

PUBLIC PARTICIPATION IN THE EDUCATIONAL OPERATION IN
SCHOOLS OF CENTRAL ETHIOPIA: A SYSTEMS APPROACH

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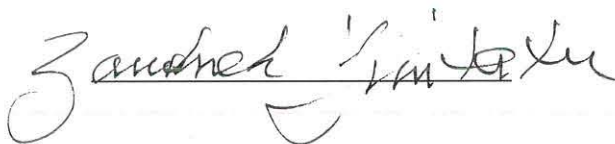
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THE DEGREE OF MASTERS OF ARTS IN
EDUCATIONAL ADMINISTRATION

BY
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JUNE 1996

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ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

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ABBREVIATIONS

1. AASA = American Association of School Administrators
2. MOE = Ministry of Education
3. NGO = Non - Government Organization
4. NSPRA = National School Public Relations Association
5. PTA = Parent Teacher Association
6. TGE = Transitional Government of Ethiopia

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ABSTRACT

The purpose of this study is to investigate the state of public participation in relation to the disparity it possibly has by school level, size, appropriation, experience of principals, and geographical setting.

To treat both the micro and macro factors of the intensity of public participation, the study was made to base on the major components of systems approach.

The data made in use were collected mainly through questionnaire from 98% of respondents from both groups representing school systems and the public suprasystem, as well as through structured interview as a supportive from 100% of school principals. Mainly one-way ANOVA, Correlation statistical techniques were used to analyze the data.

Taking all things together, the results indicated that by level, the primary; by size, the small-size; by appropriation, the non-government; by experience of principals, those schools with experienced principals; by geographical setting, the rural schools are found exceeding correspondingly their counter parts under their respective dimensions with regard to:

- Their openness amplitude to public participation;
- Enhancing the extent of public influence on their educational operation;
- Intensifying the magnitude of the economic, political-legal, social, and technological-educational dimensions of public participation.

Statistical treatments proved that the disparities in public participation among the categories under those dimensions happened mainly due to the relationship between the dimensions of this study and the degree of occurrence of the major components of the systems approach in dealing with public participation.

Yet, what ever the difference is, it is apparently understandable that the schools as a whole are found in a pertinent need of increased public participation in their endeavour of educational operation. Thus, the following are expected from schools, the public, and from the government as suggested by the study.

It is indispensable to develop two-way relationship between the schools and the public. Thus, the schools being more open and using socialization as their strategy in responding to public demands, have to enable the public to participate and support them more economically, legally, socially, and educationally.

Public representatives (local administrative councils) have to create conditions for the public to participate being organized so that the educational operation in schools would be economically efficient, legally responsive socio-culturally relevant, and educationally effective.

The government or policy-makers have to strengthen school administration committees by establishing at Woreda (District) level as boards of education for better coordination and with better legal protection enabling the public to share educational responsibility in light of decentralization. This can be done by securing the educational policy nationally and the administrative task at the would be educational board level updating both the curriculum as well as the work and organization designs.

CHAPTER ONE

INTRODUCTION

1.1 Formulation and Statement of the Problem

Schools, as systems, are part of the public in which they are situated; to be supported and, in turn, to serve the public.

In recent years, public participation in the educational operation has become a catchword (Morgan et al., 1992: 11, Goldring, 1991: 215). For this reason, governments, world wide, are devolving responsibility for the support of school systems in terms of financial, material, manpower, direction and feedback or information resources by the public environmental-suprasystem (Preston, 1991: 275-276).

It is obvious that except the salary payment to government schools' personnel, the budget to run those schools provided by the government in Ethiopia is too little. Furthermore, in non-government schools there is no government expenditure that shows that the expenditure on the educational operation in schools provided by the public is found to be considerable.

In relation to this, the various acts made in Ethiopia describe for the public to have a part in the administration of schools' educational operation (Zaudneh, 1989: 8).

This leads to issues such as the openness amplitude of school systems for public participation, the extent of public influence in the educational operation of school systems, the magnitude of the dimensions of public participation or support (i.e., the economic, political-legal, social, technological-educational support).

On the whole, despite the fact that the public participation in the educational operation in school systems in many countries is mainly through fund raising, its participation is not that much recognized as well as not found developed (Goldring, 1991:215; Bush et al., 1980:72-73).

Thus, more often than not, schooling needs better public participation beyond what is being attempted because: (1) educational expansion and absorption by the economies is not found to be proportional; (2) education could not solve the problems the people are everfacing and improve its life, instead, it is found to be a means to "divorce" the children from the life of local community or the public (Shaeffer, 1991:6; Foster in Karabel and Halsey, 1977:356); (3) education is not made to be relevant and responsive to the needs of the public (Sander, 1989:226-230).

This necessitates the schools to have the due amplitude of openness to the public and more public influence on their educational operation in various dimensions of participation.

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This necessitates the schools to have the due amplitude of openness to the public and more public influence on their educational operation in various dimensions of participation.

As a result, by virtue of the public being the source of the necessary resources, school systems have to be accountable to it; and the public in turn should be responsible for the educational operation of the schools (Ranson, 1988:7-11; Bush et al., 1980:42; Goldring, 1991:215).

This implies that under the appropriate administration of school systems, by the public representatives (i.e. under the school administration boards), some degree of decentralization has to be given to school systems for more public participation; for the degree of decentralization affects the magnitude of public participation in turn (Marsh, 1988:86).

With this in mind, this study describes the school as a system, its administration committee as well as the principal as boundary spanners; and the public, which is interchangeably used with "community" and "parents", as environmental-suprasystem. Generally, in systems perspective, they are found described as having complementary objective.

Similarly, the study uses public "involvement" in the context of "participation" to support schools in terms of various resources, and to have an important place in the decision-making and execution in the operation of education.

Hence, the public is supposed to participate as environmental-suprasystem support to schools, as educational systems, individually as well as through organized school

administration or education boards. In this context the usage of "boards", councils and committees are optionally seen. And the public can participate or provide support through parent committees or parent associations and the PTAs as supportive public organizations.

With reference to mobilizing the public for participation, government regulations, guidelines or policies in various countries state that education is the responsibility not only of the governments but also of the public or the community (Moegiadi in the edition of Shaeffer, 1992:15; Shaeffer, 1991:8). To this end, the newly issued Ethiopian policy of Education and Training gives place for schools to be administered under boards or committees in which parental or public representation is indicated (TGE, 1994: 30).

Yet, with regard to public participation, disparity seems to reveal in the educational operation between the Ethiopian schools by level, size, appropriation (status), experience of principals, and geographical setting at which this study is made to aim.

Purpose of the Study

The purpose of this study is to identify and examine the difference between primary and secondary, small-size and large-size, government and non-government schools as well as between those schools with inexperienced and experienced

principals, between rural and urban schools in public participation in their educational operation with respect to: (1) the openness amplitude of the school systems to public participation; (2) the extent of public influence on the educational operation of school systems; (3) the magnitude of the dimensions of public participation.

Basic Questions

To achieve the purpose of this study, the following basic questions were raised to be answered:

1. Is there a statistically significant difference in public participation between the educational operation in government primary and secondary school levels?
2. Is there a statistically significant difference in public participation between the educational operation in government small and large school sizes?
3. Is there a statistically significant difference in public participation between the educational operation in government and non-government school appropriations?
4. Is there a statistically significant difference in public participation between the educational operation in government schools with inexperienced and experienced principals?
5. Is there a statistically significant difference in public participation between the educational operation in government schools with rural and urban geographical settings?

1.2 Delimitation of the Study

For its capacity to accommodate schools with diversified dimensions of level, size, appropriation, experience of principals, and geographical setting, the study is delimited to the investigation of public participation in the educational operation in 30 schools (i.e., in 20 government and 10 non-government) of central Ethiopia.

1.3 Limitations of the Study

The unavailability of non-government schools in the rural geographical setting being consistent with that of the urban that would have helped in comparing with the government schools (i.e., by embodying the two geographical settings) is one limitation in this study.

Among the 30 sample schools 5 primary, 5 secondary of government schools; 5 primary, 5 secondary of non-government schools totally 20 out of the 30, which is 2/3 of the sample schools or half of the government schools, are found in Addis Ababa where untrained administrators are assigned to run the schools. For this reason, "training of principals" is not included in the study as one dimension or basic question. Thus, this can be considered as another limitation of the study.

Moreover, very weak or nearly non-existent condition of the school administration committees, particularly of certain urban secondary schools, also limited this study to obtain

responses from the public representatives with that rate. Any how, it is found reflected as one major drawback of secondary and urban schools in public participation in the finding of this study under the dimensions of school level and geographical setting respectively.

1.4 Significance of the Study

It is felt that the study is significant for the following three reasons with the systems approach perspective.

First, the study provides a measure of public participation in the educational operation in schools using the scores of the variation in public participation between couple of school categories as an index. These couple of school categories are primary and secondary, small-size and large-size, government and non-government schools, schools with inexperienced and experienced principals, as well as rural and urban schools.

Second, the study can contribute by enabling policy makers and practitioners to be aware of the degree and imperativeness of public participation in the educational operation in school systems so that they may give the due attention.

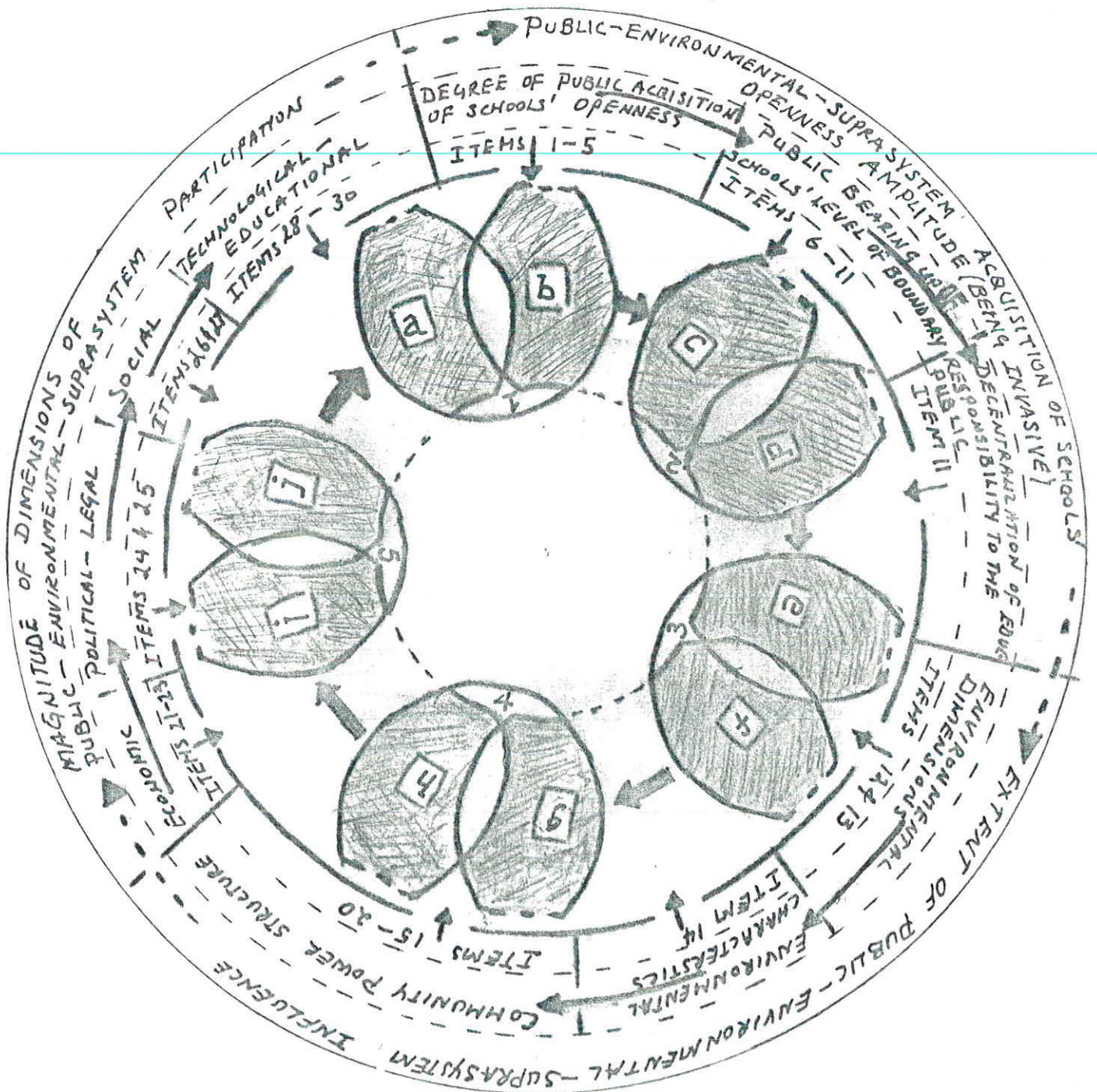
Third, the study can serve as an additional material document for further study and other researchers.

