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A Janitorial Survey of the Classified High Schools of North Dakota

Olger Marvin Olson

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A JANITORIAL SURVEY
OF THE
CLASSIFIED HIGH SCHOOLS OF NORTH DAKOTA

A Thesis
Submitted to the Graduate Faculty
of the
University of North Dakota
by
OLGER MARVIN OLSON

In Partial Fulfillment of the Requirements
for the
Degree of
Master of Science in Education
August, 1939

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University of North Dakota

August, 1939

This thesis, presented by Olger Marvin Olson in partial fulfillment of the requirements for the degree of Master of Science in Education, is hereby approved by the Committee on Instruction in charge of his work.

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CHAPTER I.

INTRODUCTION

This thesis has been written with due respect for that person who in the minds of many is thought to be the most insignificant part of the school personnel. Some have termed him the "forgotten man." It is true that in the past, schools have thought that most any man incapable of doing other work could manage a janitorial job. Due to the progress in school management the importance of the janitor has increased. He no longer holds a humble job. His job calls for more than physical ability. It requires considerable skill and technical knowledge because his position plays an important role in building the character, health, and success of the pupils that go through our schools.

The past decade has brought increased emphasis on the janitorial position and attempts have been made to professionalize it. Surveys have been made in recent years and the work of the janitor has been carefully studied and defined by Reeves, Ganders, Engelhardt, Womrath, and others. The government also has sponsored surveys. The purpose of these surveys has been to show the importance of this position to the economy of school management and to the welfare of the pupils and community at large. In brief, the accomplishments of these studies have been to recommend the following: methods of performing the various janitorial services, standards by which these services may be evaluated, and methods of comparing the conditions as they exist with the standards they have established. These studies have also been effective in creating an active interest in janitorial service to the extent that leading educational magazines have carried their results.

Janitorial schools have been inaugurated in many of the states the past few years to more directly professionalize the janitor but as yet this movement has barely begun.

The data for the previous surveys have been collected from various parts of the United States including schools in cities having populations over 2,500. Until the present survey there has been no janitorial study made exclusively of the North Dakota schools. In contrast to the former studies this survey is made of schools with small enrollments.

The present survey includes the classified schools in North Dakota which have enrollments between 67 and 2400. Ninety percent of the schools that replied to the inquiry sent to the superintendents of this state have enrollments below 450. It is interesting to note that 88 percent of all the classified schools in North Dakota have enrollments less than 450.

The purpose of this study is to determine the common practices concerning the janitorial services in the State of North Dakota.

The purpose as stated above has been further delimited regarding the manner in which the janitor obtains his position and the duties demanded of him. The methods of janitorial services are not dealt with in this thesis. A thorough study of methods would comprise too large a field for one thesis topic but could advantageously be divided into a number of phases such as floor maintenance, woodwork maintenance, and heat and ventilation.

It is hoped that this study will aid school administrators and those responsible for management of janitors in selecting persons who can perform more adequately janitorial services and also acquaint the progressive janitor of prevalent demands and practices pertaining to his position.

The questionnaire method was used in gathering the data for the present study. A study was made of the available material pertaining to janitorial services of which School Building Management by Reeves and Ganders was the most helpful. With the aid of the available data a questionnaire was prepared including approximately two hundred questions. The questions for the most part were so constructed that they could be answered with check responses, except those that required figures such as square feet of floor space, number of rooms in building, number of years the janitor had been employed, and age of janitor. After the questionnaire had been approved by Dr. Erick Selke, the thesis adviser, and by the North Dakota Educational Department at Bismarck, it was mimeographed and sent to the superintendents of all the classified schools in the state.

The first of September, 1938, questionnaires including a short personal letter were sent to the superintendents of the 212 classified high schools listed in the North Dakota Education Directory for 1937 and 1938. One hundred twenty were returned, and of these 105, which is 50 percent of the total, were found to be usable for the present study. One of the superintendents replied that this questionnaire did not apply to his institution. This reply came from a high school associated with one of the state institutions of higher learning. Four of the classified high schools are of this type, none of which answered the questionnaire. Of the denominational schools listed, only one of the ten answered. Neither of the two county agricultural schools replied.

It was necessary to send second and third requests before the 120 replies were received. The second requests were sent the first of December and brought 37 replies. The third requests were sent the first of January,

1939 and brought only one reply. This reply came from a person who had for the first time been employed as a superintendent and who had accepted this position the first of this year. A questionnaire was mailed to him upon request.

The writer found the following usual objections to the questionnaire method of collecting data.

1. The majority of the unanswered questions were those which needed effort on the part of the respondent.
2. Where figures were asked for, a few were found to be unreasonable guesses. These were not used.
3. Very few attempts were made by the respondent to give added suggestions where blank lines were left for that purpose.

Separating the 105 schools which were used in the present study, according to the method of classification used in this state, it was found that 23 schools are of the third class, 21 of the second class, and 61 of the first class. In the present study it was found convenient to separate the 105 schools into the following four groups: 36 with enrollments less than 150, 36 between 151 and 250, 21 between 251 and 450, and 10 over 450.

The tables in the succeeding chapters have been divided into five large divisions which are labeled as follows: Group I which represents schools having enrollments less than 150, Group II between 151 and 250, Group III between 251 and 450, Group IV over 450, and the Total which represents the sum total of instances in each specific case. The percentages are within .005 of being correct. When the third digit was one-half or greater it was called a whole.

CHAPTER II.

ADMINISTRATION OF JANITORIAL EMPLOYMENT

This chapter resolves itself into two primary purposes. First to disclose who is the administrant in the North Dakota schools in respect to janitorial service. Where the data indicates that the board exceeds the superintendent, it reveals one of two conclusions: either the superintendent lacks the power he should command, or that he lacks sufficient knowledge of janitorial service to gain the confidence of his constituents. Either of the above conclusions is serious and should provoke definite action on the part of our school personnel.

In the second place, this chapter shows how the janitor proceeds to obtain his position according to prevalent practices in this state. This is of consequence to the progressive janitor who wishes to procure a better position.

This chapter has been developed around five specific problems which will infer conclusions for the above purposes and also serve as an outline of content. These problems have been stated in the form of questions as follows:

1. Are written or oral applications used?
2. To whom are they made?
3. Are examinations used to determine eligibility? If so, what is the nature of such an examination?
4. Who recommends the appointment of the janitor?
5. To what extent are written contracts used?

The frequency with which the written and oral applications are used in

the classified schools of North Dakota have been tabulated in Table 1. The percentages have been calculated for each group. Table 1 should be read as follows, 36 questionnaires were used in Group I, which is 100 percent used for this group.

Table 1.

COMPARATIVE FREQUENCY OF THE ORAL AND WRITTEN APPLICATION

Type of Application	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Written	5	14	3	8	2	9	3	30	13	13
Oral	12	33	18	47	8	38	5	50	45	43
Unanswered	19	53	17	45	11	52	2	20	46	44
Total	36	100	38	100	21	100	10	100	105	100

In the first four groups there is an irregular increase in the percentage which use the written application. The data shows that the use of the written application does not increase in direct relation to the size of the school. It does indicate, however, that the percentage is much greater for schools having enrollment over 450. This indicates a greater advancement in the administration of janitorial service in comparison with schools of less than 450. Although advancement is indicated, it is not significant.

There is a gradual increase in the use of the oral application from 33 percent in Group I to 50 percent in Group IV. To conclude from this regular increase that the schools with small enrollments use the oral application less than the large schools would be erroneous. Each group, and the sum total, indicate that the oral application is the more prevalently

used.

There are two salient reasons for the unanswered questions. First, that the respondent did not know the answer, and second, that he was careless in recording his reactions or lacked interest, both of which are undesirable characteristics of an administrator. The first three groups indicate a slight irregular decrease with a significant drop in the last group. This reveals a greater interest and knowledge of janitorial services in schools having enrollments over 450 and a lack of knowledge and interest in schools having enrollments below 450.

A larger majority of our schools are in rural districts (those 2,500 and over are urban), therefore the written application is of questionable value for seldom is more than one janitor employed. The tenure is fairly long, the number of applicants are limited, and in most cases one or all of the board members are acquainted with the applicant. However, some merits may be mentioned for the written application especially in systems where a number of janitors are employed. This type of application provides a criterion by which to judge the applicant and applicants are available upon a short notice.

Closely related to the previous question and of greater consequence to the janitor is to whom are written and oral applications presented? This question is answered by the data tabulated in Table 2 on the following page. The table also indicates to whom the applications are most often presented and reveals the importance of the superintendent in this phase of janitorial administration.

Table 2 indicates that the principal receives 10 percent of the applications in schools having enrollments over 450. This tends to show that the

principal is of no consequence in schools having enrollments less than 450 and of very little importance in schools having enrollments over 450 in janitorial administration.

Table 2.

RECIPIENTS OF JANITOR'S APPLICATIONS

To Whom Application is Presented	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Board	10	28	11	29	10	48	3	30	34	33
Clerk	1	3	1	3	-	-	-	-	2	2
Superintendent	1	3	1	3	-	-	4	40	6	6
Principal	-	-	-	-	-	-	1	10	1	1
Unanswered	24	66	25	66	11	52	2	20	62	59
Total	36	100	38	100	21	100	10	100	105	100

The data shows that the clerk receives very few applications. The superintendent compares with the clerk in schools below 450 but receives the largest percentage of applications in schools having enrollments over 450.

The most prevalent practice is to present the application to the board. If the board or clerk receives the applications, the superintendent is less likely to be acquainted with the procedure, which may account for the large percentage of unanswered questions.

The prevalent practices in North Dakota schools are not in keeping with the practices of progressive boards in the larger school systems throughout the United States. Reeves and Ganders state, "Prospective janitors, like

teacher applications should apply for positions to the superintendent of schools or his appointed assistant and not directly to the board of education. Direct application to the board is not countenanced by a progressive board."¹

The proper individual to receive the application for employment is the superintendent. Table 4 indicates that the superintendent and the superintendent, with the collaboration of the board, recommends the janitor in the largest percentage of cases. The janitor receives his instructions from the superintendent and is responsible to him except in very few of the largest schools. These schools have an intermediate administrative official. Therefore the superintendent becomes the logical recipient of janitor's applications.

The criterions used to determine the eligibility of the janitor, in North Dakota, is tabulated in Table 3. These findings reveal both the preliminary examinations which the janitor may expect to take to demonstrate his qualifications for the position and also indicate the status of our state in respect to this phase of janitorial administration.

The first three types of examinations indicated in Table 3 have been totaled because of the infrequency with which the first two types appear and the close relationship of the three types. In the following explanation these totals will be known as the "merit" system, because there was nothing to show in the questionnaire that these examinations were definitely written types prepared for this purpose but rather that they were conceptions based merely on the judgment of the person or persons responsible for the applicant's employment.

1 Reeves, Charles E. and Ganders, H. S., School Building Management, p. 10.

Table 3.

EXAMINATIONS REQUIRED TO DETERMINE JANITORIAL ELIGIBILITY

Examination for Eligibility	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Mental	-	-	1	-	-	-	-	-	1	-
Physical	-	-	1	-	-	-	-	-	1	-
Ability to work	<u>4</u>	<u>-</u>	<u>11</u>	<u>-</u>	<u>3</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>19</u>	<u>-</u>
Total for above (Merit System)	4	15	13	35	3	14	1	10	21	20
None	32	85	25	65	18	86	9	90	84	80
Civil service	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Grand total	36	100	38	100	21	100	10	100	105	100

In comparing the groups the data indicates that only in Group II is the use of the "merit" system of any significance. The other three groups show a small percentage. The schools with enrollments less than 450 show the use of the "merit" system to be more prevalent than in schools having enrollments above 450. Of all the schools studied, only 20 percent show any criterion for janitorial eligibility. Not one of the schools indicated used the civil service examination.

