follow up work, sometimes taking children
   to clinic for examinations.

f. Teeth--Dental hygienist; Eyes--nurse; Contagious
   disease--school nurse; Posture--physical education
   instructor.

g. Posture tests.

h. Health card kept and marked after second investiga-
   tion. If not corrected, try to convince parents
   of the importance of correction.

E. Methods of determining whether health education
   carries over into the home.

I. The improved health of the children and their
   attitudes in contact with other children.
II. The rapid correction of defects and notes from parents giving cooperation.

III. Thorough examination both written and oral—Home visits.

IV. Discussion at various times with pupils, followed by informal reports to health teacher. General physical condition of pupils, especially in cases where individual help and advice is given.

V. Parent-Teachers' Association cooperation in health projects.

VI. Weights checked—home calls and conferences with parents help in carrying over.

VII. Cards taken home, signed, and checked by parent.

VIII. Teeth, nails, personal cleanliness checked weekly in the gym; unsatisfactory rating here usually brings conference with family.

IX. Visits by school nurse and home-room teachers not very satisfactory; parents often reticent about discussing their child's health, especially if there is a defect.

X. Use of standardized health knowledge tests.

XI. Use of health checking charts.

F. Correlation of health education with other subjects in the Curriculum.

I. Definite correlation.

a. Home Economics (cooking, proper clothing, etiquette).

b. General Science (reproduction, growth, adolescence, and sex hygiene).

c. Physical Education.

II. Nominal correlation

a. English—study of scientists, themes on health subjects.

b. Art—posters

c. Civics—community hygiene and industrial hygiene.

d. Geography—healthful locations.

III. Theoretically considered important, practically submerged.

IV. Dean of girls may assist in getting correlation through appeal to other members of the teaching staff.

G. Cooperation of the Teaching Staff.

I. 26 Systems are able to get cooperation.

2 Systems find it difficult.

4 Systems do not commit themselves.
7 Systems find it much varied, but can get cooperation better if the teachers are given a specific thing to do.

E. Health Projects Included in School

I. 28 Systems include them.

II. 7 Systems do not.

III. 5 Systems do not commit themselves.

IV. Kinds of projects.
   a. Posture contests
   b. Health play.
   c. Teeth honor roll, better posture week, and Balanced lunch (check trays in lunch room.
   d. This is conducted through cooperation of nurse, physical education and home rooms.
   e. Competition between boys and girls in general health and correcting defects.
   f. Auditorium assemblies.
   g. Advocating of child health week.
   h. Clean-up week.
   h. Philadelphia annually presents a health trophy to the school attaining the highest rating in a survey conducted by Division of Physical and Health Education. Factors included are personal cleanliness of students, building cleanliness, physical vigor (based on test and aims included in physical education) correction of remedial defects and hygiene information test.

I. Contest for healthiest boy and girl. Every pupil is given a rating, and the final selections are examined thoroughly, even to bone X-rays. While the results of the contest may not be quite correct, that is, we may not pick the really healthiest boy and girl, yet it draws the attention of the children to health.

J. Work with undernourished children--given free milk, checked weights and diets.

K. Weight gaining campaign--home room method.

L. Fresh Air talks.

M. May Day games and other exercises concerning health.

N. Surveys made of various phases, such as, school lunch and physical findings. Results are displayed by health bulletins posted in home room. Letters to parents are distributed with report cards each time the latter are issued.
I. Course of Study.

I. Number of years health education has been included in curriculum.

a. 1 System one year  
b. 2 Systems two years  
c. 3 Systems three years  
d. 1 System four years  
e. 3 Systems five years  
f. 4 Systems six years  
g. 1 System seven years  
h. 2 Systems eight years  
i. 2 Systems nine years  
j. 5 Systems ten years  
k. 1 System twelve years  
l. 1 System 13 years  
m. 1 System 15 years  
n. 1 System 17 years  
o. 3 Systems several years  
p. 9 Systems gave no number

II. Length of time present course of study has been in use.

a. 5 Systems 1 year  
b. 3 Systems 2 years  
c. 4 Systems 3 years  
d. 1 System 4 years  
e. 2 Systems 5 years  
f. 1 System 7 years  
g. 1 System 8 years  
h. 1 System 9 years  
i. 1 System was revising their course of study new
j. 7 Systems had no general course of study included in physical education or other subjects
k. 3 Systems gave no answer.
l. 1 System introducing new course in September, 1932.
m. 1 System has revised the course 5 times in ten years
n. All systems that have included health education several years have revised their course of study except two, according to the questionnaire.

III. Organization of Course of Study.

a. 25 Systems have had their course of study organized by a committee from city or school faculty.
b. 2 Systems use one issued by State.
c. 5 Systems use a text book with supplementary reading.
d. 3 Systems include it as part of other subjects, such as, science or physical education.
e. 1 System uses a course of study organized by physical education teachers.
g. 4 give no answer.

IV. Does Course of Study meet adequately the school health problem?

a. 15 Systems feel it meets their problem adequately.
b. 9 Systems feel it does not meet their problem.
c. 10 Systems doubtful or ignore the question.
d. Reasons for meeting problem adequately:
   l. made definite progress and the outcome points towards reasonable achievement.
2. It covers every phase of health.
3. There must be standards set and minimum essentials which the course included.
4. Children come from good homes; don't need personal hygiene.

Reasons for not meeting problem adequately:
1. More time is needed on personal habits.
2. Classes too large for best work.
3. State text books are a drawback.
4. More interesting procedures in outside work should be given.

V. Emphasis placed on Mental Hygiene.
   a. 20 Systems include it either directly or indirectly.
   b. 10 Systems place no emphasis.
   c. 10 Systems do not commit themselves.

Health Education as a subject required in the junior high school has made such rapid strides within the last few years that now over 87\% per cent, apparently, of the cities in the United States include it in the curriculum. Since the curriculum within recent years has embraced so many different subjects, time has become a precious item. Subjects were allotted so many hours a week, and, of course, academic courses were given the preference. Others were given the time that was left. Health Education, being one of the last to gain a place, did not have much chance in this struggle for time and space.

Any time a new course is suggested, the officials groan, as they say that the curriculum is already overcrowded. The old mathematics-Latin subjects may not compare in value with newer ones, but the powers that be are sometimes very reluctant to change. Such is the situation in which Health Education is placed. As is shown by the questionnaire, 40\% per
cent allotted one period a week to health. The other systems varied from two to five periods a week. Approximately 6 per cent require it five days a week, which is the ideal situation; but for the reasons stated above, the time allotment is very meager.

