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August 5, 1975
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ATTITUDES OF TEACHERS IN OPEN SPACE SCHOOLS

by

LINDA KATHERINE BERG

A professional paper submitted in partial fulfillment
of the requirements for the degree

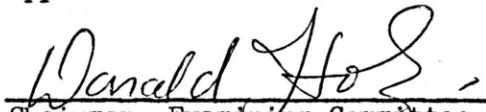
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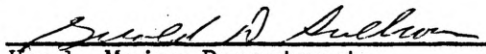
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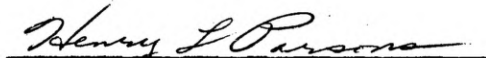
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ABSTRACT

The problem of this study was to survey the attitude of teachers in Montana to obtain information concerning open space schools.

The population consisted of 171 teachers from open space schools in Great Falls, Billings, and Helena. There were eleven elementary schools and one junior high school.

A questionnaire was used to collect the data. Six areas surveyed by the questionnaire were 1) space, equipment, and materials, 2) team teaching, 3) preparation time, 4) size and kinds of student groupings, 5) college preparation and in-service training, and 6) teacher and pupil adjustment and parent acceptance.

Conclusions presented from survey findings concerning teacher attitudes about open space schools were 1) adequate space, equipment, and materials are available except for places to conduct noisy activities, 2) team teaching strategies are employed with the assistance of paraprofessionals, 3) arrangements for preparation time are not sufficient, 4) there is a lack of college and in-service training programs, and 5) parents accept the open space design while teachers and students adjust to this type of school.

Recommendations of this study were 1) the organization and strategies of team teaching need to be presented, studied, and evaluated, 2) more preparation time should be provided, 3) college preparation programs need to be improved and expanded, 4) continuous in-service training should be provided, 5) student groupings should be according to needs and interests, and 6) open space design should be considered in planning future school buildings.

Recommendations for further research were 1) a study of team teaching organization, 2) an investigation of the utilization of space, 3) a survey of student attitudes, 4) a survey of parent attitudes, and 5) an examination of teacher preparation time in relation to student achievement.

CHAPTER I

INTRODUCTION

Since the release of the Plowden Report in 1967 on the British Infant Schools in England, a great deal of interest in the open education concept has been shown in the United States. Various approaches to utilize this idea have developed in schools across this country in the past decade. Team teaching, nongradedness, and individualization, where emphasis is placed on learning rather than teaching, are three of the approaches used to implement the open concept.

The building of open space schools has evolved from the open education concept. Buildings of this nature have made an appearance in Montana schools during the past five years. A physical structure which involves openness of spacial design has created a new look in the appearance of schools. Open space schools, designed with pods and clusters of rooms, arrived in Great Falls with the opening of two elementary and one junior high school in 1970. Billings and Helena have also created buildings of this design in the past five years at the elementary level.

In this chapter a statement and description of the problem of this study will be given. The need for or purpose of this study will be discussed giving reasons why the research will be conducted.

General questions to be answered from the information gathered in the research of this problem will be presented. Following the questions will be a general explanation of the procedure that will be used to gather the necessary information in the research of this problem. The limitations and/or the delimitations will be described and the definitions of terms will be included. The meanings of the terms given will provide a more precise understanding of the words that will be used in each of the succeeding chapters.

Statement of the Problem: This study will determine the attitudes of teachers in open space schools in Montana. Teachers from elementary and junior high levels will be contacted. Attitudes of teachers will be examined about the amount of physical space, material, and equipment available to them in their open space school. Questions will be presented to investigate attitudes of teachers concerning the implementation of team teaching as an approach to be used in buildings of this nature. Preparation time during and adjacent to the pupil instruction day will be compared for teachers presently involved in open structure schools. Various methods of grouping students can be used to facilitate instruction such as 1) heterogenous, 2) homogeneous, 3) interest, and 4) ability groups. These kinds of groupings and the average group size will

be presented. Teachers will be polled to obtain information about the availability of training for teaching for open space schools from college. Teachers' attitudes will be secured concerning the amount of "in-service" training they received. Teacher attitude will be explored with regard to teacher and pupil adjustment and enjoyment. Teacher attitude concerning parental acceptance will also be sought.

Need or Purpose of the Study: The importance of this study deals with the need to identify attitudes of teachers in open space schools. Schools built in this fashion have different physical surroundings in which teachers and students function. Construction of a variety of architecturally open schools in Montana has become increasingly popular.

The purpose of this study will be to aid in determining what teachers' attitudes are concerning the space, equipment, and materials available to them in their open space school. Consideration of the physical designs of open buildings were stated by Dr. Harold Gores in a report at a seminar sponsored by Educational Facilities Laboratory in 1970. Carpeting, curtains, and moveable natural barriers need to be available to enable children to use the various types of instructional media. Furnishings must be flexible to accommodate the intended mobility and informality of the setting.

Team teaching is one approach that has been implemented in open space schools and needs to be discussed. Teachers are functioning in a different role and teaching is no longer a solo experience. In a team teaching situation, teachers' methods and techniques are visible to other team members. (Report of Association of School Administrators, 1971) Also a larger number of students are involved in the class setting.

Larger open spaces and the use of team teaching has increased the number of student and teacher contacts during the school day. In a report of the Educational Facilities Laboratories in 1968, it was stated that the major aim of open space schools is to provide an environment which encourages greater interaction between teacher and pupil and between teacher and teacher. Stephens (1974) adds to this by expressing a concern for teachers being able to interact with professional colleagues, within open classrooms and in other schools, to discuss ideas and to learn from one another's reactions. With increased interaction, preparation time during and adjacent to the teaching day needs to be considered. For the same reason, the kinds and size of student groupings will be explored.

In a survey reported in a bulletin from Open Space Schools Project, 1970, eighty percent of the superintendents surveyed indicated teachers were unprepared for teaching in open space schools. This report also specified an urgent need to have intensive

pre-service and in-service training for both new and experienced teachers in open space schools. A further purpose of this investigation is to determine if adequate preparation for teachers either in college and/or by in-service training was provided. Crumbaugh (1973) supports the need for continuous programs of in-service training that provide experiences which allow teachers to develop the necessary competencies. He further suggests this training will aid teachers in learning first hand that children must actively do their own learning.

Teacher and student adjustment and parent acceptance of open space schools is important. Evidence found in this study regarding the support of teacher, pupil, and parent will help determine the need of building this type of structure in the future.

Possibilities exist for additional research in the areas of 1) curriculum, 2) attitudes of parents and students, 3) methods of grouping students, and 4) team teaching in open space schools. This investigator will attempt to add to the research by determining what the attitudes of teachers are in open space schools in Great Falls, Billings, and Helena. This study should be beneficial to educators pursuing further innovations and improvements in this type of physical structure.

General Questions: The information gathered in the research of this problem will include a presentation of teacher attitudes in six areas. These areas will be elaborated upon in the definition of categories in Chapter III. The six questions stated here delineate each area.

