

EVALUATION OF A RURAL SCHOOL HEALTH EDUCATION PROJECT¹

I. EVALUATION OF TEACHER'S WORK IN HEALTH EDUCATION

by RUTH M. STRANG,² RUTH E. GROUT,² AND DOROTHY G. WIEHL²

IT is difficult to evaluate a teacher's contribution to the health of his pupils. Not only his methods of instruction but also his personality is involved in effective health teaching. Of these two factors the intangible relationships between teacher and pupil are the more important, for it is these relationships that determine, to a large extent, the child's attitude toward healthful living.

Insofar as the method of teaching is indicative of the personal relationship existing between teacher and pupil (and it is, to some extent), a survey of methods of teaching health education would be enlightening. The best type of survey, however, would include not only written reports made by the teacher, but also observation of pupils and teacher and the interaction between them in the classroom and in other natural situations, interviews with teacher and pupils, examination of medical and educational records, and samples of the children's work.

This article will be confined to a discussion of questionnaires on health teaching activities, given to all teachers in Cattaraugus County, New York, and to a control group of about one hundred teachers in Steuben and Allegany Counties, New York, in an effort to study methods of health teaching. It is the first of a series of

¹ This project has been made possible by grants from the Milbank Memorial Fund. For a description of its development *see* Grout, Ruth E.: A PROJECT IN RURAL SCHOOL HEALTH EDUCATION, Milbank Memorial Fund. The project started in a few schools in September, 1931, and gradually expanded until by September, 1933, practically all of the two hundred and more schools were participating in some way. The evaluation studies were begun in the spring of 1936, and when possible also have been applied in a control group of about one hundred schools in Steuben and Allegany Counties. Appreciation is extended to the district superintendents in both of these Counties who have cooperated in these studies.

² Respectively: Associate Professor of Education, Teachers College, Columbia University; Director, School Health Study, Cattaraugus County; Milbank Memorial Fund.

articles dealing with the evaluation of the experimental school health education project in the rural schools of Cattaraugus County. Future articles, although treating other phases of the study, also will reflect indirectly the effectiveness of the teachers' contributions to the health of their pupils. The total number of questionnaires returned in this study was 256—187 from Cattaraugus County and sixty-nine from Steuben and Allegany Counties.

Both groups compare closely in all respects except that Cattaraugus County has an organized school health program including educational features, while Allegany and Steuben Counties have none. The schools used in the study serve a rural farming population and are of the one, two, or three teacher type. Significant school census figures in the three Counties are compared in Table 1.

For the teachers who filled out the questionnaires the district superintendents furnished a general rating of teaching ability. The classification of teachers in Cattaraugus County and in the control counties is shown in Table 2, and the distributions give evidence of the general comparability of the two groups of teachers.

The Kind of Report Made by the Teachers. Near the end of the

Table 1. Significant school census figures in Cattaraugus, Steuben, and Allegany Counties (excluding cities and villages under superintendents).¹

ITEMS	CATTARAUGUS	STEBEN	ALLEGANY
Total Population ²	72,874	82,717	38,416
Rural Population (Villages under 2,500) ²	38,944	43,617	32,518
Number of School Districts	247	332	219
Number of One, Two, and Three Teacher Schools	191	266	175
Total Number of Different Teachers Employed at Any Time During the Year	556	591	481
Licenses Held—Normal Diplomas	231	231	180
Total Number Pupils Registered During the Year	10,912	10,848	8,182
Number of Pupils Completing the Eighth Grade	741	672	531
Total Expenditures for Instructional Service	\$659,682.86	\$642,905.57	\$511,029.74

¹These figures are taken from the Thirty-First Annual Report of the New York State Education Department, 1935.

²Estimate as of July 1, 1936, New York State Department of Health, Division of Vital Statistics.