Under such conditions it is difficult to develop progressive health education. The child comes to the health class one period of forty minutes each week. He does not come in contact with the instructor again until the following week. How much benefit can be derived from health education in such a situation? If the schools expect to educate individuals in health habits and attitudes, contact once a week will accomplish very little.

Health education and physical education have been interpreted to mean the same thing; but educators in these fields are striving to educate the public to the fact that they are interrelated but separate subjects. Since the two have been associated together so intimately, the trend has been to have the physical education teacher take charge of health education. Such an arrangement is desirable if he has had training in health work, but without it, a progressive health program could not be realized. As shown by the questionnaire, 60 per cent of the school systems place the burden of health teaching upon physical education teachers, and 40\(\frac{1}{2}\) per cent include health as a part of the physical director's program.

This again brings up the subject of time, which was
mentioned earlier in the chapter. The ordinary allotment for physical education in a school program is two periods (averaging forty minutes each) a week. If health teaching is to be included in the time assigned, a definite period should be designated for it, otherwise one, if not both, phases of the work, will suffer. Although such a meager portion of the school week is allotted to health work, we find encouragement in the fact that $57\frac{1}{2}$ per cent of the systems require the subject in all three grades of the junior high school. Consequently, even though the time is short according to per capita per week, by making it a required subject in all three years, the child can be made health conscious to at least some degree. In order to assist in the teaching of health, physical examinations of all students are desirable. This gives the health instructor a basis for teaching those things that are within the child's experience. The discussion of various means of correcting defects will be clearer if he has a conception of his own deficiencies.

The student is weighed each month and a graph is kept, showing the increase or decrease. After following suggestions given by the health instructor, some children have gained from fifteen to twenty pounds in a short period.

A great many of the school systems make use of physical examinations; 55 per cent require one at least once, while in junior high school. The ideal is to have the examinations annually, and $27\frac{1}{2}$ per cent are able to do so; but this
is not possible in many cases, because of the small staff in charge.

The work in health education is greatly assisted by the help of doctors and nurses. The physical defects of the children can be handled more intelligently; they are brought into direct contact with health problems, and the contact between home and school is closer. The nurse makes home contacts in regard to problems in health, such as gaining the parents' consent in removing Mary's tonsils in order to improve her health and progress in school. This is especially true among the large foreign element in a city.

However, again time becomes the element of difficulty. As shown by the questionnaire, the time that a nurse spends in one school varies from half a day per week to full time. Where a nurse spends only half a day per week in a school, the time is so short that it would seem impossible that she could be of valuable assistance. The duties expected of her, such as checking skin disease, defective teeth and eyes, first aid, and assisting the doctor in physical examinations, take a considerable amount of time. In a junior high school of 1200 students, a nurse reporting half a day a week to do her various duties would have difficulty in getting through half of her ordinary routine, without considering anything extra that might occur.

Let us glance into a school dispensary for a moment and watch the general routine. When the nurse arrives, there are perhaps a dozen children waiting to see her. Some are
to be examined and questioned as to eyes, teeth, weight, and other defects. In the midst of the examinations someone rushes in and says that a boy has cut his hand severely in one of the shops. The nurse must drop everything and rush him to the hospital to have his hand dressed, because there will have to be some stitches taken. The half day for that week is ruined. Of course these special cases do not occur every week. However, as her various duties are listed, it would be a physical impossibility to do justice to any of them. They are essential elements of a health program, and for a nurse to be a vital part of the work, she would have to spend more time at a school. Otherwise her contribution to the work would be very meager.

School doctors, as mentioned above, are essential to a well balanced and organized program. Eighty-five per cent of the school systems have them, with the time ranging from two hours to two days per week. If the doctor spends only two hours a week at a school, the work would have to be so arranged that only the urgent or emergency cases would be brought to him. All the minor cases could be handled by the nurse, which is another argument in favor of more school hours for the nurse.

One of the important items in the health program is not only to discover the defects, but to get them corrected as well. Here is where the health teacher has an opportunity to develop an interest and an attitude of cooperation. This involves a broad vision on the part of the instructor, for
Just the mere knowledge of hygiene and physiology is not enough. As Doctor Oberteuffer says, "Health instruction now...uses the details and generalities of physiology in answer to rather than as sources of the problems of life. The teacher, therefore, is called upon to understand and apply the principles of today's educational philosophy and psychology before teaching the recommended material."

The methods used to discover whether the defects have been corrected do not vary to a large extent. The most outstanding ones are: to send a note home to the parents, explaining the defect and requesting a consultation; and to have inspection by the nurse, in which all defects are checked. One system breaks the work into several parts. The inspection of the teeth is given to a dental hygienist. Eye and contagious diseases are assigned to the nurse. Posture is corrected by the physical education instructor. This would probably mean a more thorough investigation, for not all systems have dental hygienists.

The whole system of checking will be useless unless there has been a cooperative attitude created. One could check forever, and get defects corrected, but if the individual is doing so just from external coercion, time is wasted. A girl was heard to remark, "When I came away to school, I promised my mother to get my pint of milk a day. However, I did not say anything about drinking it." Who was being cheated? It should be the aim of each school system

(1) Oberteuffer, D., Health and Physical Education Series of the State of Ohio, Department of Education.
to develop in its pupils the desire not only to correct any existing defects, but also to acquire proper health habits which would last long after their school days were ended.

As shown by the questionnaire, 60 per cent are striving toward that goal. Various methods are used, such as parent-teachers' association cooperating with health projects, and discussion at various times with pupils, followed by informal reports to health teachers. The general physical conditions of the pupils was found to be better especially where individual help and advice had been given. This is something rather intangible, but it is interesting to know that work is being done in that phase of the program, and teachers are not depending on health verbalisms alone.

"Learning activities should desirably grow as richly and honestly as possible from the child's past, so as to provide rich connections of learning. Just as the self is built of what is learned, so each self is related through its learning to the life about. The two are but inner and outer aspects of the same process, but both need to be kept in mind: the self, that it may grow richly and in integrated fashion; what is learned, that it may more and more adequately include life and more and more adequately provide for its efficient management." (1)

Health education should not be confined to the health classroom, but integrated with those subjects that make for a wider understanding and richer experience.