1. What is the attitude of teachers in open space schools concerning the amount of physical space, materials and equipment available for use in this type of building?
2. What are teachers' attitudes about the implementation of team teaching in open space buildings?
3. What is the amount of preparation time during and adjacent to the pupil instruction day used by teachers in this type of setting?
4. What type and size of student groupings are used by teachers in this situation?
5. Was adequate college preparation and in-service training available?
6. Was this type of building readily acceptable to teachers, pupils, and parents?

General Procedure: The method used in gathering information will be a questionnaire. Teachers from elementary and junior high levels will make up the population. The information was gathered

during the 1974-1975 school year. Chapter III will develop the procedures to be used. The information will be presented in tabular form in Chapter IV. The final chapter will contain the conclusions of the research.

Limitations and/or Delimitations: This study will be limited in that the open space schools in Great Falls, Billings, and Helena have been in operation for five years or less. Statements of teacher attitudes are based upon the experience of teachers within the buildings they are assigned. The findings will apply to only those areas in which a similar type of population exists. No attempt will be made in this study to compare a traditional building with an open space building.

Definition of Terms: The terms listed below are defined with respect to their use in this study.

Open space schools refers to those buildings designed in "pods," "clusters of rooms," or "big rooms" to accommodate a definite number of teachers and class groups. A large instructional materials center is located so that resources can be shared.

Open education as used throughout this study refers to the decentralized learning environment which children help to create. The physical space is flexible and functional. Children have choices of learning activities, free access to a wide variety

of materials and time to explore and discover individually or in groups. The curriculum is individualized and based on needs, interests, and concerns of the children. A wide variety of techniques and approaches are used to achieve this purpose. The teacher's role is that of a facilitator of the above conditions and is trustful, encouraging, humane, and understanding.

An open area classroom is a relatively large instructional area or multiple classroom space not separated by walls. It also may be a room in a non open space school in which walls between certain classrooms have been removed to create a large open area. This type of classroom will have a variety of different groups and/or classes which may be working in the area at the same time.

Similar to an open area classroom is an open school. The curriculum is open and not necessarily the structure of the classroom. The total environment is based upon freedom to pursue learning goals in an individual manner within the confines of the building and within the community of the school.

Open corridor is defined as the use of a corridor in a building as a place for activities and materials which are shared by adjoining rooms. Freedom of movement between these rooms and the corridor is allowed.

An open plan school refers to any school in which the concept of open education is being used in any portion of the curriculum.

This type of school could be a traditional structure but certain subjects in the curriculum are open in concept.

The definition of team teaching means two or more teachers who are responsible for planning, organizing, instructing, and evaluating the education for a group of students.

Summary: This chapter was introduced with a brief description of the origins of the open education concept and the open space school. A statement of the problem was included. The problem will be to research the attitudes of teachers in open space schools in Montana. Reasons were given as to the needs and purposes for conducting the study. General questions were stated. Information will be gathered with the aid of a questionnaire. The general procedure for conducting the investigation was presented. Terms were defined and a statement of the limitations and/or the delimitations was included.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction: The review of related literature will include a description of open space schools and the implications of open education concepts for open space schools. Attitudes of teachers who are moving toward involvement in open education will be viewed. Teacher attitudes in open education as presented in studies will be presented. Authorities in this field will be cited.

The review of related literature is pertinent to this study because the areas covered in the books and articles reviewed are directly related to the attitude of teachers in open space schools.

Description of Open Space Schools: The physical structure of a building does not insure that learning will occur. It is the facilitation and relevant use of the environment within and without the school building. This is of major importance in the encouragement of individual learning. During the past decade the building of schools based on a model of openness in their physical appearance have increased rapidly.

The history of space design in open space schools is described by Frazier (1972) as first beginning with schools that have moveable walls between clusters of rooms, secondly the interconnecting of rooms in the form of pods or clusters, and finally the development of total teaching space which become very large rooms or an entire open interior.

The report of the American Association of School Administrators on open space schools (1971) included a description of non-committed spaces or open areas of undivided space adjacent to a group of classrooms. These clusters or pods are open within themselves but not to each other.

A further description of space design is extended to include an environment which enables the staff and assistants to provide a varied program for children. This plan includes other forms of staff organization other than one teacher with one group.

(Frazier, 1972, p. 23)

Team teaching and individualized instruction have become part of the internal program for buildings of this nature. Wing and Mack, 1970, state that team teaching, flexible time patterns, and flexible groups are three of eight components to achieve the goal of individualized instruction and learning in open space schools.

In the D and R Report 1970, open space schools depart from other types of organization first by having teachers operating as a team to make decisions cooperatively. Secondly teachers are visible to one another as they work.

Implications of Open Space Schools for Open Education:

Open space school is one label that is directly associated with the concept of open education. There are a variety of labels which are related to aspects of the open education concept. These labels include open area classroom, open school, open corridor, and open plan school.

Blitz (1973) contended the main thought behind each is that children are unique, active individuals. Their learning needs can only be met in a free active atmosphere tailoring the environment to the specific needs and abilities of each child. The interpretations given by Silberman (1970) of these same methods used, are concerned with the idea that children need a quality school experience. This experience would enable them to learn from others and from their environment. He (Silberman, 1970. p. 209) further states that it is important to realize that learning grows out of the interests of the learner. The learner needs to be free to develop interests and skills with the guidance of the teacher.

The basic needs of previously mentioned labels agree with the philosophy of open education. According to Blitz (1973), "the child's need to be actively involved in an environment and involved with other people, is of major importance in structuring the learning process for a child. Recognition of the learning pace, style, and needs of the individual child are important. It is necessary that the process be exciting and enjoyable."

From a recent study of twenty-five open space schools in Ohio, the indications noted by Frazier (1972. p. 73) were "innovations in the aspect of organization are likely to accompany living in the new quarters. Gains in open structure or organization are obviously less visible than those in open space. More openness in the organization of schools is not confined to open space schools."

Barth (1972) emphasizes the point that not any one model will provide acceptable remedies for solving all the problems in education. Teachers interested in moving toward informal classrooms do so out of evolution and change in their personal philosophy. This change includes professional concern for the nature of instruction and of a child's learning process rather than to change the way a classroom looks or to simulate appearances.

The Change in Attitudes of Teachers Moving Toward Open

Education: From the articles reviewed in the related literature, the views of authorities in the field of open education express the change in the attitudes of teachers moving toward or directly involved in this process.

Teachers all have different feelings and attitudes regarding an innovation which can result from mere observation. Yet those interested in pursuing the concept of open education need to be aware of the values, attitudes, and priorities concerning open education and evaluate them personally. Then these factors need to be put into operation effectively so as to have control over them when interferences with educational goals arise.

(Blitz. 1973. p. 20)

Wlodarczyk (1972) comments that teachers entering an open classroom environment need to develop certain beliefs which may be different from their present feelings. These attitudes will influence the relationship with children in implementing this new role.

In an interview conducted by Leanne Landsman with Charles E. Silberman published in the Instructor (October, 1973. p. 99), he states,

I'm impressed with the changes in teacher attitudes which have led to changes in teaching practice. There is first of all a remarkable change in atmosphere--more

humaneness and understanding, more encouragement, more trust. I see, too, a change in learning style--away from the teacher as a source of all knowledge to the teacher as a facilitator of learning, away from the traditional whole-class orientation to more concern with individualized instruction.