CLASSIFICATION	PERCENTAGE DISTRIBUTION		NUMBER OF TEACHERS	
	Cattaraugus County	Control Group	Cattaraugus County	Control Group
TOTAL	100.0	100.0	187	69
High	34.1	37.1	62	23
Medium	45.1	33.9	82	21
Below Average	20.9	29.0	38	18
Not Classified			5	7

Table 2. Efficiency ratings by superintendents for teachers returning questionnaires in Cattaraugus County and in control counties.

school year of 1936 the teachers were asked by their district superintendents to answer the following questions:

What health teaching activities have you carried out successfully this year?

Please describe in this space at least one in some detail.

What changes have taken place in the health behavior of your pupils as a result of your health program?

What changes have taken place in the school environment as a result of your health program?

In what ways have you tried to reach the parents in health matters? A brief description and a critical statement of your success in this would be helpful.

What improvements do you plan for next year as a result of your experiences this year?

In general, the questions seem to have been understood by the teachers. There were no irrelevant answers. There were, however, many incomplete answers. Accordingly, the investigators could not judge whether the incomplete answers were due to the fact that the teachers had not carried on the health activity indicated in the questions or to the lack of time to answer the questionnaire, failure to recognize the importance of giving a detailed account of their health work, distaste for writing reports, or other factors.

The Evaluation of the Teachers' Reports. In order to compare the health work of the teachers in the schools having special help in health education with those not having such help, it was neces-

sary to rate each of the teachers' reports as objectively as possible. As a rating by one person is generally considered to have low validity, it was deemed necessary to have the reports rated independently by three persons,³ all of whom might legitimately be considered experts in health education. The questionnaires were so arranged that the raters had no way of knowing to which groups they belonged.

Seven items of importance in evaluating health instruction were selected as a basis for the ratings:

1. The inclusion of important areas of health knowledge, habits, and attitudes, especially those relating to the prevention of infection, to nutrition, and to good mental hygiene. A teacher whose reports showed that he was giving instruction in these health problem areas would be rated high whereas a teacher whose report indicated that he was devoting all his effort to a single relatively unimportant practice from the standpoint of health, such as brushing the teeth or coming to school neat, would be rated low.

2. Use of real situations and health problems as content of instruction. A high rating would be given to the teacher who showed that he was using the school lunch period and other activities and health problems of the school and neighborhood as health subject matter, while the teacher who seemed to be depending upon artificial situations such as the making of scrap-books, a toy village, health plays, and the like, would be rated low. Actually there might be errors in this rating because what appeared to be an artificial situation might have developed out of a felt need and interest of the children or served as a concrete summary of their study of a vital health problem. The chances are, however, that if the teacher gave no indication in his report that this was the case, he was probably using an artificial type of instruction.

3. Attention to individual health needs and abilities, child initiative, and originality. This was an especially difficult item to rate, for no question dealt directly with this subject. Certain teachers, however, indicated quite clearly that they were aware of individual needs and abilities, while others gave little information from which their point of view

³ Grateful acknowledgment is made to the assistance of Miss Ethel Mealey, director of a demonstration in health education in Westchester County, and to Miss Verre Johnson, experienced teacher of health, who helped to evaluate the questions. One of the authors (R. H. S.) also rated the teachers' questionnaires.

might be inferred. The small size of the schools suggests at once that all teachers must be aware of the individual pupils. But a very small class does not always guarantee the personnel point of view on the part of the teacher.

4. Types of motivation. Teachers who mentioned as child incentives interest in the solution of a real health problem, social service, and the like, were rated high while those who depended upon such extrinsic rewards as prizes and stars were rated low.

5. Results in terms of health habits, attitudes, and knowledge. The raters had to depend upon the teacher's own statement of his results, and the factor of modesty and difference in desire to make a good impression enters in. However, when concrete evidences of excellent results were indicated, a high rating could be given with considerable assurance.

6. Home cooperation. In this case likewise, the rater was dependent upon the teacher's statement and was aided in his evaluation by concrete illustrations of home cooperation.

7. Plans for the next year. This was an enlightening item which revealed marked differences in teachers. Some teachers with obviously poor programs had no suggestions to make for improvement while others showed that they had evaluated their health work and had better plans for next year. However, the value of this item, for the group as a whole, was reduced by the fact that many teachers were not planning to return to the same school and accordingly had made no plans.