Correlation with several subjects of the curriculum is very definite, as shown by the questionnaire. Home economics (cooking, proper clothing, and etiquette), general

science (reproduction, growth, adolescence, and sex hygiene), and physical education— all are working with the same end in view— better health habits and attitudes. Those answering the questionnaire found possibility of correlations in other subjects, such as English (study of scientists and themes on health subjects), art (posters), civics (community and industrial hygiene), and geography (healthful locations). This integration is considered important in eighty per cent of the systems. Such a correlation is considered a vital part of the curriculum throughout the country.

To make the health program a really integrated one, it is necessary to have the cooperation of other members of the staff, who already have a teaching load which is not to be envied. However, it is encouraging to note that 60 1/8 per cent of the systems have no difficulty in getting the cooperation of the teaching force.

Health projects within the school, as a means of creating interest, is generally practiced, as is shown by the questionnaire; for 61 per cent conducted a health project of some kind. The type of project used is generally about the same, including posters, posture and clean-up week, charts, and some form of checking. One system emphasized attention to undernourished children, on account of the special need for it. Each individual school working out its own projects instead of the city combining in one large project, as one system does, seems to be more prevalent, and the writer would say, desirable. This city presents annually a health
trophies to the school which attains the highest rating in a survey conducted by the Division of Physical and Health Education. Factors considered are, personal cleanliness, building cleanliness, physical vigor (based on tests and aims included in physical education), correction of remedial defects, and a hygiene information test. So much time would be spent acquiring a good rating, that we question whether there would be any time left to devote to individual and school needs.

In another city a contest was conducted to discover the healthiest boy and girl in the city. This was done by a rating system which included physical perfection, personality, and mentality. The final selection was determined by taking X-Ray pictures in addition to examinations, both physical and mental. At the time it was being conducted, the students were very much interested and enthusiastic; but after the selection had been made, enthusiasm subsided almost at once. It would seem much better to allow each school to conduct its own projects, having them grow out of its own experience, than to make an artificial basis for interest.

However, these examples indicate that the health educators are striving to find the best possible method to make the child health conscious, and are not content to use the old methods. Such an experiment has many possibilities.

The course of study in health education indicates the desire for change, and appears to be organized as a result of the problems confronting each school, inasmuch as 60% per
ent have a course which was formulated by a committee from the city and the school. The longest any course has been in use without revision is nine years, and that number applies to only one system. There are five courses which have been in use only one year, and eight courses which have been used only two years. One system is in the process of revising its course now. The desire for improving the course is an indication that health educators realize that this rapidly changing world in which we live must be recognized. So many new discoveries are being made that in order to give the child the best material available, there must be constant change. As Kilpatrick says,

"It appears that we must have a philosophy that not only takes positive recognition of the fact of change, but one that includes within it change as an essential element." (1)

If one is to judge from the conclusion of the questionnaire, health education is recognizing this change. All systems except one that have included health education several years, have revised their course of study. One has revised it three times within the last ten years.

The recency of health education as a course in the curriculum is clearly shown when sixty per cent of the cities reporting have included such a course for a period of not more than ten years. One system has had the subject for seventeen years, which shows the slow progress that health education has made in the school. A chart will show the

distribution of the schools in respect to the length of time during which health education has been given.

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Out of the forty schools, 37½ per cent feel the present course of study meets their school health problems adequately. This is encouraging, and may be due to the large percent of courses being organized by a committee from the city or school.

The school authorities are realizing that children have a difficult mental adjustment to make in our modern civilization with its constant change, and that assistance should be given to them in school. This is shown by the results of the questionnaire, for fifty per cent of the cities recognized that mental hygiene should be a part of health education. If education tears down what the child has believed, it should assist him in his mental adjustment to the new situation. In health education there will be conflicts that
require guidance and adjustment, such as the superstition concerning disease and the scientific knowledge of it.

Health education can assist the child in these conflicts by fostering healthful mental attitudes.

From the returns on the basis yielded by the questionnaire, it is evident that the majority of cities are placing health education in the junior high school. They are handicapped by the time element in the class room work, for 40% per cent of the cities allotted only one period a week for instruction in hygiene. However, many are trying to integrate the program by conducting various health projects that involve the whole school. The courses of study are being revised or have been in use only a short time, which is an indication that health educators are striving to give to the child the best available material for this changing environment.

Health Education in this developmental stage gives an opportunity for experimentation and growth.
Chapter III.
Objectives of Health Education.

Since education has become such a dominating factor in the lives of youth, the objectives to be attained have been a subject of much discussion. There have been from one to more than fifty objectives advanced for secondary education. Bobbitt lists so many that one is lost in his maze of objectives. It is a difficult task to decide what should be included in educational objectives, but Dr. Bode gives us a clue when he says, "It is both possible and necessary to compare educational values so as to secure most effectively and economically the ends that education seeks to realize."

Since educators are thinking of education in terms of the democratic ideal, which gives every individual an opportunity to express himself to the best of his ability and yet arouses him to the conscious fact that he is a social being whose behavior is guided according to the contribution it makes to the special group of which he is a part, educational objectives should be formulated with this idea in mind. The social group to which a child belongs is not fixed, but ever changing and flexible. Since education is aiming to train the child for this changing society, the general objectives should be stated in terms of large social outcomes. The objectives formulated by the College of Education of Ohio State University seem to provide for this larger conception.

These objectives are as follows:

"1. Social Outlook. To foster and encourage the development of an ever expanding social outlook on life, by means of an environment which provides constant opportunity for intelligent response to a widening area of vitally shared interests. In connection with this active participation in social living, the school should, to a degree and in a manner appropriate to the present needs and abilities of the student, provide for the following:

A. The development of a sensitivity to the major problems of present day social living, which grow out of the conflicts between standards which are held to be fixed and consequently not subject to revision, and standards which are regarded as being relative to a constantly changing social ideal. The social heritage in its various forms should be used as a means for the securing of deeper social insight and not as the source of ready-made solutions for social problems.

B. The cultivation of a disposition to make a choice among these conflicting points of view, and an active participation in the development of a social program in accordance with this choice.

C. The development of a familiarity with the data and techniques that are necessary for dealing intelligently with social problems.

II. Intellectual and Aesthetic Interests. The discovery of personal intellectual and aesthetic interests and the development of those interests in the direction of scientifically organized knowledge and standards of judgment with reference to truth and value.