Attitude of Teachers in Open Space Schools: Little

research was located as this review of literature was conducted concerning teacher attitudes in open space schools. Previously reviewed literature has dealt with the philosophy of open education. Thus the literature reviewed in this section will reflect the studies and observations of the authors in relation to this concept.

A survey was taken by Pritchard of former and current teachers involved in open area schools in Vancouver, British Columbia in 1972. The questionnaire indicated that teachers were supportive of the concept of open area schools for a majority of the students.

Characteristics of open education were observed by trained observers in primary classrooms in Illinois and a questionnaire was submitted to teachers by Evans in 1971. The study showed that there was a variety in the usage of materials. Flexible grouping and scheduling of classroom activities and procedures were evident.

In discussions with teachers Silberman (1973) pointed out that their impressions and attitudes towards open education were gained from observations they had made in those schools they had visited. From these observations teachers assumed that children

always worked individually or in small groups. He pointed out this was not always the case in open classrooms.

Summary: The review of related literature was conducted to study the space patterns of open space schools to give an idea of the physical structure in this type of building. The open education concept was dealt with briefly to show the implications of its use in open space schools. The terms, the meanings of labels, and the concept of open education used throughout the literature reviewed were defined in Chapter I. A section in this review presented the impressions of authorities in the field of open education concerning the change in the attitudes of teachers moving toward or involved in open education. Little research was located dealing specifically with teacher attitudes in open space schools. The related literature reviewed reflects the authors' surveys and observations of the attitudes of teachers in similar situations yet surrounded by the open education philosophy.

Because of the lack of information available about this specific problem, the literature reviewed was related to the study by encompassing the concept and philosophy of open education. Open education is discussed in depth by authors in book length form. The areas covered in the review of related literature in this chapter

are all directly related to open education and by implication to the open space school.

CHAPTER III

PROCEDURES

Introduction: This chapter will include a description of the population to be used. A definition of categories will explain the six areas to be dealt with in the teacher attitude questionnaire. The method to be employed in organizing data gathered in the research will be given. General questions will be stated that are to be answered. Following the presentation of these questions, the method that will be used to analyze the data will be outlined. An explanation of the precautions taken to insure accuracy in the interpretation of the information will be covered. This chapter will then be summarized.

Population Description: The population of this study will consist of all the teachers at elementary and junior high levels in open space schools in Great Falls, Billings, and Helena. The population includes teachers presently teaching in the two elementary schools and one junior high open space school in Great Falls. The elementary level includes about forty teachers working with grades kindergarten through sixth. The junior high level includes about seventy teachers working with grades seven, eight, and nine. Billings has seven elementary schools that have open space facilities in part or total with about sixty teachers working with grades

kindergarten through sixth. Helena has two elementary open space buildings with about fifteen teachers working with grades kindergarten through sixth. The total population as described will be used in gathering information for this study.

Explanation of the Categories: The categories to be dealt with will include the attitude of teachers in six areas.

1. The physical space will be defined as the internal, architectural design of the open space building as well as smaller enclosed areas. To be considered in this first category will be the availability of physical space, equipment and materials needed to carry out the curriculum adequately in this setting.
2. The implementation of team teaching in buildings of this type will be investigated. The concerns will be centered on the present use of a team organization, a designated team leader, and paraprofessionals. The feelings of teachers will be reflected regarding the organization of teachers into teams in open space schools.
3. The kinds of student groupings utilized and the size of an average instructional grouping will be discussed. Grouping types include interest, ability, large heterogenous, small heterogenous, large homogeneous, and small homogeneous.

4. The amount of preparation time used by teachers during and adjacent to the pupil instruction day will be presented.
5. The amount of college training and teacher preparation for the open space school will be explained. The amount of in-service training available to prepare a teacher for this new role will be included. Preference of types of in-service training such as 1) teacher meetings for the sharing of materials and ideas, 2) organizational meetings for grouping, teaming, scheduling, etc., 3) demonstration workshops in subject areas, 4) visiting and observing teachers in open space schools, and 5) other teacher suggestions will be compared.
6. The final category will include teacher opinion as to pupil and teacher adjustment and parent acceptance of open space schools. Teachers will be asked to respond to questions about their acceptance of the open setting, volunteering for work in this situation, comfort in teaching with other teachers present, and enjoyment in working in this type of building.

Method of Collecting Data: The method which will be used to collect data for this study will be a questionnaire. The questionnaire will be sent with a cover letter explaining the reason for conducting the research. Items for each of the six categories will be included in the questionnaire. The cover letter with the

questionnaire and a self-addressed envelope will be sent to each teacher who is working in an open space school in Great Falls. The school mail will be used. One person in each building will be designated to gather and return the questionnaire to the researcher. The questionnaire with a cover letter and self-addressed stamped envelope will be mailed directly to teachers in Billings and Helena. These will be returned by mail. Permission to conduct this study will be obtained from each of the three districts mentioned.

Method of Organizing the Data: The data obtained will be presented in tabular form. The attitude of teachers in open space schools will be expressed in percentages. These percentages will be calculated for each of the items on the questionnaire. Some items will require a yes or no response. For certain items the respondent will have an opportunity to circle one of a series of choices. These choices will include such information as number of years, students, and hours. An individual table will be used for each of the twenty-six items on the questionnaire to show the information collected.

In addition to the twenty-six tables, there will be four tables giving a description of the population surveyed. Percentages will be given to show the proportion of male to female, the amount

of teaching experience, the amount of teaching experience in open space schools, and the amount of education of the teacher population surveyed. A summary of the attitude of teachers to advantages and disadvantages of open space schools will be stated.

The survey instrument was designed to seek opinions regarding the six general questions stated in Chapter I.

Analysis of Data: The data will be analyzed by examining the questionnaire which contains teacher attitudes in open space schools from Great Falls, Billings, and Helena. Percentage relationships will be compiled and presented. This information should enable the researcher to describe the present attitudes of teachers from these three districts. It will also aid the researcher in identifying the variety in teacher opinions. A summary of teacher comments as to advantages and disadvantages of open space schools will provide additional scope to the data.

Precautions Taken for Accuracy: A hand computer will be used to calculate the percentages for each item. To eliminate as much error as possible in recording the percentages, the tabulations will be checked. An audit by another person will be made of all data presented to validate the accuracy.

Summary: A general statement of the problem and the organization of the chapter was given. The population to be used in obtaining the information for this study was described. Six areas used to categorize the items to be surveyed were defined. The methods used for collecting the data will be in the form of a questionnaire. Data will be organized in tabular form showing teacher attitudes. The data will be analyzed using percentages and tables which describe the variety of teacher attitude concerning open space schools. Precautions to be taken for accuracy were explained.

CHAPTER IV

FINDINGS AND INTERPRETATIONS

Introduction: This chapter will report the data obtained by questionnaire concerning the attitudes of teachers in open space schools in Montana. The data will be shown in tabular form and interpretations of responses will be given.