This study reveals that the janitor is subject to no examination, except the judgment of those who hire him. In other words, there is no standard by which the janitor is judged except the varied opinions of the persons responsible for his employment. To gain employment in North Dakota it then becomes

necessary for the janitor to prove himself acceptable to the separate individuals that employ him.

The writer is of the opinion that written examinations for janitors should be incorporated in our administrative practices. Since the entire school personnel, with the exception of the janitor, are required to demonstrate their adeptness by this procedure. This procedure appears to lend itself more readily to standardization since it serves as a means of eliminating the undesirable and unqualified. Finally, it encourages the applicant to prepare himself for his position. The written examination therefore provides a fair and impartial means of choice based on merit and desirable qualities.

The examinations to fulfill these motives should include the following set of division:

1. The applicant's principles of citizenship and right living.
No candidate should be employed who demonstrates poor moral character. One of the goals of modern education is to build good citizenship. The janitor comes in contact constantly with the school children and will necessarily exert influence.
2. His knowledge of health and sanitation. It is a well known fact that there is a close relationship between sanitation and the health of the school children.
3. His knowledge of janitorial equipment and methods of work.
This would reveal the janitors comprehension of the duties and work he would be expected to perform.
4. The applicant's physical health. The applicant should be subjected to a physical examination by a physician. This

is important not only to insure efficiency but also to safeguard the health of the school children.

The present study further discloses that our state has exercised no progress in respect to this phase of janitorial administration.

The individuals responsible for recommending the janitor for employment in the classified schools of North Dakota are tabulated in Table 4. The conclusions of this study are important to the janitor seeking employment in that they disclose the person or persons responsible for his election. It also reveals whether the superintendent or board exceeds in this recommendation. This then shows more conclusively the individual who administers the employment of the janitor.

Table 4.

INDIVIDUALS RESPONSIBLE FOR RECOMMENDING THE JANITOR

Individuals recommending the janitor	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Superintendent	5	14	8	21	11	52	6	60	30	29
Supt. & Board	15	42	11	29	4	19	4	40	34	33
Board Member	8	22	13	34	4	19	0	0	25	24
Supt. & Principal	1	3	0	0	0	0	0	0	1	1
Bids	1	3	1	3	0	0	0	0	2	2
Unanswered	6	17	5	13	2	10	0	0	13	12
Total	36	100	38	100	21	100	10	100	105	100

Group III and Group IV prove interesting in that they indicate that in schools having enrollments over 250, the superintendent recommends the jani-

tor in the greatest percentage of cases while in the remainder, except for 4 instances in Group III, he collaborates with the board. In schools having less than 250 the board surpasses the superintendent in individual recommendations, while the largest percentage indicates a collaboration of the superintendent and the board.

In the percentage for the sum total of all the groups, the superintendent with the collaboration of the board is the most prevalent practice. In individual recommendations the superintendent slightly exceeds that of the board.

The comparison of the sum total cases merely shows the prevailing practice. The comparison of the groups proves the more significant.

The present study discloses the following fact. To gain employment in a large system, a janitor must gain the confidence of the superintendent while in the smaller systems he must gain the confidence of either or both the superintendent or board, depending on which proves the more influential.

Since in most cases the superintendent has the greater knowledge of janitorial practices through his continual contact with it and is the more apt to have the stronger motive to choose a qualified applicant, the better condition very likely prevails where the administration of the janitorial services is under the control of the superintendent. If he lacks this authority, either the board of education does not recognize the importance of the superintendent's being invested with this authority or the superintendent lacks the command of knowledge regarding janitorial service necessary to gain the confidence of his constituents. If the superintendent is qualified to administer janitorial service, the board should delegate this power to him. On the other hand, if he lacks this knowledge it is his duty

to become qualified.

Bids are used in two percent of the sum total cases. It is encouraging that this practice is not used more extensively than it is. Such a practice should be discouraged because it tends to yield the position to the least qualified individuals. Bids tend to cause the individuals seeking the position to under bid each other which in most cases results in less than a subsistant wage and which may mean the hiring of inferior persons. This may cause discouragement and loss of interest on the part of the employee.

The number and percentage of oral and written contracts used in the classified schools of North Dakota are tabulated in Table 5. The data reveals which method prevails in the classified schools of this state. The written contract has definiteness while the oral is indefinite. The advantages and disadvantages of each practice will determine which practice should be used.

Table 5.

COMPARISON OF FREQUENCY OF THE TYPE OF CONTRACTS USED

Type of Contract used	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Written	10	28	16	45	14	67	2	20	42	40
Oral	26	72	22	55	7	33	8	80	63	60
Total	36	100	38	100	21	100	10	100	105	100

The data reveals that the employment of the written contract reaches its maximum use in schools having enrollments between 251 to 450. In all

the other groups the oral contract is the more prevalent, especially in schools having enrollments over 450. The sum total of all the classified schools of this state reveals that the oral contract prevails.

The written contract has its merits for the janitor in that it makes his dismissal more difficult, and it has definiteness which specifies time of employment and duties. Some times duties are vaguely understood in the oral contract leading to disagreements. The written contract has its disadvantage in that it may hold the employee to service against his will.

The following quotation from School Building Management by Reeves and Gander substantiates the use of the oral contract. "It is doubtful whether written contracts for services are ever advisable so far as the board of education is concerned. Such contracts often act as a restriction on the board of education, making dismissal difficult without recourse to law, while to hold an employee to service against his will, is of doubtful value, and can seldom be enforced even in the courts of law."¹

SUMMARY

Comparing classified schools with enrollments below 450 and with enrollments over 450, the writer found the former to be inferior in janitorial administrative practice to the latter, substantiated by the following results:

1. A larger percentage of the superintendents of the schools with enrollments below 450 are unfamiliar or disinterested in janitorial service.
2. The schools with small enrollments surpass the schools with

1 Reeves, Charles E. and Ganders, H. S., School Building Management, p. 11.

enrollments over 450 in the use of the oral applications.

3. The board exceeds the superintendents as the recipient of applications in schools below 450. In schools with enrollments over 450, the superintendent and principal receive 50 percent while the board receives 30 percent of the applications.
4. The board exceeds in importance in recommending the applicant for employment in schools with enrollments less than 450. In schools over 450 the board does not in any case recommend the janitor without the collaboration of the superintendent. In 60 percent of the cases it is left solely to the superintendent.
5. The written contract is the more prevalent in schools having enrollments less than 450, while in schools over 450 it appears in only 20 percent of the cases.
6. The board, in schools with enrollments below 450, proves, in the largest percentage of the cases, to be the potent administrator in the employment of the janitor.

In none of the classified schools, irrespective of enrollment, is there a specific criterion to test the eligibility of the janitor beyond the judgment of those that employ him.

The data reveals the larger schools to be superior to the smaller schools. It also shows the larger schools are merely mediocre in the administration of the employment of the janitor. In none of the schools does the superintendent have the authority he should command.

CHAPTER III.

ADMINISTRATION OF JANITORIAL SCHEDULE

Schedules are an essential part of the administrative procedure. Some form of schedule should be used by all schools to assure the administrant of the work to be done and also to serve as an outline for the employee who thereby may be informed of his duties and when these should be performed.

It is impossible to make a specific schedule that will fit all schools because each system differs in the number of rooms, type of buildings and location, inside arrangement, and amount and type of janitorial equipment available. Therefore it becomes necessary for each administrant, in forming a schedule, to take cognizance of his individual plant and the equipment available. The administrant should also know the time it takes to perform the various duties. With this information the administrant may form a schedule.

An administrant should, however, permit the janitor to modify the schedule to allow for interruptions which may arise from time to time.

Day, week, month, and year schedules and their combinations are the usual types of schedules used. Each type indicates the janitor's duties for its frequency. In the combination of any four or all four types, the duties are indicated under each according to their frequency. In the combination of the day and week schedule the duties which are to be executed daily are indicated in the day schedule while those that are to be executed weekly are indicated in the week schedule. The frequencies with which these various types of schedules are used in the classified schools of North Dakota are tabulated in Table 6.

Table 6.
FREQUENCIES OF THE VARIOUS TYPES OF SCHEDULES

Type of Schedule	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Day	3	9	4	10	6	28	-	-	14	13
Week	4	11	2	5	-	-	-	-	6	5
Month	3	9	2	5	1	5	2	20	8	7
Year	4	11	8	21	3	14	1	10	16	15
Day & Week	1	3	2	5	1	5	-	-	4	4
Day, Week, & Month	-	-	1	3	-	-	-	-	1	1
Day, Wk., Mo., Yr.	1	3	3	8	-	-	-	-	4	4
Day & Year	2	5	-	-	-	-	1	10	3	3
Week & Month	-	-	1	3	1	5	-	-	2	2
Week & Year	-	-	1	3	1	5	-	-	2	2
None	18	49	14	37	8	36	6	60	46	45

The total indicates that 55 percent of all the schools use some type of schedule, while the astounding percentage of 45 use no schedule. This may be explained to some extent by Table 8, which indicates that a large percentage of the janitors determine their own duties or are informed from time to time by suggestions as the superintendent becomes aware of the needs of the school.

The duties which are determined by other means than by the use of the schedule for the janitors of the classified schools of North Dakota are

tabulated in Table 7. It further discloses the importance of the superintendent in the administration of janitorial services.

Table 7.

METHODS OF INFORMING THE JANITOR OF HIS DUTIES

Methods Used	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Notes or letters	-	-	-	-	2	9	-	-	2	2
Suggestions	12	32	12	28	1	5	2	20	27	26
Determines own duties	5	14	2	5	5	24	1	10	13	12
School board	1	3	-	-	-	-	-	-	1	1
Schedule, suggestions	6	12	5	13	5	24	1	10	17	16
Schedule, notes	1	3	-	-	-	-	-	-	1	1
Determines own duties, schedule	3	9	3	8	1	5	-	-	7	7
Determines own duties, suggestions	2	6	2	5	-	-	-	-	4	4
Schedule	8	22	14	37	7	33	4	40	33	32
Unanswered	-	-	-	-	-	-	2	20	2	2
Total	36	100	38	100	21	100	10	100	105	100

Table 7 shows that in 13 percent of the cases, the sum of percentages for "determines own duties" and "school board", the superintendent is without administrative power in reference to designating the duties of the jani-

tor. The largest percentage of these are found in schools having enrollments below 450. The 13 percent may be increased somewhat by part of the sum of 10 percent for the combined cases "schedule plus determines own duties" and "suggestions plus determines own duties." The exact increase is difficult to determine.

It is interesting to note that the school board is of minor significance in designating the duties of the janitor in contrast with their greater importance in choosing the janitor, which was indicated in Tables 2 and 4 in Chapter II.

It is however encouraging that the superintendent shares the greatest power in determining the duties of the janitor. On the other hand, it is to be regretted that 45 percent of the schools use no schedule but rely on less definite methods of supervising janitorial duties and services.

Table 8.

FREQUENCY OF SUMMER SCHEDULE

Type of Schedule	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Summer months	9	25	12	32	7	33	5	50	33	31
None	27	75	26	68	14	67	5	50	72	69
Total	36	100	38	100	21	100	10	100	105	100

Table 8 indicates a gradual increase in the percentage using the summer months schedule as the schools increase in enrollment. The table shows a 25 percent increase. This increase may be explained in that the larger the

school the more apt the janitor is to be employed throughout the summer months. The small total percentage may be due to the fact that a large percentage of the smaller schools employ the janitor on a nine or ten month basis, and also as was explained in Table 7, that a large percentage of the janitors determine their own duties or are informed by suggestions as the superintendent becomes aware of the school's needs.