III. Practical Interests. The exploration and development of worthy practical interests, aptitudes and needs, such as those pertaining to health and vocation, designed primarily to meet the practical problems of life." (1)

Education in the past was conducted on an autocratic basis. The teacher was the law and gospel, dealing out in dogmatic fashion fixed truths to the pupil, which he must

(1) Unpublished formulation by faculty committee of the College of Education, Ohio State University.
learn and believe. His whole basis for education was to prepare for his later life. That conception had to be readjusted, for one's problems cannot be solved in advance, since things are not stereotyped as in "the good old days."

Autocratic ideals are slowly being replaced by what is known as the democratic conception of education. Instead of handing out solutions to problems, the better way of doing is to assist individuals to recognize problems and develop an intelligent method of attack upon them. The children must be placed in situations that will require them to choose largely for themselves the modes of activity which guide their behavior in order to contribute most to the social welfare. It is the responsibility of teachers to assist pupils in choosing those activities which are the most worth while for them as a part of the social group.

On the point in hand Bode makes the following statement:

"We cannot instruct pupils how to vote or how to invest money twenty years hence; we cannot tell them what friendships to cultivate, which books to read, which magazines to take, which side to support in social and political movements. What we can do, however, is to acquaint them with the main things that should be taken into account, as based on the experience of the race, so that they may have a proper sense of values when they are called upon to make their own decisions; and it is in this sense that we can provide a general education." (1)

The individual should be educated to the realization that the order of things is not fixed, that changes occur,

producing problems which can be solved only through an understanding of his environment.

The democratic ideal recognizes the worth of cultural interests as part of the development of the individual. The intellectual and aesthetic interests of the child lead him into unknown fields. This means a widening of experience and a chance for an expression of individuality which would be impossible otherwise.

The development of practical interests is found to include health and vocation as two of the main essentials. An interest in these two factors may decide the happiness of an individual. An interest in health inspires a desire for healthful living. If one chooses a vocation which is compatible with his nature, he is happy in his environment. However, if he is deprived of his health, the vocation becomes drudgery. Proper guidance in each assists in making the other more complete. The two together or either independently carries always weighty social implications, as well as individual.

The objectives as quoted above represent the social side of education and look to the development of intelligent understanding of the problems involved and to giving the child the tools with which to guide his behavior in situations that are encountered. Health Education with the moulding of the child's activities in hygiene, both personal and community, has an opportunity to make a large social contribution. The close relationship between his personal conduct and the
effect on the community is so clear, that the social and moral outcomes loom very large indeed.

Health Education objectives to be of value must be compatible with those of secondary education. The examination of various courses of study reveals a variance in statement, and yet there is a basic agreement found in all. They all emphasize the fact that correction of remediable defects is necessary and that desirable habits should be established. There should be a larger conception of health, however, which involves the control of one's environment and makes for social adjustment.

To form objectives that include all phases of health—physical, mental, social, and moral—that are related to the objectives of secondary education, should be the aim.

"Health Education can be promoted only by emphasizing all aspects of health—physical, mental, social, and moral. The teacher of health should look for normal development of the child from all of these points of view. The ideal of health is not mere freedom from obvious deformities and pathological symptoms. It is the realization of the highest physical, mental, and spiritual possibilities of the individual." (1)

Health Education in the light of modern educational theories should be directed toward ends which may be stated as follows:

1. Necessary information and training relating to individual health problems, enabling pupils to conserve

(1) Health Education--A Program of Public and Teacher Training Institutions. (Report of the Joint Committee on Health Problems in Education and National Education Association and American Medical Association with Cooperation of Technical Committee of Twenty-seven). p. 23.
and improve their own bodily resources.

2. Understanding of the environment so as to awaken social and moral health interests and attitudes and opportunity for the exercise of these.

3. Training in suitable forms of play and recreation looking toward
   a. Use of leisure in the interest of health.
   b. Social adjustment through participation in group activities.

Habits have been considered in the past as of fixed nature, with relatively little adaptability or flexibility. Instincts have been similarly regarded. The latter have been a source of much discussion amongst the psychologists and are now viewed as highly flexible groups of learned habits which the child has developed through interaction of various impulses, depending "in turn upon the outlets and inhibitions supplied by the social environment." As Dewey states further, "In the case of the young it is patent that impulses are highly flexible starting points for activities which are diversified according to the ways in which they are used. Any impulse may become organized into almost any disposition, according to the way it reacts with surroundings." Habits, instead of being reduced to a fixed, mechanical basis, are outlets for activities which are flexible and pliant. They become a source of developing interests seeking self expression through interplay and interaction with its environment.

The ability to develop habits into channels of interest and adaptation involves another element in the situation and it is the "element of meaning."

(2) Ibid., p. 95.
The view expressed by Dewey implies repeated and varied experiences which increase one's understanding or enable one to foresee more or less definitely what may befall from this or that. One item will suggest another or bring into view a relationship; and all will combine in such a way, as the individual reacts to them, that next things or consequences may be seen. In this way the meaning of the combination of factors which we call the situation comes into view.

"Behavior becomes flexible or adaptive when reflexes and habitual tendencies become servants of meanings... every normal person has on hand a certain stock of meanings by which to give direction to conduct, and the possession of a wide range of meanings implies a more or less commensurate ability to adjust conduct to the nature of the environment." (1)

The ability to detach meanings for the purpose of using them in various situations gives one a better understanding of the world in which he lives. The child is given the opportunity of gaining meanings through education that will enable him to evaluate his past experience in terms of new situations or problems. This places upon education the responsibility of providing the necessary raw material that will give occasion for applying meanings to new situations.

Transfer of training is involved here, but not in the sense in which it was formerly thought to apply. Then it was believed that if a man studied about a gasoline engine, it would help him to appreciate lyric poetry. Now the gap in the transfer is not so wide, for the elements in the situation are more identical. One is equipped with various

(1) Bode, B. x., Fundamentals in Education, p. 151.
habits, but unless they can be modified to meet the situation at hand, there is very little growth of the individual. "All conduct is normally interwoven with habit, but the fact remains that meanings furnish the flexibility and adaptability which constitute transfer of training."

