

MULTI-PURPOSE ROOMS IN SMALL

NORTH DAKOTA SCHOOLS

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## ABSTRACT

The purpose of this study was to determine if small North Dakota high schools were utilizing multi-purpose rooms according to what experts in the field recommend.

A review of literature in the field was conducted to find what experts are recommending.

In order to find what is being done concerning multi-purpose rooms in small North Dakota high schools a questionnaire was constructed which was validated and checked for reliability by three Montana State College faculty members. The questionnaire was then mailed to seventy-five schools randomly selected from the North Dakota School Directory. The schools had enrollments of between fifty and two hundred students.

The results of the returned questionnaires were tabulated and after being analyzed were related to the review of literature. Of the seventy-five questionnaires mailed, seventy-one or 95 per cent were returned. Thirty-four or 48 per cent indicated they had multi-purpose rooms.

The review of literature showed that the multi-purpose room of today grew from the one-room school house. Crowded conditions after World War II caused adoption of the gymnasium-auditorium which has never proven itself satisfactory. Today, experts recommend that multi-purpose rooms be extremely flexible to meet a variety of activities. Acoustically treated operable walls are emphasized to allow several conflicting activities to go on at the same time.

The recommendations of the experts were compared to the answers to the questionnaire and the following conclusions were reached: (1) fifty per cent of the schools of the size surveyed in North Dakota have multi-purpose rooms, (2) school activities and adult community and adult school activities are almost equally scheduled, (3) the schools surveyed are meeting their needs satisfactorily through the use of portable or collapsible furnishings and equipment.

The following recommendations were made: (1) that further study be made of the need for multi-purpose rooms in the schools of North Dakota, (2) a study be made to arrange for future flexibility even though the need for flexibility is not present at this time, and (3) the study on future needs for flexibility take into account the possibilities of operable acoustically treated walls for dividing the multi-purpose room.

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## CHAPTER I

### INTRODUCTION

In this age of growing school enrollments, it is common knowledge that schools have been faced with the problem of making existing facilities carry a student load in excess of that originally anticipated. Many small schools have been forced by these increasing enrollments to schedule activities in rooms not suited to the purpose for which they are being used.

The writer believed that a room equipped with suitable equipment could, together with careful scheduling by the administrator, place some school activities and classes in a multi-purpose type room. He also believed that this would reduce the strain on rooms designed as conventional classrooms.

The final test of good use for a multi-purpose room is described by Strevell and Burke in the following words:

It should be born in mind when planning multiple use of spaces that efficiency in the use of the instructor's and the student's time is a major means of economy.<sup>1</sup>

#### The Problem

The purpose of this study was to determine if North Dakota schools were utilizing multi-purpose rooms according to what experts in the field recommend.

#### Procedures

The first procedure used in the study was to find what the experts in

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<sup>1</sup>Strevell, W. H., and Burke, A. J., Administration of the School Building Program, p. 172.

the field recommend and second, what is being done in comparison to these recommendations.

In order to find what is being recommended the writer made a review of literature in the field of school construction and design.

After the review of literature, the author constructed a questionnaire concerning multi-purpose rooms. The questionnaire was validated and checked for reliability by submitting it to a panel of three Montana State College faculty members.

A list of all school districts operating high schools in North Dakota with enrollments of between fifty and two hundred students was compiled from the North Dakota School Directory. From this list seventy-five schools were randomly selected by drawing the names from a hat. These seventy-five schools represented sixty per cent of all the schools in North Dakota with enrollments of between fifty and two hundred students for which this study was initiated.

The questionnaire was then mailed to the superintendents of these seventy-five school districts. The results of the returned questionnaires were tabulated and after being analyzed were related to the problem and the review of literature.

The following section deals with the review of literature.

## CHAPTER II

### REVIEW OF LITERATURE

In order to emphasize what is being recommended and what is being done, the writer briefly traced the multi-purpose room's origin. The review of literature was then made to determine what the experts in the field of school construction and design recommend for multi-purpose rooms and what is being done in comparison to those recommendations.

#### Origin of the Multi-purpose Room

The one-room schoolhouse is a prime example of the multi-purpose room. It is similar to today's multi-purpose rooms only in that it was not designed but merely grew. Within the four walls, all the learning and living activities of groups of children took place. Reading, writing, arithmetic, reciting, stove-stoking, graduation exercises, pie-socials, elections, and dances all took place in the one room.<sup>1</sup>

Larger schools at first were collections of one-room schools under a single roof--two, then four, then four above four. The heating plant and later inside toilets in the basement followed by separation of grades, and slowly specialization in academies where the laboratory was built in the basement and two rooms could be opened into one for an assembly room.<sup>2</sup>

From this age to the present, the curriculum expanded and there was more and more specialization of spaces. The platoon system in crowded areas and a result of war conditions which allowed no construction, seemed to

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<sup>1</sup>Shaw, Archibald B., "Trends in Multi-purpose Rooms," American School and University, vol. XXIV, 1953, p. 280.