Each item was rated on a five-point scale:

3. Very good practice.
2. Fairly good practice.
1. A little evidence of good work.
0. No evidence given in the questionnaire.
- 1. Harmful features indicated.

A composite rating was made by adding the positive scores on the seven items and subtracting from the sum the minus ratings.

This analytical rating on the seven phases of health instruction made it possible to ascertain whether some groups of teachers were markedly superior in certain respects. For example, the group as a whole seemed to be covering important areas of health knowledge,

habits, and attitudes more effectively than they were using intrinsic incentives. In other words, the teachers seemed more aware of health subject matter than of best methods of motivation.

In addition to this analytical evaluation of the teachers' reports of their health work, a total impression of each teacher's work, obtained from a study of his report as a whole, was made. Such an evaluation is flexible and makes it possible to give credit for certain outstanding features. Moreover, several recent psychological experiments have indicated that an evaluation of a total situation or a total personality may be more accurate and useful than the sum total of the weighted ratings of specific items. As a guide to this evaluation of the questionnaires as a whole, a description of types of programs was prepared ranging from V which includes the features expected in a superior program to I at the other extreme, which not only is lacking in the excellent features but may include certain objectionable procedures. The following scale was presented to the raters:

Not Rated

Inadequate information on all points—no evaluation possible.

Type I

Little or no emphasis is placed upon important health habits and knowledge, instead, some attention is given to the teaching of fallacies and the establishment of undesirable habits.

Health is taught only by the most artificial and formal means.

Pupils are told what to do and what to learn; no evidence is shown of self-direction and pupil initiative.

No indication is given of study of individual, school, or community problems.

No indication is given of the study of health needs of individual pupils or of making provision for them.

No indication is given of the study of group needs with a view to effecting desirable environmental changes.

Prizes and other forms of competition are used for motivation.

No evidence of accomplishment is presented.

No effective plans for the next year are reported.

Type II

Trivial habits and knowledge of little fundamental importance in the promotion of health are emphasized.

Health is taught almost exclusively through formal drills and reading.

Very little or no indication of pupil initiative is presented.

No evidence of problem solving method in which pupils take an active part is reported.

Meager indication is given of appraisal and adjustment of individual pupils.

Little or no reference is made to local school and community problems.

Health instruction is motivated through extrinsic rewards and appeals to self interest, etc.

Program is evaluated in terms of trivial accomplishment.

Slight reference is made to the health values of other school activities.

No personal contacts with parents are reported. Little effort is made to obtain home cooperation.

Plan for the next year shows no advance over the inadequate plan for the past year.

Type III

Certain relatively unimportant areas of health are emphasized to exclusion of more vital phases.

Schoolroom situations used in teaching healthful living are chiefly of an artificial kind, such as posters, plays, etc.

Some indication is given of opportunities for pupil initiative and responsibility.

Interest is shown in having pupils acquire a method of problem solving as well as the knowledge of the best solution of a problem, but little indication is given that the pupils are studying individual, home, and community problems.

Some indication is given of interest in the development and health guidance of individual pupils.

Awareness of the desirability of studying group needs and environmental problems is evidenced, but no indication is given of changes made as the result of the study.

Pupils' interests are motivated by such appeals as the approval of teacher and others.

Some evidence is presented of progress in the formation of desirable habits and knowledge.

Health is related to other subject matter fields, such as science and social studies, but in an academic way.

Plans for next year are an improvement over present program.

A fair degree of home cooperation is reported.

Type IV

Important areas of health knowledge, habits, and attitudes are emphasized. No undesirable emphases, such as poor mental hygiene, are evident.

Health is taught through natural classroom situations, but not through home and community situations.

Some examples of pupil initiative are presented.

Some examples are given of problem solving as an objective of health education.

Indication is given of child study and guidance with reference to individual pupils.

Some effort is made to study the environment and the needs of the group with a view to making desirable changes.

Interest in growth and immediate local problems is used as motivation for health instruction.

Significant evidence of results is presented in terms of pupils' growth in habits, attitudes, and knowledge.