In collecting the data for this study, questionnaires were sent to teachers in open space schools in Great Falls, Billings, and Helena. Eleven elementary schools were contacted. Two of these eleven schools were not open space structures. Teacher comments from these two schools will be summarized separately. One junior high school was surveyed. Of the 171 questionnaires distributed, 126 were returned, representing 73.68 percent. Of those 126, six were from teachers in non-open space structures resulting in a return of 70.18 percent.

Tables Describing the Population: The first four tables provide a description of the population surveyed as to sex, number of years of teaching experience, number of years of teaching experience in open space schools, and amount of education. These tables are presented to further describe the population.

Table 1

Description of the Sex of the Population

	Number	Percent	Number	Percent	Number	Percent
	Male		Female		Other	
Junior High	24	51.06	22	46.81	1	2.13
Elementary	13	17.81	59	80.82	1	1.37

In the junior high school, there were more male teachers than female. There were four times as many female teachers at the elementary level than male teachers. Two respondents omitted this item on the questionnaire.

Table 2

Description of the Amount of Teaching Experience of the Population

	No.	Per.	No.	Per.	No.	Per.	No.	Per.
Number of Years	0-4		5-9		10-14		15-19	
Junior High	8	17.02	35	74.47	2	4.255	2	4.255
Elementary	26	35.61	38	38.36	14	19.18	2	2.74

Number of Years	20-24		25-29		30-34		34+	
Junior High	0	0.00	0	0.00	0	0.00	0	0.00
Elementary	2	2.74	0	0.00	1	1.37	0	0.00

A majority of the teachers at the elementary level have taught from zero to nine years. Nearly three-fourths of the junior high teachers have taught from five to nine years. Less than one-fourth of the teachers from either level have taught ten years or more.

Table 3

Description of the Amount of Teaching Experience of the Population
in Open Space Schools

	No.	Per.	No.	Per.	No.	Per.	No.	Per.	No.	Per.
No. of Yrs.	0		1		2		3		4	
Jr. High	2	4.26	0	0.00	7	14.89	6	12.76	6	12.76
Elementary	9	12.33	9	12.33	12	16.44	16	21.92	12	16.44

No. of Yrs.	5		6		7		8		8+	
Jr. High	25	53.19	1	2.14	0	0.00	0	0.00	0	0.00
Elementary	13	17.80	1	1.37	0	0.00	1	1.37	0	0.00

Over half of the junior high teachers have taught at least five years in an open space setting. The amount of teaching experience for elementary teachers in open space schools varies from less than one to five years.

Table 4

Description of the Amount of Education of the Population

	No.	Per.	No.	Per.	No.	Per.	No.	Per.
	BA		BA+15		BA+30		MA	
Junior High	19	40.43	9	19.15	5	10.64	7	14.89
Elementary	21	28.77	29	39.73	10	13.70	7	9.58

	MA+15		MA+30		MA+30+			
Junior High	3	6.38	4	8.51	0	0.00		
Elementary	2	2.74	2	2.74	2	2.74		

One half of the teachers from both levels have either a bachelor's degree or a bachelor's degree plus fifteen additional hours. A larger percentage of the junior high teachers hold masters degrees than do elementary teachers.

Report of Teacher Questionnaire: The following section of this chapter will present the answers to twenty-six questions presented to the study's population. These questions all concern the attitudes of teachers in open space schools. Individual tables will be used to organize the information. The total number of responses will be given and percentages will be calculated. The questions generally require a yes or no response. Noncommittal responses will be presented in a separate column on each table. The responses included in this

column were those marked not applicable or left blank. Six questions provided the opportunity for a choice of a series of responses. These choices included hours or size and kind of student groupings.

The last two items on the questionnaire asked teachers to comment on advantages and disadvantages of an open space school. Instead of presenting a table, teacher responses to these questions will be summarized. A copy of the questionnaire appears in Appendix A.

The tables for questions one and two present additional information concerning the population. These two questions are categorized as information about the population. Each remaining question will be categorized as to the six areas previously described. These categories are 1) space, equipment, and materials, 2) team teaching, 3) preparation time, 4) student groupings, 5) college preparation and in-service training, and 6) teacher, student and parent acceptance and adjustment. Conclusions and recommendations will be given for each of these areas in the following chapter.

Table 5

Category: Information About the Population

Question 1: Are you presently teaching in an open space school?

	Number	Percent	Number	Percent
	Yes		No	
Junior High	47	37.30	0	0.00
Elementary	73	57.94	6	4.76

The population consisted of a larger percentage of elementary teachers than junior high teachers. Because of this, the data will be tabulated separately for each level.

Six elementary teachers who do not teach in open space schools returned questionnaires. They are summarized here. All of these respondents indicated they were teaching in a self-contained or traditional classroom. Two of these six responded that a five or six teacher team was being used. These teams were divided into two smaller teams for cooperative teaching. One advantage of these teams that was suggested was the ease of holding the attention and interest of children. "Every teacher is able to do what she does best." A disadvantage mentioned concerned the children who are unable to direct their own activities. These "pupils do not respond well to working in a more relaxed atmosphere." It was also suggested

that some teacher personalities do not lend themselves to the give and take of team teaching.

For all the remaining items, only the 120 responses from teachers in open space schools will be reported. This represents 70.18 of the population surveyed.

Table 6

Category: Information About the Population

Question 2: Have you ever taught in a traditional building?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	41	87.23	6	12.77	0	0.00
Elementary	53	72.60	19	26.03	1	1.37

A majority of teachers sampled in this survey had taught in a traditional building. Three elementary teachers and one junior high teacher had student teaching experience in a traditional school but have subsequently only taught in an open space environment.

Table 7

Category: Space

Question 3: Do you agree with the internal physical setting of open space schools?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	35	74.47	7	14.89	5	10.64
Elementary	66	90.41	5	6.85	2	2.74

Three-fourths of the teachers surveyed indicated they liked the internal physical setting of this type of building. There was a wider range of opinion within the group of junior high teachers than there was in the group of elementary teachers who responded to this question.

Table 8

Category: Space

Question 4: Do you feel a teacher should have previous experience before teaching in an open space school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	17	36.17	27	57.45	3	6.38
Elementary	41	56.16	31	42.47	1	1.37

Over half of the responses at the junior high level indicated previous teaching experience was not necessary. At the elementary level over half of the responses indicated that teachers should have previous experience. No significant differences are suggested by the responses to this question when the two groups of the population are compared. Several teacher comments concerning this question said that it would depend upon the teacher. Another comment suggested that previous experience might be helpful and that at least part of the team should have had experience. It was also stated that "Attitude is more important than experience."

Table 9

Category: Teacher Acceptance

Question 5: Did you volunteer to be assigned to this type of school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	28	59.57	19	40.43	0	0.00
Elementary	53	72.60	19	26.03	1	1.37

A greater percentage of elementary teachers said they volunteered for teaching in an open space school. A lesser percentage of junior high teachers volunteered. However a majority of teachers at both levels did volunteer to work in this type of school. An

additional comment stated that the reason for volunteering was not because it was an open space school.