1.5 The Research Methodology and Procedures of the Study

The theoretical frame work for this study is drawn from the systems model of organizations of Daniel Katz and Robert Kahn, Fermont Kast and James Rosenzweig.

Accordingly, the following major components of systems approach as premises are used in the examination of public participation in educational operation in schools of central Ethiopia as illustrated by Figure 1.

Figure 1: A Systems Model of Interacting Components of Public Participation in the Educational Operation of Schools



LEGEND

1 = Level Dimension

a = Primary

b = Secondary

2 = Size Dimension

c = Small-size

d = Large-size

3 = Status (Appropriation)
Dimension

e = Government

f = Non-government

4 = Dimension of Experience of
Principalsg = Schools with Inexperienced
Principalsh = Schools with experienced
Principals5 = Dimension of Geographical
Setting

i = Rural

j = Urban



= The difference between the categories in each dimension in receiving public-environmental-suprasystem participation.



= The interaction of a major component of public-environmental-suprasystem participation and another.



= The interaction of a subdivision of a major component and another.



= The intrusion of the components of public-environmental-suprasystem participation in the educational operation of school systems.



= The movement or effort of categories of school systems (under each dimension) to receive various magnitudes of dimensions of public-environmental-suprasystem participation as per the extent of public-environmental-suprasystem influence as well as the openness amplitude of the school systems.

Figure 1 demonstrates a systems model of interacting components of public participation in the educational operation of schools.

Beginning from the center, the numbers in the figure show the various dimensions. Under these dimensions, the differences between the couple of categories of schools (that are represented with letters) in having public participation in their educational operation are investigated.

Accordingly, the representation of the numbers and letters is as follows.

- 1 represents the level dimension where "a" stands for primary and "b" for secondary schools.
- 2 represents the school size dimension where "c" stands for small-size and "d" for large-size schools.
- 3 represents the appropriation (status) dimension of schools where "e" stands for government and "f" for non-government schools.

4 represents the dimension of experience of principals where "g" stands for schools with inexperienced principals and "h" for schools with experienced principals.

5 represents the dimension of geographical setting where "i" stands for rural and "j" for urban schools.

The shaded parts under each dimension show the possible differences between the categories of schools in receiving public-environmental-suprasystem participation.

The different types of arrows depicted are with different purposes. Besides, bar arrows show the effort or the ability of the various categories of school systems under their respective dimension to receive public-environmental-suprasystem participation.

The arrows pointing to the center represent the intrusion of the subdivisions of major components of public participation to the categories of schools (as educational systems) originating from the major components.

The horizontal arrows indicate the interdependence between subdivisions of a major component and another. And the arrows with broken lines show the interconnection or the interdependence between one major component and another.

To measure the public-environmental-suprasystem participation with the instrument (the questionnaire), based

on the systems perspective, items 1-11 are used for the openness amplitude of schools. These items of the openness amplitude are further specified into the subdivisions with the items 1-5 for the degree of schools' openness, 6-10 for the level of school boundaries, and item 11 for the autonomy of schools in light of decentralization. As to the extent of public influence on schools, items 12-20 are used. Within this range, items 12 and 13 are used for the environmental dimensions, item 14 for the environmental characteristics, and items 15-20 for the community power structure. And as for the magnitude of the dimensions of public participation in the operation of schools, items 21-30 are used. Among these, items 21-23 are used for the economic, items 24 and 25 for the political-legal, items 26 and 27 for the social, and items 28-30 for the technological-educational dimensions of participation.

The systems model of interacting major components and subdivisions of major components of public-environmental-suprasystem participation are indicated in the first and second layers from the last respectively.

The first major component is the openness amplitude of schools. Under this major component, the degree of public acquisition of schools' openness, public bearing upon schools' level of boundary, and decentralization of educational responsibility to the public are found as subdivisions. The second major component is the extent of public influence on

schools. And its subdivisions are environmental dimensions, environmental characteristics, and community power structure. The third major component is the magnitude of the dimensions of public participation. And the subdivisions of this major component comprise economic, political-legal, social, and technological-educational dimensions of participation.

Thus, as per the systems approach, it is conceived that the categories of schools receive various extent of public influence as well as magnitude of dimensions of participation according to their openness amplitude to the public in their educational operation.

Furthermore, it is conceived that the prevalence of the subdivisions of the major components are the immediate venues of public participation.

This study uses a descriptive-survey research method; and thus, the following methods and procedures are employed to collect and analyze the data.

1.5.1 Data Source

Relevant and related literature (books, periodicals) and school principals, deputy principals, unit leaders, department heads, teachers, school administration committee members (in government schools) as well as parent committee or board members (in non-government schools) and parents were used as sources of data.

1.5.2 Sampling

The subjects of this study consist of a stratified and purposefully sampled schools; 10 from rural and 10 from urban; totalling 20 government schools from central Ethiopia. These include Northern Shoa, Southern Shoa, Western Shoa, Eastern Shoa, to represent the relatively rural geographical settings and 5 zones in Addis Ababa to represent the urban geographical setting. Here, considering the current socio-economic setting (SES) of the Ethiopian population, rural people are considered with low SES while urban community are considered in the relatively upper SES.

To have a balanced approach, the number of schools in the categories under each dimension were made to be equal.

There were 6 school administration committee members plus 4 parent committee members; totalling 10 respondents from each school were taken to represent the public. Where any one of these groups are not available parents as representatives of the public were taken by stratified, purposeful and simple randomization sampling based on their children's grade level.

There are one principal, 2 deputy principals, 2 unit leaders and 5 department heads selected. In situations where there are not enough of these personnel, teachers are sampled purposefully using simple randomization. In so doing, a fair balance between the number of representatives of the public environmental-suprasystem and the school system is used.

In this manner, there were 20 respondents from each school to make (20x20) 400 respondents from the 20 sampled government schools. The small-size and large-size schools (classified based on student population) as well as the schools with inexperienced and experienced principals (classified based on the experience of their principals as principals and related experiences) were classified using the "Median" statistical technique with in those 20 government schools.

Moreover, 5 "public schools" and 5 mission schools with a total of 10 non-government schools were taken to correspond to the 5 primary and 5 secondary of a total of 10 government schools with two categories of respondents.

In the same manner, these groups of respondents include one principal, 2 deputy principals, 2 unit leaders, and 5 department heads where these are found in the sample schools. Where any one of these groups are not available, teachers are sampled purposefully and by simple randomization. In the other group, 10 parent committee members or school administration members as public representatives are used where these many are available. And where these public representatives are not available parents are sampled purposefully and by simple randomization as well as stratified sampling (based on their children's grade level) that make 20 respondents from each school, totalling (10x20) 200 respondents from the 10 sampled non-government schools.

Thus, the number of respondents includes the 400 and the 200 respondents from the 20 government and the 10 non-government schools respectively. All in all the total sample includes 600 respondents from the 30 sample schools.

1.5.3 Instruments

A questionnaire with 34 items was originally developed on public participation based on the systems approach perspective in English and later translated into Amharic.

Before the questionnaire was used for the final study, it has been made to pass through two phases to maintain its reliability and validity, and its being exhaustive and mutually exclusive. Accordingly, as a pretest, a surface test was made that made the questionnaire to remain with 30 items with certain corrections. Then a pilot study that has shown the total reliability coefficient (calculated with Cronbach's formula) of the questionnaire was used to be 0.93, carried out in northern and southern Shoa as well as in Addis Ababa. As a result, the reliability indexes of the three major components of the systems approach namely: the openness amplitude of the schools to the public, the influence of the public environmental-suprasystem, and the dimensions of public participation were found to be 0.85, 0.63, 0.83 respectively.

For this reason, the study was able to continue with the final study, using the same questionnaire and having 30 items in both English and Amharic for school systems and public suprasystem representatives respectively.

Here, the questionnaire is prepared in such a way that all types of sample respondents as data sources are able to give response.

As to get additional information structured interview items were also designed.

1.5.4 Procedure

The finalized instrument was distributed to both groups (i.e. the school representatives and the public representatives) and collected by an assistant, designated by the principal of each school, and then returned to the researcher. The structured interview made to the 30 principals of the 30 sampled schools was administered by the researcher himself.

1.5.5 Analysis

Responses were measured by a 4-point Likert type scale ranging from "Strongly Agree" to "Strongly Disagree" that are found appropriate to investigate the state of public participation in the educational operation with the perspective of the major components of the systems approach.

In doing so, the data gathered was processed using one-way ANOVA and correlation coefficient techniques with a computer. One-way ANOVA technique is made in use to find whether there is a significant difference between the categories under each dimension as per the basic questions raised. As to the dimensions and categories, government primary and secondary schools were treated under level; government small-size and large-size schools under size; government and non-government schools under appropriation; the schools with relatively inexperienced and experienced under the experience of principals; and government rural and urban schools under geographical setting, dimensions.

Correlation coefficient technique is used to see the relationship between an item and another, a dimension, a major component of the systems approach; and it is used to see the relationship between a major component of systems approach and another, and a dimension. Additionally calculations of correlation coefficient were made to see the relationship between economic background or economic expenditure (based on the ability to pay registration fee in government schools that was practiced until this study was carried out, and school fee in non-government schools and public participation, academic achievement of primary and secondary schools. Moreover, calculations of correlation coefficient were made to see the relationship between public participation and academic achievement of both levels.

Moreover, mean scores, processed with a computer, are also made in use to see the direction of how the differences between the categories under each dimension are found significant or non-significant.

1.6 Definition of Key Terms

The meanings of some of the key terms used in dealing with public participation in the educational operation in schools, with the systems approach, are presented here under as used in the study.

Autonomy - the independence of sub-units of an organization from control by other parts of the organization or even by the whole organization (Katz in Hanson, 1991:99).

Board of Education (School Board)- a body that works as local educational authority or committee responsible for overseeing the schools in an area known as a school district. It is usually set up by the state with its members elected locally and having powers as a school governing body (Page and Thomas, 1977:300).

Boundaries - the demarcation points or lines at which an organization or a system meets the outside environment in a fairly closed system (Pearce II, 1989:47).

Characteristics of Environment - typologies of environmental conditions based on the degree of change, complexity and being clustered as per the "causal texture" representing opportunities or constraints for an organization or a system. The typologies found in a continuum include placid randomized, placid clustered, disturbed reactive, and turbulent fields (Hanson, 1991: 136; Hoy and Miskel, 1987:91).

Community Power Structure - the variation of power interrelationship among communities forming various patterns some of which allow people to adjust so as to predict the situation, and others which do not (McCarty and Ramsey, 1971: 16).

Dimensions of Environment - the forces facing the system with the demands of its supportive public; of its environment as uncertainty, the extent to which the public is found organized in interacting with the system as clustering, and the economic capacity of the public as suprasystem to support the system (Hoy and Miskel, 1987: 89-91).

Economic Dimension - the pressure on the system that results from the nature and direction of economic capacity of the public in the environment in which the system operates (Pearce II, 1989:100).

Influence - a concept of open social systems theory that represents the pressure resulting from significant changes in the environment forcing for the addition to, deletion from, or alteration of system's goals (Barnett in Gorton et al., 1988:226).

Open System (System Openness) - an organization that exchanges information, energy, and materials with its environment. In this view an organization is dependent for its survival on an exchange of goods and services with its environment in an optimal degree of openness (Kast and Rosenzweig 1985: 132; Hoy and Miskel, 1987:20; Pearce II, 1989:47).

Participation - involvement characterized by jointly initiated, monitored and evaluated programs of an organized group of people. It envisages self perceived interest of groups and individuals in an effort to achieve set goals (Rahman in Zaudneh, 1989:7).