Health values are related to other subject matter fields, and some evidence is shown of attention to health aspects of all school activities.

Good home cooperation is secured.

Plan for next year shows improvement and recognition of best features of the present plan.

Type V

Most important areas of health knowledge, habits, attitudes are emphasized, especially those relating to prevention of infection, to nutrition, and to good mental hygiene.

Emphasis may be put on any one of these in a given year.

Health is taught through real life situations.

Indication is given of excellent provision for pupil initiative and originality.

Pupils are taught methods of problem solving; i.e., how to solve health problems. They are not merely given a solution to a problem.

Indication is given of pupil's study of individual, home, and community problems.

Marked indication is given that teacher studies immediate and future health needs of individual pupils and makes provision for them.

Marked evidence is shown of the study of health needs of the group and the making of environmental changes.

Highest levels of motivation are used for social service, best individual development, satisfaction in activity itself.

Evidence is presented of excellent results in the acquisition of habits, knowledge, and attitudes.

Health education appears to permeate in a subtle way the entire school program.

Maximum of home cooperation is secured.

Plan for next year includes best aspects of present plan and certain new features.

This rating scale has been described in detail because of its value for self-rating. Teachers may be guided by it in evaluating their methods of teaching health. It may also serve as a stimulus to teachers to have in mind concretely the features of effective health instruction. Supervisors, too, may find this rating scale useful as a guide in evaluating teachers' health work and in helping them to perform this important task better. It would furnish excellent material for conferences with teachers.

Agreement of Raters. The reports demanded a good deal of reading between the lines. The three raters of the teachers' reports in this investigation showed individual differences in the leniency of their ratings. One rater, (A), gave the teachers "the benefit of the doubt" and sometimes, perhaps, read into their statements better practice than actually existed. Another rater, (B), though less generous in her interpretation of the reports, showed fair agreement with Rater A, and apparently followed approximately the same standards and had a similar point of view. The third rater, (C), on the other hand, gave a much less sympathetic interpretation of the teachers' statements and quite consistently rated them lower than either of the other two. Rater C, also was of the opinion much more

RATING	PERCENTAGE DISTRIBUTION OF RATINGS				NUMBER OF TIMES SPECIFIED RATING WAS GIVEN			
	Total for 3 Raters	Rater A	Rater B	Rater C	Total for 3 Raters	Rater A	Rater B	Rater C
RATINGS FOR EACH OF SEVEN SPECIAL PHASES OF INSTRUCTION								
ANY RATING	100.0	100.0	100.0	100.0	5,376	1,792	1,792	1,792
-1	2.9	2.0	4.2	2.5	157	36	76	45
0	25.7	22.5	17.8	36.7	1,379	403	319	657
1	31.5	24.3	32.1	38.1	1,693	435	575	683
2	24.4	27.8	26.6	19.0	1,314	498	476	340
3	15.5	23.4	19.3	3.7	833	420	346	67
RATING FOR EACH TEACHER ON BASIS OF TOTAL IMPRESSION								
ANY RATING	100.1	100.0	100.0	100.1	694	251	238	205
1	23.9	11.6	19.3	44.4	166	29	46	91
2	26.4	16.3	35.3	28.3	183	41	84	58
3	27.7	25.9	34.5	22.0	192	65	82	45
4	16.3	32.7	8.4	5.4	113	82	20	11
5	5.8	13.5	2.5	0.0	40	34	6	0
Not Rated						5	18	51

Table 3. Distribution of ratings on reports of health instruction by 256 teachers given by three raters for seven special phases of instruction and for total impression score.

frequently that there was too little evidence of the quality of teaching to enable her to give a rating.