The old physiology has been referred to as giving abstract knowledge with no conception of its application. Application in fact was regarded as taking place automatically through the all-sufficiency of mental transfer. Formerly knowledge in hygiene, as previously stated, meant the memorization of facts to be recited at the teacher's invitation. Now it is conceived in terms of function. The approach is made through life activities, with the physiology used as explanatory material. In the past students learned the circulation, structure of kidneys, and blood pressure before they knew anything about Bright's disease or immunization. The care of the hands is not studied by learning all the layers of the skin. The pupil learns by experience—how to wash his hands—and the physiology is given later. He is surrounded by conditions which foster this health habit; soap and towel are conspicuously and conveniently placed. As his experience increases, gaining meanings for new health situations, the washing of hands comes to involve not only personal cleanliness, but includes also the influence upon the social group, such as spreading disease. A social situation is created from which arises social and moral standards.

of conduct.

If health education is given to the pupil purely in terms of means to acquire health habits, the old formalized method of presenting knowledge has been put into practice. This would be "health for health's sake," which has no meaning to the child in changing situations. An understanding with no larger conception than self-involved, may be as good or little better than no understanding.

Dr. Williams gives an example of the experience of a young man upon entering the navy. He says,

"A college student who was leaving college to enter a naval unit was recounting plans for the last night in a certain city. The plans involved drunkenness and vice in its most undesirable forms. I called to his attention the danger in loss of health through the debauchery of himself in alcohol and by the exposure to deadly venereal disease. His reply was characteristic of those whose conduct conforms to McDougall's first stage and who measure life in terms of economic values: 'I'm willing to trade my health for the sake of those pleasures and entertainments.' When I brought to his attention the obligation that he owed to the race for preserving the quality of health that he had, so that he could pass it on at least preserved and if possible improved, he replied, 'The race doesn't look after me; why should I be responsible to the race? The problem was, then, not to give him scientific knowledge of hygiene, not to point out the economic loss due to venereal disease. He had the knowledge, and he was willing to trade health for what he was inclined to call fun. The problem was to awaken in him a response to social values, to a spirit of chivalry toward not only women and men, but also toward those who come after...He greatly needed ideals that would help to place him as an individual in the scheme of things.'(1)

Health habits which are conceived in terms of social outcomes enlarge the scope of meanings for the individual

(1) Williams, J., Personal Hygiene Applied, p. 53.
and give him a better understanding of his environment. The study of alcohol in terms of injuring the health of the individual alone does not mean very much. The yielding to temptation, the execution of many a crime has been the result of a paralyzed nervous system due to alcohol; and the social and moral outcome is really more serious than the result of drinking upon personal health.

Sex hygiene as a subject for moral conduct means nothing if given in terms of bare knowledge. Every child is vitally interested in the topic. It affords a splendid opportunity for developing meanings of sex function and conduct that will enable the child to see the social significance and their consequences. Information that is given to the child in terms of life situations and within his experience stimulates an interest which enlarges the meanings connected with habits and attitudes.

The exploitation of individuals in pursuit of health is one of the evils which health training should curb. People as a whole are not intelligent upon the subject of caring for health. This leads to several unpleasant features, such as faith healers, quack doctors, and indiscriminate advertisements. The school, to combat this harmful atmosphere, must educate the pupils to an intelligent understanding of health knowledge and problems. Here will arise a conflict between superstition and scientific knowledge, which creates a situation giving the child an experience in social adjustment by applying the meanings which he had received to
decide his conduct.

The development of desirable mental attitudes is coming to be recognized as one of the principal contributions of education. The child is exposed to so many theories, practices, and suggestions, one wonders how he is ever able to balance himself mentally. Health education can assist through the proper development of the procedures related to habits and knowledge. A wholesome atmosphere in the classroom, where hygiene problems may be discussed without fear of ridicule or scorn, does much to guide the child in acquiring balanced, sane attitudes. There is a discussion of flat feet, and upon examination it is found Mary possesses them. She becomes self conscious and imagines everyone is looking at her feet. This one small mental disturbance may develop into unlimited difficulties unless guided in the right channels through individual contact. Other cases can develop if the teacher does not have a vital interest in the results. The child's whole life may depend upon his attitude for, "The child's attitude toward life situations will largely determine his mental health and social behavior." (1)

Play is an activity toward which children need no urging. It may contribute something to the child or may lead into undesirable channels. Dewey says, "If education does not afford opportunity for wholesome recreation and train capacity for seeking and finding it, the suppressed instincts find all sorts of illicit outlets, sometimes overt, sometimes

(1) Health Program of Junior High School, Cleveland, Ohio, p. 26.
confined to indulgence of the imagination. Education has no more serious responsibility than making adequate provision for enjoyment of recreative leisure; not only for the sake of immediate health, but still more, if possible, for the sake of its lasting effect upon habits of mind."

Since the desire can safely be assumed, an interest in recreation of a wholesome kind should be stimulated. Play offers a splendid opportunity to stimulate an interest in healthful living. Without health, it is impossible to participate in play. Since interest will guide the individual's conduct, recreation should be provided which is of interest to the individual and will be of value to him in later life.

Wholesome recreation in adult life is necessary now more than ever before. Our industrial age, with its shortened hours and more leisure time, makes this a vital problem. A Cleveland high school has a clear vision of the problem. The majority of students in the school do not go to college, so most recreational activities are learned by them in high school. The physical education department decided to solve the problem by placing all the work on an elective basis and including activities which would be of value after school. Some of the activities were tennis, golf, swimming, dancing (social and tap) and bowling. The results have shown that the girls will choose the activity which they can follow later, for only a few would take up golf, due to the expense. Lack of facilities hampers such

a course of action in many situations; but other activities could receive attention, such as hiking, skating, and dancing. Whatever equipment the town may offer for promoting this type of activity, should be utilized.

Participation in play not only enables the child to have a repertoire of recreational activities in childhood and adulthood, but he must adapt his personal desires to the interests of the group. There will be conflicts requiring a decision which contribute towards social adjustment. A pampered child enters a game, and immediately discovers that he is not the "whole show," but only one of the group. He may try various antics to center the play around himself. He is either asked to withdraw or things are made so uncomfortable for him that his antics stop. After a while the child decides to play the game as a member of the group instead of a disturber. He was in the midst of a social conflict which demanded a solution. He used his past experience as a course of action, but discovered it would not work, consequently the situation took on a new meaning with change of conduct. It has been a lesson to him in social adjustment. Play thus served as a means of assisting him in adjusting his social conduct.