Political-Legal Dimension - the pressure that includes the opportunities or constraints on decision making that result from the legal and otherwise governing parameters within which the system must or may wish to operate (Pearce II, 1989:100).

Social Dimension - the pressure that includes the opportunities or constraints on decision-making deriving from the beliefs, values, attitudes, norms of behavior of the system's external environment as evolved from history, traditions, and religious, educational, and ethnic conditioning (Pearce 1989:101-102).

Suprasystem - the broader system in which systems or organizations are found as subsystems with identifiable as well as permeable boundary between them, through which inputs enter from the suprasystem to the system, and outputs go to the suprasystem from the system (Kast and Rosenzweig, 1985: 131-132).

System - a set of interdependent elements forming an organized whole. Organizations such as schools are systems composed of interacting personalities bounded together in mutually interdependent relationships (Hoy and Miskel, 1987: 16).

Technological-Educational Dimension - the pressure on operating system resulting from the level of scientific and technological advancement as well as the general literacy level of the society (Kast and Rosenzweig, 1985:137).

1.7 Organization of the Study

This study is organized in four chapters. The first chapter deals with formulation and statement of the problem, delimitation of the study, limitations of the study, significance of the study and definition of key terms. The research methodology and procedures of the study employed to collect and analyze the data are also included in this chapter. The second chapter presents a review of the related literature. The third chapter is concerned with the presentation, analysis and interpretation of data. Summary of the findings, conclusion and recommendations are presented in the fourth chapter.

CHAPTER TWO

REVIEW OF THE RELATED LITERATURE

In this section of the study, valid literature from books and periodicals related to the problem were summarized.

2.1 Openness Amplitude of Schools as Educational Systems to Participation of the Public as Environmental - Suprasystem

Systems theory provides a new paradigm for the study of organizations and their management and a basis for thinking the organization as an open system in interaction with its environment (Kast and Rosenzweig, 1985:112).

As a result, the systems paradigm is a ground of understanding public participation in schools.

2.1.1 Open Versus Closed Schools as Educational Systems

With respect to open Vs closed educational systems, organizations, such as schools, are supposed to be open and their boundaries are expected to be permeable to a variety of inputs; here the organization exchanges energy and information with its environment, (Hanson, 1991: 128; Silver, 1983: 52).

Inputs are classified into two: namely, (1) energy inputs that are physical materials or forces imported to the system and used up as a process called entrophy, (2) information inputs that are signals that enter the system and indicate to

the components how or when they are to interact. Accordingly, as Hoy and Miskel (1987: 20) and Nichols in the edition of Deighton (1971: 341), organizations take inputs from the public environmental-suprasystem, transform them, and produce outputs. For example, school organizations are social systems that take resources such as manpower, students, material, finance, public direction and information from the public environmental-suprasystem; subject to these inputs to an educational transformation process, to produce behaviorally changed or educated citizens or graduates.

The link is the one that ties an organization into a dependency relationship with its environment where without that link, an organization is viewed as a relatively closed or unaffected system but not in an absolute sense (Hanson, 1991: 128). As Meyer in Hoy and Miskel (1987: 16) proposed, "the issue of open versus closed systems is closed on the side of openness."

Thus, the openness of school systems to the "...gaze, support, and appropriate interaction" with the public is one major factor for public participation in the operation of education (Shaeffer, 1991: 14; Goldring, 1991: 219). With this regard, the extent of openness and transparency a school has to the public, the degree of responsibility, ownership and accountability sensed by the public towards education, and the extent of accountability of a school to the public for quality of education are worthwhile to note. One potential benefit of schools' openness to the public is the

establishment of clear and direct link between good education and greater public demand and support to education.

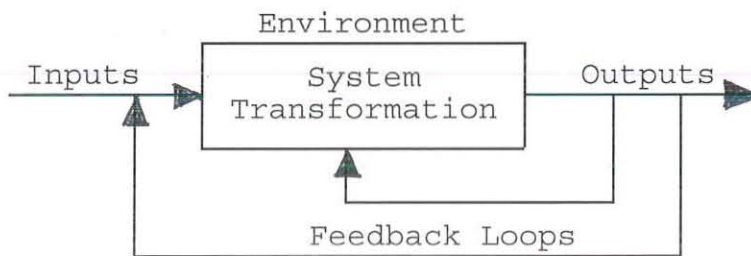
Systems vary with respect to the general range of inputs that can be absorbed. And also vary with respect to openness to particular types of inputs they face upon and deal with the public (Katz and Kahn, 1966: 59-61). This means, the prevalence of more conscientious teachers better teaching facilities and more resources lead to more satisfied pupils, lower dropout rate, higher rate of promotion and continuation; that in turn translate into greater public support for schools (Shaeffer, 1991: 14).

This state of affairs necessitates a school, as an organization, to consider a general open-system model in a continual interaction with the supporting environmental-suprasystem and achieve a "steady state" or dynamic equilibrium (Kast and Rosenzweig, 1985: 112; Griffith, 1979: 31-32).

As per Hoy and Miskel (1987: 20-21), open system, (see Figure 2) has a number of important characteristics: First, the organization's capacity for feedback facilities for the input-transformation-output cycle. When we say feedback, it is the information about the system, which enables to correct itself. Second, a system that survives tends to move toward a steady state-equilibrium. The public as an environmental-suprasystem protects a school system from disruption that

could have made it to lose its equilibrium. Third, an open system overcomes the tendency to rundown by demonstrating adaptation. Thus, a school seeks to maintain a favourable position with respect to its environmental demands. To this end, schools can select various means to emphasize on basic skills if it is a demand of the public.

Figure 2: Open-System Model



Source: Hoy and Miskel (1987: 20).

Thus, openness means (1) the sharing of authority, responsibility and accountability by involving all sectors of the public across more partners; (2) the reforming and governing of schools through an opening of the school to the public, more "bottom-up" planning and new roles for parents or the public; (3) the planning and implementing of activities in more participatory and collaborative ways suitable to a particular environmental context (Shaeffer, 1991: 11).

On the other side, as a supportive suprasystem, and to be effective, the public must organize itself if it is intended to influence school systems (Goldring, 1991: 217). As Clark and Austuto in Goldring (1991: 227), more and more educators at present believe that parents being the major components of the public, who want to invest on their children's education must be allowed to do so in relation to the schools' degree of openness particularly in three realms: (1) the selection of their own children's schooling, (2) input in determining curricula, and (3) involvement in extra-curricular activities as well as disciplinary actions.

Moreover, the public, organized as parent committees can be effective when the following hold true: (1) parental representation on the committee is substantial, and (2) relevant not merely ritualistic issues link the committee with the school system's authority (Goldring, 1991: 219).

Nonetheless, according to Katz and Kahn (1966: 19-25), the following common characteristics among others seem to define all open systems: (1) importation of energy, (2) the throughput, (3) the output, (4) systems as cycles of events, (5) information input, and (6) the steady state and dynamic homostasis.

This is related with the input-throughput-output process (Silver, 1983: 53-54). For example, a school consumes the energy and information inputs it receives and, in so doing,

alters the students who are "processed" by the school, i.e. they pass through the school system and "changed" in the same way which is often called the throughput. And systems always produce some energy and information outputs other than related to the systems' purposes identified as by-products that affect the quality of outputs or outcomes of the system.

In relation to the quality of outcomes, as identified by Carlson in Hanson (1991: 142-144) across the entire decisional spectrum of the school, there are differing classes depending on the magnitude of their relationships with their public suprasystem. These classes of organizations are (1) the "domesticated" organizations such as government schools which are guaranteed for their continuance and are less competitive with other schools for quality outcome; (2) the "wild" organizations in character like the non-government schools that depend on competition and on their quality of outcome for their survival.

This shows that an "open" school is said to be a necessity in non-government school systems. Because, when, a market for such school exists, the school must be visible to the public or parents who make additional pay for their children's education (Shaeffer, 1991: 14).

As a result, school systems by the input they receive as energy and information from their supporting suprasystem (which is the public) develop and change with the

corresponding change and development of the public. (McCarty in the edition of Deighton, 1971: 348).

Because of this, when the resource inputs received from the public are intelligently used, the public will support schools more increasingly and a better communication or public relations can be established (Nichols in the edition of Deighton, 1971: 342).

Regarding the information aspect of school systems, the most advanced thinking in school-public relations considers it as an integral part of the total system. Such a system makes provision for comprehensive factual information about all major areas of educational operation that is vital and indispensable tool of school board members, parent committee members, laymen, and principals in their effort of improving the performance of school systems (Deighton, 1971: 315).

Thus, the support and the participation of public for school improvement depends on the information received by the public from school systems or on the degree of openness of the school systems about their performance to the public environmental-suprasystem (Preston, 1991: 285; Nichols and McCarty in the edition of Deighton, 1971: 342-347; Silver, 1983: 63; Bloomberg et al. in Bloomberg in the edition of Deighton, 1971: 341). Thus, the more open the school systems to the public, the higher the sense of ownership and responsibility for the system; and the higher the partnership

with the school system, the greater the feeling of being accountable for the operation of education (Shaeffer, 1991: 14) .

Again, school systems, based on their amplitude of openness in relation to bureaucratization and formalization, they can be grouped into two: (1) rational system, where the system is viewed as formal designed to achieve specific organizational purposes only, and (2) natural system, where the system is viewed as primarily social trying to adapt primarily by the basic goal of survival not by specifically and formally defined goals. A natural system is, therefore, an organization that is informal and more open to any thing in the environment (Hoy and Miskel, 1987: 17-19).

With regard to being formal and informal for public participation in school systems, "the level at which contact is made higher, the content of such contact will be more universal" (Goldring, 1991: 217-219). In this manner, when school systems are viewed as rational systems, the manner of the contact will be highly formalized and regular; that affects the amplitude of openness. Schools have to have the due amplitude of openness without inclining more to either side of the continuum of rational or natural view of openness.

However, as realized by compbell et al. (1983: 257), some principals have almost no relationship with the citizens of their respective attendance areas, though, it is

significantly desirable for every principal as a middle manager of his system to negotiate and deal extensively and continuously with the public. And he, too, must be involved in public relationships (Goldring, 1993: 97; Bloomberg in the edition of Deighton, 1971: 341).

When establishing school public relations, with regard to school resource provision by the public, the following suggestions among others serve as a raport for principals (Nichols in the edition of Deighton, 1971: 344). These are: (1) being candid in explaining the need for the resources, (2) using wisdom and tact with regard to the resources requested.

Thus, school principals can play a decisive role in the intensity and effectiveness of public cooperation or participation in the educational operation of their school systems (Novak et al. in Goldring, 1991: 220-221).

Any how, Goldring (1991: 221) has classified principals on the subject of parental "involvement" depending on their positive or negative attitudes towards it as follows: (1) Those who want parents to feel welcome in their schools, and those who believe that positive parental-school relationships can bring about a worthwhile partnership for both parties. These principals consider parents as sources of assistance and individuals who can raise the quality of their schools' educational programs. Such principals attempt to translate parental interest into programs which aid the school in

general and their children in particular. These principals believe that parents naturally are concerned for their children's education and that they are sincere in their desire to become involved in school affairs. (2) Those who view parental involvement as a source of concern. Such principals usually report that interaction with parents is one of their most difficult task. They complain that parents are over critical and claim that parents do not cooperate in their efforts to enhance the quality and goals of education.

This negative attitude of certain principals that happen due to their fear of loss of their "traditional" power described by Bacon in Bush et al. (1980: 72-73) as experienced in the UK is as follows.

A number of head teachers took the view that the new board system posed a serious threat to their traditional personal autonomy while a few simply saw the new participatory system as a public and formal confirmation of a subtle policy which sought to undermine their traditional "leadership role", and transform it into that of a chief executive directly responsible to a powerful representative body. ... because they thought that these kinds of legalistic stipulations might not only limit their general effectiveness as leaders, and stimulate a general "looking-over-the-shoulder mentality", but would also increase their administrative burdens and make for indecisiveness in their day-to-day reactions to the crisis situations typically confronting a modern head teacher.

Again, one factor of difficulty for principals toward public involvement is the principals' split loyalty and dual responsibility toward teachers and parents (McDowell in Goldring, 1991: 220-221).