It is of interest to examine in detail the use of the two rating scales by the three raters and the differences in their points of view. In rating on the seven separate phases of health instruction, Raters A and B agreed very closely, as may be seen in Table 3 and Figure 1. The average of their 1,792 ratings was 1.5 and 1.4; and the distribution of these ratings is very similar. The frequency of lower ratings by Rater C is clearly indicated in Figure 1. Out of the total of 1,792 ratings on specific items, there was perfect agreement on 444, or 25 per cent, but 249 of these 444 ratings were "O" or "no evidence" on the special items. However, two of the three ratings were in agreement for an additional 1,010 of the 1,792 ratings, or 56 per cent. Thus, the average rating of the three raters for specific phases and

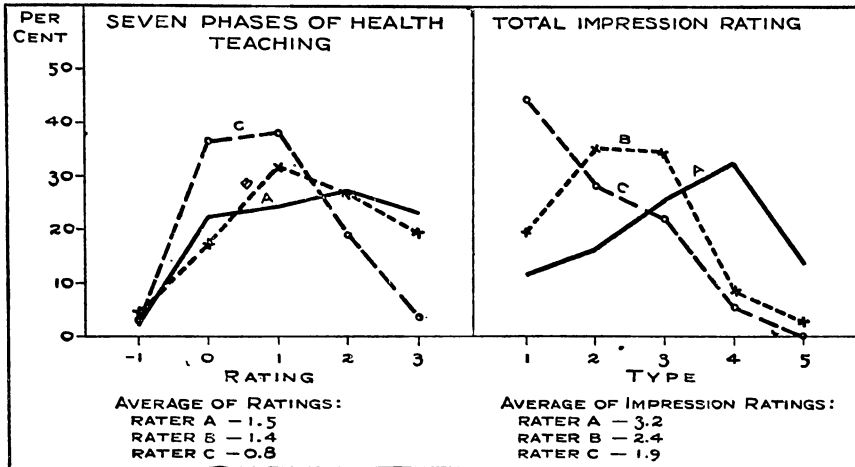


Fig 1. Percentage distribution of ratings on health instruction practice reported by teachers according to three different raters.

the composite rating based on these would seem to give a fair interpretation of the practices recorded.

The agreement on the total impression rating was less marked, since Raters A and B, as well as C, apparently had different standards or different points of view in using this rating scale. The scale was meant to be more flexible and to permit the rater to give credit for good instruction or practice relating to any part of the health teaching even though some specific phases were not well covered. The wide divergence of opinion of the raters is apparent in Table 3 and Figure 1. Rater A and B agreed on 28 per cent of the total impression ratings, but all three raters agreed on only thirteen, or 5 per cent. Each rater seems to have applied some standard consistently and the average result should provide a dependable basis for judging the comparative quality of health instruction in Cattaraugus County and the control group.

The failure of Rater C to give a total impression rating to thirty of the sixty-nine teachers in the control area, and twenty-one of the 187 teachers in Cattaraugus County presented some difficulties in determining an average total impression rating for the two groups

of teachers. However, it was decided to use the simple average of ratings given, using the ratings of two raters, or in a very few instances, one rater, for teachers who had not been rated by all three raters. The ratings given by C were consistently lower than those by A and B and the omission of C's rating for a number of teachers results in a somewhat higher average rating than would be expected if a rating by C were available for all teachers. Since the proportion of teachers not rated by C was greater in the control group, this group is especially favored by the omission of C's ratings for a number of teachers. The resulting comparison, therefore, indicates a minimum of difference between the two groups.

General Results of Rating. Average ratings for both the composite scores and the total impression ratings were definitely higher for Cattaraugus County teachers than for those in the control group, Steuben and Allegany Counties. The averages are shown in Table 4, which also indicates that differences of about the same amount between Cattaraugus and the control group were noted by each of the raters, although the general level of their ratings differed. The consistency of the findings by the three raters and the degree of difference noted give valid evidence that the teachers' accounts of their health teaching showed some phases of the practice in Cattaraugus to be better than that in the control group.

Table 4. Comparison of Cattaraugus County teachers and control group on basis of total composite rating and total impression rating.