<sup>2</sup>ibid., p. 280.

utilize every seat, be it in a laboratory, classroom, assembly, or lunchroom. There were those whose ingenuity and thrift were feeding on the coincidence that physical education, basketball, and auditorium activities all require a larger floor space and a higher-than-classroom ceiling. The end result was a large box called a combination gymnasium-auditorium, about equally misfit for either.<sup>3</sup> In smaller schools it is often difficult to provide special spaces since each would be utilized so little during the school day. Under such conditions then, the multi-purpose room has been provided.<sup>4</sup> The small school then, can build the larger-size combination auditorium-gymnasium in order to accomodate occassional larger audiences than they would feel they could afford by having a separate gymnasium and full-scale auditorium.<sup>5</sup> However, the combination auditorium-gymnasium has really never proved to be entirely satisfactory because many of the needs of one are opposite to the needs of the other.<sup>6</sup>

The multi-purpose room grew from a single room school house to a collection of one room schools under a single roof. Specialization and expanded curriculum led eventually to the present multi-purpose facilities which, in many cases, has added to the efficiency of our schools. The crowded conditions in schools following World War II caused the adoption of the gym-

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<sup>3</sup>ibid., p. 280.

<sup>4</sup>Engelhardt, N. L., Engelhardt, N. L. Jr., and Stanton Leggett, "Multi-purpose Room," Planning Elementary School Buildings, 1953, p. 118.

<sup>5</sup>Strevell, W. H., and Burke, A. J., "Multiple Use of Spaces in a School Plant," Administration of the School Building Program, 1959, p. 173.

<sup>6</sup>Engelhardt, Engelhardt, and Stanton, op. cit., p. 118.

nasium-auditorium which has never proven itself to be satisfactory. This is largely due to the fact that the needs of one are contradictory to the needs of the other.

#### What is Being Recommended

Some recommendations closely related to multi-purpose rooms which need investigating mentioned by Gray include: (1) implementation of a long-term planning program to fit the functional requirements of a dynamic educational system, (2) the apportionment of floor space to different school activities, (3) greater flexibility and expansibility in structural plan and building materials to permit ready adaptability to change, (4) accessibility and contiguity of functionally related areas to provide efficient and uncongested student, material, and vehicular traffic, and (5) multiple use of space to approach more closely the full-time use of the different areas of the building and the site.<sup>7</sup>

According to the National Council on School-house Construction there needs to be considerable planning and forethought if the multi-purpose room is to serve its purpose satisfactorily. If extensive use by the community is one of the considerations, then facilities such as heating, ventilating, toilet facilities, and lighting should be planned as a separate unit.<sup>8</sup>

Where combinations of rooms must be utilized it may be wise to be able to darken the auditorium for showing films and also other stage activities,

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<sup>7</sup>Gray, A. L., "Needed Research in the School-Plant Field," Review of Educational Research, vol. XXI, 1951, p. 64.

<sup>8</sup>MacConnel, J. D., "Space and Facility Requirements," Review of Educational Research, vol. XXI, 1951, pp. 19-23.

at the same time, the gymnasium should be quickly and easily flooded with fresh air. The hard wall commonly found in gymnasiums usually conflicts with accoustical needs of an auditorium.<sup>9</sup>

In designing a multi-purpose room an important thing is to avoid as much as possible, compromises in providing desirable physical facilities for various activities and to make certain the operation of the room is so simple that it will not add to extra custodial expenses or unproductive class time. Planning may cover a limited selection from such a list as dictated by present programs. However, it usually happens that utilization of the multi-purpose room increases as time goes on, in fact, to the point where additional building is necessitated.<sup>10</sup>

A list of activities for which the multi-purpose room may serve are listed by Engelhardt, Engelhardt, and Stanton as follows:

1. A gathering place for pupils at beginning of school days when weather is inclement.
2. As a recess gathering place on similar occasions.
3. As a playroom for class groups.
4. As an assembly center for the entire school.
5. As the folk and rhythmic dance center for two or three classes.
6. As a play center in after-school and evening hours.
7. As a supplement to the out-of-doors in vacations and on holidays when playground is being used.
8. As a meeting place for social games for the P.T.A. and other

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<sup>9</sup>Engelhardt, Engelhardt, and Stanton, op. cit., pp. 118-123.

