

SPECIAL REPORT

THE EDUCATIONAL EXPERIENCES
INHERENT IN
THE CONSTRUCTION OF A SIOUX INDIAN HOME

Submitted by
Walter C. Barton

In partial fulfillment of the requirements
for the
Degree of Master of Science

Colorado State College
of
Agriculture and Mechanic arts
Fort Collins, Colorado
August, 1939

COLORADO STATE COLLEGE
OF
AGRICULTURE AND MECHANIC ARTS
=

.....August.....19 39.....

WE HEREBY RECOMMEND THAT THE SPECIAL REPORT PREPARED UNDER
OUR SUPERVISION BY WALTER C. BARTON
ENTITLED THE EDUCATIONAL EXPERIENCES INHERENT IN THE
CONSTRUCTION OF A SIOUX INDIAN HOME
BE ACCEPTED AS FULFILLING THIS PART OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF SCIENCE
MAJORING IN TRADE AND INDUSTRIAL EDUCATION

Head of Department

Supervisor of Research

J. B. Youngling
Gilbert L. Betts

Recommendation concurred in by-

Director of Summer Session

Geo. T. Avery

This report, or any part of it, may not be published without
the consent of the Committee on Graduate Work of the
Colorado State College
of
Agriculture and Mechanic Arts

ACKNOWLEDGEMENT

Grateful appreciation is hereby expressed for the able assistance, constructive criticism, and the interest of the following people, who helped to make this study possible:

Mr. J. B. Yingling, Associate Professor of Industrial Education, Colorado State College, Fort Collins, Colorado: Mr. K. G. Irwin, Thesis Consultant; Mr. James Hodgson, Librarian, and his staff; Mr. James Arentson, Supervisor of Vocational Education, United States Indian Service.

Grateful appreciation for the cooperation and continued inspiration given the writer by his wife, Nettie V. Barton, is also expressed.

TABLE OF CONTENTS

I. INTRODUCTION.	Page 6
The relation of the writer to the problem.	8
The problem and its setting	10
II. REVIEW OF LITERATURE.	12
Educational philosophy relater to present study.	17
III. THE DEVELOPMENT OF THE PROJECT.	22
School groups involved in the project .	22
Initiation of the house planning project, by shop group	26
Production of house drawings by shop group	28
Discussion of house plans with health groups.	29
Discussion of house plans with girls activity groups	30
Discussion of house plans with agriculture group.	31
Re-organization of house plans by shop group.	32
Related activities of arithmetic class room	33
Related activities of the English class room	34

	Page
Related activities of the geography class room.	35
Related activities of the history class room.	35
House construction procedure	36
Further activities of Home economics classes and girl- sponsored groups.	38
Further activities of the agriculture group	39
General Discussion	40
IV. CONCLUSION	41
BIBLIOGRAPHY	43

Chapter I

INTRODUCTION

The present report deals with the educational experiences inherent in the construction of a Sioux Indian home carried out as a project of the Indian school shop and involving a cooperative plan in which other school groups and their advisors take a part. Such a project is in keeping with the newer trends in education, especially as applied to the Indian Service.

With the passing of the tepee type of home, the Sioux Indians of the Dakotas attempted to build homes not unlike those of the white settlers who had moved into the area. The results, however, were unfortunate. An overwhelming majority of the Indians were poor, even extremely poor, and they were not adjusted to the economic and social system of the white civilization (10:3). It is stated that the number of Indians who are at present supporting themselves through their own efforts and maintaining a standard of living which the white man would regard as a minimum standard of health and decency, is extremely small (10:5).

These Indian homes proved to be little more

than board shacks and the housing conditions were conducive to bad health (10:4). In the majority of the more or less permanent homes there still is great overcrowding, so that all members of the family are exposed to any disease that develops. Even today education in housekeeping and sanitation has not proceeded far enough, so that the Indians living in these more or less permanent shacks, practice what they have been taught about sanitary living and domestic cleanliness.

Recent changes in Governmental administration have granted the Indians many opportunities for improvement. Under the Indian Reorganization Act of 1934, \$4,000,000 has been already appropriated for loans to incorporated Indian tribes. These credit funds are being expended almost entirely for capital investment in the form of agricultural machinery, farm buildings, live stock, saw mills, fishing equipment, and other improvements. This credit program, if it is supplemented by a sound land program, possibly will establish for the first time a stable basis of economic independence for tribes, some of which have lived in the depths of poverty, or are kept alive on the edge of starvation by income from annuities, land sales and leases of land (11:31).