GROUP	AVERAGE RATING		AVERAGE FOR INDIVIDUAL RATERS					
	Composite Rating	Total Impression	Composite Rating			Total Impression		
			A	B	C	A	B	C
Cattaraugus County	9.7	2.7	11.3	11.2	6.7	3.4	2.6	2.0
Control Group	5.8	2.0	7.8	5.8	3.8	2.6	1.8	1.2
NUMBER OF TEACHERS:								
Cattaraugus County			187	187	187	184	171	166
Control Group			69	69	69	67	67	39

RATING	CATTARAUGUS COUNTY 3 RATERS	CONTROL 3 RATERS	CATTARAUGUS COUNTY			CONTROL GROUP		
			A	B	C	A	B	C
COMPOSITE RATING								
TOTAL	100.0	100.0	100.0					
-2	2.5	9.2	1.6	1.1	4.8	7.2	7.2	13.0
2-5	23.9	45.4	17.6	17.1	36.9	24.6	43.5	68.1
6-9	25.3	27.1	17.1	22.5	36.4	33.3	31.9	15.9
10-13	22.3	13.0	24.1	25.1	17.6	21.7	14.5	2.9
14-17	16.8	4.8	28.3	18.2	3.7	11.6	2.9	0
18-21	9.3	0.5	11.2	16.0	0.5	1.4	0	0
Number of Ratings	561	207	187	187	187	69	69	69
TOTAL IMPRESSION RATING								
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	18.6	39.9	9.2	11.7	36.1	17.9	38.8	79.5
2	24.8	31.2	14.1	30.4	30.7	22.4	47.7	17.9
3	30.1	20.2	21.2	43.3	26.5	38.8	11.9	2.6
4	19.0	8.1	37.5	11.1	6.6	19.4	1.5	0
5	7.5	0.6	17.9	3.5	0	1.5	0	0
Number of Ratings	521	173	184	171	166	67	67	39

Table 5. Percentage distribution of composite ratings and total impression ratings for Cattaraugus County teachers and a control group.

The percentage distributions of the composite ratings and the total impression ratings for both Cattaraugus teachers and the control group, shown in Table 5 and Figure 2, indicate that many teachers in both areas appeared to be carrying on a very poor type of program. On the other hand, a considerable number of teachers in Cattaraugus County received ratings indicative of excellent health education, but in the control group no teacher was given the highest impression rating (5) by two of the raters and only one teacher received this rating from the third rater. Since no teacher was rated 5 by Rater C, there was no teacher in either group who had an average rating of 5.

When the composite scores are grouped into five classes, as in Figure 2, the percentage distribution shows a striking similarity to that for the five class impression rating. The higher percentage

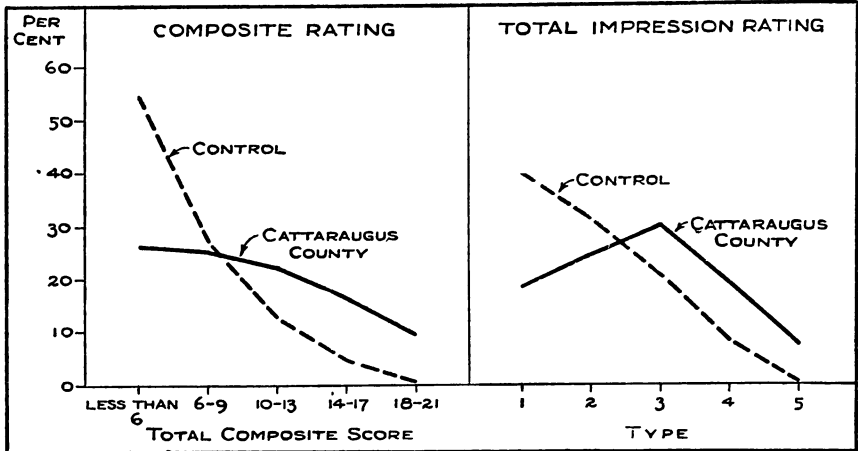


Fig. 2. Percentage distribution of total composite ratings and of total impression ratings by three raters for health instruction practices reported by teachers in Cattaraugus County and in a control area.

with very low composite scores than with the lowest impression rating arises from the fact that many of the teachers with the lowest composite scores received no impression rating from one or more of the raters. The composite rating equalled fourteen or more, out of a possible twenty-one, in 26 per cent of the ratings for Cattaraugus teachers compared with 5 per cent in the control group, and 27 per cent of the impression ratings for Cattaraugus teachers were Type 4 or Type 5, as against 9 per cent for the control group. Although these ratings show that many teachers in Cattaraugus County have taken little or no advantage of the special supervisory service, the average level of health teaching appears to be better than in the control group, and a larger proportion of the teachers in the County were giving a fairly high type of health instruction.