Nevertheless, the principals' accessibility to parents or the public is important because schools with an informal open door policy are more effective (Glatter et al., 1988: 122). Accordingly, there should be face-to-face relationships or two-way communication between the school system and the public environmental-suprasystem. Principals may stress on the importance of openness, by enhancing public participation, noting the value of participation in the planning, decision-making, soliciting and utilizing feedback to develop the schools' educational operation (Deighton, 1971: 315; Epstein in Redding, 1991: 150; Glatter et al., 1988: 112).

According to Deighton (1971: 315) and Marsh (1988: 95), the most basic consideration of school systems is taking the initiative in organizing and conducting public relations program. It is indispensable to understand that schools belong to the people and, consequently, the people have the right to be informed about the affairs of schools. Attention and initiative has to be made to contact local government and private industrial, agricultural, and business organizations within the general public for participation (Moegiadi in the edition of Shaeffer, 1992: 95). As per Moegiadi in the edition of Shaeffer (1992: 104), to facilitate implementation of strategies for obtaining full participation from the public, specialized training should be arranged for school principals.

Because, as an open system realizes, schools are supposed to be sensitive and often quite vulnerable to shifts in their external environments (Hanson, 1991: 253). Besides, the extent to which the public perceives its objectives through schools becomes critical in explaining the depth of public commitment to school management through the school administration boards (Preston, 1991: 285).

When a dynamic community or public is well organized behind a school many tasks will develop in its educational operation (Stearns, 1955: 295). However, the techniques of public participation as a community action varies according to the relative power of the public organization (i.e., school administration boards, parent committees or associations) and the nature of the issue (Gittel in the edition of Deighton, 1971: 352).

In addition, the nature of interaction between parents and a school is influenced by the socio-economic status of parents on the one hand, and on the students' relative status among classroom peers on the other hand. Teachers would have greater contact with parents of children who have academic or disciplinary problems (Beher and Epstein in Goldring, 1991: 224; Nichols in the edition of Deighton, 1971: 342).

In a broader sense, in their effort to maintain public support and good relations with teachers or the school system in general, school administration boards as representatives of

the public environmental-suprasystem can experience difficulties. These difficulties in turn can affect teacher attitudes, pupil access to school, learning resources, and subsequently learning outcomes (Preston, 1991: 283).

Therefore: (1) enthusiastic principals are said to stimulate strong school administration boards (school administration committees in our case) and public support with regular and considered consultation. Because, without consultation, the authoritarian principal adopting superior attitudes to the public is likely to induce apathy and alienation among committee members. (2) Where public commitment to education is high, the school administration board or committee may generate high level of authority to change the attitude of teachers.

Yet, to Preston (1991: 284), public commitment for participation through school administration board can be maintained through: (1) innovation and (2) the need to manage crisis.

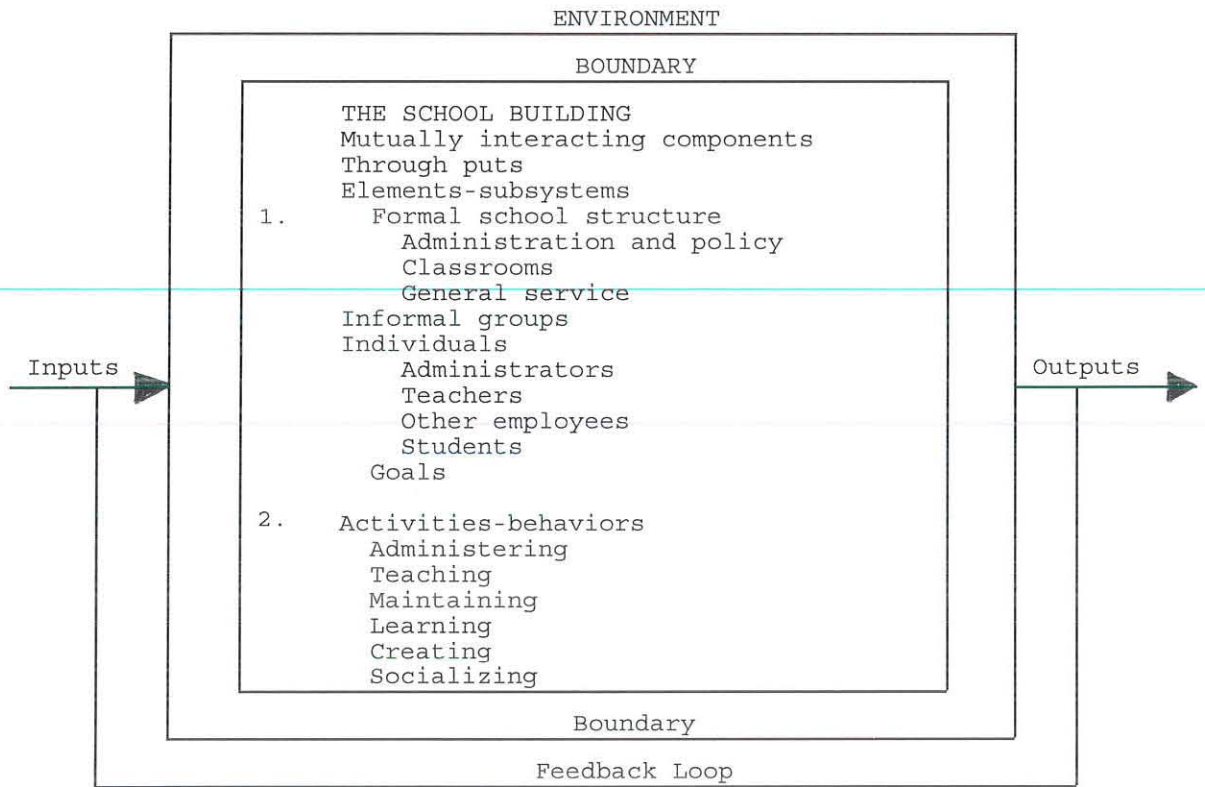
Accordingly, it is necessary to conceptualize a school as a system the public as environmental-suprasystem, a school administration board together with a school principal as boundary spanners between the two, and all in all as a triad of organization.

2.1.2 Boundaries of Schools as Educational Systems

The concept of boundaries helps one to understand the distinction between the relatively open and closed systems to the broader suprasystem (Kast and Rosenzweig, 1985: 134).

With respect to boundaries, social systems such as educational systems must be bounded in some manner to "separate" them from their environment (Hoy and Miskel, 1987: 56). According to Hoy and Miskel (1987: 57), using social-systems analysis is important to define carefully the boundaries and the unit of analysis. Hence, the environment is anything outside the boundaries of the unit of system analysis that: (1) affects the attributes of the internal components and (2) changes the social system itself (see Figure 3).

Figure 3: A Graphic Illustration of the Social Systems Definition Using a School Building as a Unit of Analysis



Source: Adapted from Hoy and Miskel (1987: 56).

The community is thus the environmental-suprasystem of schools; and normally, the boundaries are partially open to the contribution of the major component of the environment, i.e. the public or the community.

The interchange between the school as a system and the public suprasystem is related to boundary maintenance and organizational buffer (Hanson, 1991: 64) and boundary spanning (Kast and Rosenzweig, 1985: 136). Boundary maintenance refers to the preservation of the social system against undesirable interaction with outside factors. As a result the boundary becomes high or low (Hanson, 1991: 64).

The organization can not respond to all possible environmental influences, or it is selective in its intake of energy and information inputs (Kast and Rosenzweig, 1985: 132-134). Selection is done, because, demands conflict oftenly and organizations cannot thrive by simply responding to every environmental demand.

Hence, the challenge for school decision-makers is to determine the extent to which the school organization can and must respond to various environmental demands.

The overall implication for practice is that school organizations do not have to be simple passive instruments of the external environment. Both internal and external coping strategies can be used to buffer environmental influences and actually to change the demands. Structures, programs, and processes can be developed by educational administrators to manage the environments of their school organizations (Hoy and Miskel, 1987: 103).

Thus, there will be organizational buffer, which is an operational screening device that reveals itself in various strategies. Buffering strategies are used by school personnel, mainly by the principal, to conform an environmental demanding attention (Hanson, 1991: 358-360).

2.1.2.1 Buffering Strategies of Public Demands

In practice, school principals attempt to control the openness of schools, and the result is a partially controlled exchange that modifies both the system's internal and environmental components. This mutual control and exchange mechanism is explained in social system models as homeostasis, feedback, and equilibrium (Hoy and Miskel, 1987: 57).

As Hoy and Miskel (1987: 98), in unstable environments and high levels of dependency, buffering strategies will not adequately protect the instructional program from external influences. As a result, under the conditions of high uncertainty and dependency, educational organizations of schools can attempt to control environmental fluctuations by strategies of planning and forecasting. Under these circumstances, a separate and extensive planning and forecasting of a variety of scenarios is carried out.

A principal who is unsuccessful in dealing with the diverse demands of parents, as members of the community, may be unable to achieve manageable boundaries for the schools (Goldring, 1991: 221).

Hallinger et al. in Goldring (1991: 221-224) noted three response (buffering) strategies, which principals use, when interacting with parents: 1) coalition collaboration, (2) socialization, and (3) formalization.

Coalition Collaboration - The first response strategy which is useful at defined periods of time, when parents and principals join together in order to achieve a common, agreed upon goal (Mintzberg in Goldring 1991: 221). Such Collaboration is intended to reach a goal that would be difficult to realize without the two parties' collaboration. In this case, if coalition collaboration is not institutionalized, the coalition is disabandoned.

Socialization - The second strategy is an attempt to mold the parents' attitudes to approximate those of a school. Morris et al. in Goldring (1991: 222) stated that in their attempt to socialize parents, principals, should try to modify parents' expectations of their schools. They attempt to persuade parents to identify with the schools' objectives and values. In other words, principals attempt to bring parents closer to the schools' frame of reference.

Formalization - In contrast to the first two strategies, which deal with initiated contacts between the principal and parents, the third response strategy attempts to diminish, delay or relegate contact to others. Formalization is achieved through buffering and cooptation. An example of buffering as reported by Hollister in Goldring (1991: 222) is found in schools; as parents posed numerous demands, principals adopt

rational and bureaucratic measures in order to weaken unwanted parental demands. Principals can also buffer parental demands by relegating them to their superiors or to their subordinates.

The aim of this is to change parents' attitudes so that they will be less critical about the schools (Barak in Goldring, 1991: 222).

Furthermore, through cooptation an organization absorbs representatives of the public and institutionalizes their actions and gives them a role in the decision-making process (Selznick et al. in Goldring, 1991: 222; Hoy and Miskel, 1987: 102).

According to them, organizational theorists consider cooptation to be an effective strategy for retaining a manageable link between an organization and representatives of the public. However, the problem comes when clients from the public that are not represented experience alienation, not only from the educational organization, but also from those representatives who have become part of the organization.

Those strategies used by principals to either foster or discourage parental involvement are linked to parents' social class and to the balances of power that exist between them and the principal (Becker et al. in Goldring 1991: 223; Gittel in

the edition of Deighton, 1971: 352). They found that principals viewed upper-class parents' involvement or participation as too intense and that of lower-class parents' involvement as insufficient.

Hallinger and Murphy in Goldring (1991: 223) again stated that principals in low SES are supposed to use more buffering by carefully controlling access to the school and protecting the schools' program from outside influence that might dilute its effectiveness. Principals in high SES schools engaged in socialization and cooperation. These principals are found busy mediating public expectations of the school and constantly seeking efficient ways to involve a population that took great interest in the school.

As Goldring's discriminant analysis (1991: 223-224), the higher the percent of low SES parents in the school, the more likely principals are to respond to parents by buffering, a formalization strategy. Principals in homogeneous schools, regardless of socio-economic status, are more likely to interact with parents through cooperation than are principals who work in heterogeneous schools. Principals in heterogeneous schools are more likely to respond to parents by socialization.

It seems that principals serving a heterogeneous parent clientele must socialize the parents in an effort to homogenize expectations and demands. Principals in

homogeneous schools can work with parents more easily; because they are dealing with a homogeneous clientele with similar values and expectations. Hence, cooperation is found to be a typical response model.

With regard to cooperation, as a strategy of public or parental participation, Morgan et al. (1992: 16-19) carried out a research on public participation and found that there was considerable variety in the issue that the public or parents wished to raise. More importantly there is also variation in the intensity of interest that leads to the concept of levels of involvement.