The conditions disclosed in Tables 7 and 8 may be due directly or indirectly to the overload of the superintendent's other duties, to the lack of interest of the administrant in janitorial service, or that the janitor has been in employment so long that his duties have become routine.

Whatever the reasons may be for these conditions, the writer feels that they should be amended. A schedule should be arrived at and an attempt be made to follow it for the good of the school and the economy of the school plant. Such a schedule may cause exertion on the part of the administrant, but undoubtedly will have the same desirable result as a budget for an individual or an organization.

In the study of the length of the janitorial day it was found that the arithmetic mean for the same period in all groups were the same, therefore, rather than tabulating the data for each individual group the data for the sum total is tabulated in Table 9.

Table 9 indicates that the arithmetic mean for all groups for spring and fall is ten hours and for the winter it is twelve hours. In no case does the janitor serve less than five and in very few cases less than eight hours. The longest day indicated in the table is eighteen hours which is served during the winter.

Table 9.
LENGTH OF THE JANITORIAL DAY

Spring		Winter		Fall	
Hours	Number Schools	Hours	Number Schools	Hours	Number Schools
8	4	7	2	5	3
9	6	8	5	6	1
9½	2	9	1	8	8
*10	24	10	7	8½	1
11	7	11	10	9	7
12	3	*12	19	9½	2
13	1	13	1	*10	32
14	1	14	7	11	4
15	1	15	7	12	4
16	1	16	4	15	1
		18	1	16	1
Unanswered	55	Unanswered	41	Unanswered	41

* arithmetic mean

The hours of the janitor are altogether too long compared with the accepted hours of industry. It is true that the conditions in many of the schools compel long hours. If better equipment were used and a well planned schedule were adopted and followed it should operate to make a considerable reduction in the number of hours required.

Due to the conditions in some of the schools the janitor is required to be on duty early and late but is allowed to leave the building during the

day. A few work at other employment during this spare time.

Table 10.

BEGINNING AND CLOSING HOURS OF JANITORIAL DAY

Beginning and Closing Hours	SPRING	WINTER	FALL
	No. Schools	No. Schools	No. Schools
<u>Beginning Hours:</u>			
4 - 4:30	1	7	1
5 - 5:30	1	18	1
6 - 6:30	3	32	8
7 - 7:30	34	8	44
8	7	3	15
9	1	-	-
Unanswered	41	28	29
<u>Closing Hours:</u>			
5 - 5:30	11	9	21
6 - 6:30	37	30	45
7 - 7:30	4	7	5
8 - 8:30	2	7	8
9 - 9:30	1	11	1
10 - 10:30	-	2	-
Unanswered	49	39	25

The table shows that the most prevalent starting time is seven o'clock in the morning and closing time is six o'clock in the evening. The janitorial

day which is most prevalent during the winter starts at six o'clock in the morning and ends at six in the evening.

Table 11.

REACTION OF THE JANITOR TO THE METHODS OF ADMINISTRATING HIS DUTIES

Reaction	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Willing to follow	24	67	20	53	19	90	7	70	80	76
Unwilling	2	5	3	8	2	10	-	-	7	7
Unanswered	10	28	15	39	-	-	3	30	28	27
Total	36	100	38	100	21	100	10	100	105	100

Only 7 percent of the respondents reported that their janitors were unwilling to follow their methods of administering janitorial duties. One respondent stated the reason for the janitor's negative reaction was that the janitor felt assured of his job because he was related to one of the school board members. Another reported that the janitor was becoming despondent because he had been employed for many years and was old and feeble. The third stated, "We are canning him."

This table shows a very favorable reaction of the janitors towards their duties. It further discloses a favorable reaction to the superintendents' administration of their duties as far as the superintendents can detect.

SUMMARY

This chapter shows that the larger number of schools in this state use some form of schedule.

It further discloses that the methods used in determining the janitors' duties in the order of their importance are: schedule, 56 percent; suggestions, 27 percent; determining own duties, 12 percent; and the school board, 1 percent.

The superintendent determines the duties of the janitor in by far the largest percentage of cases.

The janitorial day is altogether too long compared with the universally accepted day in industry.

A very small percentage of the janitors show unwillingness to follow the methods of administering janitorial duties.

The writer feels that the superintendents should be encouraged to make schedules for their individual plant. One method of encouraging schedules may be for the state department to suggest a very general schedule and require that the superintendents submit a specific schedule based on the general schedule, but with cognizance of their school and equipment, to the state department for their approval. An attempt should then be made to follow the schedule.

CHAPTER IV.

THE EXTENT OF USE OF RECORDS AND REPORTS

The tendency indicated by the majority of the schools disclosed by former studies is that the schools keep very few records and reports. The most customary records kept are for payrolls and a few items relating to the cost of service and supplies. Those schools that do keep records report the tendency is to record minor details that appear to have little practical value and omit the more essential items.

The extent to which the more important records and reports are used in the classified schools in North Dakota is the object of this chapter. This data has been tabulated in Table 12.

Table 12.

THE USE OF VARIOUS RECORDS AND REPORTS

Types	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Issue receipts for supplies	4	14	2	5	6	25	2	20	15	14
Requisition for supplies	18	49	15	39	12	56	6	60	51	49
Inventory of supplies	8	22	10	26	10	50	7	70	35	34
Attendance reports	2	6	-	-	1	5	-	-	3	3
Heat, Fuel, Ash	11	30	6	16	7	33	3	30	27	26
Repairs needed and completed	21	59	17	45	19	90	7	70	64	61

Table 12 indicates that records and reports are more extensively used in schools having enrollments over 250. It appears that issuing receipts for supplies and attendance reports are the least commonly used. Repairs needed and completed appear to be the most common. It further shows that nearly half of the classified schools use some form of reports and records for janitorial services.

The use of issuing receipts for supplies by the janitor is more suitable in the larger schools where freight comes in greater quantities and arrives at various times of the day and year. In the larger schools it should be his duty to be on hand to receive the goods, issue receipts for them, and place them in the storage room or other rooms specified so that such supplies may be available for use or storage. He should also furnish the person in charge of the storeroom with a list of the supplies for such person is often a part time worker, therefore, may not always be on hand when the supplies are brought in.

In the smaller schools it is a general practice to order the most common supplies in the spring, so they will be on hand in the fall when school starts. A second order may be placed before the second semester. In this case it should be the janitor's duty to have the shipment at the school and help unpack the packages and carry the supplies and boxes to their proper places. Only incidental supplies are usually received during the school year. These are often taken care of by either the principal or the superintendent.

Based on the above table, requisitions for supplies are used in 49 percent of the classified schools studied. The larger percentage is used in schools having enrollments over 250.

Requisitions for supplies should originate with the janitor for he is in a better position to know the amounts used and needed. In the smaller schools the superintendent may have a fair knowledge of supplies used and needed. The better school diplomacy on the part of the superintendent should be to incorporate the janitor's assistance in making the list of such supplies. The janitor may do this by writing or orally.

The larger percentages for inventories and supplies appear in schools with enrollments over 250. This report should be made at least annually in the larger schools. The proper time to make such an inventory is toward the close of the school year. This inventory should in turn be checked in the fall to determine any possible loss of janitorial supplies during the summer months. Such an inventory should include fuel, janitorial supplies, and tools.

To some administrants in the smaller schools it may seem unnecessary to make an inventory because the amount of supplies and tools are small. A better policy to follow is to make a written inventory in case vacancy should occur in either the administrant's or janitor's position.

The attendance report is used in only 3 percent of the cases. This form of record seems to have doubtful value in schools that hire their janitor by the month or year. This survey indicates these intervals of service to be the universal practice in the classified schools of North Dakota. In case a school hires their help by the hour, and there is no indication in this survey that this is done, or pays the janitor for over time or extra jobs an attendance report should be kept. It is, however, necessary for the janitor to inform the administrant orally or by writing if he intends or has to be absent so that the administrant may arrange to have another person take his place during his absence.

The table indicates that the heat, fuel, and ash reports are kept in 26 percent of the cases. A report of this nature has value and should be kept. The heat should be checked occasionally and the apparatus for recording the heat should be checked to assure the janitor that such apparatus is accurate and operating. Fuel reports have value in that they inform the administrant of fuel on hand, which may save the embarrassment of running out. It will also show the amount of fuel used so that a rough comparison between the amount and the heating value of different types of fuel may be determined. The economy of handling fuel is determined to some extent by the amount of ash that remains after it is burned.

In the smaller schools a janitor should be required to give at least an oral report to the administrant on heat, fuel, and ash.

Repairs needed and completed appears to be used most often of the reports indicated in Table 12.

If damage is done to property or urgent repairs are needed, these should be reported immediately either orally or in writing to the administrant. The larger the system the less likely the superintendent is to get this information without the aid of the janitor. Less urgent repairs may be reported by the janitor monthly or yearly depending on their importance.

The frequency of ordering supplies directly by the janitor and recommending supplies are given in Table 13.

In this table the ordering of supplies by the janitor is indicated in 7 percent of the cases. In the larger schools this would be considered a very poor practice because it would necessarily cause confusion and duplication of supplies. If such a practice is allowed in the smaller schools the janitor should consult the administrant before such purchases are made

to assure the administrant of the need for such supplies.

Table 13.

FREQUENCY OF SUPPLIES ORDERED AND RECOMMENDED BY THE JANITOR

Methods	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Orders supplies	5	14	1	3	2	9	-	-	8	7
Recommends supplies	32	89	38	100	20	95	9	90	99	96
Total	36	100	38	100	21	100	10	100	105	100

The janitor recommends supplies in 96 percent of the cases. The administrant should consult the janitor before supplies are ordered because the janitor is in a better position to know the needs of janitorial equipment and supplies. It also has a tendency to cause a more cordial feeling and spirit of cooperation on the part of the janitor if he is consulted.

SUMMARY

This chapter discloses the following conclusions indicated by the data tabulated in Tables 12 and 13.

Attendance reports are seldom used.

The janitor issues receipts for supplies in very few cases.

About one-fourth of the schools use reports on heat, fuel, and ash.

The table indicates that in about one-half of the schools studied the janitor makes requisition for supplies.

The janitor makes reports and records on repairs needed and completed

in about two-thirds of the cases.

Very seldom does the janitor order his own supplies.

Nearly all superintendents consult their janitor before ordering janitorial equipment and supplies.

No indication was made that other records and reports were made by the janitor in the classified schools of North Dakota by the respondents that filled the questionnaires.

The general conclusion is that the larger number of schools keep the more important reports and records.

CHAPTER V.

JANITORIAL SERVICE PERTAINING TO BUILDINGS AND GROUNDS

The amount of work of a janitor may be determined to a large measure by the number of rooms and acres of lawn he is required to tend.

Service rooms tend to facilitate janitorial service in the upkeep of buildings and grounds. This convenience furnishes him with a place to do his minor repair work and keep his supplies and tools.

Table 14.

SERVICE ROOMS PROVIDED FOR THE JANITOR

Type of Rooms	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Workroom	29	81	32	83	20	95	9	90	90	87
Office	2	6	6	16	3	14	3	30	14	13
Office & workroom in boiler room	2	6	3	8	-	-	1	10	6	6
Unanswered	5	14	3	8	1	5	-	-	9	8
Total	36	100	38	100	21	100	10	100	105	100

This table shows that the janitors are furnished with workrooms in 85 percent of the cases. A work room is very essential to a janitor in order that he may have a place to do minor repairing and also a convenient place to keep his tools so they may be easily found.

