

Extent of Use of Qualitative and Quantitative Management Techniques in Administrative and Academic Decision-Making Among Basic Education Principals/Head Teachers and Teachers-In-Charge in Zamboanga del Norte

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Abstract

The study aimed to examine the extent to which elementary and high school administrators used the qualitative and quantitative techniques of decision – making along the four managerial functions: Planning, Controlling, Leading and Organizing to enhance their administrative and academic decision –making capability. The descriptive-correlational method was used with a questionnaires- checklist to gather the data. Three hundred three principals/ head teachers/ teachers-in-charge from both elementary and high schools in the Divisions of Zamboanga del Norte and the twin cities of Dipolog and Dapitan were utilized. Statistical tools included percentage, weighted mean, Chi- square and contingency coefficient. The results of the study revealed that school principals/ head teachers were familiar and used the qualitative technique but were not acquainted with the quantitative techniques while teachers-in-charge were not well- versed in both techniques. But all school administrators found so many benefits in using these techniques in the four managerial functions. School principals/ head teachers encountered less serious obstacles both in the use of these two techniques but not the teachers- in- charge who encountered serious obstacles. There was a significant difference in the use of qualitative techniques along four managerial functions. A significant difference in the use of quantitative technique along leading, organizing and planning was revealed but no significant difference along controlling function. No significant relationship was revealed between benefits derived from use of the techniques and the course completed and seminars attended by the administrators. Therefore, teachers-in-charge must attend seminars /conferences on qualitative and quantitative techniques in decision-making along the four managerial functions. However, school principals/head teachers should continue to apply and use the techniques to strengthen their ability to make good and wise decisions in terms of improving the school programs and students learning.

Key Words and Phrase: *Qualitative and Quantitative techniques, decision making, four Managerial functions: Planning, Organizing, Leading and Controlling.*

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Introduction

The ability to deal effectively with other people and accomplish tasks through others has and will remain a fundamental ingredient in the management process. This is true among management groups faced with complicated problems. However, human relations skills are insufficient for managing complex educational organizations. Technical competencies also required numerous and various tasks. The use of simple models can identify and evaluate effective alternatives. Management techniques are needed to process the information needed for effective planning, leading. Organizing and controlling.

According to Dunn (994) most organizational problems are interdependent, subjective, artificial and dynamic. They are systems with purposive properties such that the quality of the whole different from the quantitative sum of the parts. If this reasoning is factored into the decision-making process, then administrators will be able to discern multitudinous alternatives. Since decision- making according to Morris is psych-technical, the psychological use of information must be combined with practical and technical analysis. Qualitative and quantitative methods are productive tools in solving organizational problems. They are behavioral and mathematical techniques respectively that can provide a diversity of knowledge base.

Qualitative analysis requires the administrators' judgment experience, conceptual and interpersonal skills and behavioral techniques to make good and sound decision. On the other hand, quantitative analysis concentrates on facts, data and numerical aspects associated with the problem. The emphasis is on the development of mathematical expression to describe the objectives and constraints connected with the problem. Thus, the administrator's quantitative knowledge can help enhance the decision- making process.

In Zamboanga del Norte, many elementary and high school teachers are dissatisfied with the decision-making process of their administrators. This lead them to react with indifference to management decisions. The study was conceived to complement the administrators' capacity to deal with problematic organizational environments.

Theoretical/Conceptual Framework

The study was premised on the concept that man could be programmed to be an efficient machine. This management movement was the result of Frederick Taylor's writings, who believed on scientific management and efficiency in the workplace, seeking ways to use man effectively in industry. His theory focused more on physical production and man's physical limit.

It found support on Taylor's administrative theory which includes broader problems of departmental decision of work and coordination. As administrative science developed, human relations was recognized. It was seen that the fundamental problem of all organization was the development and maintenance of a dynamic and harmonious

relationship. It stressed that conflict was not a necessary and wasteful outbreak in incompatibilities but a normal process by which socially valuable differences register themselves for the enrichment of all concerned.

These theories paved the birth of administration whereby the rational decision-making influence the behavior of the members of the organization. In return the organization resolves questions through satisfying rather than optimizing actions. Educational administrators must then realize that to enhance their decision-making capabilities, they need to learn about quantitative methodologies. Knowledge of the quantitative techniques facilitates the comparison and evaluation of the sources of information and the combination of data to formulate the best decision. Moreover, the administrators must be able to recognize, adjust to and accommodate various behavioral situations that are present in any organization. Most problems requiring management intervention are focused on individual groups, staff work, task forces, subordinates other administrators, support groups and public officials. This is where the qualitative skills of administrators come in.

Objectives of the Study

The study aimed to examine the status and extent to which the elementary and the high school principals/head teachers and the teachers-in-charge used the qualitative and the quantitative techniques of management in planning, organizing, leading and controlling activities for enhancing their administrative and academic decision-making capability.