This opportunity of financial aid ought to

give the Indians a new vision. An Indian Service supervisor reporting on conditions on one of the reservations, since they had accepted the provisions of the Reorganization Act, states (11:19):

Less than four years ago it could truthfully be said: They are discouraged and broken in spirit. Today they still have their rich national resource, but in addition they have comfortable homes; they have their children in convenient and well-run schools; they have their herds on a thousand hills; they are caring for their old and indigent; but what is of more significance, they are rapidly learning to manage their own affairs, and they are assuming responsibility for their own economic and social well-being.

It is against such a background of Indian life that the problem situation represented in the present report is to be considered.

The relation of the writer to the problem situation.--The writer has been in the United States Indian Service for fourteen years, and as a youth lived at an Indian boarding school, where his father was an instructor. In the course of time he worked with Indian boys and girls, the parents of whom he had played with in his younger days.

At the present time, the writer is stationed at a boarding school in Wahpeton, North Dakota, where he is shop instructor, in addition to an assignment to assist as principal. The school has a capacity of 300

children divided equally between boys and girls; the school grades ranging from the first to the ninth grades inclusive. The shop work, basically, takes boys from the seventh, eighth, and ninth grades. Besides the campus proper, the school has farm land including a little less than two, one-quarter sections of land.

The physical plant consists of an academic building of nine rooms, and an auditorium; two dormitories, one each for the girls and boys; a dining room for pupils; a home economics building; a shop building; a hospital with a full time nurse, and a contract doctor who makes regular visits to the school and is subject to call at any time; a dairy barn; a central heating plant; a gymnasium; a club and living quarters for employees; homes for employees; the administration office, a maintenance shop; and several minor service buildings. The Indian school campus adjoins that of the North Dakota State School of Science, and is situated on the outskirts of Wahpeton, a town with a population of slightly more than 3,000. Breckenridge, a town of some 2,500, is immediately across the Red River in Minnesota.

The school draws Sioux boys and girls from the Dakotas, and some Chippewa from Minnesota. For the writer's problem, he has considered the Sioux only, since

the school is in an area more in keeping with that from which this group comes, as the Chippewa boys and girls of the school come from timberland in northern Minnesota. Further, it has been suggested that in the next school year (1939-40), the school will have more Sioux and fewer Chippewa. By far the greater proportion of these boys and girls are orphans, or from broken or irregular homes.

At Fort Wingate, New Mexico, in 1937, and at Pine Ridge, South Dakota, through June of 1939, the writer conducted a course in shop methods at in-service training schools sponsored by the Indian Office at Washington. These in-service training schools are set up in keeping with the newer trends of education, the work offered is very flexible, and built around the activity method of teaching. The project as presented in this report follows similar educational line.

The Problem and its Setting

As was suggested at an earlier point, the problem involved in the present report is one dealing with the construction of a Sioux Indian home. Specifically, the question to be answered may be stated as

follows:

What are the educational experiences inherent in the construction of a Sioux Indian home; and how may these experiences be used by the school in carrying through a project of the Indian school shop in such a way that other school groups and their advisors may take a part?

It is proposed in the present report to show that the project referred to can be carried out in such a way that it would be highly practical in nature; that it would represent not a pseudo situation, but a real life situation; that it would involve an activity program in which the pupils would take a directing part, under guidance; that the project would call for cooperative action between various groups and that there would be integrated into the program the directed activities of a reasonably large part of the entire school.

In the section of the report that follows, there will be introduced a review of literature that will indicate that what is being proposed as a project for the Indian school is not out of line with current educational thought and does not set a goal which is unattainable.

Chapter II

REVIEW OF LITERATURE

In the newer trends in education the individual pupil is not the sole center of the educational program. Cooperative and integrative situations are stressed. Group projects and teaching through group activities are recognized as being highly desirable methods and procedures. Educative experiences that fall within the scope of ordinary life experiences are being emphasized.

Educational Philosophy Related to Present Study.

The writer's plan of using in an integrated, cooperative way the educational experiences inherent in the construction of a Sioux Indian home, and having the project centered about the activities of the school shop, would seem to be keeping with the modern educational trends mentioned above. Quotations from the writings of present day authorities or leaders in education may be quoted in this connection.

That the project method of teaching is a natural one was pointed out by Prosser and Allen (17:281), when they wrote:

There is nothing startling or revolutionary in this project method of teaching. Indeed it is the natural way by which people have been taught for centuries outside the school.