Separate offices are less essential than workrooms except in the larger schools where the head custodian is required to keep many records. An office

does, however, give more prestige to the janitor and furnishes a separate room for the files, records, and library. In the smaller high schools the office can be conveniently placed in one part of the workroom where the janitor may keep his necessary records, files, and library.

In 6 percent of the cases the office and workroom are combined with the boiler room. This would seem to be less favorable because in schools which heat with coal, the boiler room is dusty and also as a rule is poorly lighted.

In no case does the survey indicate that the janitor is furnished with private lavatories or storerooms.

Table 15.

NUMBER OF ROOMS IN SCHOOL

Number of rooms	Group I	Group II	Group III	Group IV	Total
	Number	Number	Number	Number	Number
8 - 14	20	15	-	-	35
15 - 21	10	15	13	2 (1-3)*	40
22 - 28	3	2	6	3 (1-2)*	14
64	-	-	-	1 (1-7)*	1
Unanswered	3	6	2	4	15
Total	36	38	21	10	105
Arithmetic mean	13	15	18	12	15

* Number of janitors in school.

A janitor on the average takes care of about 15 rooms. As the table shows, a large number of the janitors have more rooms than they can success-

fully clean. The state provides N.Y.A. labor based on enrollment, and many schools avail themselves of this help, which lightens the janitor's load to some extent.

Table 16.

JANITORIAL WORK DISPLACED BY N.Y.A. LABOR

Amount of work displaced	Group I	Group II	Group III	Group IV	Total
	Number	Number	Number	Number	Number
1/8 and less	4	3	4	2	13
1/8 to 1/4	8	9	7	-	24
1/4 to 1/2	3	5	3	2	13
More than 1/2	-	-	1	-	1
Unanswered	21	21	6	6	54
Total	36	38	21	10	105
Average displaced	1/4	1/4	1/4	1/4	1/4

Table 16 indicates that one-fourth of the janitor's work is taken care of by N.Y.A. labor.

The square feet of floor space reported by the classified schools is the next to be considered. Table 17 gives the tabulated data. The low average in the last group is due to the increased number of janitors hired in the largest schools. The first group indicates the greatest number of square feet per janitor.

The school grounds are an important part of the school plant because the people who observe it formulate their opinions of the school to some extent by the appearance of its surroundings. If the school grounds have a

beautiful lawn, trees and shrubbery it has a tendency to stimulate the people of the town to improve their yards. Beside this it has an educational value for the science students because it provides them with specimens for study and it also develops the aesthetic nature of the children who attend the school.

Table 17.

NUMBER OF SQUARE FEET OF FLOOR SPACE

Number of Square Feet	Group I	Group II	Group III	Group IV	Total
	Number	Number	Number	Number	Number
5,000 - 9,999	6	9	3	-	18
10,000 - 14,999	5	6	3	-	14
15,000 - 19,999	1	1	3	2*	7
20,000 and over	3	1	2	-	6
Unanswered	21	21	10	8	60
Total	36	38	21	10	105
Average square feet per janitor	19,847	10,485	13,803	10,450	11,079

*Two janitors employed in one of the schools.

To have these values it is necessary for the janitor to plant trees, shrubs, and law and keep these in condition. He must also rid the grounds of all paper and rubbish from time to time.

The number of acres of lawn, therefore, become an important factor in determining the amount of work the janitor is required to perform. Authorities vary as to the number of acres a school yard should contain but most of them contend that two acres is sufficient excluding athletic fields.

Table 18.
NUMBER OF ACRES OF SCHOOL YARD

Number of Acres*	Group I	Group II	Group III	Group IV.	Total
	Number	Number	Number	Number	Number
1/8 - .9	5	4	2	-	11
1 - 1.9	9	9	7	3	28
2 - 2.9	6	10	5	1	22
3 - 3.9	-	4	1	-	5
4 and over	5	4	4	1	14
Unanswered	11	7	2	5	25
Total	36	38	21	10	105
Average per janitor	1.77	2.07	2	2	2.17

*The range is 1/8 acre to 15.

After the enrollment reaches 150 the acreage stays practically the same. It appears that the larger number of schools have ample acreage.

The type of blackboards most prevalently used in the classified schools is tabulated in Table 19 on the following page. The type of blackboard has a definite effect on janitorial service.

The slate and glass boards last longer and need less servicing than any of the other boards indicated. The other type of blackboards have to be refinished occasionally and have a tendency to become rough which makes them difficult to keep clean.

Table 19.
TYPES OF BLACKBOARDS USED

Type of Blackboard	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Slate	16	44	18	47	14	67	5	50	52	50
Painted paper board	8	22	8	21	4	19	2	20	22	21
Paper board and slate	4	11	3	8	-	-	1	10	8	7
Composition	-	-	2	5	-	-	-	-	2	2
Glass	1	3	-	-	1	5	-	-	2	2
Painted plaster	1	3	1	3	1	5	-	-	3	3
Smooth painted wood	3	8	1	3	-	-	1	10	5	5
Smooth painted wood & paperboard	2	6	-	-	-	-	1	10	3	3
Unanswered	1	3	5	13	1	5	-	-	7	7
Total	36	100	38	100	21	100	10	100	105	100

The type of fuel used in the classified schools in North Dakota appears in Table 20. The study reveals that it takes more labor to handle lignite than any of the other types of coal indicated because it contains a smaller B.T.U. per pound than either of the other types used. The large percentage of lignite used may be contributed to the following reasons: North Dakota mines a large amount of lignite, some schools are close to these mines which

Table 20.
TYPE OF FUEL USED

Type of Fuel	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Lignite	26	72	29	76	11	52	7	70	72	70
Soft stoker	4	11	2	6	4	19	1	10	11	10
Kentucky stoker	1	3	2	6	-	-	-	-	3	3
Lignite stoker	-	-	1	3	2	9	-	-	3	3
Steam nut coke	-	-	-	-	1	5	-	-	1	1
Unanswered	5	13	4	10	3	12	2	20	14	13
Total	36	100	38	100	21	100	10	100	105	100

make it an economical coal to use, and laws have been passed to encourage the use of lignite in public institutions.

Table 21.
COMPARATIVE METHODS OF FEEDING COAL

Methods	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Hand	16	44	19	50	8	38	1	10	44	42
Hopper stoker	9	25	15	37	10	49	6	60	40	38
Bin stoker	1	3	-	-	1	5	1	10	3	3
Unanswered	10	28	4	11	2	10	2	20	18	17
Total	36	100	38	100	21	100	10	100	105	100

The preceding table shows that the smaller schools use the hand method in the greatest percentage of cases. As the enrollment increases the hopper stoker becomes more popular. In comparing the amount of labor necessary in using each of the methods, the hand method takes much more labor and demands the greater amount of attention. This is significant because it tends to make the janitor's day longer during the winter months. The bin stoker needs less attention and labor than either of the other methods. Besides being more economical, a stoker gives the janitor more time for his other duties which otherwise may be interrupted.

The drafts of the furnaces are usually either regulated automatically or adjusted by the janitor. The two automatic methods most often used and reported in this study are the thermostat and pneumatic. The thermostat utilizes the different expansion of metals to regulate the drafts of the furnace while the pneumatic utilizes the expansion of air for the same purpose.

Table 22.

METHODS OF REGULATING TEMPERATURE

Methods	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Thermostat	14	39	13	37	11	52	4	40	42	40
Pneumatic	2	5	5	13	3	14	3	30	13	12
Feeling	11	31	9	24	2	9	-	-	22	21
Unanswered	9	25	11	29	5	24	3	30	28	27
Total	36	100	38	100	21	100	10	100	105	100

Both the thermostat or pneumatic methods need less attention and give the janitor more time for his other duties. The janitor should, however, check them occasionally to be sure that they operate.

Twenty-one percent have neither of these methods, but have to rely on the janitor's judgment. The latter method necessitates occasional visits by the janitor to each room to determine whether it is properly heated. These occasional visits may disturb the rooms that are visited in addition to taking time and effort from his other duties.

Table 23.

TYPE OF FLOOR

Rooms and Type of Floor	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Corridors:										
Cement	5	14	1	3	5	24	1	10	12	11
Hard wood	16	42	29	78	8	38	7	70	60	58
Pine	1	3	2	6	2	9	-	-	5	5
Terrazzo	1	3	1	3	2	9	2	20	6	6
Linoleum	-	-	2	6	-	-	-	-	2	2
Fir	-	-	-	-	1	5	-	-	1	1
Maple	-	-	-	-	1	5	-	-	1	1
Halls:										
Cement	4	11	1	3	2	9	1	10	8	7
Hardwood	27	75	30	79	12	57	7	70	76	73
Pine	-	-	-	-	2	9	-	-	2	2
Terrazzo	1	3	1	3	2	9	2	20	6	6
Linoleum	-	-	1	3	-	-	-	-	1	1
Maple	-	-	-	-	1	5	-	-	1	1
Fir	-	-	-	-	1	5	-	-	1	1
Stairways:										
Cement	6	17	3	8	2	9	1	10	12	11
Hardwood	18	50	27	71	10	48	6	60	71	68
Pine	3	8	2	6	3	14	-	-	11	10
Terrazzo	-	-	1	3	2	9	3	30	6	6
Linoleum	-	-	2	6	-	-	-	-	2	2

Table 23. (continued)

Rooms and Type of Floor	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Maple	-	-	-	-	1	5	-	-	1	1
Fir	-	-	-	-	1	5	-	-	1	1
Rubber matting	1	3	-	-	-	-	-	-	1	1
Combination	1	3	-	-	-	-	-	-	1	1
Toilets:										
Cement	28	78	23	62	12	57	5	50	68	66
Hardwood	3	8	10	27	2	9	3	30	18	17
Pine	-	-	-	-	1	5	-	-	1	1
Terrazzo	1	3	-	-	-	-	2	20	3	3
Linoleum	-	-	1	3	-	-	-	-	1	1
Maple	-	-	-	-	1	5	-	-	1	1
Fir	-	-	-	-	1	5	-	-	1	1
Tile	-	-	-	-	1	5	-	-	1	1
Gymnasium:										
Cement	23	8	7	21	-	-	-	-	10	9
Hardwood	25	67	26	68	19	90	10	100	80	77
Pine	2	6	-	-	-	-	-	-	2	2
Maple	-	-	-	-	1	5	-	-	1	1
Storeroom:										
Cement	11	30	16	42	6	27	4	40	37	35
Hardwood	16	44	15	39	8	37	6	60	45	42
Pine	2	6	-	-	4	19	-	-	6	6
Mastic	1	3	-	-	-	-	-	-	1	1
Maple	-	-	-	-	1	5	-	-	1	1
Fir	-	-	-	-	1	5	-	-	1	1
Linoleum	-	-	1	3	-	-	-	-	1	1
Slate	-	-	-	-	1	5	-	-	1	1
Furnace room:										
Cement	28	78	29	78	19	90	10	100	86	83
Hardwood	1	3	3	8	-	-	-	-	4	4
Pine	1	3	-	-	-	-	-	-	1	1
Linoleum	-	-	1	3	-	-	-	-	1	3
Maple	-	-	-	-	1	5	-	-	1	5
Glass room:										
Hardwood	28	78	33	86	16	76	10	100	88	84
Pine	2	6	-	-	1	5	-	-	3	3
Mastic	1	3	-	-	-	-	-	-	1	1
Linoleum	-	-	1	3	-	-	-	-	1	1

Table 23. (continued)

Rooms and Type of Floor	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Class room:										
Presswood	-	-	-	-	1	5	-	-	1	1
Tile	-	-	--	-	1	5	-	-	1	1
Slate	-	-	-	-	1	5	-	-	1	1
Maple	-	-	-	-	1	5	-	-	1	1
Fir	-	-	-	-	1	5	-	-	1	1
Office:										
Cement	2	6	-	-	-	-	-	-	2	2
Hardwood	27	75	30	81	14	64	6	60	77	74
Pine	3	8	2	6	1	5	-	-	6	6
Terrazzo	-	-	1	3	-	-	-	-	1	1
Mastic	1	3	-	-	-	-	-	-	1	1
Presswood	-	-	-	-	1	5	-	-	1	1
Tile	-	-	-	-	2	9	1	10	3	3
Fir	-	-	-	-	1	5	-	-	1	1
Maple	-	-	-	--	1	5	-	-	1	1

Smooth floors take less time and are easier to clean than rough surfaced floors. All the floors indicated have smooth surfaces except cement, tile, pine, and fir. Cement and tile by proper surfacing may be made smooth. Pine and fir if given the proper treatment while still new may be made smooth, but because they are soft wood, which wears quickly, slivers and becomes rough, they are considered more difficult to keep in condition and clean. The table indicates that pine and fir are not used extensively. The greatest percentage of pine is used in stairways. Of all materials indicated hardwood is used in the greatest percentage of cases, except for toilets and furnace rooms where cement predominates.