<sup>10</sup>ibid., pp. 118-123.

adult groups.

9. As the rendezvous of the Scouts and other children's organizations.
10. As the physical education center for children.
11. As a lunchroom.
12. As a room for arts and crafts.
13. As a music room.
14. As a center for special teaching.
15. As a room for homemaking activities.
16. For a simple shop work on connection with the crafts and the stage.
17. As a space for playing small table games.
18. As an area for community fairs and school and community exhibits.<sup>11</sup>

Engelhardt, Engelhardt, and Stanton emphasized that in any combination, the features essential to the program of each function must be safeguarded. For instance, the kitchen for an assembly-lunchroom must be as carefully planned as the kitchen would be for a lunchroom alone. The stage provisions for an assembly, in any combination of spaces, must be given even more intensive care in the planning than if they were being designed for an assembly alone. It is logical to assume that no combination of spaces will, in the long run, be as satisfactory as the separate units, and hence the consideration of every detail of planning must be related to the varied conditions arising out of the new impacts.<sup>12</sup>

Careful and advance planning must be given the size, relationship of specialized spaces, and arrangement to include standardized multi-purpose

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<sup>11</sup>Ibid., pp. 118-123.

<sup>12</sup>Ibid., pp. 118-123.

furniture and equipment.<sup>13</sup>

It may seem wise to have different types of multi-purpose planning, but on the other hand, there may be some objections. One type of planning may be for a gymnasium and auditorium to share a common purpose but because of noise this may prevent the simultaneous use of these rooms. At any rate, to decrease costs, much planning has gone into the multi-use of gymnasiums, auditoriums, cafeterias, and other rooms for special space. One room may function quite successfully as both a gymnasium and auditorium for obvious reasons not as a gymnasium and cafeteria.<sup>14</sup>

Recent thinking offers a different approach in that some experts question the need for all the large auditoriums and gymnasiums which have been taken for granted. They suggest that many gymnasiums could be smaller and used without loss of educational effectiveness, also the approval of a gymnasium by voters may be possible in such a situation. Many high schools use a large double gymnasium with separate areas for boys and girls whereas in the smaller gymnasium classes could be rotated at much less cost.

Other recent suggestions advocate eliminating the cafeteria and preparing and serving meals in the classroom. This too would not always be feasible but might be satisfactory for elementary grades. Cafeterias could be more functional by reducing the dining area, using steam tables and push carts, and have more flexible menus to do away with long waiting lines.

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<sup>13</sup>Strevell, and Burke, op. cit., p. 172.

<sup>14</sup>National Citizens Commission for the Public Schools, What Are Our School Building Needs?, A report prepared for the Improvement of Public Schools, New York: National Citizens Commission for the Public Schools, August, 1955, pp. 36-37.

The National Citizens Commission for the Public Schools states that in considering the reduction or full use of any special facility, the overall effect should be kept in mind. The important point in each case is that since non-classroom areas come high, none should be included without careful scrutiny of its function. Those special facilities which are added, should be included only as a part of a design which will insure their fullest possible use.<sup>15</sup>

Experts recommend that considerable planning be given to multi-purpose facilities so the room will serve its purpose satisfactorily. The facilities should be so planned that they are extremely flexible so they can meet a variety of activities efficiently, but special spaces are expensive. Those which are included should be examined carefully so that they will meet a design to insure their fullest use.

#### What is Being Done In Comparison To What is Being Recommended

It is apparent that most multi-purpose rooms were box-like in shape and built large enough to accomodate all the pupils on chairs or benches and at the same time large enough for basketball games with the spectators around the edge. Many such rooms were enlarged or even built new during the period of depression with W.P.A. funds. However, with many new advancements in education we also find many new ideas in uses and designs of the multi-purpose room. The first to be described is the "well known" divisible auditorium at Boulder City, Nevada.