2.1.2.2 Levels of Public Involvement

Level of public involvement could be seen as indicators of particular relationships that parents have with schools; and this model can be postulated an ascending ladder of levels: (1) low level involvement, (2) high level involvement, and (3) formal, structural involvement.

Low level involvement - This is a traditional one, where parent-school relations have tended to operate. Such involvement is usually of a formal nature and of school rather than parent oriented. Parents visit schools when invited occasionally to discuss problems that are mainly often of a disciplinary nature. The relationship between parent and school engendered by this type of structure can be narrow and one-sided.

High level involvement - In this level some parents extend their relationship beyond the basic teacher-parent relation. They take an active part in the activities of parents' councils, act as teacher-helpers in the classroom, and raise funds for the school. In these ways, the focus of their relationship with the schools widens from that of the parent concerned with his/her child's education perse with the school.

Formal structural involvement - At this level, a relatively small number of parents also become involved with the schools beyond the levels described above, usually as governors. As a parent governor the type of involvement is managerial and the form of the relationship between parent and school becomes much more specific and formal (Golby and Brigley in Morgan et al., 1992: 18).

As to the findings of Morgan (1992: 19), most parents are content to operate at the basic level, at which involvement usually signifies a close two-way relationship with teachers for the benefit of the child.

However, as to Redding (1991: 161), to involve parents in the education enterprise, understanding of the complex connections between the intervention strategy, parents' motivation, the parent-child relationship, the child's learning, and the practices of teachers and school is required.

With regard to public "involvement" or participation, there is a variation in relation to geographical setting. Here the public in an urban area with a relatively high socio-economic status are aware of the importance of education. This awareness can help to provide schools with supporting facilities. And those parents or the public found in a relatively rural area have lower socio-economic status and also lower educational level that do not allow them to consider that education is their concern.

Coleman and Husen in Redding (1991: 150), in their report described three phases of public or parent-school relationships that correspond to the levels of economic development.

In phase I, the family lives at a subsistence level, relying on children for work. Phase I families limit the growth of the child, and the school's role is to "free" the child from his family and expand the possibilities for his development.

In phase II, the industrial economy, the goals of the family and the school converge, with both institutions seeking the improvement of the child's ultimate economic situation.

In phase III, post-industrial affluence, parents view being a child as an impediment to the pursuits of their adult lives and invest little time and energy in the development of their children.

Thus, based on the description of phases again, Coleman and Husen in Redding (1991: 150-153) provide the analysis of changes in families through the economic evaluation of their societies by altering the view of phases into types of parent-school relationships as follows.

Type I families are from a subsistence economy but they live at a survival level, overwhelmed by the daily demands of the world that they are unprepared to meet.

Type II families retain the value system of the multi-generational, intact family.

Type III families are the norm in the new world of mobile families, working mothers, divorce, and self-indulgence.

Schools of today feel pressure from both type II and III families in their educational operation. Type II parents seek greater role in the education of their children and may seem to be the ideal in home-school relations; their goals and of the school are confluent. Nevertheless type II families are inclined to flee government schools opting instead for non-government schools.

And type III parents usually receive little sympathy from school personnel and they have much to offer their children and the school system; unfortunately, their acquisition of various resources does not compensate for their inattention to their children .

As Shaeffer (1991: 17) put it, to solve this discrepancy of public attention and participation in the educational operation of school systems parents and PTAs among others can be the most and common venue for collaboration between the school and parents. These may be formed around individual classes, grades, and/or the entire school and may, depending on their mandate, have the power of a school management board.

However, openness is not an unmixed blessing that necessitates school boundaries to be high or low; if the public is to be at all involved in planning the objectives and evaluate the activities of education, and thus to "gaze" at the school, they have to know what they are gazing at (Shaeffer, 1991: 15). This is because "open" system can lead to manipulation within highly politicized contexts, to domination of school affairs by a local elite.

Hence, buffering may be used to reduce the prevalence of uncertainty and interference caused by parents or members of the public.

Therefore, schools should be open with only the precaution that the most effort can be applied in collecting all the pertinent facts in checking their correctness and validity (Douglass in Olsen, 1963: 124). Thus, a trained school public relations personnel is needed in schools.

With regard to public-school relationship, the boundary-spanning components must represent their organization. To be effective, they must be sensitive to the attitudes, needs, beliefs, values, goals and aspirations of the public environmental-suprasystem. This in turn necessitates to have public relations bodies in school systems; because, institutional environments are notoriously invasive (Kast and Rosenzweig, 1985:136; Hoy and Miskel, 1987: 57).

More significantly, school administration committees or boards have the potential to be the ideal vehicle for the interaction of public suprasystem with the school system (Marsh, 1988:12)

This means, for the representation purpose, boundary spanning personnel send information in the environment from the organization. Similarly, the school administration boards link the school organization to important constituencies in the environment in a highly visible way where they will feel their interests are being represented. As a result, managing

the school's image can reduce uncertainty and able to depend on the various elements of the public environmental-suprasystem(Hoy and Miskel,1989: 101).

With regard to school public relations, NSPRA (National School Public Relations Association) of the USA has established minimum standards for full-time public relations staff (Deighton, 1971: 316) where in every school there should be one full-time professional public relations officer in our case.

As to Deighton (1971: 316-17), among others, the following six kinds of relationships between schools and the public are most common:

- (1) Level 1 relationships - These are the simplest and with the longest history. The flow of communication is one direction: from school to public. The school takes the initiative to provide information for a passive public audiences.
- (2) Level 2 relationships - The school again is the initiator, but the community plays a more active role than it does in level 1 relationships. In most instances, the flow of communication again is one direction: from school to public. However, individuals or groups are in a somewhat better position to respond to what they observe.
- (3) Level 3 relationships - Here, members of the community or the public initiate communications and enter into

dialogue with school representatives. Thus, the flow of communication is in two directions i.e. from school to public and from public to school.

- (4) Level 4 relationships - The school considerably influences the format of communication between the school and public, but the public clearly exercises greater influence of the substance of the communications than what the school does. Members of the public are encouraged to provide insights and advice on school policies and problems, and the public is given the opportunity to generate the greater portion of the dialogue.
- (5) Level 5 relationships - Although the public is given a progressively larger role to play at each higher level through level 4, the school unquestionably retains complete control of its own operations and decision-making. The distinguishing characteristic of level 5 is that members of the public are given a greater opportunity to participate in the planning and/or decision-making process on some school issues or in some areas of school operations.
- (6) Level 6 relationships - Educators have found level 6 relationships, as conducive for the involvement of laymen in implementation of school programs and services, as compared to level 5 relationships. Laymen serve both as volunteer aids and as paid employees of the school system.

More generally, as Katz and Kahn (1966: 60-61) put it, the practice is to have specialized structures for the reception of information. Hence, any message will have to traverse and survive the proper channels.

Assessing how a system has been successful in maintaining its equilibrium, makes the feedback loop necessary (Deighton, 1971: 316). The purpose of assessment is to gain indicators on causes of failure and scope of improvement by establishing relationships (Davies, 1975: 310).

Therefore, specific departments and roles supposed to be created in school organization to deal with and absorb uncertainty and dependence from a variety of environmental elements (Hoy and Miskel, 1987: 98).

Thus, when one considers about levels of public involvement, he has to be aware of that the goal of buffering is to make the technical care as nearly as "closed system" as possible and there by enhance efficiency and protect disequilibrium (Hoy and Miskel, 1987: 98).

On the other hand, Beher et al. in Kogan in the edition of Glatter et al. (1988: 149) have concluded that giving parents information did not allow them much power and influence. According to them, more information might in fact reduce criticism, but that might depend on the nature of what is given and received. So, the time spent on communicating

with parents could be regarded as an important part of the educational task of the school.

Accordingly, Beher et al. in the edition of Glatter (1988: 149-150) have provided five types of reasons for the significance of public-school interaction in the processes of education. These are: (1) personnel - refers to the responsiveness of teacher to parents in their dealings with the schools. (2) Melieu - refers to what the school could explain how it maintained good order and reasonable behavior. This can occur through open assemblies for conversation or by quick visits to working classroom. (3) curriculum - where schools can develop written accounts of curriculum policy that parents can welcome them. (4) Teaching process - where parents who gained access to classrooms show increased confidence on teachers. (5) Progress of individual pupils - which means teachers could inform parents about what their children had learnt, give some indication of the children's aptitude and motivation and discuss any matters that either the teacher or parents regard as "problematic."

Hence, school systems are part of a complex public environmental-suprasystem in which principals as middle level managers and as boundary spanners have to respond to the parent clientele (Chub et al. in Goldring, 1993: 95). For example, experienced principals learn to recognize which types

of school activities or matters will interest parents. And thus, a new role of the professional principal comes need for a technique of public relations (Stearns, 1955:5).

Consequently, from an organizational perspective, the principal must take certain actions to increase public-school interaction, while simultaneously "freeing" the internal organization (mainly the academic part) from undue external intervention to maintain the systems' proper and due autonomy (Goldring, 1991:221).

2.1.3 Autonomy of Schools as Educational Systems in Light of Decentralization

As the examination of public participation with the systems perspective (especially the amplitude of openness) leads to boundaries of schools as educational systems, treating their boundaries also raises the issue of autonomy of school systems in light of decentralization. Because, the issue of autonomy of schools in light of decentralization has a significant implication on public participation. As described by Hoy and Miskel (1987: 97), environmental uncertainty and resource dependence threaten organization autonomy and effectiveness. As a result, administrators often try to minimize external effects on internal operations by making system boundaries high or low.

In this connection, Kast and Rosenzweig (1985: 135), state that organizational boundaries perform another vital function by providing a degree of autonomy and independence

for the system like that of a school. And the degree of autonomy of schools shows variation in relation to being governmental and non-governmental. Hence, each organization as a system needs sufficient discretion for conducting its operation, as long as it meets the broad social goals. Thus the filtering and buffering functions of an organization are important in maintaining its autonomy.

Among the other concepts, system openness and system boundaries are interrelated and have to do with the relative autonomy of system functioning (Katz and Kahn, 1966: 59). As per Scott's conclusion in Hoy and Miskel (1987: 44), "the more open a system the harder it is to distinguish the system and its environment."

Nonetheless, the question of autonomy can be geared to the decentralization or delegation of responsibility and authority of educational operation in schools not from the public but from enacted bureaucratic chains in the government educational structure. This is because, the problems of undue interventions from the public environmental suprasystem can be alleviated with what are mentioned earlier as strategies of buffering in relation to system's openness.

When one talks of decentralization, there are three forms that exist on a continuum of the decision-making process: deconcentration, delegation, and devolution. On the other hand, centralization also takes place within the context of

these three concepts; because, decentralization usually occurs in 'measured' doses (Hanson, 1991: 31-33).

With regard to the debate over centralization versus decentralization, in educational organization and administration; it reveals that there are no hard and fast rules or pat formulas as well as easy solutions (Sander, 1989: 232). Nevertheless, there are two suggestions forthcoming. First, it is necessary to separate educational policy and administrative practice. In order to preserve national identity, it would seem that general educational policy should be national in nature. Then, for the implementation of national educational policies, administrative practice could be more or less decentralized. This means, in each case, to attain educational policy and at the same time to preserve the cultural heterogeneity of the country, the most efficient, effective, responsive and relevant administrative strategy should be adopted.

Second, it is important to clarify concepts and practices so that centralization is not necessarily associated with authoritarianism, and decentralization not necessarily be confused with democracy and participation.

In effect, in the same way that authoritarianism can coexist with decentralization, democracy and participation can also exist in a centralized system. The difference lies in the forms of participation and the practice of democracy. As

a result, the concept of autonomy is a key to understand the special characteristics of the spheres of influence to schools (Hanson, 1991: 99). Hence, as Katz and Kahn in Hanson (1991: 99) propose, autonomy refers to the independence of systems such as schools from the undue control of other parts in higher hierarchy or echelons considered as stifled bureaucracy. Because these higher echelons are not the "major" and "proper" sources of the resources over which school systems depend for their existence and growth.

Thus, what has to happen among higher echelons and school systems is that, certain decisions are decentralized (delegated) and others are centralized (retained) (Hanson, 1991: 31-33). Because, federalism itself is a form of decentralization, and constitutionally in certain countries is deliberately made to be difficult to violate the powers and boundaries of systems (Gorton et al., 1988: 51).