The schools with enrollments over 450 show more unity in floor materials. The only other material indicated beside cement and hardwood are ter-

razzo and tile. Tile is used in only one case.

SUMMARY

The typical condition which exists in the classified high schools in North Dakota is the following:

Very few service rooms besides the workroom are furnished the janitor. In most cases there are too many rooms for the janitor to keep clean. There are on the average 11,079 square feet of floor space and 2.17 acres of yard to tend.

Most of the janitors have to feed the furnace by hand.

The large percentage of blackboards are of poor materials.

N.Y.A. labor takes over one-fourth of the janitorial load.

This chapter indicates that the smaller high schools are inferior in equipment and have more floor space per janitor than the larger high schools. It would seem that the janitorial load could be made lighter if better equipment were used in the schools.

CHAPTER VI.

THE WORK AND DUTIES OF THE JANITOR

The content of this chapter is based upon the time and intervals of cleaning the more important parts of the building and upon the miscellaneous duties of the janitor.

The usual time of sweeping the floors is tabulated in Table 24.

Table 24.

USUAL TIME FLOORS ARE SWEEP

Time	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
After 4 P.M.	34	94	34	89	19	90	8	80	95	92
Per schedule	-	-	-	-	-	-	2	20	2	2
Noon	-	-	-	-	1	5	-	-	1	1
Unanswered	2	6	4	11	1	5	-	-	7	7
Total	36	100	38	100	21	100	10	100	105	100

After school is dismissed in the afternoon is the proper time to sweep the floors for several reasons. If the floor is swept before school begins it leaves the air filled with dust particles, which may impair the health of the occupants of the room. The janitor is usually so busy with his other tasks in the morning that it would be difficult to find time for sweeping. During the day it would be impracticable because the school rooms are in use. Many schools require the halls and corridors to be swept during the day.

The time floors are swept are tabulated in Table 25.

Table 25.

COMPARATIVE TIME FLOORS ARE SWEEP

Rooms and Time	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Corridors:										
Twice daily	6	17	5	14	4	19	4	40	19	18
Daily	29	81	28	74	11	52	4	40	71	68
Halls:										
Twice daily	5	14	2	6	6	29	3	30	16	15
Daily	29	81	27	72	10	48	4	40	70	67
Thrice weekly	-	-	2	6	-	-	-	-	2	2
Stairways:										
Twice daily	5	14	2	6	5	24	3	30	15	14
Daily	30	83	29	76	11	52	4	40	74	71
Toilets:										
Twice daily	-	-	4	11	2	9	2	20	8	7
Daily	31	86	28	74	14	67	6	60	79	76
Thrice weekly	-	-	1	3	-	-	-	-	1	1
Primary room:										
Twice daily	1	3	-	-	1	5	1	10	3	3
Daily	33	91	33	92	16	76	5	50	87	84
Gymnasium:										
Twice daily	-	-	1	3	1	5	1	10	3	3
Daily	18	50	24	63	10	48	5	50	57	56
Thrice weekly	5	14	4	11	2	9	1	10	12	11
Weekly	6	17	3	8	2	9	1	10	12	11
Twice monthly	-	-	1	3	-	-	-	-	1	1
Monthly	1	3	-	-	-	-	-	-	1	1
Storer room:										
Daily	13	35	17	41	7	33	1	10	38	36
Twice daily	-	-	-	-	-	-	1	10	1	1
Thrice weekly	1	3	-	-	-	-	-	-	1	1
Weekly	6	17	5	14	5	24	4	40	20	19
Twice monthly	2	6	1	3	-	-	1	10	4	4
Monthly	3	8	4	11	1	5	1	10	9	8
Furnace room:										
Daily	19	53	17	41	12	57	4	40	52	50
Twice daily	-	-	-	-	1	5	2	20	3	3
Thrice weekly	3	8	-	-	-	-	-	-	3	3
Weekly	4	11	3	8	2	9	1	10	10	9
Twice monthly	1	3	1	3	-	-	-	-	2	2
Monthly	2	6	2	6	-	-	-	-	4	4
Class rooms:										
Twice daily	1	3	-	-	1	5	1	10	3	3
Daily	32	89	32	84	16	76	7	70	87	84
Office:										
Twice daily	1	3	-	-	1	5	1	10	3	3
Daily	32	89	32	84	16	76	7	70	87	84
Thrice weekly	-	-	1	3	-	-	-	-	1	1

Table 26.

COMPARATIVE TIME OF SWEEPING DURING WET WEATHER

Rooms and Time	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Corridors:										
Twice daily	6	17	12	32	8	38	7	70	33	31
Daily	29	81	14	37	4	19	2	20	49	47
Twice weekly	-	-	1	3	-	-	-	-	1	1
Weekly	-	-	1	3	-	-	-	-	1	1
Halls:										
Twice daily	5	14	12	32	8	38	5	50	30	28
Daily	28	78	16	39	4	19	3	30	41	39
Stairways:										
Twice daily	4	11	9	24	7	32	5	50	25	24
Daily	29	81	20	54	4	19	4	40	57	55
Thrice weekly	-	-	-	-	1	5	-	-	1	1
Toilets:										
Twice daily	3	8	7	18	2	9	5	50	17	16
Daily	30	84	21	57	10	48	5	50	66	64
Thrice weekly	-	-	1	5	-	-	-	-	1	1
Primary room:										
Twice daily	1	3	3	8	1	5	1	10	6	6
Daily	32	89	27	71	11	52	5	50	75	72
Thrice weekly	-	-	-	-	1	5	-	-	1	1
Gymnasium:										
Twice daily	-	-	2	6	-	-	2	20	4	4
Daily	17	47	18	44	7	32	6	60	36	34
Thrice weekly	5	14	6	17	3	14	2	20	14	13
Weekly	-	-	-	-	1	5	-	-	1	1
Twice monthly	1	3	-	-	-	-	-	-	1	1
Monthly	1	3	-	-	-	-	-	-	1	1
Store rooms:										
Twice daily	-	-	1	3	1	5	2	20	4	4
Daily	13	35	14	37	4	19	1	10	32	30
Thrice weekly	-	-	1	3	2	9	2	20	5	5
Twice monthly	1	3	-	-	1	5	-	-	2	2
Monthly	4	11	5	32	-	-	1	10	1	1
Furnace room:										
Twice daily	-	-	-	-	1	5	2	20	3	3
Daily	19	53	18	44	10	48	5	50	42	40
Thrice weekly	3	8	5	14	-	-	2	20	10	9
Weekly	3	8	-	-	-	-	-	-	3	3
Twice monthly	1	3	-	-	-	-	-	-	1	1
Monthly	3	8	1	3	-	-	-	-	4	4

Table 26. (continued)

Rooms and Time	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Class rooms:										
Twice daily	1	3	2	6	1	5	2	20	6	5
Daily	31	86	24	63	11	52	7	70	73	70
Thrice weekly	-	-	1	3	-	-	-	-	1	1
Office:										
Twice daily	1	3	2	6	1	5	2	20	6	6
Daily	31	86	24	63	11	52	7	70	73	70

The time floors are swept during wet weather is tabulated in the above table, Table 26.

Floors should be swept at least daily during dry weather and twice daily during wet weather, especially rooms that are used frequently or where the children sit on the floor as is often true in the kindergarten and first grades.

Tables 25 and 26 indicate that the largest percentage of janitors sweep their floors daily during dry weather and during wet weather the percentage increases slightly in favor of sweeping twice daily. In comparing the two tables, schools below 150 show the least variation.

Floor preservatives facilitate floor maintenance. The different kinds of floor preservative are tabulated in Table 27 on the following page.

Smooth floors are the easier to keep clean and take the least amount of effort on the part of the janitor. Some preparation should be put on the floor to fill the cracks and depressions because these add to the difficulty of cleaning.

Nearly all the schools use some form of preservation.

Table 27.

VARIOUS TYPES OF FLOOR PRESERVANTS

Types	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Oiled	5	14	7	16	1	5	1	10	13	12
Wax	6	17	7	16	4	19	2	20	19	18
Varnish	5	14	10	26	3	14	1	10	19	18
Floor seal	4	11	1	3	2	9	1	10	8	7
Floor dressing	1	3	-	-	-	-	1	10	2	2
Varnish & oil	-	-	4	11	1	5	-	-	5	5
Varnish & wax	10	27	4	11	6	27	4	40	20	19
Seal & wax	-	-	-	-	2	9	-	-	2	2
Partly oiled and waxed	3	9	1	3	2	9	-	-	6	6
None	-	-	2	6	-	-	-	-	2	2
Unanswered	2	6	2	6	-	-	-	-	4	4
Total	36	100	38	100	21	100	10	100	105	100

Table 28.

FREQUENCY OF USING COMPOUND

Type	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Compound	19	51	17	49	11	51	5	50	52	50
Total	36	100	38	100	21	100	10	100	105	100

Sweeping compound is not recommended for waxed floors because the oil in the compound dissolves the wax. It may be used on oiled and cement floors. Fifty percent of the schools indicate that they use compound.

Proper care of the toilet rooms is one of the most important janitorial services. Nothing will so quickly condemn the janitorial service of a building as dirty toilet rooms.

Table 29.

FREQUENCY OF DISINFECTING TOILET FIXTURES

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Daily	10	27	10	26	10	48	2	20	32	31
Thrice weekly	1	3	-	-	-	-	-	-	1	1
Twice weekly	3	8	1	3	2	10	1	10	7	7
Weekly	13	36	14	37	8	38	5	50	40	39
Twice monthly	-	-	1	3	-	-	-	-	1	1
Monthly	-	-	1	3	-	-	-	-	1	1
Semi-annually	-	-	2	6	-	-	-	-	2	2
When needed	-	-	1	3	1	5	1	10	3	3
Unanswered	9	24	8	21	-	-	1	10	18	17
Total	36	100	38	100	21	100	10	100	105	100

Toilets and toilet fixtures should be cleaned daily and thoroughly cleaned weekly. When the toilets and fixtures are cleaned, disinfectants should be used in the water. Eighty percent of the respondents report disinfecting the toilet fixtures at least weekly. Four percent report disin-

fecting the fixtures less frequently. The negligence of disinfecting may be due to the overload of the janitor's other duties.

Table 30.

FREQUENCY OF DUSTING SCHOOL FIXTURES

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Daily	27	75	21	55	15	73	9	90	72	69
Twice weekly	2	6	1	3	1	5	-	-	4	4
Weekly	1	3	8	21	3	14	-	-	12	11
Monthly	-	-	-	-	1	5	-	-	1	1
Twice annually	1	3	-	-	-	-	-	-	1	1
When needed	-	-	2	6	1	5	-	-	3	3
Unanswered	5	14	6	16	-	-	1	10	12	11
Total	36	100	38	100	21	100	10	100	105	100

Table 31.