The great difference found in this new auditorium is that there are

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<sup>15</sup>Ibid., pp. 36-37.

two operable walls. This makes for flexibility and combinations for instructional space. These walls are almost sound proof and also block the sight which makes these spaces independent of one another and conflicting activities can be carried on at the same time.<sup>16</sup>

Another immediate observation made by Farrell is that the students and faculty can break out of the present classrooms and utilize the new instructional capacity which is increased by five classrooms. This makes it possible for the building to be used throughout the day rather than lying idle ninety per cent of the time if it were reserved for school-community relations.<sup>17</sup>

The major force behind the school districts push for a better-rounded education was the decision to add an auditorium to Boulder City High School. Neither the school nor the community had an auditorium and stage suitable for speech or music productions and consequently these activities could not be effectively practiced. In some situations the gymnasium could be and was pressed into service for large meetings but the absence of a stage and the presence of uncomfortable and inconvenient bleacher seats made it unsatisfactory. Whenever testing or other large scale activity was in progress, the gymnasium was not available for other purposes. In short, the lack of auditorium-assembly space was effectively strait-jacketing the school's educational program.<sup>18</sup>

The problems were generally solved by learning the number of dif-

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<sup>16</sup>Farrell, W. R., A Divisible Auditorium, Boulder City, Nevada, A report prepared by Educational Facilities Laboratories, Inc., 1962, p. 4.

<sup>17</sup>Ibid., pp. 5-8.

<sup>18</sup>Ibid., pp. 5-8.

ferent activities an auditorium can be used for and also by knowing the number of times it can be used for similar activities. Then by starting with a conventional auditorium plan it was found its efficiency could be increased by using it for large-group instructional space. This large-group instructional space could then be divided into smaller sections. This was made possible by having wedge shaped seating arrangements divided by an audio-visual core that divided the wide end of the wedge and by using two moveable partitions that separate the rear alcoves on either side of the audio-visual core from the main seating area at the front of the multi-use area. By following this approach, according to Farrell, Boulder City could have its cake and eat it too. With the partitions furled, the building would be a typical auditorium, complete with stage and all necessary public areas. With the partitions unfurled, it would become three independent teaching stations, each able to handle types of instruction for which the full auditorium would be too large, a standard classroom too small, and neither properly equipped. An if partitions could be found that would provide enough acoustic separation to permit the use of all three spaces at the same time, potential utilization could approach 100%.<sup>19</sup>

If this is a model for schools looking for ways to multiply space use by dividing space, then the answer is that since this concept is so new the potential as yet has not been exploited. The school at present has enough staff and space for the ordinary work so there has not been pressure to provide full time use for the auditorium. If and when the enrollment increases a full scale test of the uses will be brought from the building. The

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<sup>19</sup>ibid., p. 8.

curriculum and class schedule will then need to be tailored to utilize the spaces. The building is satisfactory now and will continue to be through the foreseeable future. For schools everywhere, it offers tangible proof that divisible space can be educationally desirable; technically and economically. A list of the specific uses for the divisible auditorium as listed by Farrell include: (1) music instruction, (2) dramatics, (3) class and other large meetings, (4) large group testing programs, (5) large group instruction, (6) laboratory studies in electronic sound control, amplification and recording techniques, studies in maintenance of equipment, studies in stage management and lighting control, (9) future development of closed circuit television, and (10) community use.<sup>20</sup>

Engelhardt, Engelhardt, and Stanton describe the Katherine Burke School in San Francisco, California, which has a multi-purpose room of extreme flexibility. It has a fireplace with raised hearth which contributes to the attractiveness and comfort of the room. It also serves all the schools needs associated with bringing people together whether for formal affairs, lunch, dramatic or musical programs, or for indoor play and games.<sup>21</sup>

Another trend commonly found, especially in smaller communities, is using the multi-purpose room for adult use. Since adults require more space than students it is essential to achieve a good space allowance by providing storage for both the children's and adult's work-in-progress, and also for

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<sup>20</sup> Ibid., p. 13.

<sup>21</sup> Engelhardt, Engelhardt, and Stanton, op. cit., p. 120.

<sup>22</sup> Shaw, op. cit., p. 284.

seating used by the one group while the other group uses the area.<sup>22</sup>

Difficulties arise when the stage is attached to the gymnasium. Conflicts usually occur between coaches, music teachers, dramatics teachers, and even from some public performances. These teachers generally need to use these facilities after school hours. Administrators find difficulty in scheduling programs without interruption and confusion. When this happens the use of the multi-purpose room as an auditorium is very limited.<sup>23</sup>

Nimnicht and Partridge suggest three possible solutions to this difficulty of conflicting activities when the stage is attached to the gymnasium. The first plan is to build an auditorium following the plan used at Boulder City, Nevada, in which the moveable walls divide the auditorium into smaller teaching spaces. Since this plan has been described in preceding paragraphs, it will be omitted here. The second plan is a solution whereby the lunchroom could be used for extra seating space for those few events when it is desirable to seat more than the usual number of people at one time. A big advantage in this case is that a little theatre is available throughout the day and can be used for normal activities. By opening the folding walls this arrangement then becomes a large auditorium.<sup>24</sup> One noticeable difference in these two methods is that in the first, there is need for moveable furniture while in the second plan, the furniture in the little theatre may be semi-permanent.