Specifically the study sought to attain the following objectives:

1. Determine the managerial methodologies in the qualitative and the quantitative techniques that are more familiar to the elementary and the high school principals/head teachers and the teachers-in-charge in their decision-making;
2. Determine the extent that school principals/head teachers and teachers-in-charge of the elementary and high school used the qualitative and the quantitative techniques of decision-making in carrying out their managerial functions of planning, organizing, leading and controlling;
3. Find out the benefits that the principals/head teachers and teachers-in-charge of both levels obtained from using qualitative and quantitative techniques in their decision-making process;
4. Identify the obstacles or constraints that the elementary and the high school principals/head teachers and teachers-in-charge commonly encounter in implementing the qualitative and the quantitative techniques in their decision-making;



5. Test the significant difference in the extent of use of the qualitative and the quantitative techniques in decision-making between the elementary and the high school principals and the teachers-in-charge; and
6. Test the significant relationship between the benefits perceived by the elementary and the high school principals/head teachers and the teachers-in-charge using the qualitative and the quantitative techniques in decision-making based on course finished and seminars attended.

Methodology

The study employed descriptive- correlational method. A questionnaire- checklist served as the main instrument for data gathering. The respondents were the 303 principals/head teachers and teachers-in-charge of the elementary and high school in the Divisions of Zamboanga del Norte, Dipolog city and Dapitan City. The study was conducted during the second semester, School Year 2007-2008. Statistical tools used included percentage, weighted mean, Chi- square, Pearson chi-square, and contingency coefficient.

Result and Discussions

Table 1 The Principals' Extent of Use of the Qualitative and Quantitative Management Techniques in Managerial Functions

N = 168

Managerial Functions	Qualitative Techniques		Quantitative Techniques	
	Average Weighted Mean	Interpretation	Average Weighted Mean	Interpretation
1.Planning	3.33	Always Used	3.16	Frequently Used
2.Organizing	3.18	Frequently Used	3.07	Frequently Used
3. Leading	3.25	Always Used	3.09	Frequently Used
4.Controlling	3.14	Frequently Used	2.99	Frequently Used
Grand Mean	3.23	Frequently Used	3.08	Frequently Used

Table 2 The Teachers - in - Charges' Extent of Use of the Qualitative and Quantitative Management Techniques in Managerial Functions

N = 135

Managerial Functions	Qualitative Techniques		Quantitative Techniques	
	Average Weighted Mean	Interpretation	Average Weighted Mean	Interpretation
1.Planning	2.98	Frequently Used	2.82	Frequently Used
2.Organizing	2.90	Frequently Used	2.78	Frequently Used
3. Leading	2.96	Frequently Used	2.79	Frequently Used
4.Controlling	2.92	Frequently Used	2.82	Frequently Used
Grand Mean	2.94	Frequently Used	2.80	Frequently Used

3.25 – 4.00 *Always Used*
2.50 – 3.24 *Frequently Used*

1.75 – 2.24 *Occasionally Used*
1.00 – 1.74 *Never Used*

Table 3 The Principals’ and Teachers’-in-Charge Benefits and Obstacles in Using Qualitative and Quantitative Techniques

N = 303

Respondents	Qualitative Techniques		Quantitative Techniques	
	Benefits	Obstacles	Benefits	Obstacles
Principal	3.39	2.39	3.40	2.35
	Much Beneficial	Less Serious	Much Beneficial	Less Serious
Teachers- in – Charge	3.30	2.52	3.19	2.54
	Much Beneficial	Serious	Beneficial	Serious

3.25 – 4.00 *Much Beneficial*
2.50 – 3.24 *Serious*
1.00 – 1.74 *Not Beneficial*

3.25 – 4.00 *Very Serious*
1.75 – 2.49 *Less Beneficial*
1.00 – 1.74 *Not Serious*

2.50 – 3.24 *Beneficial*
1.75 – 2.49 *Less Serious*

Table 4 The Comparison of the Principals and The Teachers – in – Charge’s Extent of Using the Qualitative and Quantitative Techniques Along Managerial Functions

N = 303

Managerial Function	Qualitative Techniques		Quantitative Techniques	
	Mean Square	Interpretation	Mean Square	Interpretation
1.Planning	18.42	Significant	15.66	Significant
2.Organizing	11.75	Significant	14.47	Significant
3. Leading	14.78	Significant	12.71	Significant
4.Controlling	8.52	Significant	6.20	Not Significant

**df* : 3.0

**TV*: 7.82

* α = 0.05

Table 5 The Relationship of the Principals and the Teachers – in –charge’s Benefits on Qualitative and Quantitative Techniques Based on Course Finished and Seminars Attended

N = 303

	Qualitative Techniques		Quantitative Techniques	
	Mean Square	Interpretation	Mean Square	Interpretation
Course Finished	5.92	Not Significant	7.87	Not Significant
Seminar attended	15.98	Not Significant	14.69	Not Significant

Course Finished **df* = 6.0

**TV*: 12.59

* α = 0.05

Seminar Attended **df* = 15

**TV*: 25.00

* α = 0.05

1. On familiarity of elementary and high school administrators with the qualitative and quantitative techniques, a weighted mean of 3.31 showed that these administrators



were indeed using the qualitative decision-making techniques but not always with the quantitative technique in their administration, with a weighted mean of 2.97. On the other hand, a weighted means of 2.85 and 2.77 showed that teachers-in-charge often used only the qualitative and quantitative decision-making techniques in their administration and in the process of making themselves well-versed with its application.