Specific Phases of Health Teaching. The ratings on the separate items for Cattaraugus County and the control group, Steuben and Allegany Counties, are given in Table 6. For each item, the Cattaraugus average rating was higher, but the difference between averages varied considerably. The highest average ratings in both groups were for the inclusion of important areas of health knowl-

SPECIFIC ITEMS RATED ¹	AVERAGE RATING FOR SPECIFIC ITEMS							
	3 Raters Combined		Rater A		Rater B		Rater C	
	Cattaraugus County	Control	Cattaraugus County	Control	Cattaraugus County	Control	Cattaraugus County	Control
TOTAL COMPOSITE RATING ¹	9.73	5.81	11.32	7.81	11.17	5.80	6.71	3.83
1. Important Areas of Knowledge	2.04	1.41	2.32	1.87	2.26	1.28	1.56	1.09
2. Use of Real Situations and Problems	1.36	0.58	1.45	0.64	1.67	0.59	0.96	0.51
3. Attention to Individual Needs and Abilities, Initiative and Originality	1.13	0.75	1.43	1.30	1.54	0.84	0.41	0.10
4. Type of Motivation	1.26	0.23	1.48	0.41	1.32	0.14	0.98	0.14
5. Results in Terms of Habits, Attitudes, and Knowledge	1.75	1.25	2.08	1.71	1.88	1.14	1.27	0.90
6. Home Cooperation	1.21	.93	1.51	1.20	1.34	1.06	0.78	0.54
7. Plans for Next Year	0.99	.66	1.05	0.68	1.16	0.75	0.76	0.55

¹Highest possible rating for items 1 to 7 is 3; and for composite rating is 21.

Table 6. Comparison of results of ratings for specific phases of the health education programs reported by teachers in Cattaraugus County and in a control group.

edge, habits, and attitudes, with 2.04 for Cattaraugus County and 1.41 for the control group. The highest rating possible for any of these seven items was 3. The item receiving the second highest average rating also was the same for both groups, namely, results in terms of habits, attitudes, and knowledge; the ratings were 1.75 and 1.25.

The greatest difference between Cattaraugus County and the control group was in types of motivation, with 1.26 average in Cattaraugus County and .23 average in the control group. Nearly as great a difference was shown in the use of real situations and problems, the average ratings being 1.36 and .58 respectively.

General Summary. The attempts to evaluate health education with precision are few in number. This effort to record and evaluate health instruction is a pioneer one. The attempt to formulate

significant aspects on which teachers may report, and to devise a rating scale by means of which the teachers' reports may be contrasted by impartial judges is a necessary first step.

The questionnaires used in this study brought forth no irrelevant answers from the teachers. There were, however, many incomplete answers which increased difficulties in making evaluations.

The rating scales which were used seemed to differentiate among the reports and to cover all the important kinds of information supplied by the questionnaires. The "general impression rating" made possible a total evaluation in which one exceptionally admirable feature could be given special weight, or a general impression of good teacher-pupil relationship could be given credit.

The results obtained by the application of the rating scale to the questionnaires returned by the two groups of rural teachers show quite clearly the value of the type of in-service education given to the experimental group. In regard to types of motivation used by the teachers the experimental group was rated as markedly superior to the control group. Apparently the education of teachers was especially effective in creating an awareness of the more desirable types of incentives to healthful living. In every respect, however, the experimental group was rated somewhat higher by judges who did not know the group to which the individual records belonged.

Although the results of this investigation are more favorable for the experimental group, which has had the advantages of special help in health instruction, they also point to the need for further in-service education of teachers in this group. If this is done, continuous improvement in the school health program of Cattaraugus County may be expected.