That the shop provides opportunities to make a real contribution in education is recognized by one of the leaders in the Industrial Arts field, Ericson (8:48), who writes:

Let us remember that in the boy's mind the school shop stands for an opportunity to make something. While that conception may be broadened later by tactful "engineering" on the teacher's part, it will still remain that shop teaching makes its unique contribution in education through activities.

Ericson (8:77) continues by pointing out the proper place of the student in the project:

It (the project method) does mean, unmistakably, that the student occupies the center of the stage, and the teacher becomes the "stage-hand", so to speak, ready to assist in developing the performance.

The place of the school shop, in the educational field, beyond that of manipulative activities, is further indicated by the same writer (8:216):

Shop work in the school is essentially manipulative in character, and it should not be made into a discussion subject of the academic type. But to narrow the shop work down to the manipulative processes is to limit it in educational

and exploratory value.

A school with its several departments and divisions can accomplish desirable aims and results if these groups will work together; this is pointed out by Smith (19) in referring to work of the shop:

Cooperation is a concept of unique currency in the so-called practical areas of education. In truth good schools and colleges are consummated by the mutual exchanges which occur among the divisions and by the additions which are made by all of them to programs as a whole. And these changes and additions are neither forced nor artificial; they are real and free and almost without limit.

He points out that we have an exceedingly cooperative life and the school may profit by a sharper realization of the fact. Cooperation is achieving together what could not be otherwise achieved--in the classroom with the pupils--in the building with the teachers--in the office with the superiors and clerks--in the community with all types of persons and organizations--in the state and nation with all those similarly situated and motivated.

Running parallel to the project method of teaching, and sometimes referred to as being the same thing under another name, is the activity method of teaching. Burr (4:11-14) discusses the activity plan when he writes:

Gradually more and more duties have been assumed by the school until, under the activity plan, it becomes the most important social force of the community. In general, it may be said that the activity plan, or the activity method, is the one by which man does most of his learning, unless formal conditions are imposed upon him. It is the experience plan. It provides for learning on a plane appropriate to the learner. The activity school emphasizes the truth of Dewey's oft repeated statement, We learn to do by doing.

According to Burr, most out of school learning which is done from day to day, from the cradle to the grave, is done by processes closely akin to those used in the school room operating according to the activity plan of progressive education. Most of the education gained by children of primitive people is gained by such means. The same is quite true of the pioneering American settlers, both as children and as adults.

The integration of subject matter in a school program needs to be done with thought. The proper relationship between subjects is not attained under all circumstances, writes Sweeney (20):

At Lincoln School from the very beginning, it has been recognized that integration is what takes place in the mind of the learner; that it is a personal reaction dependent upon the mind's ability to grasp and make use of relationships; and that any arrangement of subject matter is merely a means of facilitating this understanding of relationships. Therefore, any new synthesis of content is justified only when it contributes toward the purpose of helping the learner to gain better

what the school conceives to be socially desirable understandings. This point needs special emphasis, for too frequently the term integration is taken to mean the giving of parallel courses, the attempt to put all subject matter from two or three courses into a general course, or to have one teacher teach two subjects rather than one. In other words the means becomes an end.

A plea for democratic practices in the school is brought out by Presler (15), when she writes:

School must become the place where intelligent, conscious democratic living is practiced. Where else than in school can it be practiced by children? And if it is not practiced by them, we have no hope for its perpetuation in society. To do this the school must provide ample time for children to think and to plan, and to live out the plans they make.

Dewey (6:7-86), indicates his concept of newer trends in education in the following scattered passages taken from his "Experience and Education":

I take it that the fundamental unity of the philosophy is found in the idea that there is intimate and necessary relation between the processes of actual experience and education . . . It is not enough to insist upon the necessity of experience, nor even activity in experience. Everything depends upon the quality of the experience which is had . . . Every experience is a moving force. Its value can be judged on the ground of what it moves toward and into (6:7). . . When education is conceived in terms of experience, anything which can be called a study, whether arithmetic, history, geography, or one of the natural sciences, must be derived from material which at the outset fall within the scope of ordinary life experiences (6:86).

The school must consider the whole child, and must also realize that one program does not call for the

response in all children, writes Wile (22):

If the whole child goes to school, then the whole child must be considered by the school, and he must be regarded as an integer rather than a fraction . . . All learning should take place in response to the personal needs and demands of the organism. Identities of school programs do not offer identical stimuli to different children. The children, therefore, should be the subjects of greater consideration; not used as objects to be educated but as subjects to be lead forth to learn in terms of total living, in which harmonious integration is most necessary.

The preceding statements indicate the philosophical bases for the present report. How these ideas can be applied to an Indian situation are brought out in the following studies.