COMPARATIVE TIME OF DUSTING FIXTURES

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
After school	30	83	34	89	19	90	9	90	92	89
When needed	1	3	-	-	-	-	-	-	1	1
Unanswered	5	14	4	11	2	9	1	10	12	11
Total	36	100	38	100	21	100	10	100	105	100

Class rooms should be dusted daily, woodwork weekly, and the entire inside of the building three times a year or oftener if needed. Eighty-eight percent dust at least weekly. Seventy-two percent dust daily. The table indicates that dusting daily is the prevalent practice but does not indicate how thoroughly it is done.

Dusting should be done in the morning before school opens because at this time the janitor usually has time available and the dust particles have settled after sweeping the day before. Table 31 indicates that the prevalent practice in the North Dakota schools is to dust after school, a practice that may be seriously questioned.

Table 32.

FREQUENCY OF WASHING WINDOWS ON OUTSIDE

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Monthly	1	3	1	3	-	-	-	-	2	2
Four times annually	2	6	-	-	-	-	-	-	2	2
Thrice annually	1	3	1	3	2	9	-	-	4	4
Twice annually	6	17	9	24	6	27	2	20	23	22
Annually	19	51	18	47	11	52	7	70	55	52
When needed	-	-	1	3	-	-	1	10	2	2
Unanswered	7	19	9	24	2	9	-	-	18	17
Total	36	100	38	100	21	100	10	100	105	100

Windows should be washed not only for appearance but also to admit the maximum amount of light to avoid eyestrain. The outside of the windows

should be washed at least three times during the year. The prevalent practice in North Dakota, as indicated by the table, is to wash the windows annually, which is not often enough in this zone.

Table 33.

FREQUENCY OF WASHING WINDOWS ON INSIDE

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Weekly	2	6	3	8	-	-	-	-	5	5
Monthly	1	3	2	6	-	-	-	-	3	3
Six times annually	-	-	-	-	2	9	-	-	2	2
Four times annually	1	3	2	6	1	5	-	-	4	4
Thrice annually	1	3	3	8	2	9	1	10	7	7
Twice annually	13	36	4	11	7	33	4	40	28	27
Annually	1	3	7	16	4	19	3	30	15	14
When needed	6	17	3	8	-	-	1	10	10	9
Unanswered	11	30	14	37	5	28	1	10	21	20
Total	36	100	38	100	21	100	10	100	105	100

Windows should be washed on the inside every month. The prevalent practice according to Table 31 is to wash them twice a year. This would indicate that they are washed too seldom to give the required light.

Cleaning the blackboards is the duty of the janitor or may be assigned to N.Y.A. labor. In no case should this duty be expected of the teacher or pupils who are not trained in this task and which therefore would take time that could be put to a more worthwhile purpose. Fifty-four percent of the

Table 34.

PERSONS RESPONSIBLE FOR CLEANING BLACKBOARDS

Persons	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Janitor	20	55	18	44	12	57	7	70	57	54
Janitor, teacher and pupils	-	-	1	3	-	-	-	-	1	1
Janitor, pupils	5	14	11	29	1	5	1	10	18	17
Pupils	-	-	-	-	1	5	-	-	1	1
Janitor, teacher	-	-	1	3	1	5	-	-	2	2
Pupils, teacher	3	9	1	3	2	9	-	-	6	6
N.Y.A.	6	17	1	3	-	-	2	20	9	8
Unanswered	2	6	5	14	4	19	-	-	11	10
Total	36	100	38	100	21	100	10	100	105	100

Table 35.

FREQUENCY OF CLEANING BLACKBOARDS

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Daily	21	58	21	55	15	73	9	90	66	63
Twice Weekly	7	19	2	6	2	8	-	-	11	10
Thrice Weekly	-	-	2	6	-	-	-	-	2	2
Weekly	4	11	12	31	4	19	1	10	22	21
Unanswered	4	11	1	3	-	-	-	-	5	5
Total	36	100	38	100	21	100	10	100	105	100

janitors perform this service alone. In 27 percent of the cases the janitor is helped by teachers or pupils. There is no logical reason for such practice even if the janitor is overloaded with other duties.

The blackboards should be cleaned daily. If they are cleaned less often the legibility becomes poor, which in turn causes eyestrain on the part of students and teachers. Table 35 indicates that 63 percent of the schools clean their blackboards daily and 33 percent clean them less often, with 21 percent cleaning them only once a week.

Table 36.

TIME OF CLEANING BLACKBOARDS

Time	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
After school	22	58	20	52	12	56	8	80	64	61
Weekly	1	3	4	11	4	19	1	10	10	9
When needed	1	3	2	6	-	-	-	-	3	3
Unanswered	12	33	12	31	5	28	1	10	30	29
Total	36	100	38	100	21	100	10	100	105	100

The proper time to clean blackboards is at the close of the school session before sweeping so the dust escaping from the cleaning device may have time to settle. The janitor is required to clean the boards daily in most schools.

Chalk trays should be cleaned daily and washed once a week. They may be cleaned at time of sweeping or at time of dusting. In most schools the janitor is required to clean chalk trays daily.

Table 37.

FREQUENCY OF CLEANING CHALK TRAYS

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Daily	15	41	20	52	12	56	8	80	55	52
Twice weekly	6	17	1	3	-	-	-	-	7	7
Weekly	6	17	9	24	8	38	2	20	25	24
When needed	1	3	-	-	-	-	-	-	1	1
Unanswered	8	22	8	21	1	5	-	-	17	16
Total	36	100	38	100	21	100	10	100	105	100

Table 38.
METHODS OF CLEANING ERASERS

Methods	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Electric cleaner	10	27	9	24	9	43	8	80	36	34
Brush wheel	15	41	18	44	8	38	1	10	42	40
Hand	4	11	4	11	3	14	1	10	12	11
Unanswered	7	19	7	16	1	3	-	-	15	14
Total	36	100	38	100	21	100	10	100	105	100

The electric cleaner and brush wheel lighten the janitor's work load and give him more time for his other duties. Much more time and effort is exerted in cleaning the erasers by hand. Seventy-four percent of the schools

furnish the janitor with these conveniences.

Table 39.

PERSONS RESPONSIBLE FOR CLEANING ERASERS

Persons	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Janitor	22	58	21	55	12	56	7	70	62	60
Janitor, pupils	3	8	7	16	2	6	1	10	13	12
Janitor, teacher	2	6	1	3	-	-	-	-	3	3
Janitor, N.Y.A.	-	-	3	8	2	9	-	-	5	5
Teacher	-	-	1	3	-	-	-	-	1	1
Pupils	1	3	1	3	2	9	-	-	4	4
Pupils, N.Y.A.	-	-	1	3	-	-	-	-	1	1
N.Y.A.	5	14	3	18	3	14	1	10	12	11
Unanswered	3	8	4	11	-	-	1	10	8	7
Total	36	100	38	100	21	100	10	100	105	100

It is the janitor's duty to clean the erasers, but where N.Y.A. labor is available he may assign it to them. In no case is this the duty of the teachers and pupils. The table indicates that the janitor cleans the erasers in 60 percent of the cases but in 21 percent of the cases he is aided by the teachers and pupils, a practice which should be condemned.

Metal should be polished before it becomes badly tarnished. There is no set interval during which it should be cleaned. Forty-nine percent of the questions as to the frequency of polishing metal work were unanswered which may be interpreted to mean that these schools have very little metal

to be polished. If the fixtures are polished often, it adds considerable effort to the janitorial service.

Table 40.

FREQUENCY OF POLISHING METAL WORK

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Daily	-	-	1	3	1	5	1	10	3	3
Twice weekly	3	8	-	-	-	-	-	-	3	3
Weekly	4	11	2	6	4	19	1	10	11	10
Monthly	2	6	4	11	-	-	3	30	9	8
Twice annually	-	-	4	11	1	5	1	10	6	6
Annually	3	8	3	8	1	5	-	-	7	7
When needed	6	17	3	8	3	14	3	30	14	13
Unanswered	18	50	21	55	11	52	1	10	51	49
Total	36	100	38	100	21	100	10	100	105	100

The frequency of washing the floors is indicated in the following table. Table 41. Preserved floors should not be washed, but cleaned three times a year with preparations recommended for each type of preservation. Floors which are not treated should be washed often. The North Dakota state requirement is once a month. This requirement should undoubtedly be modified due to the new methods of floor preservations which have come into use since this requirement was made.

The data in Table 41 indicates that floors are washed often enough.

Table 41.

FREQUENCY OF WASHING THE FLOORS

Frequency	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Weekly	3	8	5	13	3	14	1	10	12	11
Twice monthly	1	3	1	3	1	5	-	-	3	3
Monthly	-	-	3	8	1	5	1	10	5	5
Every six weeks	1	3	-	-	-	-	-	-	1	1
Thrice annually	3	8	2	6	-	-	-	-	5	5
Twice annually	8	22	3	8	1	5	3	30	15	14
Annually	1	3	-	-	6	29	-	-	7	7
When needed	-	-	3	8	2	9	1	10	6	6
Not washed but oiled, sealed, etc.	6	17	4	11	3	14	1	10	20	19
Unanswered	16	44	17	44	4	19	3	30	40	38
Total	36	100	38	100	21	100	10	100	105	100

The frequency of the supervisory duties are tabulated in Table 42. The purpose is to determine the extent of such duties and their frequency.

The supervisory duties mentioned in this table are the extent of such duties reported by the respondents. It does indicate that the janitor has considerable supervisory duties.

The percentages for the groups indicated that the schools with enrollments over 250 demand slightly more supervision by the janitor than schools having less enrollments.

Table 42.

FREQUENCY OF SUPERVISORY DUTIES

Duties	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Supervise lavatory	10	27	13	34	13	62	5	50	41	39
Supervise corridor and halls	4	11	5	14	4	19	2	20	15	14
Supervise noon hour	12	33	13	34	10	49	-	-	35	33
Report misconduct	20	55	19	50	12	54	5	50	56	53
Guide for visitors	8	22	8	21	5	24	3	30	25	24
Locate rooms for beginners	5	14	6	16	3	14	2	20	16	15
Supervise fire drill	4	11	6	16	4	19	3	30	17	16
Unanswered	-	-	-	-	1	3	-	-	1	1
Total	36	100	38	100	21	100	10	100	105	100

Table 43.

FREQUENCY OF DUTIES DEMANDING SKILL

Skills	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
First aid	8	22	6	16	6	28	-	-	20	19
Carpentry	31	85	29	76	19	90	9	90	88	85
Painting	31	85	30	79	17	81	8	80	86	83
Heating	32	88	30	79	17	81	8	80	87	84
Electric	18	50	24	63	13	62	6	60	61	59
Plumbing	23	64	25	66	16	76	7	70	61	59
Masonry	18	50	19	50	9	43	6	60	52	50
Unanswered	-	-	-	-	1	5	-	-	1	1
Total	36	100	38	100	21	100	10	100	105	100

Table 43 indicates that many skills are demanded of the janitor. The greatest number of schools demand that he be able to do carpentry, painting, and repair heating devices. Over 50 percent require that he be able to do electric repairing, plumbing, and masonry.

The table also shows that there is a demand for "first aid" knowledge. This demand appears only in schools having an enrollment below 450. Engelhardt, Reeves, and Wamrath agree that it is well for the janitor to have this knowledge since he may be the first school official to see the need.

Table 44.