The third plan is the multiple use area formed by combining the

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<sup>23</sup>Nimnicht, G. P., and Partridge, A. R., Designs for Small High Schools, A report prepared by Educational Planning Service, Colorado State College, 1962, p. 60.

<sup>24</sup>Ibid., pp. 60-63.

auditorium-gymnasium area as used at the Kohler High School, Kohler, Wisconsin. The scheme used there is one with operable walls raised and lowered with hydraulic equipment instead of the folding or sliding walls.

The trend is toward more and greater flexibility in the organization of teaching units, and as William Gaudill has stated, "Every Classroom can be a multi-purpose room - if you understand what flexibility really is."<sup>25</sup>

A multi-purpose room as described by Charles E. Funk of Pleasant Hill High School, Creswell, Oregon, is a separate building. It includes the gymnasium-auditorium which has folding bleachers, two basketball courts and other physical education facilities. There is a balcony over the dressing rooms which can be used for several activities. Because of considerable rain a complete undercover area is available for both school and community. It also has a common area the full length of the building with lavatories at each end. It contains a custodial office-storage room, a concession stand, a trophy case and cabinets for display purposes.<sup>26</sup>

Now that acoustically effective walls are becoming available, divisible spaces are feasible, and, at this time, at least fifteen divisible auditoriums are on the drawing boards from Stockton, California, to Litchfield, Connecticut.<sup>27</sup>

The trend is clearly toward multi-purpose rooms. The encouraging

<sup>25</sup>Gaudill, W. W., "Fourteen Ways School Design Has Responded to Modern Education," The Nations Schools, vol. LXXI, January, 1963, p. 54.

<sup>26</sup>Funk, C. E., "Pleasant Hill High School," American School Board Journal, vol. CXLVII, August, 1963, p. 22.

<sup>27</sup>Clinchy, E., (ed.), Profiles of Significant Schools: High Schools, 1962, A report prepared by Educational Facilities Laboratories, 1961, pp. 34-35.

aspect is that there is a perceptible trend toward design based on educational planning. Architects, school people, and community representatives are sitting down together to discover the purposes which the particular school must serve, and the designs which will economically (read as wise expenditure of money) and efficiently house and promote those activities while preserving as an indispensable "plus" a built-in, planned adaptability to the inevitable changes in activities and purposes. This kind of planning and design is resulting in schools in which every room is a multi-purpose room, skillfully housing and promoting a range of activities which are compatible in their schedule and environmental demands.<sup>28</sup>

The newest idea in multi-purpose facility designing is to increase use by using operable walls to allow different activities to go on at the same time. When the walls are removed, an area for large group activities results. Another plan is to build a separate building to house the multi-purpose facilities. This building would contain all necessary equipment and facilities to be used by the community as well as the school.

#### Summary

The multi-purpose room has progressed from the one-room school house, to a collection of one-room schools under a single roof, and then to the present multi-purpose facilities which add to the efficiency of the present schools.

Crowded conditions in the schools after World War II caused adoption of the gymnasium-auditorium which has never proven to be satisfactory.

Experts recommend that the multi-purpose room be extremely flexible

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<sup>28</sup>Shaw, op. cit., p. 280.

to meet a variety of activities efficiently. Since non-classroom facilities also come high, careful planning is necessary to have the room meet the demands of the school curriculum and the needs and desires of the community.

The greatest emphasis today is being given to multi-purpose rooms which have operable walls that have been treated acoustically. This allows smaller divisions which permits conflicting activities to go on at the same time.

The next section deals with the findings of the questionnaire mailed to seventy-five small North Dakota schools concerning multi-purpose rooms.

## CHAPTER III

### MULTI-PURPOSE ROOMS IN SMALL NORTH DAKOTA HIGH SCHOOLS

In order to find what the experts in the field recommend in the construction of multi-purpose rooms, the writer made a review of literature in the field.

After the review of literature, the author constructed a questionnaire to determine what is being done concerning multi-purpose rooms in small North Dakota high schools. The questionnaire was validated and checked for reliability by submitting it to a panel of three Montana State College faculty members.

A list of all school districts operating high schools in North Dakota with enrollments of between fifty and two hundred students was compiled from the North Dakota School Directory. From this list, seventy-five schools were randomly selected by drawing the names from a hat. The questionnaires were then tabulated and after being analyzed were related to the problem and to the review of literature.