Related Studies

In the following pages two studies are reviewed. Both are closely related to that of the present report. Both deal with Indian boys and girls, both involve an activity program based upon cooperation. In one case there was a definite attempt to integrate school subject-matter with the activity program. Neither deals, however, with the shop as the project center, as is the case with the present report.

A series of educational studies on the Pine Ridge Indian reservation in South Dakota, reported by P. T. Orata (13,14), of the Office of Indian Affairs, U.S.

Department of the Interior, includes a brief account of a home training project conducted at one of the day schools.

The two practice cottages at the school were utilized as a source of "promoting boy-girl relationships". One cottage was occupied by two boys, while in the other were two or three girls and an Indian woman with her baby. All ate their meals together in the house occupied by the girls and the Indian mother and baby. This program was carried for a period of two weeks, when another group of boys and girls replaced the first group. The details of maintaining and managing the cottage were left entirely to the students. They decided what to do and when and how to do it, the teacher merely acting as a guide to stimulate their interest in the various phases of homemaking and in planning the work so it could be carried out effectively. In general both boys and girls carried on what would normally be their respective work in the better homes. While in residence they were excused from regular school duties except when the presence of the whole class was needed. Early in the morning the boys built the fire and carried water, while the girls cooked breakfast. The boys chopped wood for fire while the girls made the beds and cleaned the rooms. In the afternoon after lunch,

the girls washed the clothes while the boys made cupboards, painted chairs or repaired furniture in the school shop or worked in the garden.

The boys and girls had ample time to visit together. They fixed their schedule for visiting from 6:30 to 7:30 in the evening, except on Tuesdays when they left at 10:30 and on Saturdays when they stayed until midnight. At the dinner table they talked quite naturally in Indian and in English after they got fully acquainted.

In evaluating the boy-girl relationship project the author made use of various data including records and controlled observations by the teachers in charge and statements of various employed personnel of the school and reservation generally.

The report discussed the effect of the project upon individual pupils. One such case was reported at length, that of a fifteen year old full-blooded girl.

When she first came to the school, her hair had to be deloused, and her body was not clean. Her nails were painted red, but underneath they were black with dirt. Her development was both rapid and consistent. She learned to enjoy a daily shower and weekly shampoo. She learned to save time by systematizing

her work and being more prompt. When she found out what the time saved gave her in the way of leisure which she could use in visiting, or in attending parties at the Community Hall she improved in speed and performance. At the end of the project period her mother reported that her work at home was improved. She made curtains for the windows, provided their room cottage with a partition for privacy, and washed the bedding. Still generally self-centered, Mary became more sensitive to the feelings of others. This increased rather than lessened her popularity, much to her delight and to the satisfaction of her parents.

E. L. Raines (18), who at the time of the study was a teacher of the junior-high grades at the Shoshone Wind River Reservation, Wyoming, collected material for the purpose of developing an historical pageant built around the character of Sacajawea, the Indian woman who acted as the guide for the Lewis and Clark Expedition. The collection of material, the writing of the pageant, the preparation of the stage settings, and the rehearsing of the pageant itself were used as a vehicle for the integration of instruction. All of these were used "to bring about more vitalized learning experiences than the traditional-type of class-

room procedure afforded."

Some of the ways in which integration and cooperation developed are indicated by the following quotation taken from the summary section of his report:

In collecting material for the pageant, pupils developed skill in reading and in scanning hurriedly for some item of information desired. . . . The establishment of the school paper as a means of developing pageantry background also furnished an incentive for pupils to write. . . . Lists of words for spelling lessons were developed and used in preference to those outside the area of pupil experiences . . . the inclusion of the linoleum block printing process as a part of the school paper in developing pageantry background . . . became a further means of integrating elements of school work.

The making of costumes and other properties for the pageant was carried on by the classes in art, home economics, and manual training. The pageant was useful in the study of United States history and geography. . . . this helped to enrich the vocabulary of the children since many come from homes where their native tongue was used almost exclusively.

The author concludes that the pageant was useful as an instructional device, both for pupils and adults and developed a greater feeling of good will between the school and community.

The writer's project- -developed in the following chapter- -is similar to those reviewed, in that cooperative efforts of both boys and girls are utilized around real life situations.

Chapter III

THE DEVELOPMENT OF THE PROJECT

The problem of planning for, and the construction of, a Sioux Indian home is a very practical one. The home is to be built upon a plot of land near the school buildings. It is planned that the project is to be an all-school activity rather than one in which only the shop boys would participate. The present chapter discusses the methods that the writer proposes to use in carrying out such a plan and will present, first of all, a general discussion of the school groups whose interests can be used in carrying out the activities involved in the project.