MISCELLANEOUS JOBS OF A JANITOR

Duties	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Responsible for room temperature	34	94	34	89	21	100	10	100	99	96
Care for national flag	34	94	33	92	19	90	9	90	95	92
Turn off and on light and water	25	69	30	79	17	81	7	70	79	76
Move furniture	28	78	26	69	16	76	8	80	78	75
Clean up after sick	24	67	25	66	18	86	9	90	76	73
Responsible for fire equipment	28	78	26	69	11	52	8	80	73	70
On duty for evening meetings	24	67	26	69	13	62	8	80	71	69
Sound fire gong for drill	14	38	19	50	14	67	8	80	55	53
Open exits for fire drill	11	30	10	27	7	33	2	20	30	29

Table 44. (continued)

Duties	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Run errands for superintendent	10	28	5	14	3	14	1	10	19	18
Run errands for principal	5	14	-	-	-	-	3	30	8	7
Run errands for teachers	6	17	2	6	1	5	1	10	10	9
Help construct for plays	1	3	-	-	-	-	-	-	1	1
Mimeograph	1	3	-	-	-	-	-	-	1	1
Unanswered	-	-	-	-	1	5	-	-	1	1
Total	36	100	38	100	21	100	10	100	105	100

The miscellaneous duties indicated in this table are the extent of such duties reported by the respondents. Most of the duties reported are required by more than 50 percent of the schools reporting. It is interesting to note that duties that are specifically duties of the janitor are not always demanded of him, while other duties that are not considered as janitorial duties, such as running errands, are demanded. Personal errands which require the janitor to leave the school grounds are specifically not his duty. Errands that pertain to janitorial services should be performed by him.

SUMMARY

The prevalent practice in the classified schools of North Dakota is to sweep and dust daily after school. Some floor preservative is extensively

used and most schools use sweeping compound. Toilet fixtures are as a rule disinfected weekly. Windows are usually washed inside and outside annually. Erasers and blackboards are cleaned by the janitor. Chalk trays and blackboards are usually cleaned daily. Mechanical devices are furnished the janitor to clean erasers in most cases. No definite time is indicated for cleaning metal work. The largest percentage of floors are seldom washed. Many miscellaneous duties are required of the janitor.

CHAPTER VII.

PERSONAL DATA PERTAINING TO THE JANITOR

The personal characteristics studied in this chapter include sex, marital condition, size of family, age, health, attitude, appearance, education, and previous experience relating to position.

None of the respondents reported women in employment. Women have a place in janitorial service and are needed on the janitorial staff. In the schools of North Dakota where few schools hire more than one janitor, it would be impracticable to hire a woman because she would not be qualified to do many of the heavier physical tasks required of a janitor. However, without a woman on the force the girls' lavatories cannot be cleaned before school has closed. The larger schools employing several janitors would find a woman invaluable for this work. She would also be of service in doing the lighter tasks about the building.

Table 45.

FREQUENCY OF MARRIED MEN

Marital status	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Married	24	67	25	66	14	67	30	97	93	78
Widower	6	17	4	11	2	10	-	-	12	11
Single	2	6	2	6	-	-	-	-	4	4
Unanswered	7	11	7	17	5	24	1	3	17	15
Total	36	100	38	100	21	100	31	100	126	100

Married men are the most popular in the janitorial service. One reason for this may be that married men as a rule are more permanent because they maintain a home. If need should determine the choice, the man with dependents would in most cases receive the position.

Table 46.

NUMBER OF DEPENDENT CHILDREN IN JANITOR'S FAMILY

Number of dependent children	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	2	6	4	11	-	-	7	23	13	10
1	6	17	9	24	6	29	3	10	24	19
2	7	19	5	14	2	9	4	13	20	16
3	9	25	5	14	-	-	3	10	17	13
4	2	6	2	6	3	14	3	10	10	8
5 or more	2	6	2	6	1	5	4	13	9	7
Unanswered	8	22	11	29	9	43	7	23	35	28
Total	36	100	38	100	21	100	31	100	126	100

The range of dependent children is from 0 to 8. The average number of dependent children per janitor is 2. Ninety percent of the janitors have dependent children.

The age of the janitors is given in Table 47. The ages range from 20 to 79. The average age is 49.5. The size of enrollment has no effect on the age of the janitors employed.

Table 47.

AGE OF JANITORS

Age	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
20 - 30	3		3		-		2		8	
31 - 40	5		7		6		5		23	
41 - 50	12		8		6		8		34	
51 - 60	7		13		3		8		31	
61 - 70	1		7		3		5		16	
71 - 80	2		-		-		1		3	
Unanswered	6		-		3		2		11	

Table 48.

JANITOR'S HEALTH CONDITION

Condition	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Excellent	16	44	12	31	12	57	16	52	56	44
Good	11	30	17	49	4	19	8	26	40	32
Fair	1	3	3	8	3	13	1	3	8	6
Poor	1	3	2	6	-	-	1	3	4	3
Unanswered	7	14	4	11	2	9	5	16	18	17
Total	36	100	38	100	21	100	31	100	126	100

A very small percentage show fair or poor health. Health is one of the important qualifications a janitor should possess. Under no circumstances

should an individual having a contagious disease be allowed to serve as janitor. A person with poor health is often apt to be melancholy and glum and as a result would usually not perform his duties as well as a healthy person.

The attitude of the janitor toward the superintendent, principal, teachers, and students as rated by the superintendent is given in the following table.

Table 49.

ATTITUDE OF JANITOR TOWARD OTHERS

Attitude	Supt.		Prin.		Teacher		Students	
	No.	%	No.	%	No.	%	No.	%
Excellent	75	72	69	66	61	58	56	54
Good	21	20	23	22	23	22	25	24
Fair	-	-	7	6	12	11	13	12
Poor	1	1	2	2	1	1	4	4
Unanswered	8	7	4	4	8	7	9	8
Total	105	100	105	100	105	100	105	100

In a few cases the janitor is less congenial towards the teachers and pupils. He shows a splendid attitude to the whole school in over 75 per cent of the cases. Comparing Tables 48 and 49, the janitor's attitude is closely related to his health.

Table 50 deals with the general appearance of the janitor. In most cases the appearance of the janitor is satisfactory.

In none of the cases did the respondents report the use of a uniform.

Table 50.

GENERAL APPEARANCE OF JANITOR

Appearance	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Neat and clean	28	78	26	69	14	67	15	49	83	66
Slovenly and dirty ₄	11		8	21	2	9	2	6	16	13
Unanswered	4	11	4	11	5	24	14	45	27	21
Total	36	100	38	100	21	100	31	100	126	100

There is value in having all the janitors dressed the same. It would not only add to their appearance but would tend to make them distinctive which in turn would work toward professionalizing their service.

Table 51.

EDUCATION OF JANITOR

Education Completed	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
None	2	6	4	11	3	14	-	-	9	7
Less than eighth grade	-	-	2	6	-	-	-	-	2	2
Elementary school	29	81	18	52	12	57	20	65	79	62
High school	5	14	10	26	-	-	1	3	16	13
Two year college	-	-	-	-	1	5	-	-	1	1
Unanswered	-	-	2	6	5	24	10	32	17	14
Total	36	100	38	100	21	100	31	100	126	100

The education of the janitor in the largest percentage of cases is limited to the elementary schools. Very few have had any training beyond the grades.

Table 52.

NUMBER ATTENDING JANITORIAL SCHOOLS IN 1938

	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
No. attending	6	14	7	17	5	24	18	58	36	29
No. reported in survey	36	100	38	100	21	100	31	100	126	100

A very small percentage of the janitors from the smaller schools avail themselves of the janitorial school but a goodly percentage from the largest schools attend.

Table 53.

POSITION HELD PREVIOUS TO BECOMING JANITOR

Position	No.	Position	No.	Position	No.
Farmer	26	Farmer, thresher	1	Painter	1
Janitor	13	Bus driver	1	Miller, farmer	1
Carpenter	6	Contractor	1	Miscellaneous	1
Mechanic	6	Coal miner	1	W.P.A.	1
R.R. engineer	4	Lumber yard	1	Store clerk	1
Laborer	4	Tin & Plumb shop	1	Butcher	1
Farmer, mechanic	3	Truck driver	1	City employee	1
Carpenter, mechanic	3	Wagon maker	1	Sales clerk	1
Steam engineer	3	Boilerman	1	Editor	1
Engineer	2	Plumber, steamfitter	1	Unanswered	31
Plumber	2	Electrician	1		
Drayman	2	Mason	1	TOTAL	126

This table indicates that the largest number of janitors were farmers

previous to becoming janitors. One reason for this may be that North Dakota is primarily an agricultural state and therefore more farmers are available than men from other vocations. The largest number of janitors came from occupations which have direct relation to janitorial duties.

SUMMARY

The typical janitor is a married man, who has 2 dependent children. He is 49 years old, in good health, neat and clean in appearance, does not wear a uniform, has an elementary education, attends janitorial school occasionally, and shows a splendid attitude towards the whole school. Usually his previous position before becoming janitor had a direct relation to some phase of janitorial service.

CHAPTER VIII.

THE PAY AND TENURE OF THE JANITOR

The purpose of this chapter is to determine the tenure and pay of the janitor. It is to the interest of every school board to employ a trained personnel in janitorial service.

Table 54.

COMPARATIVE SALARY SCHEDULE

Salary	Group I	Group II	Group III	Group IV	Total
	No.	No.	No.	No.	No.
350 - 500	3	8	-	1	12
501 - 700	16	9	1	-	26
701 - 900	9	15	8	7	39
901 and over	2	5	10	13	30
Unanswered	6	1	2	10	19
Total	36	38	21	31	126
Average	\$704	\$734	\$947	\$1001	\$806

The salaries range between 350 to 1500. The table indicates that the salaries increase as the enrollment increases. The highest salaries are paid in schools having enrollments over 250.

The questionnaire showed that the janitor was furnished with living quarters, light, and fuel in about 6 percent of the cases.

The number who receive remuneration for odd jobs within the school is given in Table 55.

Table 55.

NUMBER WHO RECEIVE REMUNERATION FOR ODD JOBS WITHIN SCHOOL

	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Odd jobs	7	17	7	16	2	9	-	-	16	13
Total	36	100	38	100	21	100	31	100	126	100

Thirteen percent of the janitors in schools with enrollments below 450 receive remuneration for odd jobs while those in schools over 450 receive no remuneration. This additional money may offset in a small way the lower salary schedule for the schools with smaller enrollments.

The number of janitors working at other jobs for wages other than janitorial service is very small, indicating that few have time to do any other work.

Table 56.

WORK PERFORMED OUTSIDE SCHOOL OTHER THAN JANITORIAL SERVICE

Amount	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
1/20	1	3	1	3	-	-	-	-	2	2
1/10	1	3	-	-	-	-	-	-	1	1
1/8	1	3	-	-	-	-	-	-	1	1
1/4	1	3	-	-	-	-	-	-	1	1
1/2	1	3	-	-	-	-	-	-	1	1

The table indicates that there is very little work done for remuneration

beside the janitorial service as only six persons were reported as doing other work.

Table 57.

COMPARABLE NUMBER OF JANITORS RECEIVING PAY DURING ILLNESS

	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Receive pay	13	36	18	47	10	48	7	70	48	45
Total	36	100	38	100	21	100	10	100	105	100

There is a decided tendency for the larger school systems to pay the janitor's salary during illness.

Table 58.

COMPARABLE TENURE OF JANITORS

Number of years	Group I	Group II	Group III	Group IV	Total
	No.	No.	No.	No.	No.
0 - 5	17	20	10	10	57
5 - 10	10	4	3	8	25
10 - 15	4	4	4	2	14
15 - 20	2	4	2	-	8
Over 20	-	4	-	5	9
Unanswered	3	2	2	6	13
Total	36	38	21	31	126
Average tenure	5.6 yr.	8.2 yr.	7.8 yr.	10.3 yr.	7.8 yr.

