CHAPTER FOUR

ANALYSIS OF DATA

The purpose of this study was to design and test an instrument to measure teachers' satisfaction with their participation in school decision making. Research questions were used to formulate the data gathering process. The information was gathered by developing a survey instrument and administering it to 168 elementary teachers. Eighty-one teachers were in site-based management schools and 87 were in non site-based management schools.

Findings for Research Questions

This study was guided by eight research questions. These questions were designed to measure teachers' satisfaction in school decision making by determining discrepancies between teachers' desired and actual involvement in school decision making based upon their participation in a site-based management program, or a non site-based management program. The discrepancy scores, therefore, reflect teachers' satisfaction.

Research Question 1: What is the discrepancy of teachers' desired and actual levels of involvement in the operation of the school based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to ABstat subprogram, TIND, the t-test for independent samples. The mean site-based management

SBM score for this domain was 6.06 and the mean non site-based management NSBM score was 5.86. The difference between the means was .20. The standard deviation was 4.23 for SBM and 3.97 for NSBM. The t-value was .32 and the probability was .38 with 166 degrees of freedom. Although the t-test indicates that site-based management teachers were more satisfied with their involvement in the operation of the school than teachers in non site-based management schools, this difference was not statistically significant at $p \leq .05$. Therefore, the difference may have been due to chance. A summary of the t-test of Involvement in the Operation of the School is shown in Table 7.

Research Question 2: What is the discrepancy of teachers' desired and actual levels of involvement in establishing curriculum and instructional techniques based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to ABstat subprogram, TIND, the t-test for independent samples. The mean site-based management (SBM) score was 5.57 and the mean non site-based management (NSBM) score was 4.46. The difference between the means was 1.10. Standard deviation was 3.79 for SBM and 3.83 for NSBM. The t-value was 1.88 and the probability score was .03 with 166 degrees of freedom. The difference score was statistically significant at $p \leq .05$. Therefore, site-based management teachers indicated that they were more satisfied with their involvement in establishing curriculum and instructional techniques than teachers in non site-based management schools. The summary of the t-test is shown in Table 8.

TABLE 7

SUMMARY OF T-TEST

FOR

INVOLVEMENT IN THE OPERATION OF THE SCHOOL

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	6.06	4.23				
				.20	166	.315	.37
NSBM	87	5.86	3.97				

The difference is not statistically significant at $p \leq .05$.

TABLE 8

SUMMARY OF T-TEST

FOR

INVOLVEMENT IN ESTABLISHING CURRICULUM AND INSTRUCTIONAL TECHNIQUES

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	5.57	3.79				
				1.10	166	1.88	.03
NSBM	87	4.46	3.83				

The difference is statistically significant at $p \leq .05$.

Research Question 3: What is the discrepancy of teachers' desired and actual levels of involvement in teacher development, evaluation, and work allocation based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to ABstat subprogram, TIND, the t-test for an independent sample. The mean site-based management (SBM) score was 7.52 and the mean non site-based management (NSBM) score was 7.44. Standard deviation was 4.38 for SBM and 4.59 for NSBM. The t-value was .118 and the probability was .45 with 166 degrees of freedom. The difference between the means was .082. This difference was not statistically significant at $p \leq .05$. Therefore, site-based management teachers indicated that they have more satisfaction with their involvement in teacher development, evaluation, and work allocation than teachers in non site-based management schools. However, the discrepancy is small. This difference may be due to chance. Table 9 shows the summary of the t-test of Involvement in Teacher Development, Evaluation, and Work Allocation.

Research Question 4: What is the discrepancy of teachers' desired and actual levels of involvement in establishing student/teacher relationships based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to ABstat. subprogram TIND, the t-test for an independent sample. The mean site-based management SBM score was 6.35 and the mean non site-based management NSBM

TABLE 9

SUMMARY OF T-TEST

FOR

INVOLVEMENT IN TEACHER DEVELOPMENT, EVALUATION,

AND WORK ALLOCATION

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	7.52	4.38				
				.082	166	.118	.45
NSBM	87	7.44	4.59				

The difference is not statistically significant at $p \leq .05$.

score was 6.56. Standard deviation was 3.89 for SBM and 4.27 for NSBM. The t-value was .34 and the probability score was .366 with 166 degrees of freedom. The difference between the means was .22. This difference was not statistically significant at $p \leq .05$. Therefore, the results of the data indicate that non site-based management teachers have more satisfaction with their involvement in student/teacher relationships than the teachers in site-based management schools, however, this difference was very small and could have occurred due to chance. A summary of the t-test of Involvement in Establishing Student/Teacher Relationships is shown in Table 10.