Moreover, as Gorton et al. (1988: 50-51), centralization and decentralization may be used for varieties of ends; each should be evaluated based on the purpose for which each is employed. They can be analysed as the transfer of organizational decisions initiated by different competing groups with three major goals: (1) representativeness, (2) politically neutral competence, and (3) executive leadership or liability to get and use of information.

Therefore, the public as a suprasystem of schools, need to have the due degree of participation that mainly depends on the degree of decentralization. Contrarily, highly centralized forms of educational practices allow little opportunity for public "involvement" or participation in school systems (Marsh, 1988: 86).

In relation to public participation, as Sander (1989: 231) noted, the proponents of decentralization argue that it facilitates the interaction between education and society by upgrading significantly the degree of responsiveness and relevance of education for its participants and the public at large. According to these proponents, decentralization could also move the participants of local communities to search for solutions to their problems in education within their limits. Because adopting universal solutions cannot be practical. Besides, in the context of autonomy, public participation refers to an active process, whereby beneficiaries influence the direction and execution rather than merely receive guidelines (Paul in Bamberger, 1988:5).

Consequently, as the perspective of decentralization defenders, decentralized education systems would be economically more efficient, and pedagogically more effective. Decentralization is an instrument of change through which more active public participation could have sought greater innovation and flexibility in school programs and curriculum (Gittel in the edition of Deighton, 1971: 356).

Besides, reforms designed in a central ministry and implemented in an average school, financially and bureaucratically might not be relevant to local needs. In this manner, it is unable either to stimulate local demands or to be sustained, and leading to an increased realization of the need of decentralization (Shaeffer, 1991: 7; Gittel in the edition of Deighton, 1971: 356).

To this end, if and when there is decentralization, principals are capacitated to ascertain that the schools belong to the public and that they (the schools) should be guided by the belief of the public (Campbell et al., 1983: 257). Accordingly, in relation to the autonomy of school systems in light of decentralization, Knezevich (1969: 23) has indicated that the problem of uneven quality of education in various schools within a country can be solved through decentralization.

However, the adoption of a decentralized education system in countries marked by a centralized economic structure and political organization could run the risk of creating "abandoned" school systems in the marginal urban communities and poor rural localities (Sander, 1989: 231). Moreover, decentralization can seriously jeopardize equity and increase regional inequalities and educational services (Preston, 1991: 287; Sander, 1989: 232).

Hence, this can be considered as a limitation of decentralization as any mode of administration possibly acquire. Nevertheless, it has exceeded centralization in terms of public participation in addition to the variation and relativity of ends they have. That is why many countries currently, from both developed and less developed, are moving towards an increase school autonomy after realizing that the centralized system could not meet the diversified educational needs of their pluralistic society (Goldring, 1993: 94-101; Shaeffer, 1991:7; Goldring, 1991: 217; Preston, 1991: 276).

Nonetheless, it is necessary to use participatory form of administrative mediation to attain the enhancement of education in quality and quantity, with the conviction that a school administration with higher public participation is better than centralizing or decentralizing the system. A decentralized system need not always necessarily ensure participation, and a centralized system need not always necessarily deny it; what matters is, their being favourable for more public participation (Sander, 1989: 232).

Therefore, schools have to be granted the due autonomy being administered by independent trust boards to create self-governing institutions under the control of the public or parents. As Bacon in Bush et al. (1980: 95) reported, the extremely centralized tradition of school administration left each principal in a particularly isolated and visible position being exposed to the critics that can emerge when the public

raises "fundamental questions" about its educational operation.

This necessitates for school systems to be influenced by their major customer (the public suprasystem) (Ranson, 1988: 7-11).

2.2 The Public as Environmental-Suprasystem of School Systems and Its Influence

Man has been learning from his environment and has thus acquired a multiplicity of technological and related skills (Ekanayake, 1987: 129).

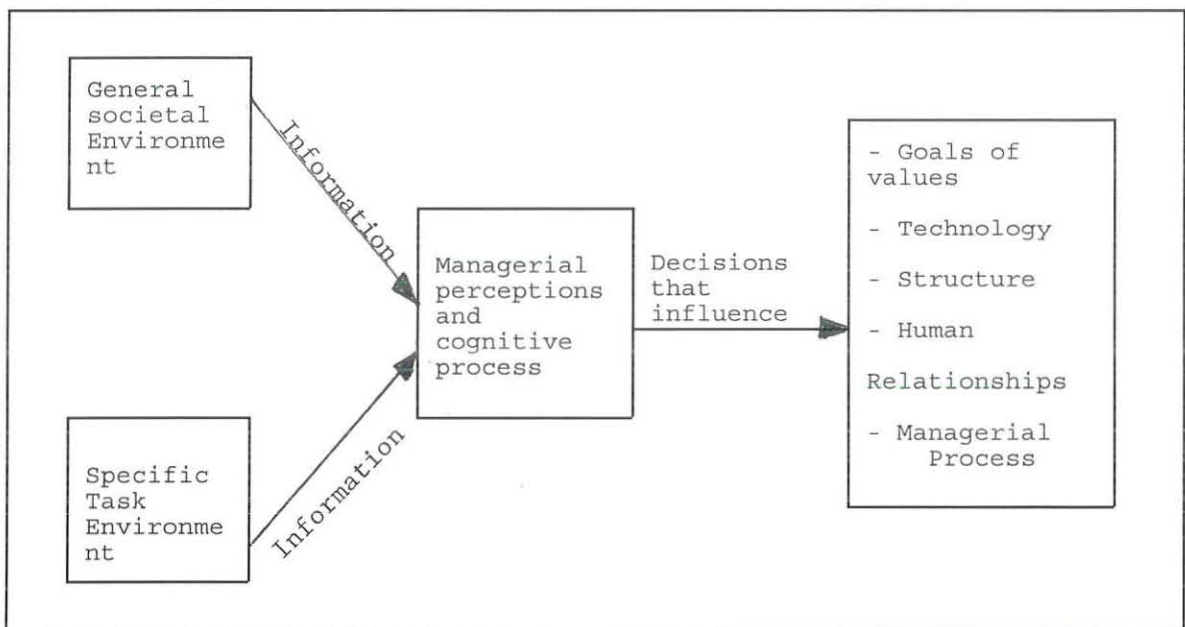
Moreover, even in the history of American Education the word public or community has been a part of education lexicon since John Dewey, and at the beginning of the 20th century the public have enhanced the scope of learning in schools and obviously made a remarkable transformation (Redding, 1991: 149).

Thus also, the public is a major reference group with which any school administrator must work in the determination of school policies and programs (Campbell et al., 1993: 257; Bloomberg in the edition of Deighton, 1971: 336). This is so because the dimensions ^{of} environmental-suprasystem do affect the nature of educational operation in school systems.

2.2.1 Dimensions of Public Environmental-Suprasystem

According to Hoy and Miskel (1987: 88-91) and depending on the particular circumstances, specific environments vary from school to school. An enhanced understanding may be gained by examining the dimensions of school environment. The general environment does not only influence the school as an organization but also its specific environments as illustrated by Figure 4.

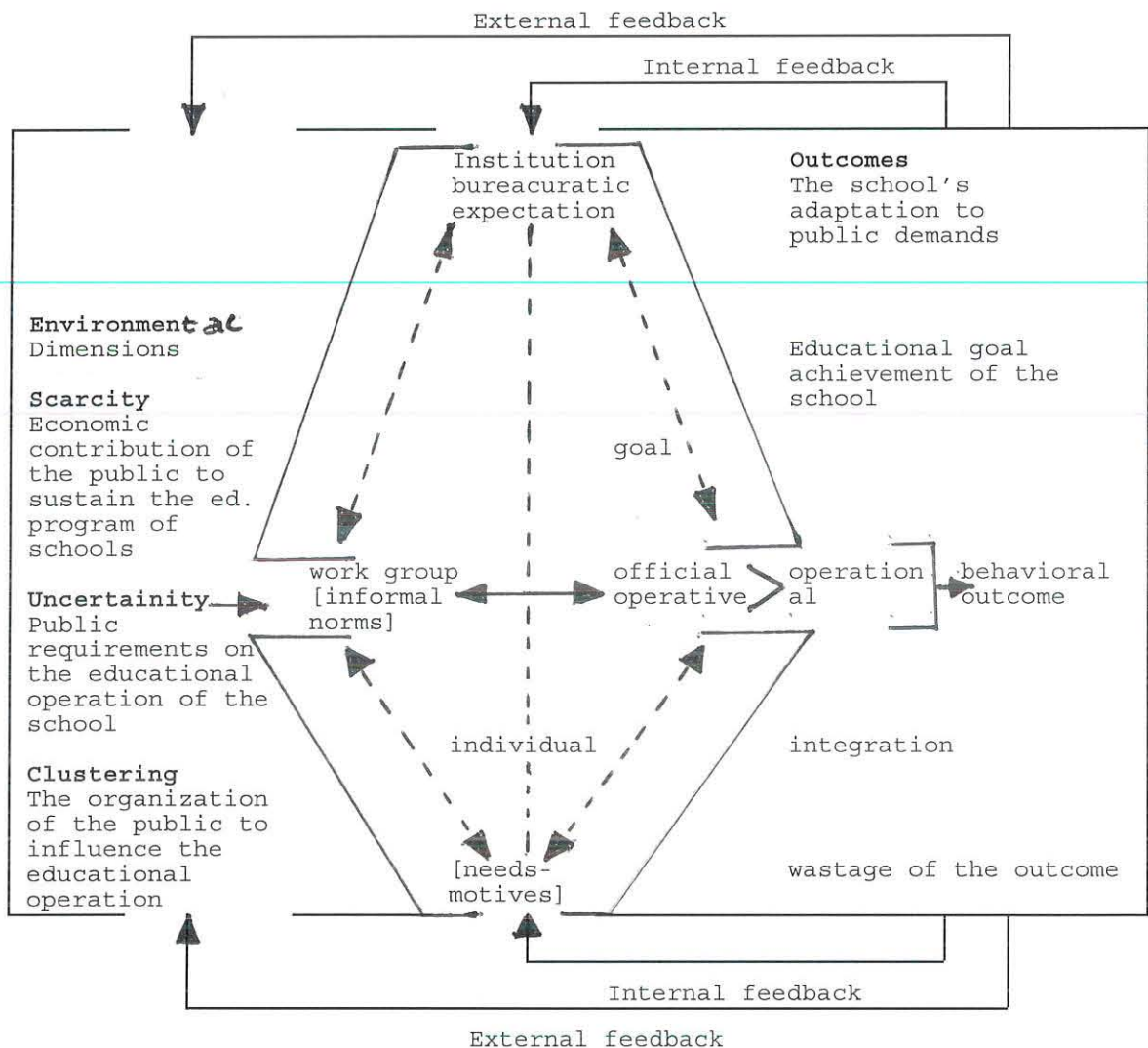
Figure 4: Managerial Perceptions of the Environment



Source: Kast and Resenzweig (1985: 139).

Empirical tests have shown that environmental dimensions that include uncertainty, clustering and scarcity do influence the educational operation and outcome of school systems (see Figure 5).

Figure 5: A Social Systems Model for Schools Showing Dimensions of Public Environmental-Suprasystem Influence on Their Educational Operation



Source: Adapted from Hoy and Miskel (1987: 72).

These dimensions (uncertainty, clustering and scarcity) are particularly useful to understand how the public environmental-suprasystem can influence the educational operation of schools. Uncertainty is viewed as a problematic situation confronting organizations.

However, if schools are to develop in their educational operation through public participation, some degree of uncertainty in a clustered form and with the necessary resource provision is indispensable. Accordingly, stability and complexity affect environmental uncertainty. The more complex and unstable the environment, the greater the uncertainty of the organization. Schools like all formal organizations need certainty, that is why they are subject to the criteria of rationality.

Hence, schools, when confronted with uncertainty, often attempt to cope up by creating special parts such as committees or offices like that of public relations. This enables schools as educational institutions as well as social systems to be obliged to be influenced by the public as their environmental-suprasystem. Therefore, this influence serves considerably as a means of public participation.

When we say clustering, it is to say that environments differ in the degree of clustering or structuring as compared to randomness. Highly clustered environments present any organization with a powerful and highly structured set of demands and constraints.