General education and health education seem to be striving toward the same goal. Both are trying to give the child experiences and guidance which will enable him to have an intelligent understanding of his environment, so as to adjust himself for the welfare of the social group.
striving for enrichment of the life of the child through experience that will develop worth while interests. Each is endeavoring to assist the individual in acquiring habits with large meanings, to give flexibility which guides the course of action according to the situation. They together conceive of learning as a dynamic process which enables the child to grow into a competency that is far reaching in its social implications. Each has for its basis the democratic ideal which, as Dewey says,

"signifies not only numerous and more varied points of shared common interest, but greater reliance upon the recognition of mutual interests as a factor in social control... Not only freer interaction between social groups... but change in social habit--its continuous readjustment through meeting the new situations produced by varied intercourse." (1)
Chapter IV.
An Integrated Program of Health Education

A program of health education, in order to be a vital part of the school program, should be an integrated part of the curriculum throughout. When the program is first launched upon an integrated basis, the teaching staff must be in sympathy with the work; otherwise it cannot prosper. They must realize the importance and value of such a program if it is to become an integrated course. One way of arousing the teachers to the realization of the need of this type of work is to acquaint them with the environment in which the children live. Some of them have no conception of the home life of the children. They may have a vague idea, but that is all.

The school nurse is usually in close contact with the home conditions and environment of the children. Let her acquaint the teachers with conditions verbally, and then have a committee appointed to investigate with her. Their experience would give them a sympathetic attitude and a good foundation upon which to build their program of health education. This is illustrated in the story told by Esther A. Canter and called "The Tollivers Leave Town," in Hygeia. The "Tolliver" children were always dirty at school; and the hygiene teacher bewailed the fact that when she sent Johnny out to wash, he came back looking very pale with large circles under his eyes. She heard a rumor that this family was going back to Tennessee from where they had
originally come. She was discussing the matter with another teacher, and was very much elated over the fact that they were leaving. The teachers wondered where the Tollivers were getting the money with which to go back. In a spirit of curiosity the two teachers decided to go with the school nurse to the home of the Tollivers. They called it "slumming." The school nurse warned them about their attitude in the situation. When they arrived and discovered the pathetic figure the family made, they wondered how a family could exist as did this one, and could understand why it was so difficult for the children to be clean. Their attitude was entirely changed. If every faculty were acquainted with the home conditions of their pupils, cooperation in advancing a health program would be freely offered.

There should be a staff or health committee selected from the teaching staff to organize and promote the health program. This should include the hygiene teachers, physical education teachers for both boys and girls, school dietitian, heads of the home economics and general science departments, school nurse, representatives from academic departments, and principal. The one having charge of the work might properly be known as the health counselor and all work should be under his supervision with the aid of the committee.

Some of the duties of the health counselor are to see that each department has a clear conception of the work to be done, to avoid overlapping, to get the cooperation of teachers for special cases, both in academic subjects and
physical activities; to assist in getting defects corrected through the parents' cooperation, either by letter or personal contact, and in any other problem that might arise in connection with the program. "In the last analysis, the health counselor is directly responsible to the principal (1) for the results of this coordinating and specific program."

The first essential in a scientific intelligent health program is a physical examination for all children in the junior high school. The frequency to be desired is an annual examination for each child, but the time element in the majority of cities forbids this practice. Since the ideal is impracticable, the examinations should be arranged in order to obtain the greatest possible value.

An examination upon entrance into the junior high school and one again in the ninth grade should be insisted upon in every school.

The teachers are urged to recommend any one who, as they think, should have special attention or examination, for it is possible then to observe the children more closely. Adenoids may be the cause of a child's failure; inability to see well may retard his progress; such defects may be detected by a physical examination. However, unless the teacher's attitude is one of cooperation and real interest, she is liable to miss her opportunity.

When physical defects that are remedial are found, a letter is sent home to the parents, urging correction.

(1) Uhl, W., Supervision of Secondary Subjects, p. 569.
If corrections are not made within a certain length of time, an investigation is made to find the difficulty and to discover if it can be overcome. The details of this procedure will be explained later in the chapter. A child with a heart difficulty requires a special schedule which the teacher must arrange in such a way as to avoid long distances between classes or flights of stairs. Revising schedules to fit special cases takes both time and effort. There is a "good test of the health-mindedness of a group of teachers in their willingness to go to the trouble of (1) making such adjustments." Special attention to individual schedules also involves taking into consideration individual differences among children. Such differences will have to be studied to determine the best approach to them in getting their cooperation. If a wholesale announcement were made to them concerning what they should do, the writer doubts if any progress could be made; but if their interest is aroused in the desired goal, behavior will be guided accordingly. Dewey says, "Interest is personal; it signifies a direct concern; a recognition of something at stake, something (2) whose outcome is important for the individual."

"Health is a phase of living, an element of success, and a part of good citizenship. It is desired that it should appear in its normal and proper relationships in connection with any and every subject. Care should be exercised to teach the truth in relation to health, so that each department shall teach the same thing and there will be no conflict of

(1) Uhl, J., Supervision of Secondary Schools, p. 567.
(2) Dewey, J., Interest and Effort, p. 10.
authority. The mistake of separating knowledge into "water-tight compartments" should be avoided. (1)

Each subject cannot be expected to emphasize health as the main feature, but as any health factor presents itself, such ideas should be introduced in the program to assist in developing health habits and attitudes. When special projects are being conducted and certain subjects correlate, special emphasis will be placed at that time.

The time element is of vital importance to a worthwhile program of health education. The majority of schools allow only one forty or forty-five minutes' period a week for health instruction. This is a very meager amount of time to devote to an interest so important to every individual. Although the other subjects will contribute to developing health habits and attitudes, the foundation must be laid in the hygiene class. One can readily see the handicap under which health education functions. A class of seventh grade girls meet once a week to discuss the various problems in personal hygiene. What will they really get from this short discussion? The situation is saved by an integrated program, for there are several subjects that supplement the work so well that even under the handicap, considerable can be accomplished.

Any subject matter to be of value to the child must provide for the child's growth and for his interest. As Dewey says,

(1) *Health Program of Junior High School, Cleveland, Ohio*, p. 28.
"The important question, however, is what specific subject matter is so connected with the growth of the child's existing concrete capabilities as to give it a moving force? What is needed is not an inventory of personal motives which we suppose children to have, but a consideration of their powers, their tendencies in action, and the ways in which these can be carried forward by a given subject matter." (1)

Personal hygiene gives the knowledge to the child of how to maintain his own personal health by applying it to his own life. The facts that one learns become functional and play an active part in his daily affairs. It is no longer just a mere body of subject matter to be learned like dates in history. Interest in personal hygiene should be created so the child will be given an opportunity to develop health habits and practices that make for intelligent health conduct.