School groups involved in the project.--To have the planning and construction of a home limited so as to involve only the boys in the shop would be to rob the project of much of its educational significance. They would make actual drawings of the plans, and would handle the manipulative work in the construction of the house. With their background, much of the educational experiences inherent in a home-construction

project would be missed without the aid of the cooperative activities of other school groups. It is true that the shop boys would gain some valuable experiences from the mere doing of the things suggested--the pencilling of lines for a wall, the cutting and laying of flooring, the raising of the wall structure--but there are other things that must be experienced if the house is to become translated into a home. As was mentioned at an earlier point many of the boys and girls coming to the school are orphans or are from broken homes. The common every-day activities of the home are not necessarily present in their thought when "home" is mentioned--eating, sleeping, dishwashing, laundering, sweeping, building the fire, removing ashes, mending clothes, home chores, working and getting along with others, preparing and eating a meal, and other commonplace activities.

Beaty (3), speaking for the Indian Service, in general, says:

The fundamental desire is to improve the living conditions in the Indian home. The first necessary step toward such improvement must be to establish in the pupil a desire for something better than that to which he has become accustomed in his own home. Not only must he desire something better, but he must be so habituated to better living that he will know what to do with improved conditions if he gets them . . . Desirable liv-

ing habits can be gained in convenient and desirable living quarters. Once established, such habits become a driving force, and an individual is willing to make an effort to satisfy his newly-established needs.

The plan as set up in the present report proposes to bring into the house planning--initiated in the shop group--the cooperative activities of the girls and their advisors. Beatty's (2) comments are particularly appropriate in this connection:

One of the most important factors for us to remember is that homes contain men and women. A good home may contain children also, but they are likely to be adjusted into a home after it has been made. In the making of a home, husband and wife play a part. Yet in most of our schools we limit our home making classes to girls, attempting to develop in them a desire for the sanitary, the efficient and the dainty. Many times, while such tasks are being cultivated on one side of the campus, the boys on the other side are being allowed to remain dirty, disorderly, and crude in their living arrangements.

A further group whose activities the writer proposes to incorporate into the project is the health group. These pupils with the school nurse as their advisor can emphasize in the house planning those features that relate to more healthful living conditions. That the Indian home needs to a high degree the emphasis that can be placed upon sanitary and healthful conditions was pointed out earlier.

An additional school group whose activities

will be cooperatively introduced is that of the boys in the agriculture group and their advisor. As stated previously the house as planned will be constructed upon a plot of land which is to represent a real Indian farm. In suggesting a desirable location for the house in relation to the other farm buildings and to the water supply, this group has something definite and important to contribute. They would also consider the location of roads and walks, the landscaping of the grounds, and the laying out of gardens.

The Indian school has classes, the individuals of which are usually found in one of the previously mentioned groups; such classes deal with the school subjects of arithmetic, geography, and history. As the work on the house planning progresses the program would have the advisor of each class group choose features of the project development as activity centers for class work.

The preceding statements indicate the groups that actively cooperate in carrying out the project. It is expected that other campus workers would be affected also, as material would have to be purchased and transported and a variety of contacts would have to be made,

all of which would involve people outside of the immediate school groups.

In the sections that follow there will be presented--largely in outline form--a discussion of the steps in the development of the project, and of the part that can be played by each of the various school groups.

Initiation of the house planning project, by shop group.--To initiate the project, the following outline of work is proposed. The writer, as instructor and advisor of the shop group, expects to take a definite guiding part.

Boys of the shop group with instructor

1. Talk about various types of house construction:
 - (a) rammed earth,
 - (b) log,
 - (c) stone,
 - (d) frame.
2. Bring out why one material is preferable to another in terms of
 - (a) cost,
 - (b) protection from severe weather

conditions.

(c) practicality.

3. Reach a decision as to what material will be used on the project house.
4. Discuss desirable location for the house.
5. Talk over the direction that the house should face.
6. Discuss such ideas as to why there are windows, doors and rooms to be planned for.

In the shop group there will be approximately fifteen boys in each of two sections. These boys will range in age from 14 to 17 years old. The older boys will have had a year or two of general shop experience that has involved wood and metal work. The work done has stressed practical applications. In the year 1938-39 the shop boys constructed a Girl Scout cabin on the campus using mill-run log-type siding.

In connection with the present project the writer proposes to suggest the construction of a frame house. Such a house would be in keeping with other houses on the campus. The school purchases all of its lumber from a saw mill that is tribal-owned and operated.