Poorly organized environments lack order that makes further diversity to be tolerated. For example, a school policy might be in conflict with a given aspect of an unclustered community, but when there is deviance by the

school from the community aspirations, it would not be construed as a general or intolerable break of values. In a clustered community, however, even if there is serious conflict, it might well produce a strong reaction from highly structured and interconnected community groups.

In relation to scarcity, it is the extent to which the environment has the resources available to support stability and sustain growth for the organization. The question of scarcity is mainly related with the abundance of resources in a district to maintain educational program for the number of students in a school.

2.2.2 Characteristics of Environmental-Suprasystem of School Organizations

With regard to the special characteristics of organization's environmental conditions, Emry and Trist in Hanson (1991: 136); and Hoy and Miskel (1987: 91) have shown in terms of four typologies based on "causal texture" to indicate the public as the main environmental element. They described the constraints or opportunities that can be caused by environmental characteristics for the organization as follows.

(1) Placid, randomized environments which are relatively unchanging, with limited interdependence among specific factors or parts. An example is a small school in a stable rural community.

In such a community years can pass without abrupt change. Students, teachers have deep roots in the area. Few special interest groups make systematic attempts to influence the school. Events that might have a major impact on the school are unlikely. In this kind of environment, the professional staff can concentrate on the day to day operations of the school. The environment typically is not a major factor in the principal's decisions-making.

(2) Placid, clustered environments which are relatively stable but increased interdependence or growing complexity is evident. Events in the environment are not random, a number of factors may change simultaneously, planning process is important and day-to-day operations should allow for possible new events in the environment.

As a direct request, government and private organizations as dominant elements or as components of the public have greater influence on the school system by introducing new programs such as vocational training.

(3) Disturbed, reactive environments are dynamic and exhibit changes that are not random. In education, the disturbed, reactive environment is a community with competing schools, for example, both government and non-government schools, want to catch the interest of the public through high academic achievement.

The role of the school principals is to plan decisions and strategic moves to allow for counter moves.

(4) Turbulent fields environments are characterized by complexity, rapid change and clustering. In this type of environment, conditions are so complex, and it is difficult to understand the combination of forces that create constant change.

As an evolutionary chain, Terrebery's work in Hoy and Miskel (1987: 93), provides the prediction that organizational environments are becoming increasingly turbulent. According to her, in today's society, placid-randomized environments are probably quite rare. And in such environments, schools are becoming more and more interconnected with and affected by other organizations.

Nonetheless, the interdependence among the school system and the public as environmental-suprasystem and its parts is decisive. As Emry and Trist in Preston (1991:284) stated, teacher absenteeism prevents the school system from fulfilling its objective of ensuring that children acquired the knowledge prescribed in the curriculum. Likewise, as Adams in Preston (1991: 284) has indicated, public and other organizations with in the public failure to provide resources, can result in school closure and restrict the future opportunities of children. Simultaneously, it thwarts the fulfillment of schools as well as the public objectives.

Therefore, as systems of the public suprasystem, schools have to go along or adapt with it, so that they can have the "reward" of successful adaptation that ranges from survival to growth or prosperity (Hanson, 1991: 157).

In relation to adaptation Burns and Stalker in Hanson (1991: 157-158); Hoy and Miskel (1987: 98) have identified two types of management styles, referred to as "mechanistic" and "organic" placed at the ends of continuum. Here, the mechanistic form of organization and administration is most efficient when existed in basically stable situations with predictable conditions prevailing. And organic organizational form is the most effective in organizations faced with changing conditions.

This implies that organizations with uncertain and diverse environments, for purposes of obtaining high level of efficiency tend to follow organic type of administration (Gabarro, Baldrige in Hanson, 1991: 159).

In contrast, those organizations operating in certain and homogeneous environments tend to operate in mechanistic fashion. Hence, the degree of stability of conditions or the certainty or uncertainty of the environment and its diversity or homogeneity become key situational variables in determining the most effective and efficient form of organization and administration. Furthermore, in relation to the influence of the degree of environmental homogeneity or heterogeneity on

schools' efficiency, it is found that school systems with differentiated or structured subsystems operating in heterogeneous are likely to be innovative than less differentiated schools operating even in relatively stable homogeneous environments. These differentiated subsystems of school systems enable them to successfully adapt or cope up with the needs of public environmental-suprasystem.

In short, when the external environment is stable, the organization is "mechanistic", that is characterized by formal rules and centralized decision-making. In a highly unstable environments, the organization is "organic", that is informal, flexible, and adaptive, characterized by decentralized decision-making, and open communication. Thus, the most effective structure is one that adjusts to the requirements of the environment (Hoy and Miskel, 1987: 98).

This is because, the maladjustment of a school system with its surrounding environment or public could be an obstacle of participation that in turn affects the operation of the system (Nichols in the edition of Deighton, 1971: 347). In connection to this, Shaeffer (1991:12) has indicated that social heterogeneity and conflict, passivity, poverty, and illiteracy of many communities are hindrances or constraints of participation.

In relation to constraints, resource dependency theory of the systems approach highlights the importance of environmental factors in promoting and restraining organizational decisions and operations (Hoy and Miskel, 1987: 100).

As a result, parents, among whom are the most valuable human resources, may either support the school program or be antagonistic towards its activities, depending on their understanding of the goals, objectives, and procedures of the school system's operation (Nichols in the edition of Deighton, 1971: 342).

This confirms that environmental forces have a direct impact on the way the organization operates its activities. This means, when the environment is dynamic and heterogeneous, it is usually necessary to establish functional departments to deal with a specific set of environmental demands (Kast and Rosenzweig, 1985: 135).

All these are done, if for example a school is not producing outputs useful to the public or community, someone must reorganize its subsystems and control its inputs so as to produce more useful changes (Silver, 1983: 63). As models of organizational analysis stress, organizations not only are influenced by their environments, but also dependent on them (Hoy and Miskel, 1987: 16).

The incursion of environmental influence would be uncontrolled and could vitiate the intrasystem, where the organization must have interchange with its supporting environment (Katz and Kahn, 1966: 61). The public thus, provides, expects and criticizes or assesses (Davies in the edition of Dobson, 1975: 307).

Consequently, the community or the public surrounding a school becomes dynamic so that decision-making structures of both the school as an educational system and the public as environmental suprasystem will eventually correspond to each other (Gans in MaCarty in the edition of Deighton, 1971: 348).

2.2.3 Community Power Structure and Its Implication On the Nature of Public Participation in Educational Operation of Schools

Power structure varies from one community to another and this variation forms various patterns, some of which allow people to adjust to predict the situation, and others which do not (McCarty and Ramsey, 1971: 16-18). These types of community power structures are: (1) the "elite power mode"; (2) the factional power structure; (3) the pluralistic power structure and (4) the inert power structure.

Walton in McCarty in the edition of Deighton (1971: 348), indicated that communities and their decision-making centers (power structures) can be categorized along with a continuum

established with four types, which assist in locating communities more meaningfully.

- (1) Pyramidical-a monolithic, monopolistic or single cohesive leadership group.
- (2) Factional-at least two durable factions that compete for advantage.
- (3) Coalitional-leadership varies with issues and is made up of fluid coalitions of interested persons and groups.
- (4) Amorphous - the absence of any persistent pattern of leadership or power exercised on the local level.

The concepts of community power structure are defined by McCarty in the edition of Deighton (1971: 349) and in the work of McCarty himself and Ramsey (1971: 19-20). Accordingly, the elite power model holds power structure in a community is pyramidical, and the decisive decision-making group is likely to be economic elite of the community. The elite power model does not allow for conflict between sides.

The factional power structure is one in which at least two durable factions compete for control over important decisions.

Dahl in Deighton (1971: 349) described that some communities follow neither the elite nor the factional power model. Rather, the power structure of these other group is pluralistic or diffused with many poles of power.

Leadership varies with issues. Power and community interests exist, but power is contestable and not overwhelming.

The fourth type of power structure which is frequently seen in small rural communities that does not reveal active power structure. In this type of a community, power is basically inert, or more properly latent, and assembles a sort of domination by the status quo.

Thus, as "mediators" of the public and the school system, school boards (school administration committees in the Ethiopian case) do exhibit a type of decision-making that corresponds to the particular type of community power structure of which they are a part (McCarty and Ramsey, 1971: 19; Bush et. al., 1980: 42-45).

Nonetheless, the objective of school board is supposed to be ensuring that conditions are favourable for both the public and the school system to meet their complementary objectives (Preston, 1991: 284).

In relation to these complementary objectives, public participation in education is most likely to enjoy substantial success when the public or community members have the ability to adequately develop the following among other important elements (Bloomberg et. al. in Deighton, 1971: 341; Preston, 1991: 284).

- (1) Substantial clarity about the goals of school programs and the means to implement these goals
- (2) A capacity to understand the problems of instruction so that the participation process would be beyond spontaneous protest and ephemeral excitement.
- (3) Direct influence on the decision-making of schools which actually affects the education of children.

Yet, as described by McCarty and Ramsey as well as Minar in the edition of Deighton (1971: 349-350), boards of educational administration as representatives of the public can exhibit a type of decision making structure that corresponds to the particular kind of community power structure stated as follows.

- (1) The elite power structure results in dominated board. Board members are chosen on the assumption that they will take the advise of community leaders mainly because they share the belief or aspiration of the dominant group. A majority of board members or perhaps one or two powerful individuals represent the community elite and executive power.
- (2) In the community with a factional power structure, a factional school board is found. Voting is more important than discussion; if the vote is crucial, the majority faction always wins. Board members represent the view point of one or the other of the factions and tend to act accordingly. Board elections are hotly contested, and the balance of dominating is likely to shift as new members are elected.

(3) In the community with pluralistic power structure, school board members may often represent particular interests. It is in this type of community that school board members will be active but not rigidly bound to one position. Discussion before a motion is often of utmost importance. Board members are equal in status and treat each other as colleagues free to act as individuals. Rather than a hierarchy of control within the board, there exists a peer organization whose decisions are characterized by full discussion of problems and arrived at consensus.

(4) In the community with the inert power structure, the school board is inactive and has no motive or reinforcement from the community as well as commitment to shoulder the representation of public views. It tends to perform perfunctorily, because, board members neither represent nor receive reinforcement from the public to expressing one view or another. When decisions have to be made, the board tends to follow the lead of the professional principal or acts as a rubber stamp without going extensively into appropriateness of a decision in terms of community needs or desires (Bacon in the edition of Bush et al., 1980: 89-90). It simply sanctions decisions presented to it and does little but exercise its right to approve or reject proposals from the school administration.

With regard to commitment and representation, Bray's report in the work of Preston (1991: 276-283), indicated that members of an effective educational board do held meetings

regularly according to their internal constitution. And for fair representation of public views, the board is made to comprise members geographically and socially from communities served by the school across the different sectors of the school catchment areas.

This realizes that school boards are the main official channels through which the public or parents are encouraged to voice their concerns, and are the means to mobilize public resources to support educational implementation (Morgan et al., 1992: 12; Moegiadi: in the edition of Shaeffer, 1992: 100).

However, as Moegiadi in the edition of Shaeffer (1992: 100-101), remarked, the frequency of board meetings and general parental meetings in schools do not occur as planned. Besides, the attendance of parents in the general meetings is common to be low. This is especially the case in schools of low socio-economic status; whereas, in urban and higher socio-economic situations, attendance is relatively higher.

One of the main reasons for such discrepancy for parental or public participation depends on the degree of strength and commitment of the school boards.

In relation to the regularity of board elections, it seems common to depend on the willingness or request of school

administration, though school board is supposed to be elected formally for a limited number of years.

As a supportive mechanism to the effort of school boards the role that can be played by PTA relations or parent committees, or parent associations constitute a major branch in the program of schools.

With regard to PTAs, the nature of relationship between parents and teachers is significantly affected by the wider organizational context of relations between the educational system and parents (Goldring, 1991: 224). Schools function normally and most of the time, depending on the balance of relationship between teachers, school boards, and the public or the community at any one time (Preston, 1991: 282).

As Blackstone et al., in Morgan et al. (1992: 13) remarked, in conventional terms, parental "involvement" or participation means that parents and teachers work in close relationship for the educational benefit of the child and the society (Blackstone et al. in Morgan et al., 1992:13).

In systems terms, as Sander (1989: 226-230) indicated, the evolution of twentieth century administrative theory is analyzed in terms of closed systems (that were practiced from 1900 to 1960) and open systems (that were practiced from 1960 to 1980), each with rational and natural models respectively.