Table 10

Category: Teacher Acceptance

Question 6: Do you enjoy teaching in an open space school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	45	95.75	0	0.00	2	4.25
Elementary	68	93.15	2	2.74	3	4.11

Over ninety percent of both groups indicated that they enjoy teaching in an open space school. This question is related to and can be compared with question three which deals with teacher approval of the physical design of this type of building.

Table 11

Category: Space

Question 7: Do you feel you have adequate space provided for the activities you wish to carry out?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	28	59.57	17	36.17	2	4.26
Elementary	43	58.90	29	39.73	1	1.37

Over half of the teachers from both levels indicated that there was adequate space provided. There are no significant differences in opinion indicated by teachers' attitudes in this area. Comments related to this question suggest that more area was needed for "messy" activities, creative dramatics, films, and speakers. Another comment indicated that the design of an open space building should include more "nooks and crannies."

Table 12

Category: Space

Question 8: Does your open space school provide sufficient smaller enclosed spaces that are needed for certain classes or lessons?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	20	42.55	25	53.19	2	4.26
Elementary	37	50.68	35	47.95	1	1.37

Over half of the junior high teachers felt there were not enough smaller spaces while half of the elementary teachers felt there was a sufficient amount. However the percentage levels indicating the attitudes of the total population are not significantly different. Comments following question seven also relate to this question.

Table 13

Category: Equipment and Materials

Question 9: Do you have adequate equipment and materials available for carrying out your program?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	42	89.36	4	8.51	1	2.13
Elementary	60	82.19	13	17.81	0	0.00

Over eighty percent of all teachers in the population said an adequate amount of equipment and materials were available.

Table 14

Category: Team Teaching

Question 10: Are teachers in your area or level organized for team teaching? (Refer to team teaching as two or more teachers working together to plan, organize, instruct, and evaluate for a subject.)

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	27	57.45	13	27.66	7	14.89
Elementary	58	79.45	12	16.44	3	4.11

Over fifty percent of the teachers at the junior high level stated they were organized for team teaching. At the elementary level, over three-fourths of the teachers were organized for team teaching. Some team teaching techniques are used in open space schools according to over half of the teachers responding to this survey.

Table 15

Category: Team Teaching

Question 11: Does your team have a designated team leader?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	11	23.40	27	57.45	9	19.15
Elementary	6	8.22	64	87.67	3	4.11

Over half the junior high teachers indicated that they do not have a designated team leader. Approximately one-fourth of this part of the population indicated the opposite is true. At the elementary level, less than ten percent revealed the use of a designated team leader. Comments related to this question suggest that junior high teachers feel department heads function as designated team leaders.

Table 16

Category: Team Teaching

Question 12: Do you feel teachers should be organized and trained
for team teaching in open space schools?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	35	74.47	10	21.28	2	4.25
Elementary	58	79.45	14	19.18	1	1.37

Nearly three-fourths of teachers from both levels agreed that teachers should be organized and trained for team teaching in this type of school. Comments made concerning this question suggest that team planning is important but the use of team teaching should depend upon the school. Further comments indicate that team teaching should definitely be considered in an open space elementary building. One person's response said that "instead of team teaching, teachers should be trained to develop open education."

Table 17

Category: Teacher Acceptance

Question 13: Are you comfortable with other teachers present while you are instructing a class?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	46	97.87	0	0.00	1	2.13
Elementary	71	97.26	1	1.37	1	1.37

Almost the total population indicated that they were comfortable when other teachers were present during their instruction. This question is directly related to questions three and six.

Table 18

Category: Grouping

Question 14: Do you group children for instruction according to interest?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	14	29.79	25	53.19	8	17.02
Elementary	28	38.36	37	50.68	8	10.96

Half of the teachers from both levels do not use interest grouping for instruction. Only about thirty percent do use this type of grouping.

Table 19

Category: Grouping

Question 15: Do you group children according to ability?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	18	38.30	22	46.81	7	14.89
Elementary	68	93.15	2	2.74	3	4.11

Ability grouping is used by less than forty percent of the teachers at junior high level. More than ninety percent of the teachers at the elementary level do group according to ability. Comments made suggested that ability and interest groupings were used for a variety of subjects and classes. In addition to ability and interest groupings, the use of learning centers and individualized instruction were suggested as ways of grouping students.

Table 20

Category: Grouping

Question 16: Which type of instruction grouping do you use most frequently?

	Number	Percent	Number	Percent	Number	Percent
	Large Heterogenous		Small Heterogenous		Large Homogeneous	
Junior High	23	42.59	11	20.37	3	5.56
Elementary	11	13.41	21	25.61	5	6.10

	Small Homogeneous		Other			
Junior High	10	18.52	7	12.96		
Elementary	40	48.78	5	6.10		

Many of the respondents circled more than one type of grouping. All the responses were considered giving a total of fifty-four at the junior high level and eighty-two at the elementary level. Large heterogenous grouping is used most frequently at the junior high level. Small homogeneous groupings are used most often at the elementary level. Comments concerning this question indicated that the type of grouping depended upon the subject area. Large heterogenous groupings at the elementary level were more commonly used for social science, science, music, art, and gym, while small homogeneous groupings were used in math and reading. One person said that

grouping includes the individual, small groups, large groups, and the entire class. Larger groups were used for instruction and smaller groups were used for activities according to another respondent.

Table 21

Category: Grouping

Question 17: What is the average size of your instructional groups?

	No.	Per.	No.	Per.	No.	Per.	No.	Per.	No.	Per.
	0-4		5-9		10-14		15-19		20-24	
Junior High	2	4.26	2	4.26	2	4.26	5	10.64	3	6.38
Elementary	2	2.74	19	26.03	15	20.55	12	16.44	12	16.44

	25-29		30-34		34+		Other			
Junior High	16	34.04	5	10.64	5	10.64	7	14.88		
Elementary	3	4.11	1	1.37	0	0.00	9	12.32		

The largest percentage of the teachers at the junior high level indicated twenty-five to twenty-nine as being the average size of instructional groups. More than thirty percent of these same teachers said that group size was larger than twenty-nine. The average size of instructional groups at the elementary level varied from five to twenty-four. Comments made by respondents indicated that class size varied depending on the subject matter being covered and the method used for instruction.

Table 22

Category: Grouping

Question 18: How many different students do you see a day?

	No.	Per.	No.	Per.	No.	Per.	No.	Per.	No.	Per.
	0-19		20-29		30-39		40-49		50-59	
Jr. High	1	2.13	1	2.13	0	0.00	0	0.00	0	0.00
Elementary	1	1.37	8	10.95	9	12.33	7	9.59	19	26.03

	60-69		70-79		80-89		89+		Other	
Jr. High	3	6.37	2	4.26	0	0.00	38	80.85	2	4.26
Elementary	6	8.22	10	13.70	13	17.81	0	0.00	0	0.00

About eighty percent of the teachers at the junior high level see over eighty-nine students a day. Comments made by these respondents indicated that the number of students they see each day is one hundred fifty or more. In areas such as music, teachers saw more than one hundred fifty students per day. In special reading and counseling, teachers indicated contact with less than one hundred fifty students. One teacher suggested that open space schools would work better if the teacher/student ratio was one to 20-25. "Students could then be given more freedom to accept responsibility for their own learning." At the same time another respondent said that supervision could be in a more or less disciplined atmosphere.