Of the seventy-five questionnaires mailed, seventy-one or 95 per cent were returned. Of those returned, thirty-four or 48 per cent indicated that they had multi-purpose rooms while thirty-seven or 52 per cent indicated they did not have multi-purpose rooms.

Three questionnaires were returned with answers filled out in anticipation of building a multi-purpose room and one questionnaire was filled out on the basis of a multi-purpose room that the superintendent had had in Alaska the previous year. The writer arbitrarily decided to use only those questionnaires for which a multi-purpose room was in use at the time of mailing the questionnaire. The four above mentioned questionnaires were

then include in the thirty-seven that did not have multi-purpose rooms.

The findings of the questionnaire are dealt with in the following three sections: (1) facilities, (2) equipment, and (3) activities scheduled.

Table 1 contains a listing of those activities scheduled as checked by those superintendents returning the questionnaire.

TABLE 1. ACTIVITIES SCHEDULED IN MULTI-PURPOSE ROOMS IN THE SCHOOLS SURVEYED.

Activity	Frequency
Hot Lunch	29
School Parties	26
P. T. A. Meetings	22
Teacher Association Meetings	22
Audio-Visual	20
Community Activities	19
Chorus	15
Physical Education	10
Basketball	9
Assemblies	7

#### Facilities

Storage for the multi-purpose room was adequate for 11 schools, 18 superintendents answered that they had some storage, but not enough, and five schools had no storage. The major activities as indicated in Table 1 do not require large storage areas. Only in the cases where physical education is regularly scheduled in the multi-purpose room would large storage areas be necessary.

Lavatories were accessible from the multi-purpose room in 19 schools and in 15 schools the lavatories were located in another section of the building. The 15 schools not having direct access to the lavatories from

the multi-purpose room would be operating under a handicap when large school and community activities were in progress.

Nineteen of the schools indicated they could shut-off the multi-purpose room from the rest of the school building. The need for showers would be light according to the activities and frequency of scheduling listed in Table 1. Only the 10 schools scheduling physical education and the nine scheduling basketball would be inconvenienced by having the showers in another section of the building as indicated by 13 schools.

Only one of the schools reported that the kitchen was located in another section of the building while 29 of the answering schools indicated the kitchen opened directly off the multi-purpose room. The kitchen being directly accessible would be a definite advantage to promoting the most frequently listed activities listed in Table 1.

Tile floors were by far the most popular according to the answers to the questionnaire with 27 of the schools having this type of floor in the multi-purpose room. Hardwood floors were present in six of the schools, and one school had a concrete floor in the multi-purpose room.

Thirty schools reported no means of dividing their multi-purpose room. Curtains are used to divide the multi-purpose room in two schools, one school had sliding doors, and no school had portable dividers. The fact that most of the surveyed schools could not divide their multi-purpose room would not appear to be a disadvantage since few of the activities listed in Table 1 would need division of the room.

Nineteen of the schools reported that the acoustics in the multi-purpose room were adequate, seven schools had some sound treatment, but not enough, five indicated very little sound treatment but stated acoustics

were adequate, and one school felt accoustics were poor in the multi-purpose room.

The hours the multi-purpose room was open each school day varied in the schools surveyed. Two of the answering schools had their multi-purpose room open eight hours, two were open for six hours, five were open for five hours, ten for four hours, ten for three hours, one for three and three-fourth hours, one for two and one-half hours, two for two hours, and one for one hour. Thirty of the schools surveyed are thus utilizing their room for at least one-half the school day.

Ten superintendents indicated they had areas which presented difficulties in the utilization of their multi-purpose room. Three superintendents stated they did not have enough area in the room, two stated they could not divide the room, and each of the following received one mention:

1. Used for one study hall but the room was too noisy with music practice on the stage.
2. Lavatories for both sexes were not handy.
3. The room could not be used in the mornings so dust could be controlled because the tables were set for the hot lunch program.
4. The room could not be closed off from the rest of the building.
5. There were not enough entrances and exits.

#### Equipment

Of those answering the question, 23 indicated they had collapsible tables, three had stacking type tables, two had recessed type tables, and one school had permanently anchored tables. This compares favorably with the activities listed in Table 1 since the most often scheduled activities

could be carried on without moving the furnishings. If necessary, the furnishings could be taken down quickly to provide a clear area for parties.

The folding type chairs proved to be the most popular with 29 checking this type on the questionnaire, four had stacking type chairs, three had benches, one school had seats which recessed, and no school had permanent chairs. The significant preference for folding chairs also indicated a flexibility of use to meet the activities listed in Table 1.