2. On extent of use of techniques in decision-making.

Planning. A weighted mean of 3.33 showed principals/ head teachers were always using the qualitative technique in planning, while the teachers-in-charge were frequently using the technique with weighted mean of 2.98. In the quantitative technique, principal/head teachers and teachers-in-charge were frequently using with weighted mean of 3.16 and 2.82 respectively.

Organizing. Principals/ head teachers and teachers-in-charge frequently used both qualitative and quantitative techniques in their decision-making with weighted means of 3.18, 2.90, 3.07 and 2.78 respectively.

Leading. A weighted mean of 3.25 showed that principals/ head teachers always used the qualitative techniques, while teachers-in-charge frequently use the qualitative with a weighted mean of 2.96 on the quantitative technique of decision-making, principals/ head teachers and teachers-in-charge were frequently using the method with weighted mean of 3.09 and 2.79 respectively.

Controlling. On the qualitative and quantitative techniques, all school administrators were found to frequently use the method with weighted means of 3.14 and 2.92 for qualitative and 2.99 and 2.82 for the quantitative techniques.

3. Benefits obtained by administrators in using the qualitative and quantitative techniques in their decision-making. It was found out that principals/ head teachers were much benefited in using qualitative techniques with weighted mean of 3.39 and 3.30 respectively. On the quantitative technique only the principals/head teachers were much benefited, while the teachers-in-charge were benefited only.
4. Obstacles encountered by administrators in implementing the qualitative and quantitative techniques. The weighted mean of 2.39 and 2.35 showed that principals /head teachers encountered less serious obstacles in the use of both techniques while teachers-in-charge encountered serious problems in the use of the qualitative techniques.
5. In the test of difference, results showed that there was a significant difference in the administrators' extent of using qualitative and quantitative methods along planning, organizing, leading and controlling. However there was no significant difference in the extent of using the qualitative method in controlling which accepted the null hypothesis only on this aspect.

6. In the test of relationship between the benefits derived from the use of qualitative and quantitative techniques and course completed and seminars attended, no significant relationships were shown.

Conclusion

Based on the findings of the study, the following conclusions are drawn:

1. The high school and elementary principals/head teachers are familiar with the use of qualitative technique in decision-making but are not well-acquainted with the quantitative techniques. The teachers-in-charge are not so well-versed in the use of qualitative and quantitative techniques in decision-making.
2. The principals/head teachers are always using qualitative techniques in planning and leading and they often apply qualitative method in organizing and controlling, while the teachers-in-charge often applied qualitative and quantitative techniques in all four managerial functions: Planning, Organizing, Leading and Controlling.
3. The principals/ head teachers are very much benefited by both the qualitative and quantitative techniques in decision-making but the teachers-in-charge are benefited only in their use of quantitative techniques in decision-making.
4. The principals/ head teachers encountered less serious obstacles in the application of both qualitative and quantitative techniques in decision-making, while the teachers-in-charge encounter serious obstacles.
5. There is a significant difference in the use of qualitative decision-making techniques between the principals/head teachers and the teachers-in-charge along the four managerial functions. The null hypothesis of no significant difference is rejected along the qualitative. There is a significant difference in the use of quantitative decision-making technique between the principal/head teachers and the teachers-in-charge both in the elementary and the high school on the three factors of leading, organizing and planning which rejected the null hypothesis. However there is no significant difference in the extent of using the quantitative method in controlling which accepted the null hypothesis only on this aspect.
6. There is no significant relationship between the benefits derived from the use of qualitative and quantitative techniques and the course completed and seminars attended by school administrators, the null hypotheses are accepted.

Recommendations

In the light of the findings and conclusions of this study, the following recommendations are proposed.



1. The teachers-in-charge must attend seminars and conference on the use of the qualitative and quantitative techniques in decision-making along the four managerial functions.
2. The principals/ head teachers should always use the qualitative method along organizing and controlling to develop mastery in its application.
3. The principals/ head teachers should always use the quantitative method along the four managerial functions to become experts in its application.
4. The teachers-in-charge must be resourceful in the use of qualitative and quantitative techniques in the discharge of their managerial functions especially in handling difficult situations.
5. Elementary and high school administrators should always apply both qualitative quantitative methods to strengthen their ability to make good decisions in terms of improving school programs and students' learning

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