Production of house drawings by shop group.--

To carry over from the initial step of the project to the production of house drawings by the shop group the following procedure is proposed:

1. Instructor to sketch free-hand plans of one, two, three, and four room houses.
2. Boys, separately or in groups, sketch their ideas of the house (rough sketch only).
3. Boys, singly or in small groups, decide as to the number of rooms they would want in the house.
4. Instructor shows how to make drawings using units on the rule to represent feet and inches.
5. Boys practice same.
6. Boys, singly or in groups, draw their house plans to scale.
7. They place openings for doors and windows.
8. They study all drawings and talk about the best features.
9. Boys re-work their drawings to bring in best features of different drawings.

The Indian boy has to have pointed out to him

the value of preliminary sketches. He wants to go too quickly to the finished drawing. It is expected that the boys in some cases will work in small groups, not only on their first sketches but also in the preparation of the scale drawings. This may be considered an advantage from a cooperative standpoint.

It is to be anticipated that the final outcome of this general procedure step will result in the production of several house plans, varying in number and arrangement of rooms. The writer will, in his advisory capacity, suggest some limit as to the dimensions of the house and number and size of rooms.

At the close of this phase of the project, the writer will point out the need for securing the opinion of other groups as to the house plans, since the complete house is to be an all-school house. As advisor he will point out the desirability of having the health group, the girls' activity groups, and the agriculture group look over the plans.

Discussion of house plans with health group.--

To secure the cooperative reactions of the health group the boys will take their plans to this group, whose advisor is the school nurse. This group may have the

plans for some time and may want to call in one or more boys to talk over the plans.

Girls of health group with school nurse.

1. Discussion of plan or plans in terms of ventilation, sunshine, sanitation, water, disposal of waste.
2. Is there sufficient light? Are the windows properly placed?
3. Is there cross-ventilation when possible?
4. Is the house oriented properly with respect to prevailing winds, sunshine, and storms?
5. Can one room be isolated from others?

The health group is made up of Indian girls who report to the nurse at the school hospital. They have duties to perform that correspond to those of nurses in training in public hospitals, so far as their age and experience permits. They are selected for this type of work and are among the older girls in the school.

It is expected that the school nurse will guide the discussion as it relates to the health features of the house plans.

Discussion of house plans with girls activ-

ity groups.--To secure the cooperative reactions of the girls the plans would go from the health group to the home economics classes and to the Girl Scouts and the Girl Reserves. It is expected that these groups will cover such points as the following in connection with their discussion of the various plans.

Girls of home economics classes and sponsored groups with their individual sponsors.

1. Is the chimney properly placed from the standpoint of stove location?
2. Will the location of windows and doors allow for furniture?
3. Are the walls arranged to accommodate shelf space and cupboards?
4. Do the kitchen plans allow for a minimum of steps?
5. Will home decorations be possible?

Girls can project themselves into the home situation better than is the case with boys. Their point of view is important. The activity programs of the two organizations mentioned emphasize the relation of the girl to the home. The project plan would, therefore, fit directly into their activity programs.

Discussion of house plans with agriculture

group.--To secure the cooperative reactions of other groups of boys the house plans would go to the agriculture group. It is expected that this group will look at the situation from the standpoint of the location of the house in relation to grounds and farm buildings.

Boys of agriculture group with instructor.

1. Does the house plan allow for storage space for garden produce?
2. What would be the best location of the house in relation to other buildings?
3. Where should the well be placed to make the water available for house and garden use?

On the suggested plot of ground the land is relatively flat and a well could be placed at almost any point. The use of well water for garden and other plantings would seem desirable as a part of the planning.

Since the plans made by the shop boys would be merely floor plans it is assumed that possible basement or attic spaces in the constructed house could be utilized for storage purposes.

Re-organization of house plans by shop group.--

It is proposed that representatives from the health group, the home economics classes, girls activity groups, and the agriculture group, meet with the shop group to present their reports on the house plans. As an outcome of the joint discussion a single, desirable home plan will be decided upon. After this decision has been reached the plan agreed upon will be drawn to scale by the members of the shop group. Blue prints of the finished plans will be made, these prints to be made available to the school classes of arithmetic, geography, history, and English, as well as to other interested groups.

From the blue print drawings needed material for house construction will be estimated and ordered. While the ordering will be done by the instructor, features involved in the estimating will be used in connection with related activities of the shop group and the arithmetic class.

The house construction will be carried out as a shop activity, a discussion of which will be given at a later point in the report.