The number of students that elementary teachers see each day varied greatly from twenty to eighty-nine. Perhaps this variance in student ratio suggests the variety of ways a teaching team can be organized.

Table 23

Category: Pupil Adjustment

Question 19: In your opinion do most of the pupils adjust and enjoy working in an open space setting?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	42	89.36	4	8.51	1	2.13
Elementary	70	95.89	2	2.74	1	1.37

According to the opinions of teachers surveyed at both levels, nearly ninety percent felt students adjusted to and enjoyed this type of setting. In commenting on this question, some teachers indicated that pupil enjoyment of school was no greater in open space than in any other school. "The below average and easily distracted students never adjust." The positive effects of open space environments provided for junior high students were questioned by some respondents because of rapid maturation, both physically

and mentally, at this level. Another statement made suggested that students adjust more quickly than do teachers.

Table 24

Category: Parent Acceptance

Question 20: In your opinion do most parents accept and like this type of school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	29	61.70	10	21.28	8	17.02
Elementary	70	95.89	3	4.11	0	0.00

Over sixty percent of the teachers at the junior high level said that parents accepted and liked this type of school. In listing other points of view, teachers at this level said 1) too many parents do not take the time to find out what is going on, 2) we have experienced negative comments just because we are open space, 3) open space is sometimes used synonymously with freedom and permissiveness, 4) parents accept it but like it no more than any other "good" school, 5) many parents have no idea of the goals and philosophy of this type of school, and 6) some don't care and use it as an excuse for the difficulties and failures their children encounter, regardless of other causative factors.

Elementary teachers almost totally agreed that parents liked this type of school.

Table 25

Category: College Preparation

Question 21: Do you feel you received sufficient training and preparation in college for your work in an open space school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	14	29.79	32	68.08	1	2.13
Elementary	15	20.55	58	79.45	0	0.00

The greatest percentage of teachers at both levels said that they did not receive sufficient training and preparation in college for working in open space schools. Some comments indicated that student teaching was the one method used to gain training in this type of school. While it would seem important that training be available, it must be realized that this type of building has not been in existence for a long period. Other comments seemed to indicate that teacher training programs dealing with the special approaches needed in open space schools should be available.

Table 26

Category: In-Service Training

Question 22: Was sufficient "in-service" training provided by your district to meet the needs of a teacher in this type of school?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	19	40.42	27	57.45	1	2.13
Elementary	18	24.66	52	71.23	3	4.11

Over half of the teachers at the junior high level expressed the opinion that they did not have enough in-service training. At the elementary level, over seventy percent of the teachers indicated a similar opinion. Comments from three teachers said that the in-service training presented at the opening of these schools was only sufficient as a beginning point.

Table 27

Category: Preparation Time

Question 23: How many hours a week of preparation time do you have during the pupil instruction day?

	No.	Per.	No.	Per.	No.	Per.	No.	Per.
Hours per/wk	0		1		2		3	
Junior High	1	2.13	7	14.80	1	2.13	0	0.00
Elementary	8	10.96	33	45.20	8	10.96	7	9.59

Hours per/wk	4		5		6		7	
Junior High	6	12.76	24	51.06	4	8.51	1	2.13
Elementary	1	1.37	6	8.22	4	5.48	0	0.00

Hours per/wk	8		9		9+		Other	
Junior High	1	2.13	0	0.00	1	2.13	1	2.13
Elementary	0	0.00	0	0.00	1	1.37	5	6.85

Over half of the junior high teachers had five hours of preparation time per week. About thirty percent had less than five hours per week. At the elementary level, over fifty percent of the teachers had no preparation time or only one hour per week. About thirty percent of the elementary teachers had from two to six hours per week. Comments concerning this question indicate that preparation time varied from week to week and for the teaching team according

to the need of particular units of instruction. Two teachers from the elementary level included recess and lunch periods in their calculations of preparation time.

Table 28

Category: Preparation Time

Question 24: How many hours a week do you spend on preparation outside of the pupil instruction day?

	No.	Per.	No.	Per.	No.	Per.	No.	Per.
Hours per/wk	0		1		2		3	
Junior High	4	8.51	2	4.25	4	8.51	1	2.13
Elementary	0	0.00	1	1.37	2	2.74	8	10.96

Hours per/wk	4		5		6		7	
Junior High	5	10.64	8	17.03	5	10.64	2	4.25
Elementary	1	1.37	10	13.69	2	2.74	5	6.85

Hours per/wk	8		9		9+		Other	
Junior High	2	4.25	2	4.25	7	14.90	5	10.64
Elementary	4	5.48	3	4.11	35	47.95	2	2.74

Nearly half of the junior high teachers spent from zero to five hours on preparation outside the school day. About forty percent spent from six to greater than nine hours.

At the elementary level over fifty percent of the teachers spent nine hours or more in preparation. The other fifty percent showed a variance from one to eight hours. Questions twenty-three and twenty-four have only an indirect relationship to this study. In question twenty-eight the opinions of several teachers indicate that the amount of preparation time is greater in open space schools and consider this a disadvantage.

Table 29

Category: Team Teaching

Question 25: Do you use additional personnel as paraprofessionals or aides for instructional purposes in your classes?

	Number	Percent	Number	Percent	Number	Percent
	Yes		No		Other	
Junior High	12	25.53	33	70.21	2	4.26
Elementary	34	46.58	33	45.20	6	8.22

A larger percentage of elementary teachers use paraprofessionals or aides for instructional help than do junior high teachers. Only about a fourth of the junior high teachers used this type of personnel while nearly one half of the elementary teachers used them for instructional help. Here again this question is indirectly related to the study. Some types of team teaching include the use

of paraprofessionals and aides as instructional staff. The large percentage of "no" responses to this question indicates that this type of organization is not employed by a majority of the teachers surveyed.

Table 30

Category: In-Service Training

Question 26: What type of in-service is most beneficial to you?

Sharing materials and ideas at meetings for teachers.

Organizational meetings for grouping, teaming, scheduling, etc. Demonstration workshops in subject areas. Visiting and observing teachers in other open space schools.

	Number	Percent	Number	Percent	Number	Percent
	Sharing		Organization		Demonstration	
Junior High	25	43.10	7	12.07	9	15.52
Elementary	38	46.91	5	6.17	14	17.28

	Visiting		Other			
Junior High	14	24.14	3	5.17		
Elementary	23	28.40	1	1.24		

The largest percentage of the total population chose the sharing of materials and ideas as the in-service activity most

beneficial to them. The second most beneficial type of in-service training indicated by the total population was the observation of other teachers working in open space schools. The subject area demonstration workshop was the third choice and meeting to organize groups, teams, and schedules was the least desired in-service activity.

In many instances the participants gave multiple responses to this question. In some cases all the possible responses were marked. In other cases it was indicated that not all of the given choices were available. All of the marked responses were accepted. The total number of responses for this question include fifty-eight at the junior high level and eighty-one at the elementary level.