Research Question 5: Is there a significant difference between teachers' total desired involvement in school decision making based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to Abstat. subprogram, TIND, the t-test for independent samples. The mean SBM score was 79.84 and the mean NSBM score was 74.68. The standard deviation for SBM was 10.77 and 10.93 for NSBM. The t-value 3.07 and the probability score was 0.00 with 166 degrees of freedom. The difference between the means was 5.15. This difference was statistically significant at $p \leq .05$. Therefore, the results of the data indicate that teachers working at SBM schools have a statistically significant higher desire to have involvement in school decision making than do teachers in NSBM schools. A summary of the t-test of teachers' total desired involvement in school decision making is shown in Table 11.

TABLE 10

SUMMARY OF T-TEST

FOR

INVOLVEMENT IN ESTABLISHING STUDENT/TEACHER RELATIONSHIPS

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	6.35	3.89				
				.22	166	.34	.37
NSBM	87	6.56	4.27				

The difference score is not statistically significant at $p \leq .05$.

TABLE 11

SUMMARY OF T-TEST

FOR

TOTAL DESIRED INVOLVEMENT IN SCHOOL DECISION MAKING

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	79.84	10.77				
				5.15	166	3.07	0.00
NSBM	87	74.69	10.93				

The difference is statistically significant at $p \leq .05$.

Research Question 6: Is there a significant difference between teachers' total actual involvement in school decision making based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to Abstat. subprogram, TIND, the t-test for an independent sample. The mean SBM score was 55.41 and 51.02 for NSBM. The standard deviation was 11.86 for SBM and 12.18 for NSBM. The t-value was 2.36 and the probability score was 0.00 with 166 degrees of freedom. The difference score was 4.38. This difference was statistically significant at $p \leq .05$. Therefore, teachers in SBM schools have more total actual involvement than teachers at NSBM schools. A summary of the t-test of teachers' total actual involvement in school decision making is shown in Table 12.

Research Question 7: Is there a significant difference of teachers' total satisfaction with their involvement in school decision making based upon their participation in a site-based management program, or a non site-based management program?

To answer this question, the data on this item were subjected to Abstat. subprogram, TIND, the t-test for an independent sample. The mean for SBM was 25.02 and 23.77 for NSBM. The standard deviation was 13.18 for SBM and 13.60 for NSBM. The t-value was .61 with 166 degrees of freedom and the probability was .27. The mean difference score was .25. Therefore, SBM teachers have more total satisfaction with participation in school decision making, however, this difference is not statistically significant and could have been due to chance. A summary of the t-test of teachers' total

TABLE 12

SUMMARY OF T-TEST

FOR

TOTAL ACTUAL INVOLVEMENT IN SCHOOL DECISION MAKING

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	55.41	11.86				
				4.38	166	2.36	0.00
NSBM	87	51.02	12.18				

The difference is statistically significant at $p \leq .05$.

satisfaction with their involvement in school decision making is shown in Table 13.

Research Question 8: Is satisfaction of teachers' total involvement affected by their age, race, and years of experience?

To answer this question, data related to this item were subjected to Abstat. subprogram, TIND, the t-test for independent samples. When looking at the age of teachers, the mean teachers ages 20-35 was 25.41 and the mean for teachers ages 36+ was 23.38. The standard deviation was 13.02 for teachers' ages 20-35 and 13.70 for teachers ages 36+. The t-value was .98 with a probability of .16 with 166 degrees of freedom. The means difference score was 2.03. This difference was not statistically significant at $p \leq .05$. Therefore, the results of the t-test indicate that age does not play a significant role regarding teachers' satisfaction of their total involvement in school decision making. But, it does reveal a slight difference that younger teachers have more total satisfaction with their total involvement than older teachers. This difference could have been due to chance. See Table 14.

In terms of race, the mean for African American (AA) teachers was 20.02 and for White (W) teachers the mean was 25.60. Standard deviation was 13.36 for African American teachers and 12.75 for White teachers. The t-value was -2.4 and the probability cwas .008 with 152 degrees of freedom. The difference in the mean scores was 5.58 which was statistically significant at $p \leq .05$. Therefore, White teachers have more satisfaction with their total involvement in school decision making than African American teachers. See Table 14.