Related activities of the arithmetic class room.--In connection with the ordering of lumber, and later, with the record keeping of the house construction there will be numerous opportunities for related activities on the part of the arithmetic class room group.

1. Estimating of material needed and cost involved:
 - a. lumber
 - b. cement, sand and gravel
 - c. brick for chimney
 - d. paint, inside and out.
2. Keeping daily and weekly records of time of boys working on the house.
3. Keeping a record of labor and other costs.
4. Keeping a record of the materials used in the house.
5. Checking the estimated costs and material with those of the actual costs.

Related activities of the English classroom.--

As related activities there will be many opportunities for the members of the English classroom group. All of these activities cannot be anticipated; the following are to be considered as merely suggestive:

1. Keeping a diary of the construction activities.
2. Preparing a complete story, written or oral, of the all-school project.
3. From the groups outside the shop, obtaining a list of the activities involved,

and preparing a story of the activities.

4. Having the shop boys list new words and new phrases peculiar to the drawing and the construction work; and explaining the meaning of the words and the phrases.

Related activities of the geography classroom.-

As the project develops it would seem possible for the geography classroom group to use the project as a center of thinking in showing how differences in climate and building resources have affected the types of homes constructed by the Indians. In order to translate such ideas into activities it is suggested that the geography group make models.

Making of models of homes used by different Indians geographical groups:

1. Indians of the Salt river valley in Arizona.
2. Indians of Florida everglades.
3. Indians of North Carolina
4. Pueblo Indians
5. Navajo Indians.

Related activities of the history classroom.--

The house construction project can be used as a center for activities relating to the history classroom. Historical changes that have taken place in the construction

of homes--from the time when caves were used down to more modern times--can be worked out as activities.

To give these activities continuity they could be made to tell the story of "How People Found Shelter".

House construction procedure.--With the completion of the blue prints and the ordering of the material, house construction would begin.

The construction itself is planned to represent a major part of the year's shop work, and to be definitely cooperative. The following procedure steps would be followed in carrying out this construction.

Lay Out

1. Using stakes, locate one corner of the house.
2. From this stake locate one side with respect to road, other building, or some fixed station.
3. From this side "stake off" the other sides, using 3-4-5 method.

Excavation

1. Depending on amount to be done, use hand power, or horse drawn equipment.
2. Check footing depth with frost line depth.

Foundation

1. Build forms for concrete foundation, including footing forms for chimney.
2. Check on standard mix for concrete proportions.
3. Prepare run-way.
4. Mix concrete by hand, or by machine.
5. Pour in place, tamping well.
6. Allow sufficient time for concrete to set.
7. Remove forms; remove nails from lumber; stack lumber.

Framing

1. Frame and place sills
2. Frame and place floor joist
3. Lay sub-floor, if used; or lay boards on joists temporarily, if no sub-floor is used.
4. Frame and set studding of outside walls.
5. Cut and frame openings of outside walls.
6. Lay sheathing of outside walls.
7. Frame and place ceiling joists.
8. Build chimney
9. Frame and place rafters.
10. Place sheathing on roof.

11. Shingle roof, after insulating with building paper.
12. Place sheathing on ceiling.
13. Set outside door and window frames.
14. Put on siding of outside walls, after insulating with building paper.
15. Frame studding, and set up partitions.

Finish

1. Lay flooring
2. Finish walls and ceiling. (Knotty pine suggested.)
3. Set inside door frames. (Frames to be purchased made up.)
4. Hang doors
5. Place hardware on doors and windows.
6. Case doors and windows
7. Paint house inside and out

Further activities of Home Economics classes and girl-sponsored groups.--As previously reported, the girls visualize themselves in the home more than do the boys. They are very anxious to see the house construction brought to a conclusion, and are even more anxious to have a hand in the final activities of making the

house ready for occupancy.

For the girls to have a share in the actual construction, and putting, in place, of shelves, coat racks, built-ins, furniture and other house features, and to have a share in planning and actually painting the interior of the house, would give them an outlet to their enthusiasm. This could be a joint activity with the boys, and would be in keeping with the cooperative features of the project.

As an activity for the girls only, they could plan curtains, drapes and other interior decorations to adorn the house interior.

Further activities of the agriculture group.--

For Indian Service schools, the work "agriculture" has a broad interpretation. It means far more than planting and raising grains, more than raising and taking care of stock and other activities commonly associated with the farm. It has been interpreted to include any activity having to do with the soil--building dams, conserving the soil, planting of wind breaks, regrassing of lost-pasture areas.

As an activity to complete the project the boys of the agricultural group could plant trees and lawn to landscape the immediate grounds of the home.