Suggestions were made for types of in-service training other than those listed and for the content of in-service training sessions. These included 1) open education (meaning ideas similar to British schools), 2) time be allowed for planning and classroom organization instead of in-service, 3) professional books, conversations, and parent-teacher conferences be included, 4) an investigation to see how materials and ideas are actually used, 5) workshops in various academic and behavior modification areas, and 6) time to plan within the school day.

Question 27: Please list the advantages you have found of open space schools.

Comments concerning the advantages of open space schools are grouped together in this section according to their similarity. Comments with similar content and made with the greatest frequency begin the summary.

The comment with the greatest frequency concerned the advantage of planning and sharing ideas with fellow teachers. "Many specialties and individual talents are utilized." One teacher may be more proficient in an area such as reading and another have more skills in the science area. Teachers are eager to share ideas, try new things, and work collectively to give students better instruction. Responsibility is shared and there is an openness among teachers. Team planning provides an open forum for sharing ideas and planning programs and is the springboard to team teaching.

A variety of methods for grouping are possible. There is flexibility to change the type of grouping according to instructional and individual needs. Smaller groups are possible and teachers are able to work with a wider range of levels. When groups are small, the student/teacher ratio allows for greater participation.

Teachers indicated that flexibility was possible in the scheduling of programs and in planning to provide maximum

opportunities for children. The utilization of time and teacher talent was also stated as definite advantages.

Another advantage of open space schools in the opinions of the participants of this study is that students were being taught at their individual levels. Their individual needs are being more adequately met. Children can work at their own learning rate and teachers can give more individual attention. Students are relaxed and become less dependent on teachers. They are allowed to move freely and have a wider choice of activities. Interaction and communication between children and between teachers and children is evident and encouraged. Children express themselves freely and take more responsibility for their own learning. Children love it so there are fewer discipline problems. These comments all suggest the facilitation of individualized instruction.

The organization and appointment of space in open space schools was seen as an advantage. Specifically mentioned were 1) the accessibility of the library because of its central location, 2) materials in the library are readily available for student and teacher use, 3) wider halls cut down congestion, 4) carpeting minimized the noise factor, 5) variety is possible in the use of space and 6) halls and corners can become spaces for small groups to work and activities to take place.

The atmosphere is comfortable, pleasant, relaxed, and free but controlled. This produces a stimulating learning environment. It is conducive to teacher and pupil development.

Teachers have a strong feeling of unity and the advantages of working together as a total group are evident in the open space school. Varied teaching methods and strategies are also evident. Observation opportunities and cooperative planning encourage a teacher's professional growth.

Question 28: Please list the disadvantages you have found of an open space school.

The disadvantage mentioned the greatest number of times was the noise level. Causes of noise which were suggested include problems with the design of the building, overcrowdedness, lack of discipline, and the lack of closed areas.

Some teachers in the study population felt that distractions and the noise factor make adjustment and learning for the slower child difficult. Opinions indicated that some students do not respond well to flexibility and freedom. It was also felt that children have too many adults to answer questions and therefore productivity is reduced.

Still other opinions indicated that the scheduling of activities tends to be rigid, unflexible, structured, and regimented.

Certain types of activities are limited because of the noise factor. This stifles and limits spontaneity and creativity. The lack of sufficient spaces to schedule distracting activities such as films, speakers, dramatic presentations, and music were also cited as disadvantages.

Members of the study population said that there was not enough time to team plan and prepare lessons. It was felt by some that more time was needed to schedule, plan, group, keep records, and organize. Finding time and energy to do the necessary tasks was a problem.

Other disadvantages of open space schools were indicated by the respondents. They include the following: 1) too many classes, 2) a heavy planning load, 3) lack of encouragement and opportunity for experimentation and innovation, 4) personality conflicts of teaching team members, and 5) a lack of understanding of the special qualities of open space schools when they are compared to traditional schools.

Summary: Data obtained from the questionnaire was reported. Four tables describing the population were presented. A report was given regarding the teacher questionnaire. Tables giving the number and percent of teachers' responses to each item were included. A

discussion interpreted the information given in each table. The respondents' opinions about the advantages and disadvantages of open space schools were summarized.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Conclusions. The writer has drawn the following conclusions concerning open space schools. These conclusions will be organized into categories which correspond to those used throughout this study. The categories are listed on page 19.

Space, Equipment, and Materials:

The physical arrangement of learning areas in open space schools is advantageous. There is a need for space where noisy or distracting activities can take place. Adequate equipment and materials are available in buildings of open space design.

Team Teaching:

Open space schools are organized for team teaching although a team leader is not usually designated. Paraprofessionals or teacher aides are employed to help with instruction. They are more frequently a part of the instructional process at the elementary level than at junior high level.

Preparation Time:

More time is needed for planning, organizing, record keeping, preparing, and teaming. Junior high teachers have more preparation time during the pupil instruction day than elementary teachers. Elementary teachers spend more time preparing outside the pupil instruction day than do junior high teachers. All information

gathered concerned the amount of time spent in preparation. No conclusion can be drawn as to the quality or amount of time necessary for teacher preparation in this type of building.

Student grouping:

Large heterogenous groupings are used frequently at the junior high level. Small homogeneous and ability groupings are evident at the elementary level. Junior high teachers saw a greater number of students per day than elementary teachers. However the size of instructional groups vary at both levels. It is apparent that student groupings depend upon the level and the method and type of instruction being used. This study made no attempt to relate the size or types of groupings to methods used for instruction. Conclusions as to grouping patterns best suited to open space buildings are not drawn.

College Preparation and In-Service Training:

College training and preparation for teaching in the open space school is needed as is in-service training at the elementary level. The sharing of ideas and materials with other teachers is the most beneficial type of in-service training. This is followed closely by visiting and observing teachers in other open space schools.

Teacher, Pupil and Parent:

Teachers accept, enjoy, and are comfortable working in open space schools. According to the opinions of teachers in the study population, students adjusted to and liked this type of school. They also said that parents accepted school buildings of an open design.

The writer concludes that the purpose of this study has been achieved. Teachers in open space schools in Montana have expressed their attitudes concerning open space schools. These attitudes have been tabulated and comparisons were made. There are indications of commonly held attitudes and ideas. Diversity of opinion is also evident. These attitudes and opinions should provide information which will be useful to those who administer or teach in open space schools.

Recommendations: Based upon the results of the survey, the following recommendations are made:

1. The organization and strategies of team teaching need to be presented, studied, and evaluated continuously by teachers and administrators in buildings of this design.

2. Various types of in-service training should be geared to the needs of teachers in this type of setting. Time needs to be allowed for teachers to plan and share ideas as well as visit and observe other open space schools.

3. Preparation and training programs dealing with the particular teaching approaches necessary in open space schools should be made available at the college level.

4. Continuous in-service training dealing with teacher and student needs in this type of situation should be provided for teachers working in open space schools.