Ten schools had permanent stages in their multi-purpose room, one had a portable stage, while 23 indicated they had no stage. This lack of stages is justified by the types of activities scheduled in Table 1.

Nineteen of the answering schools had a portable projector and none of the schools had a projection booth. Seventeen schools used a portable screen while only four had permanent screens in their multi-purpose room. Eight schools had blackout curtains, one had a television set, and nine had a public address system.

Of the ten schools using their multi-purpose room for physical education classes, nine had permanent baskets for basketball and one school had portable baskets. Other equipment available for physical education were table tennis in two schools, seven had tumbling mats, six had volleyball equipment, three had badminton, two had trampolines, and one school had parallel bars. This equipment can easily be moved to fit the needs of the most often listed activities as itemized in Table 1.

#### Activities Scheduled

A wide variety of activities were indicated as being scheduled for the multi-purpose room by those superintendents returning the questionnaire.

Table 1 contains a listing of those activities checked in the returned questionnaire.

A significant fact illustrated in Table 1 is that school activities such as the hot lunch program and school parties are most frequently scheduled but non-school activities such as P.T.A., teacher association meetings, and community activities are also prominent uses in the schools surveyed. Chorus, physical education, basketball, and assemblies were scheduled in a minority of cases.

It cannot be determined in this study how much effect the lack of certain equipment has on the activities scheduled in the schools surveyed. If more of the schools had showers available in the multi-purpose room, perhaps more schools would schedule physical education classes or basketball in their multi-purpose room. Also, if most of the schools surveyed could divide the multi-purpose room more small group activities would be scheduled.

#### Summary

To find what experts in the field recommend concerning multi-purpose rooms the author made a review of literature in the field. He then constructed a questionnaire to determine what is being done in small North Dakota schools in comparison to what is being recommended. A list of school districts operating high schools in North Dakota with enrollments of between fifty and two-hundred students was compiled from the North Dakota School Directory. Seventy-five schools were randomly selected from this list by drawing them from a hat. The questionnaire was then mailed to schools and the returned questionnaires tabulated and analyzed.

Of the seventy-five questionnaires mailed, seventy-one or 95 per cent were returned. Thirty-four or 48 per cent indicated they had multi-purpose

rooms.

The findings of the questionnaire were dealt with in the following three sections: (1) facilities, (2) equipment, and (3) activities scheduled.

The majority of the schools indicated they did not have stages in their multi-purpose room and that storage in most of the schools was adequate. The list of activities scheduled as listed in Table 1 do not indicate a real need for a stage.

The majority of the schools indicated they could close the multi-purpose room off from the rest of the building. This appears to be desirable considering the number of adult and community activities scheduled by the schools surveyed.

Since only 10 schools schedule physical education and nine schedule basketball in the multi-purpose room, the need for showers directly accessible from the room would be light.

The great majority of the schools indicated the kitchen was directly accessible from the multi-purpose room.

Tile floors were the most popular type of floor used in the multi-purpose rooms of the schools surveyed.

The majority of the schools could not divide their multi-purpose rooms. This does not appear to be a serious inconvenience when the major types of activities scheduled are considered. It is possible that with dividers in the multi-purpose room more small group activities would be scheduled.

The accoustics were generally felt to be adequate by most of the superintendents who answered the questionnaire.

The hours the multi-purpose room was open each day varied from eight

hours to one hour with great majority of the schools utilizing the room for over one-half the day.

The two areas of difficulty listed more than once by the superintendents answering the question were (1) the room did not have a large enough area, and (2) the room could not be divided.

All of the most frequently mentioned activities require few items of special equipment. Collapsible tables, folding chairs, portable movie projectors and movie screens, and physical education equipment can be set-up and moved quickly.

A variety of activities were scheduled in those schools answering the questionnaire. The hot lunch program, school parties, and audio-visual programs were the most often listed. However, P.T.A. meetings, teacher association meetings, and community activities also received a considerable number of votes.

The following section is concerned with the summary, conclusions, and recommendations of this study.

## CHAPTER IV

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The problem of this investigation was to determine if small North Dakota high schools were utilizing multi-purpose rooms according to what experts recommend as enumerated in the literature in the field.

#### Summary

In order to find what experts in the field recommend in multi-purpose rooms the writer made a review of literature in the field. He then constructed a questionnaire concerning multi-purpose rooms in small North Dakota schools and mailed the questionnaire to seventy-five randomly selected schools. Ninety-five per cent of the questionnaires were returned with forty-eight per cent indicating they had multi-purpose rooms.