The tenure ranges from 0 to 31 years. The shortest tenure is found

in the schools having enrollments below 150.

Table 59.

COMPARABLE LENGTH OF JANITOR'S TERM

Term	Group I		Group II		Group III		Group IV		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
9 months	3	8	7	13	1	5	4	13	15	12
9½ months	1	3	-	-	-	-	-	-	1	1
10 months	12	33	16	46	3	14	2	6	33	26
11 months	1	3	1	3	1	5	-	-	3	3
12 months	16	44	14	37	14	67	24	77	68	54
Unanswered	3	8	-	-	2	9	1	3	6	5
Total	36	100	38	100	21	100	31	100	126	100

Few schools employ the janitor for less than ten months. Most janitors are hired by the year. This is as it should be for there is much work about the building that can and should be done when school is not in session.

SUMMARY

The typical janitor receives \$806 per year. He has had about 8 years of tenure. In the smaller schools he receives remuneration for odd jobs, seldom works at other labor for remuneration, as a rule receives pay during illness, and in most cases is hired for a twelve month term.

CHAPTER IX.

SUMMARY AND RECOMMENDATIONS

In various parts of this work, which is in the nature of a comparative study of the classified schools based on enrollment to determine the common practices concerning the janitorial service in the state of North Dakota, summaries of the various findings have been made. In order that the results which were obtained may be noted more clearly, the following summary and recommendations are presented.

The second chapter deals exclusively with the practices used in employing the janitor from an administrative point of view. The data reveals that a large percentage of the superintendents are unfamiliar or disinterested in janitorial service. Oral applications are used most extensively. The board is the primary recipient of janitorial applications. Examinations for eligibility are seldom used and if so they consist mainly of the judgment of the school board or superintendent. In the greatest percentage of cases the janitor is recommended either by the superintendent or the superintendent with the collaboration of the board. The oral contract predominates.

The superintendent should possess sufficient interest, as an administrant of the entire school plant, to familiarize himself with the janitorial service since it plays such an important factor not only in the economy of the plant, but also in its healthy and wholesome atmosphere, all of which are vital to his constituents. To stimulate such an interest a course in plant maintenance should be required of each prospective administrant, and the employment of the janitor should be delegated to him.

To assure the school board, administrant, and community of a better employee and to eliminate any unjust motive of choice, a written examination

should be offered to prospective applicants. Certain educational, health, and personal qualifications should be demanded.

A written contract may more specifically designate the terms of the agreement and duties of the janitor.

Bids may appear economical but place the best qualified individuals at a disadvantage. Economy in salary does not necessarily mean economy in plant maintenance.

Chapter III shows that the larger percentage of schools use schedules to determine the duties of the janitor but in a number of cases less definite methods are used. Irrespective of methods used, the superintendent determines the janitor's duties in by far the greatest percentage of cases. The janitorial day is too long compared with the universally accepted day of industry. In nearly all the schools the janitor willingly follows the instructions of the administration.

Schedules determined by the superintendent should be encouraged but caution should be exercised in forming such a schedule to make it elastic enough to allow for interruptions that may occur from time to time.

The data in Chapter IV discloses that the larger number of schools keep the more important records and reports. Nearly all the superintendents consult their janitor before ordering janitorial equipment and supplies.

Proper discrimination must be made as to the amount and kinds of records and reports to keep. There is danger in not keeping sufficient records and reports as well as over doing it. The needs of the individual plant must be determined.

The wisest and most diplomatic practice for a superintendent is to consult his janitor before ordering janitorial supplies or equipment. The jani-

tor is in a better position to know the needs of the school and this consultation creates cooperation and interest on his part.

Chapters V and VI indicate that numerous skills, supervisory and miscellaneous duties are required of the janitor. In most cases his load is excessive. A few conveniences are furnished him.

A reasonable load should be given the janitor to insure the best plant maintenance. In all cases the janitor's load could be made easier if better equipment were used and furnished him.

Chapter VII reveals that there are few, if any, women employed. The largest percentage of men are married and have dependents. Their health, appearance, and attitude is excellent. Their education is limited in the largest percentage of cases to the elementary schools. Few attend janitorial schools. None wear uniforms. Most of them have had experience, prior to the present position, which has had direct relation to the janitorial service.

Women on the janitorial staff are invaluable where the size of plant justifies hiring a number of employees. Health, appearance, and congenial attitude are important qualifications for every janitor to possess. Educational qualifications are essential and advanced education which has direct relation to the janitorial position should be required. A person with related experiences to the tasks required in the service should be given preference.

Chapter VIII indicates that the average salary is \$806 per year with comparatively long tenure. The janitor receives remuneration for odd jobs and works for pay at other work in a few cases. Most janitors are hired on a twelve month basis.

The general conclusion is that the schools with small enrollments as compared with the schools of larger enrollments are inferior in practices, equipment supplied, and condition of buildings and grounds.

A course pertaining to plant maintenance should be offered and required of administrators. Such a course could earn graduate credit and embody information on heat, ventilation, landscaping, floor maintenance, fixture maintenance, janitor personnel, records and reports, schedule, and laboratory experiments in testing janitorial supplies.

The janitor should be required to take special work qualifying him for his position. At the completion of this course he should be given a certificate of completion to assure the employer of his educational qualifications. Such a course should preferably follow a high school education.

This course should consist of the following subjects substantiated by the data in this survey:

Psychology and supervision of children. It should consist of practical child problems and their solution and how to better janitor personality and attitude towards administration.

General plant science. This subject should be a laboratory science dealing with heating, ventilating, care of boilers, firing, furnace draft controls, types of coal, B.T.U., volatility, and ash content.

Records and reports. This should deal with the various types and forms of records and reports.

Health and sanitation. This should also include instruction in "First Aid."

Maintenance of building and grounds. This should include materials and methods of maintenance.

Shop. This subject should give practical experience in carpentry, plumbing

painting, electricity, and masonry.

A course such as this should extend over a six or nine months' period. Since this might work a hardship on the men now employed, it is recommended that janitorial schools be maintained for at least a month during the summer, giving the janitors an opportunity to qualify. This requirement is not excessive to the writer when comparing the janitor's average wage with that of the teacher and the educational qualifications required of the teacher.

To further professionalize the janitor the use of uniforms should be encouraged.

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APPENDIX A.

TOWNS AND CITIES WHICH ANSWERED THE QUESTIONNAIRE

Alamo	Forman	Northwood
Anamoose	Gilby	Notre Dame Academy,
Aneta	Glenburn	Oberon
Arnegard	Granville	Omemees
Beach	Hannah	Osnabrook
Belfield	Harvey	Pembina
Bismarck	Hatton	Petersburg
Bottineau	Havana	Plaza
Bowbells	Hebron	Portal
Bowman	Hillsboro	Portland
Braddock	Hoople	Ray
Bucyrus	Hope	Reeder
Buffalo	Inkster	Reynolds
Buxton	Jamestown	Rhame
Calvin	Kensal	Rolette
Cando	Kindred	Rolla
Carrington	Kulm	Rugby
Carson	Lakota	Ryder
Cavalier	LaMoure	Scranton
Churches Ferry,	Langdon	Sharon
Cogsweel	Lidgerwood	Sheldon
Cooperstown	Lignite	Sherwood
Dazey	Litchville	St. Leo
Devils Lake	McGregor	Steele
Donnybrook	McVile	Tioga
Douglas	Maddock	Tower City,
Drake	Marion	Towner
Edgeley	Michigan	Underwood
Edmore	Milnor	Velva
Egeland	Minto	Walhalla
Ellendale	New England	Williston
Enderlin	New Leipzig	Willow City,
Epping	New Rockford	Wimbledon
Finley	New Salem	Wyndmere
Flasher	Noonan	York

JANITOR SURVEY OF THE CLASSIFIED SCHOOLS IN NORTH DAKOTA

of School _____ County _____
Enrollment _____ Classification of High School _____

In the questions below wherever possible, use the () CHECK MARK, which will
have a positive meaning or the same as "yes", except where terms and nos. answer.)

STATION:
Janitor employed upon the recommendation of Superintendent _____ Principal _____
Superintendent of Grounds _____ Board Member _____;
an examination for eligibility is required which is used: Mental _____ Physi-
al _____ Civil Service _____ Janitorial Ability _____ Any other? _____ (spec.)
Employed by written contract _____ Written appl. required _____ Oral _____ To Whom _____;

LE:
Janitor provided with work schedule for the day _____ week _____ month _____
summer months _____ year _____ Any other (specify) _____;
not furnished with schedule is he informed by written letter or note? _____
suggestions _____ Does he determine own duties _____ Any other (spec) _____;
number of hours in janitor's day during the: Fall _____ commencing time _____
finishing time _____; Winter _____ commencing time _____ finishing time _____;
Spring _____ commencing time _____ finishing time _____;
Does he willingly follow schedule _____ notes _____ suggestions _____ Other _____;

S AND REPORTS:
Does janitor order supplies _____ recommend supplies _____ issue receipts for deliv-
ery of goods _____; Does he make: requisitions for supplies _____ Inventory for
supplies _____ Janitor attendance report _____ report on heating, fuel, ashes _____
report of repairs needed and completed _____ Any other (specify) _____;

INGS AND GROUNDS:
Janitor provided with work room _____ office _____ Other (specify) _____;
total number of rooms in building or buildings _____ No. of acres of lawn _____;
number of sq. ft. of floor (average) _____ windows _____ blackboard _____ sidewalk _____;
type of blackboard: Slate _____ painted paper board _____ smooth painted wood _____
any other (specify) _____; How is building heated: gas _____ coal _____ if coal
kind _____; Stoves are fed: Bin stoker _____ Hopper stoker _____ hand
_____ Any other (specify) _____; How is temperature regulated: Electric
thermostat _____ Pneumatic _____ Other (specify) _____;

F JANITOR:
On how many floors must floors be swept during day? _____;
How are floors treated: oiled _____ waxed _____ varnished _____ Other (spec.) _____;
What sweeping compound used _____ How often are toilet fixtures disinfected _____;
How often are school fixtures dusted _____; Time of dusting: Before
school starts _____ after sweeping _____ Other (specify) _____;
How often are windows washed: Outside _____ Inside _____;
Who cleans blackboards? Janitor _____ teacher _____ pupils _____ Other (specify) _____;
How often are blackboards cleaned _____ When cleaned _____;
How often are chalk trays cleaned _____ Method of cleaning erasers _____
_____ How often are erasers cleaned _____;
Who cleans erasers: Janitor _____ teacher _____ pupils _____ Other (spec.) _____;
How often does janitor polish metal fixtures, if ever _____ WHEN _____;
Is janitor responsible for temperature in bldg.? _____ Does he have charge of fire
equipment _____ sound fire gong _____ supervises duties during fire drill _____
opening exits _____; responsible for minor repair work: carpentry _____
painting _____ heating _____ electric _____ plumbing _____ masonry _____ other _____;
disciplinary duties: report misconduct of pupils _____ supervise laboratories _____
supervise corridors _____ supervise during noon hour _____ other (spec) _____;
What per cent of janitorial service is displaced by N. Y. A. $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$ _____;

ADDITIONAL JOBS:
Does janitor care for the national flag _____; run errands for superintendent _____
Principal _____ teachers _____; Act as guide for visitors _____; Assist pupils in
locating rooms first day of school _____; be on duty for evening meetings _____;
provide first aid in case of accident _____; Clean up after sick children _____;
move furniture for special programs _____; Turn off electricity and water and
turn them on in the morning _____; Others (specify) _____

Name of person who filled out above: _____;