5. The kinds and sizes of student groupings should be done according to teaching needs and pupil interests.

6. Open space design should be considered in the planning of future school buildings.

Recommendations for Research: Additional research needs to be conducted in all areas dealing with open space school organization. Suggestions for future studies include:

1. A study of the organization and implementation of team teaching in open space schools.

2. An investigation dealing with the utilization of space in buildings of this type.

3. A survey to identify student attitudes regarding open space.

4. A survey to identify parent attitudes regarding open space.

5. An examination of the relationships between teacher preparation time and student achievement.

The writer further recommends that a survey be conducted every five years to gather information concerning the attitudes of teachers in open space schools. This would seem important to the updating of programs in these schools as well as determining the best utilization of personnel and space.

APPENDIX

APPENDIX A

THE ATTITUDES OF TEACHERS IN OPEN SPACE SCHOOLS

The purpose of this questionnaire is to determine the attitudes of teachers in open space schools. This will be done by surveying the teachers in open space schools in Billings, Great Falls, and Helena.

This survey is being conducted by the researcher as partial requirements for a masters degree at Montana State University. Only conclusions in general will be made from the information gathered. No one person's name will be used nor will any school be evaluated by this form or by the results of this survey.

The researcher is seeking your cooperation to assist in this investigation by completing the statements on the following questionnaire. Enclosed is an envelope for your convenience in returning the questionnaire to the researcher by May 16, 1975.

Thank you for your cooperation and for taking a few minutes of your already busy schedule for completing this form.

Mrs. Linda K. Berg, Researcher

QUESTIONNAIRE

ATTITUDES OF TEACHERS IN OPEN SPACE SCHOOLS

Name of School _____

Location (Circle one): Billings Great Falls Helena

Position (Level--please specify) _____ Sex: F or M
Circle oneNumber of years of teaching experience (Please circle one of the
following)

0-4 5-9 10-14 15-19 20-24 25-29 30-34 More than 34

Number of years of teaching experience in open space schools
(Circle one)

Less than 1 1 2 3 4 5 6 7 8 More than 8

Amount of Education (Please circle one)

Bachelor BA+15 BA+30 Masters MA+15 MA+30 More than MA+30

Please circle your answer to each of the following questions.

1. Are you presently teaching in an open space school? Yes No
2. Have you ever taught in a traditional building? Yes No
3. Do you agree with the internal physical setting of open space
schools? Yes No
4. Do you feel a teacher should have previous experience before
teaching in an open space school? Yes No
5. Did you volunteer to be assigned to this type of school? Yes No
6. Do you enjoy teaching in an open space school? Yes No

7. Do you feel you have adequate space provided for the activities you wish to carry out? Yes No
8. Does your open space school provide sufficient smaller enclosed spaces that are needed for certain classes or lessons? Yes No
9. Do you have adequate equipment and materials available for carrying out your program? Yes No
10. Are teachers in your area or level organized for team teaching?
(Refer to team teaching as two or more teachers working together to plan, organize, instruct, and evaluate for a subject) Yes No
11. Does your team have a designated team leader? Yes No
12. Do you feel teachers should be organized and trained for team teaching in open space schools? Yes No
13. Are you comfortable with other teachers present while you are instructing a class? Yes No
14. Do you group children for instruction according to interest?
Yes No
15. Do you group children according to ability? Yes No
16. Which type of instructional grouping do you use most frequently?
Circle one: Large heterogenous Small heterogenous
 Large homogeneous Small homogeneous
17. What is the average size of your instructional groups? Circle one
0-4 5-9 10-14 15-19 20-24 25-29 30-34 More than 34

18. How many different students do you see a day? Circle one
0-19 20-29 30-39 40-49 50-59 60-69 70-79 80-89 More than 89
19. In your opinion do most of the pupils adjust and enjoy working
in an open space setting? Yes No
20. In your opinion do most parents accept and like this type of
school? Yes No
21. Do you feel you received sufficient training and preparation
in college for your work in an open space school? Yes No
22. Was sufficient "in-service" training provided by your district
to meet the needs of a teacher in this type of school? Yes No
23. How many hours a week of preparation time do you have during
the pupil instruction day? Circle one
0 1 2 3 4 5 6 7 8 9 More than 9
24. How many hours a week do you spend on preparation outside of
the pupil instruction day? Circle one
0 1 2 3 4 5 6 7 8 9 More than 9
25. Do you use additional personnel as paraprofessionals or aides
for instructional purposes in your classes? Yes No
26. What type of in-service is most beneficial to you? Circle one
Sharing materials and ideas at meetings for teachers
Organizational meetings for grouping, teaming, scheduling, etc.
Demonstration workshops in subject areas
Visiting and observing teachers in other open space schools

Other: (Please specify) _____

27. Please list the advantages you have found of open space schools.

28. Please list the disadvantages you have found of open space schools.

LITERATURE CITED

- American Association of School Administrators. Open Space Schools-
Report of the AASA Commission on Open Space Schools.
Catalogue No. 77-175629. ERIC Document ED 070 204.
1971.
- Barth, Roland C. Open Education and the American School. Agathon
Press, Inc. New York, 1972.
- Blitz, Barbara. The Open Classroom: Making It Work. Allyn and
Bacon, Inc. Boston. 1973.
- Crumbaugh, Thomas Lauren. The Development of Models to Aid Teachers
and Administrators in Implementing and Maintaining Programs
of Open Education in Elementary Schools. Doctoral Thesis
of Education. Montana State University. June, 1973.
- Evans, Judith T. "Characteristics of Open Education: Results from
a Classroom Observation Rating Scale and a Teachers'
Questionnaire." Education Development Center, Inc.
Office of Education (DHEW). Washington, D.C. ERIC
Document ED 058 160. August, 1971.
- Frazier, Alexander. Open Schools for Children. Association for
Supervision and Curriculum Development. Washington,
D.C. 1972.
- Harlow, Bruce. "Open Space Schools." D and R Report: Newsletter
of the Conferences for Educational Development and
Research. Vol. 1. Nov. 6. 1970.
- Landsmann, Leanna. "Changes in Teacher Attitudes Have Led to
Positive Changes in Teaching Practice. . ." Instructor.
October, 1972.
- Open Plan School. Educational Facilities Laboratories, Inc., and
I D E A. 1970.
- Open Space Schools: Project Bulletin Number 1. School Planning
Laboratory/School of Education. Stanford University.
March, 1970.

Pritchard, D. L.; Noodie, A. C. "A Survey of Teacher's Opinions Regarding Open Areas." Vancouver Board of School Trustees. British Columbia. Report No. RR71-06. ERIC Document. ED 057 102. June, 1972.

School Without Walls. Educational Facilities Laboratories Report. New York. 1968.

Silberman, Charles E. Crisis in the Classroom. Vintage Books. New York. 1970.

Silberman, Charles E. The Open Classroom Reader. Random House. New York. 1973.

Stephens, Lillian S. The Teacher's Guide to Open Education. Holt, Rinehart and Winston, Inc. 1974.

Wing, Cliff; Mack, Patricia H. "Wide Open for Learning." American Education. November, 1970.

Wlodarczyl, Steven. "Teacher Beliefs and Open Education." A paper presented at the annual meeting of the American Educational Research Association. Chicago, Illinois. April 3-7, 1972. ERIC Document. ED 063 032.