The review of literature revealed that the multi-purpose room grew from the one-room school house. Crowded conditions after World War II caused the adoption of the gymnasium-auditorium which has never proven to be satisfactory.

Experts recommend that today's multi-purpose room be extremely flexible to meet a variety of activities efficiently. The greatest emphasis today is given to rooms with acoustically treated operable walls which allow several activities to go on at the same time in the smaller divisions which are formed by moving the walls.

In the survey of small North Dakota schools a wide variety of activities for the multi-purpose room were scheduled. The most frequently mentioned activities were divided between school activities and adult school and community

activities.

Most of the schools surveyed had collapsible type furniture and portable equipment which allowed for flexible use of the multi-purpose room.

It cannot be determined in this study how much effect the lack of certain equipment or facilities has on the types of activities scheduled in the schools surveyed. If more of the schools had showers available in the multi-purpose room perhaps more schools would schedule physical education and basketball in the room. Also, if more of the schools surveyed could divide the multi-purpose room more small group activities would be scheduled.

#### Conclusions

As a result of this study the following conclusions were drawn:

1. Approximately fifty per cent of the schools that have between fifty and two hundred students in North Dakota have multi-purpose rooms.
2. The activities scheduled are divided between school activities and adult and community school connected uses.
3. The small North Dakota schools surveyed are utilizing their multi-purpose rooms satisfactorily according to their individual needs.
4. The schools surveyed are accomplishing flexibility through the use of portable and collapsible furnishings and equipment.

#### Recommendations

The recommendation is made that further study be made of the need for multi-purpose rooms in North Dakota schools.

A further recommendation is made that North Dakota schools make a study to arrange for more flexibility in the multi-purpose room in the future eventhough the needs for flexibility are not present at this time.

It is also recommended that the study on flexibility for future needs include an investigation of the use of operable acoustically treated walls to divide the multi-purpose rooms.

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## APPENDIX

QUESTIONNAIRE ON MULTI-PURPOSE ROOMS  
IN NORTH DAKOTA SCHOOLS

Please answer the following items by placing a check mark in the appropriate blank space.

1. Do you have a multi-purpose room in your school?

Yes  
 No

2. Which of the following activities do you schedule in your multi-purpose room?

hot lunch  
 physical education classes  
 basketball  
 chorus  
 school plays  
 school parties  
 Assemblies  
 audio-visual programs  
 teacher association meetings  
 Parent-Teacher Association meetings  
 Community activities (Explain) \_\_\_\_\_  
 \_\_\_\_\_  
 others (Explain) \_\_\_\_\_  
 \_\_\_\_\_

3. Please indicate which of the following types of equipment you have for activities in your multi-purpose room.

a. Tables:

Permanently anchored  
 Collapsible  
 Stacking type  
 recessed into wall

b. Chairs:

Permanently anchored  
 Folding  
 Stacking

c. Stage:

Permanent  
 Portable  
 None  
 Special stage lighting

d. Storage space:

Adequate  
 Some, but not enough  
 None

e. Lavatories:

Accessible from multi-purpose room  
 Located in other section of the building

f. Showers:

Can the multi-purpose room be shut off from the rest of the building at night?  
 Are showers available if the room is shut-off nights?  
 No showers in same building  
 Showers in other part of the building

## g. Audio-Visual (If used for audio-visual)

- Projection booth  
 Portable projector  
 Permanent screen  
 Portable screen  
 Black-out curtains  
 Television set  
 P. A. system

## h. Phy. Ed. (If used for phy. ed. classes)

- Permanent baskets  
 Portable baskets  
 Table tennis tables  
 Tumbling mats  
 Volleyball equipment  
 Badminton equipment  
 Other major equipment
- 

## i. Hot Lunch Program:

- Kitchen opens off multi-purpose room  
 Kitchen located in other section of the school building

## j. Type of floor:

- Hardwood  
 Tile  
 Concrete  
 Other (Explain)
- 

## k. How do you divide your room if several activities are scheduled for the same time?

- Sliding doors  
 Portable dividers  
 Curtains  
 No divisions

## l. Acoustics:

- Adequate  
 Some sound treatment, but not enough  
 Very little sound treatment but adequate

## m. How many hours in a typical school day is your multi-purpose room in use?

\_\_\_\_\_ hours

4. Please comment on areas which have presented difficulties in scheduling and utilizing your multi-purpose room.
- 
- 

5. If you would like a copy of this survey when it is completed, please fill in your name and address below.
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