Like the painting activity, the landscaping could likewise become a cooperative project of girls and boys.

General discussion.--In the preceding development of the house-construction project the writer has proposed that the house be constructed of sawed lumber and that concrete be used for foundations. This was done so that the boys of the shop would receive practical experience in the use of these common building materials. It is, however, realized that other materials could have been utilized in this project or in similar projects carried out in other areas.

The early white settlers in the Dakotas constructed their houses by using native soil for materials. This type of construction, usually referred to as rammed earth, has possibilities with the Indian boys and girls, who will find themselves later in life in surroundings where they will be looking for help from nature. A cooperative project involving all boys and girls of a small house constructed by the rammed earth method could be developed.

Chapter IV

CONCLUSION

The project as reported in the preceding pages is one involving a year's work on the part of the shop group. While primarily giving practice in wood working it would involve work in concrete. It can be argued that the house construction, by following so closely that of the white man, represents a false goal for the Indian. The cost, materials used in construction, and methods used in decoration, are those of the home of the white man of moderate income. On the other hand, the employability of the Indian boy should be definitely increased by his experience with practical wood working and simple concrete construction.

Two further points need comment. One deals with the cost of the project itself; the second with possible uses for the house resulting from the completed project.

The actual cost of construction would be defrayed, as any other government Indian School project

would be, through allocation of annual appropriation money as made by the local administration. In this case the building itself should not only add something to the appearance of the campus but prove definitely useful.

As was stated at an early point, the school has tentative plans for the developing of a plot of ground that would represent an actual Sioux farming situation. The house produced in the project would become the farm home for such a plan. It is possible that use could be made of such a home similarly to that done in the two practice cottages at the Pine Ridge Reservation, as reported in the Review of Literature. By making such a house the center of actual home situations it would be possible to give home training to both boys and girls.

BIBLIOGRAPHY

1. Beatty, Willard W. Flexibility, Indian education, 5:1-3, November 15, 1936.
2. Beatty, Willard W. Making the desirable possible. Indian education, 26:7-8, March 1, 1938.
3. Beatty, Willard W. Learning through living. Indian education, 21:6-7, December, 1937.
4. Burr, S. E. What is the activity plan of progressive education? Cincinnati, Ohio, C. A. Gregory Co., 1935.
5. Clark, J. R. Life in the high school, Teachers college record, 37:393-98, February, 1936.
6. Dewey, John. Experience and education, New York, Macmillan Co., 1938. 116 p.
7. Dix, Lester. Integration in the Lincoln school philosophy. Teachers college record, 37:363-71, February, 1936.
8. Ericson, E. E. Teaching problems in industrial arts, Peoria, Ill. Manual arts press, 1930. 433 p.
9. Hopkins, L. T. Integration in the high school. Teachers college record, 37:406. February, 1936
10. Institute for government research. The problem of Indian administration, summary. Findings and recommendations. Prepared by the survey staff, Lewis Meriam, Technical director.
11. New day for Indians. A survey of the working of the Indian reorganization act of 1934. (New York Academy press) 1938. 47 p. Prepared under the editorial supervision of Jay B. Nash, Oliver La Farge and W. Carson Lyon.
12. Ogden, R. M. The teaching of science. School and Society, 47:713-19, June 4, 1938.
Also in: Progressive education association, Progressive education booklet, no.8, p. 27-36, 1938.

13. Orata, P. T. and associates. Indian school serves its community. Progressive education, 15:152-5, February, 1938.
14. Orata, P. T. and Galloway, O. Promoting boy-girl relationships through the practice cottage. Journal of home economics, 30:321-3, May, 1938.
15. Presler, Frances. How can I base my teaching on the school's environment? Instructor, 48:6-7, June, 1939.
16. Proffit, M. M. Trends in industrial arts. School life, 21:149, 160. February, 1936.
17. Prosser, Charles A. and Allen, Charles R. Vocational education in a democracy. New York Century Co., 1929.
18. Raines, Earl L. A sacajewea pageant unit as a core for the integration of instruction. Master's thesis, Colorado State College. Completed but not as yet officially accepted, August 7, 1939.
19. Smith, Homer J. Cooperation in industrial education. Industrial education Magazine, 4:105, May, 1939.
20. Sweeney, Francis, G. Integration in the junior high school. Teachers College record, 37:399-405, February, 1936.
21. Tedrow, Altha. A home improvement unit in an Indian school. Practical home economics, 13:236, August, 1935.
22. Wile, Ira A. The integration of the child--the goal of the educational program. National education association proceedings, 73:6389, 1935.