Individual attention is a dominant feature in this phase of the work. The personal element between pupil and teacher overcomes the strain that exists so many times and is replaced by a friendly atmosphere. If the pupil feels that the teacher is interested in him, the fact will tend to arouse his interest, and if guided, will promote the development of worth while conduct in personal and social matters. Since the time in the class room is so limited, actual experience in most of the work must be provided in other ways. Here is where the health counselor and his staff are of so much value in the work. The class period is spent in discussing the problem under consideration. Knowledge of

facts is given a functional value through practical application.

The subject matter in personal hygiene will include such items as nutrition, emphasizing its effect upon one's weight and growth, teeth, eyes, and posture.

The care of the teeth has become one of the important interests in personal hygiene. All the students' teeth are examined by the hygiene and physical education teachers. The examination is for the discovery of decayed teeth and cleanliness with no attempt at diagnosing. It is felt that if these two items can be checked, the dentist can do the rest.

The children with decayed or unclean teeth are given a note to their parents, informing them of the defect, with a recommendation to have such condition corrected. A re-examination is given at the end of the month to those that still have cavities, and an effort is made to discover the reason for their negligence. Each child is given personal attention in order to assist him in his establishment of health habits and not cause him any embarrassment if there is some special reason, such as lack of funds. If unfortunate conditions of this nature are known, the teacher can assist the student in many ways. He feels in consequence that his instructor really wants to help him. This fact will do much toward promoting desirable mental attitudes.

One of the ways used to arouse an interest in getting the defects corrected is through the home room. The home
room teacher is in close personal contact with the group and can do much in stimulating desirable habits and attitudes. Each child without a cavity and with clean teeth has the satisfaction of seeing his name appear on what is called a "Teeth Honor Roll" card in the home room. Any time a child has his defects corrected or teeth cleaned, if he brings a note from the dentist verifying the fact, his name is entered on the card. The objective is to have every home room in the school 100 per cent within a certain length of time. This spirit of emulation not only is personal, but social in the sense that the child is placed in a situation such that his conduct must be adjusted to the standards of the group. He may be afraid the dentist will hurt him; but since his negligence deprives the home room of being 100 per cent, his behavior is guided accordingly. He is learning how to be a social being.

The correlation of other subjects that have a bearing upon the program will do much to assist in the establishment of health interests and habits. The courses that could be correlated directly with care of the teeth are home economics, art, social sciences, and English. Home economics is an important factor in the teaching of health, as it involves the discussion of food values, including proper foods for the preservation of the teeth. Posters concerning teeth may be made by the art department and placed in the halls, cafeteria, and class rooms, so that the pupils will be constantly reminded of the necessity of mouth hygiene. The English
department can have compositions and dialogues written for oral presentation. The social sciences can discuss various historical items concerning certain races of people (Egyptians and Indians, for example) whose teeth were exceptionally well preserved. The other courses could incidentally assist in the work. While the direct emphasis is placed on teeth at a definite time for an integrated program, it should be stressed whenever the opportunity presents itself. This should be done not only for the study of the teeth, but also for other health interests.

The other topics of personal hygiene could be pursued in similar manner with a slight variation in procedure. Nutrition offers an excellent opportunity for stimulating an interest in weight and correct diet. Children are interested in weight as an indication of growth.

The greater part of the weight phase of the program can be done in class. All the children are weighed in class and an individual graph kept for each child. This procedure is repeated once a month to determine any gain or loss. Special attention is given to those who are extremely underweight, to determine the best approach in dealing with the cases so as to arouse a desire to gain and find a procedure to follow in striving to gain. A monthly gain in weight in relation to height and age is an indication of good health and furnishes the child with the actual experience of what health habits contribute to him as an individual.

The other departments which can contribute toward
education regarding nutrition are home economics, lunch room, social sciences, physical education, English, art, and mathematics. The home economics group can discuss foods in relation to weight; the cafeteria can exhibit posters depicting combinations of foods; trays of balanced lunches may be sold at a special price; the amount of milk sold each day can be checked and compared with the sale of the preceding day. Social science classes can devote a portion of the time to tracing the sources of various foods; physical education can collaborate by furnishing rest periods for the underweight; compositions in English may be based on the subject; posters in art can portray food studies; mathematics classes can cooperate by making graphs of heights and weights and nutritive value of foods. A lesson in percentage might be centered upon the percentage of actual normal weight, or percentage of proteins, carbohydrates and fats in different foods.

The weighing of children in the hygiene class can be conducted in such a manner as to provide an opportunity for the development of leadership and initiative. The students are taught to weigh each other, and in doing so, they become responsible for determining one another's weight and keeping a record of it. The weighing and measuring must be done very accurately to be of any value to the student. An opportunity may be given to various members to do the work. Those who show special accuracy and ability for such procedure should be allowed to continue with the work.
Posture as an element in personal hygiene lends itself to integration in all groups. The habit of sitting at a desk in a position that promotes poor posture can be observed by every instructor and suggestions given to correct the fault. Those cases that need individual attention can be taken care of by the physical education department or the nurse.

All phases of the work, to obtain the best results, must have the parents' cooperation. So many times they have only a vague idea of what the school is trying to do; whereas if they understood, much more could be accomplished. Various ways have been suggested, such as parent-teachers' meetings with talks and discussions by the school nurse and various members of the health staff; mothers' clubs; home visits and consultations. All of these are valuable and can be used to advantage in promoting the health program, not only in the school, but the community as well.

The attainment of desirable health habits and attitudes as conceived for only personal healthful living may have a tendency not to function unless they are related to social outcomes. An individual with a communicable disease who will not isolate himself from the group in order to prevent the spread of such a disease among others, has not yet learned his place "as an individual in the scheme of things."

The study of community hygiene may contribute to this wider conception of health by giving the child an opportunity to share in the observation and investigation of his

(1) Williams, Personal Hygiene, p. 53.
environment as regards matters of health.

An investigation might be made to ascertain whether there were adequate lighting, drinking, and lavatory facilities; and to check temperature and ventilation of the rooms. The question arises whether they are able to practice the health habits with the facilities available. It is suggested that the child should always wash his hands before eating. Do the lavatory facilities permit that practice? If they should be found to be inadequate, an opportunity could be given to solve the problem. Here they are placed in a situation where conflicts may arise between themselves and those with whom they have to deal in striving to procure better facilities. The whole process is a social experience, whether it results in more facilities or not.