TABLE 13

SUMMARY OF T-TEST

FOR

TOTAL SATISFACTION WITH INVOLVEMENT IN SCHOOL DECISION MAKING

Group	N	Mean	STDDEV	diff	df	t	p
SBM	81	25.02	13.18				
				1.25	166	.60	.27
NSBM	87	23.77	13.60				

The difference score is not statistically significant at $p \leq .05$.

In terms of years of experience, the mean score for teachers with 11-15 years of experience was 24.07 and for teachers with 16+ years of experience the mean score was 24.92. There were 108 teachers in the 11-15 category and 60 teachers in the 16+ category. The standard deviation was 13.17 for teachers with 11-15 years of experience and 13.84 for teachers with 16+ years of experience. The t-value was .39 and the probability was .35 with 166 degrees of freedom. The mean difference score was .94. This difference is not statistically significant at $p \leq .05$. Although the results of the t-test indicate that older teachers have more satisfaction with their total involvement than younger teachers, there is not a significant difference in teachers satisfaction with total involvement in school decision making based upon their years of teaching experience. Therefore, this difference could have been due to chance. A summary of the t-test for satisfaction of teachers' total involvement based on age, race and years of experience can be found in Table 14.

TABLE 14

SUMMARY OF T-TEST

FOR

SATISFACTION OF TEACHERS' TOTAL INVOLVEMENT IN SCHOOL DECISION MAKING BASED ON AGE, RACE, AND YEARS OF EXPERIENCE

Group	N	Mean	STDDEV	diff	df	t	p
Age (20-35)	82	25.41	13.02				
				2.03	166	.98	.16
Age (36+)	86	23.38	13.70				
Race (AA)	43	20.02	13.36				
				5.58	152	-2.40	.008
Race (W)	111	25.60	12.75				
Experience (11-15)	108	24.07	13.17				
				.943	166	.39	.35
Experience (16+)	60	24.92	13.84				

Cronbach's Alpha

Cronbach's alpha affords opportunity to assess the reliability of the Satisfaction with Participation in Decision Making Questionnaire (SPDMQ). It addresses reliability through a consideration of items' correlations and the number of items in a set. Cronbach's alpha is a measure of internal consistency which is explained by a ratio of item variance to total variance. Cronbach's alpha is given by the formula below, where **k** is the number items and bar **r** is the average correlation among the items:

$$A= \frac{kr}{1+ (k-1) =}$$

Applying Cronbach to SPDMQ generated the following results. Some of the items in SPDMQ are practically diametrically opposed, so naturally reliabilities associated with those items would be expected to be lower than otherwise. For example, responses to desired levels of involvement and actual levels of involvement generate lower reliability than that of actual involvement and total actual involvement.

First we looked at the reliability associated with the average correlation of desired involvement items and actual involvement items and the average of total desired involvement, and actual involvement. This calculation, addressing eight items of SPDMQ generated an average correlation for desired items and actual items of .32. Correlation between total involvement and total desired involvement was .30. Cronbach's alpha for this dichotomy was .65.

Considering items that are more similar, resulted in higher alphas. Four sets of

items assessed teachers' satisfaction with various aspects of their schools: (1) satisfaction with involvement in the operation of the school (SATO); (2) satisfaction with involvement in establishing curriculum and instructional techniques (SATCU); (3) satisfaction with involvement in teacher development, evaluation, and work allocation (SATEV); (4) satisfaction with involvement in establishing student/teacher relationships (SATREL). The average correlation among these items was .76. Applying Cronbach resulted in an alpha of .77.

Relationships among desired involvement, and total desired involvement, actual involvement, and total actual involvement resulted in similar Cronbach alphas. Average desired involvement correlations was .73. Alpha turned out to be .69. The average correlation for the actual involvement of .39, generated an alpha of .66. Overall, the computations of Cronbach's alpha for the various items in SPDMQ indicate a moderately strong reliability. See Table 15 for a summary of these data.

TABLE 15

SUMMARY

OF

CRONBACH'S ALPHA DATA

Items	k	=	a
Satisfaction items	4	.76	.77
Desired Inv. Items	4	.73	.69
Actual Inv. Items	4	.39	.66