"Formation of habits of belief, desire, and judgment is going on at every instant under the influence of the conditions set by men's contacts, intercourse, and associations with one another. This is the fundamental fact in sound life and in personal character." (1)

One school in a large city was investigating the water fountains in the parks. One had a public golf course as part of its equipment. It was discovered that a common drinking cup was being used to supply the golfers with water. Through the work of the school it was replaced by a fountain. Such practical and personal investigation accomplished more than mere verbalisms could ever hope to attain.

The study of water could be a definite problem in

general science and could be correlated with economics and civics. General science would discuss the filtration of water and the disposal of sewage; home economics would concentrate on the value of cleanliness in handling food; while the effects of sewage disposal on the lakes and streams might be made the basis of a civics lesson.

The individual must feel his responsibility in relation to community hygiene, for the control and prevention of disease depends a great deal upon his cooperation. Of course other phases play a large part, but his assistance helps check disease and promotes health. However, his obligation can be realized only by an intelligent understanding of the situation that would govern his behavior for worth while social outcomes. Dewey says:

"A fact known does not operate the same as a fact unperceived... Morality begins at this point of use of knowledge of natural law, a use varying with the active system of dispositions and desires. Intelligent action is not concerned with the bare consequences of the thing known, but with consequences to be brought into existence by action conditioned on the knowledge... There remains the possibility of recognizing facts and using them as a challenge to intelligence to modify the environment and change habits." (1)

Hetherington states that the "first and immediate objective of physical education is the organization of the child's life as expressed in big muscle or physical training activities." (2) This means that recreation must be furnished that will stimulate the whole organism to action, for in this way all phases of bodily mechanisms greatly

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(2) Hetherington, C., School Program in Physical Education, p. 22.
increase their functional activity. "Increased muscular activity causes increased organic activity." Thus a program of recreational activities that includes all types of games, sports, and dancing, in order to give the child an opportunity for this organic development, is desirable. As Hetherington expresses it, "Here is where physical education makes a direct contribution to health. It develops organic powers, vitality, vigor—the developmental source of health... Activity is the only source of organic power this side of heredity." This participating in big muscle activities under proper guidance is then directly responsible for healthful organic development and physical efficiency. This is illustrated by the athlete who trains for some track event. While his physical efficiency to perform his feat is greatly increased, fatigue becomes more retarded.

These strenuous activities of the athlete are not advocated for general recreation; but play that involves big muscle activities is desired as an aid to health and physical efficiency. Such activities in the junior high school would include nine court basketball, soccer, rhythmical activities, hand ball, or deck tennis. Individual differences must be taken into account, for not every child is the same in physical development. Some children can participate in strenuous activities, while others need milder forms of play or individual work. This would mean a program composed of

(1) Hetherington, C., School Program in Physical Education, p. 36.
(2) Ibid., p. 38.
a large variety of activities.

Formerly all activities after school were given over to the training of the interscholastic team. Now educators realize that very few receive any value from this type of work, so a program of intramurals has been advocated until it is one of the dominating features of physical education. Formerly, the communities had facilities to furnish outdoor activity after school. The industrial age which started a migration to the city caused all available space to be covered with buildings, leaving no place for the children to play. The school, in consequence, has gradually been given the responsibility of furnishing the needed activity. Large numbers of students are given an opportunity to participate in wholesome competition after school in healthful recreation under a pleasant social atmosphere. The individual is receiving social experiences and healthful mental attitudes, which make for growth.

Provision should be made for activities that can be used in adult life, such as hiking, skating, swimming and tennis. The physical education program aims to develop a permanent interest in games. If this interest is created and then left with no provision made for further participation, the whole scheme is built on sand. How many people are able to continue their interest in basketball outside of school life except as a spectator? The majority are unable to, because most leisure time activities are individual. This social situation being as it is, physical education
should provide game patterns that would help men to pursue these healthful activities. As Dewey says, "Education has no more serious responsibility than making adequate provision for the enjoyment of recreative leisure."

Health Education in the light of modern educational philosophy should promote a program which creates for the child a broad social outlook in relation to his social behavior. It should provide an intelligent understanding of increased experience. The program should be integrated so as to assist the individual in making a desirable choice among conflicting elements in a situation. It should also foster desirable health habits and attitudes that make for a social being.

Chapter V.

SUMMARY

Since there has been anything known about primitive man he has been interested in health. However, as part of the educational program, it has been a long time in developing. The subject of physiology was introduced into the schools of America in 1837, but the content was composed of abstract knowledge with very little, if any, conception of its application to life situations.

Education was very narrow and limited for a long period of time, due to the old faculty psychology that dominated educators for many generations. According to this theory, the mind was composed of various faculties, such as memory, will, and reason. If these faculties were exercised, they would develop and transfer to any situation. One subject was as good as another to exercise them, so there was no reason for enriching the curriculum.

Educational philosophers and psychologists, especially Herbart, James, and Thorndike, contributed to the revising of this idea. However, the twentieth century marked a decided change under the influence of John Dewey. Education, instead of being fixed and attempting to preserve the status quo, became an education that prepared the individual for a changing environment. This newer philosophy did not have much effect on health subject matter until after the World War. From the many defects that were discovered by the physical examinations given to the soldiers, there was a realization that something
must be done. Health became a subject of much interest. With this interest and need came a radical change in the old physiology taught in the schools. The name was changed to health education and became a course in the study of life activities in relation to health, with physiology added as explanatory material.

Current practices in health education as found by the questionnaire method, show that practically all cities are interested in health education. One of the handicaps is the time allotted to the subject, for the majority of the systems give it but one period a week. However, if it is integrated throughout the curriculum, health habits and attitudes can be fostered to an extent, even under the severe time limitation.

There are numerous objectives listed in health education in various courses of study, of which some indicate an influence of the democratic ideal. The writer attempts to make health education objectives consistent with those of secondary education. This is to give the child experiences that will enable him to be a social being with an intelligent understanding of his environment through an enlargement of meanings and habits which are flexible and adaptable.

An integrated program of health education involves every department in the curriculum. Each should strive to foster healthful habits and attitudes that make for a broad social outlook. This gives the child the tools for mental adjustment and wholesome, worth while, healthful living.
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