However, it is found compatible to classify in terms of criterion-based models: (1) efficiency, (2) effectiveness, (3) responsiveness, and (4) relevance.

Efficiency conceives an organization as a closed mechanical and rational system, in which management was founded upon the criterion of economic efficiency.

Effectiveness conceives an organization as a partially open and natural system in which management is concerned with the functional integration of its components in light of its institutional effectiveness.

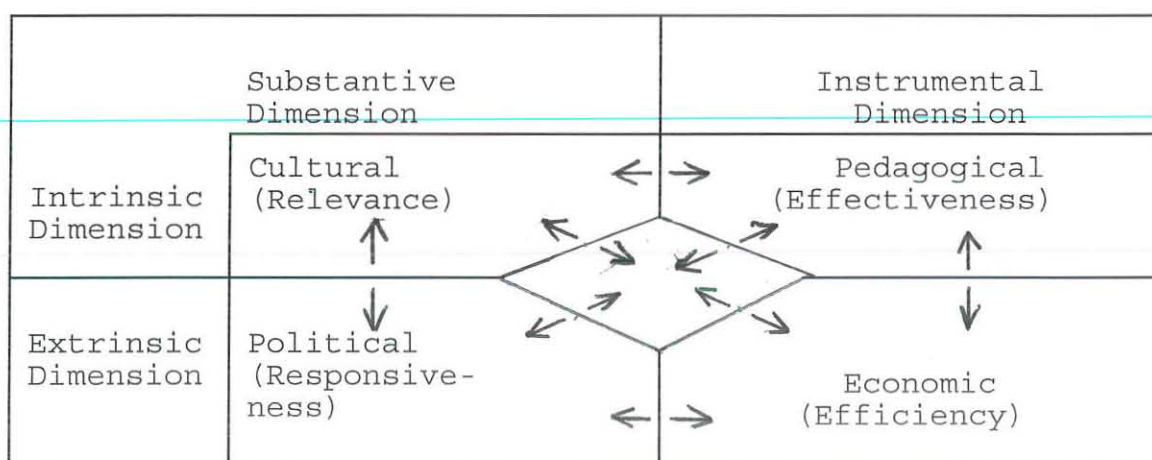
Responsiveness conceives an organization as an open and adaptive system in which administrative mediation emphasizes the situational variables of the external environment.

Relevance conceives an organization as a wholistic and interactional system. In an attempt to overcome the limitations of economic efficiency and pedagogical effectiveness, political responsiveness was developed in the context of meeting public demands; but political responsiveness caused unprecedented expansion of education.

Cultural relevance has become then the dominant criterion of educational policy-making and administrative performance. So, taking the responsiveness and relevance models together became strategic to administer public institutions such as school systems. That in turn enabled to increase public

participation in the operation of education in school systems (Sander 1989: 226-230; Bush et al., 1980: 43; Curle, 1963: 118) (see also Figure 6).

Figure 6: Multi-dimensional Paradigm of Educational Administration Model



Source: Sander (1989: 227)

Hoy and Miskel (1987: 101-103) described that school organizations can adapt the external environment by means of coping strategies, and can also change their environments. Two types of strategies are used to manage the external environment: (1) Establishing favourable linkages and (2) Shaping environmental elements.

When establishing favourable linkages, they can enter into venture in vocational education, which is one of the best predictor of organizational influence on the environment.

Co-optation represents another strategy of developing favourable linkages. Co-opting means bringing leaders from important elements in the environment or the public into policy structure of a school system. Co-optation occurs when influential citizens are appointed or represented in boards of school management and in school advisory councils or committees. Thus, it is found evident that the public can increase its influence on the social organization (the school system) via the boards or councils, or committees.

with regard to shaping environmental elements, politicking is a primary method that includes the technique to influence government regulation especially that of the local government. Politicking can be used to erect barriers against unwanted influences and to establish rules favourable to existing schools and their policies.

Therefore, exercising school or educational public relation program becomes necessary.

NSPRA in the work of Deighton (1971:314), has developed a comprehensive definition of educational public relations as follows.

Educational public relations is a planned and systematic two-way process of communication between an educational organization and its internal and external publics. Its program serves to stimulate a better understanding of the role, objectives, accomplishments, and needs of the organization. Educational public relations is a management function which interprets public attitudes, identifies the policies and procedures of an individual organization with the public interest,

and executes a program of action to encourage public involvement and to earn public understanding and acceptance.

Generally, public or community participation is an evolutionary process in which activities at the micro-level can create the conditions for increased popular participation in the planning and implementation of programs (Bamberger, 1988: 5).

To realize this, school principals have a significant role to play as middle level managers and as boundary spanners (McPherson et al. in Goldring, 1993: 94; AASA in Olsen, 1963:392).

The roles of a school principal can be identified in various contexts of community power structure as described by McCarty in the edition of Deighton (1971: 350), as follows.

In a dominated community and board or committee, the principal must play the role of functionary if he is to act effectively as the integrator of community or public interests and school programs.

In the factional community and board, the principal must work with the majority; but, since these communities often change majorities, he must be careful not to become identified too closely with one faction. In other words, he must be a political strategist or he takes middle course.

In the community with a pluralistic structure, the principal is expected to give professional advice based on the best educational research and theory. He is not limited to carry out policy handed down to him; nor is he forced to shape his opinions according to the view of the group in power. He can express to the committee or board alternatives to any policy, and he can delineate the consequences of any action openly and objectively.

In the community with the inert power structure, the principal initiates action and the board becomes merely a rubber stamp. In this case, his role is that of a decision-maker. Due to the lack of interest on the part of the board, he is not only free to initiate action in substantive matters but must do so if the program is to be effective.

Nonetheless, among the means of engaging the public or the community in school affairs as per Gorton et al. (1988: 104), school principals have found the following to be beneficial.

- (1) A curriculum to be conducted periodically to find out the goals and objectives advocated by the community;
- (2) Provision to be made for a standing advisory committee services in a capacity for the school administration;
- (3) Efforts to be made to involve the public in the day-to-day affairs of the school.

Thus, when we say public participation, the participation should have a real or discernible impact on the decision-making process in such a way that the expected needs of the participants are reflected in the results of planning and implementation process (Weiler in Jean, 1985: 297).

As a result, parents and other citizens or the public environmental-suprasystem in general have the right in democratic societies to participate in the decision-making or operation of school systems. As per Marsh (1988: 84), in relation to the parental or public right, there are five among others expected:

- (1) To be given information about school procedures
- (2) To have access to interpretation of records
- (3) To visit and observe programs
- (4) To be represented on decision-making bodies
- (5) To question the educational program and policy of their local school

2.3 Dimensions of Public Participation as Environmental-Suprasystem Support to Schools

In the broadest sense, the environment is external to the organizations' boundaries; however, it may be useful to think of the environment in two ways: (1) the societal (general) environment, which affects all organizations in a given society and (2) the specific (task) environment, which affects the individual organization more directly.

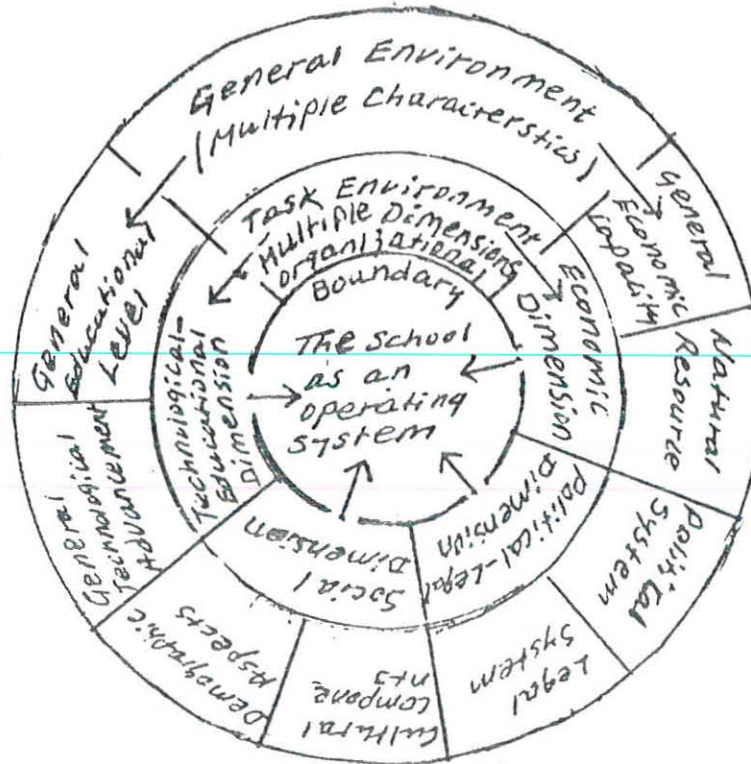
Thus, the environment of schools is composed of many converging forces (Hanson, 1991: 138). As a result, public inputs into school level decision-making have been highlighted over recent years with certain developments occurred in schools (Marsh, 1988: 109).

This means that the community or the public have various values of economic, political and social nature that influence educational purposes (Davis in the edition of Dobson et. al., 1975: 307).

Thus, the dimensions of public participation can be classified as:

- (1) Economic
- (2) Political-legal
- (3) Social and
- (4) Technological-Educational (Kast and Rosenzweig, 1985: 137; Hoy and Miskel, 1987: 88); (see also Figure 7).

Figure 7: Relationship of General and Task Environments to the Organizational System



Source: Adapted from Kast and Rosenzweig (1985: 138).

In relation to this, Sander (1989: 227), has described educational institutions as:

- (1) those having a business nature in which administration is governed by economic efficiency as a predominant criterion.
- (2) those more concerned with their political role in the larger community and, for this reason, their administration is primarily based upon the criterion of political responsiveness.
- (3) those adapt cultural relevance as a predominant criterion of their administration.

(4) those in which their administration is guided principally by pedagogical effectiveness in the attainment of instructional objectives.

These Sander's four specific models can be synthesized with the four corresponding dimensions of public - environmental-suprasystem participation described above by Kast and Rosenzweig (1985: 137; Hoy and Miskel (1987: 88) economic with efficiency; political-legal with political responsiveness; social with cultural relevance; and technological-educational with pedagogical effectiveness).

2.3.1 Economic Dimension of Participation

Generally, economic dimension of environment includes the general economic framework, including the types of economic organizations private versus public ownership, the fiscal policies, and the level of the investments as well as consumption characteristics (Kast and Rosenzweig, 1985: 137).

And more specifically as Sander (1989: 228) noted, the economic dimension involves financial and material resources.

Thus, the public or parents always have been involved in schools to assist with fund-raising activities traditionally; because, resources are always scarce in schools (Marsh, 1988: 82-91).

Here, the fundamental assumption of resource dependency theory is that organizations are unable internally to generate all the resources and functions to maintain themselves; because, resource must come from the environment (Hoy and Miskel, 1987: 95). This includes raising money for routine operation, construction, maintenance of buildings and grounds, furnishing and staffing, as well as for salary payment and incentives (Preston, 1991: 283; Moegiadi in the edition of Shaeffer, 1992: 94).

In general, most of the resources or contributions for school support, as Moegiadi in the edition of Shaeffer (1992: 101) and Morgan et al. (1992: 13) indicated, are collected from parents. For this reason, boards of school management are supposed to have a systematic plan to mobilize resources from the public.

In relation to public support, Phan and Cao in Bray and Lillis (1988:217) have asserted that increased use of public resources has the advantage, that the government will receive no more requests from the public for building more schools and running them. Because, the public has felt that it is responsible for its own community; and because, it is directly concerned with the education of its children.

As Bennett (1975: 154) has described it, if the public is persuaded of the need to construct schools for its children's education, the government could save very large amount of

money and invest on other facilities to maintain the quality of educational operation.

That is why in association with their "economic adjustments", there is a trend in many countries for governments to devolve responsibility for logistical support to schools (Preston, 1991: 275).

In this connection, Shaeffer (1991: 7) has noted the imperativeness of public participation as follows:

There is no enough money available and not enough control able to be exercised over the very bottom of a bureaucracy to guarantee that the reforms planned and organized at the central level can achieve their anticipated goals at the level of the school. There is thus the need to expand out to other sectors, both for financial and material resources and for assistance in planning and implementing educational change.

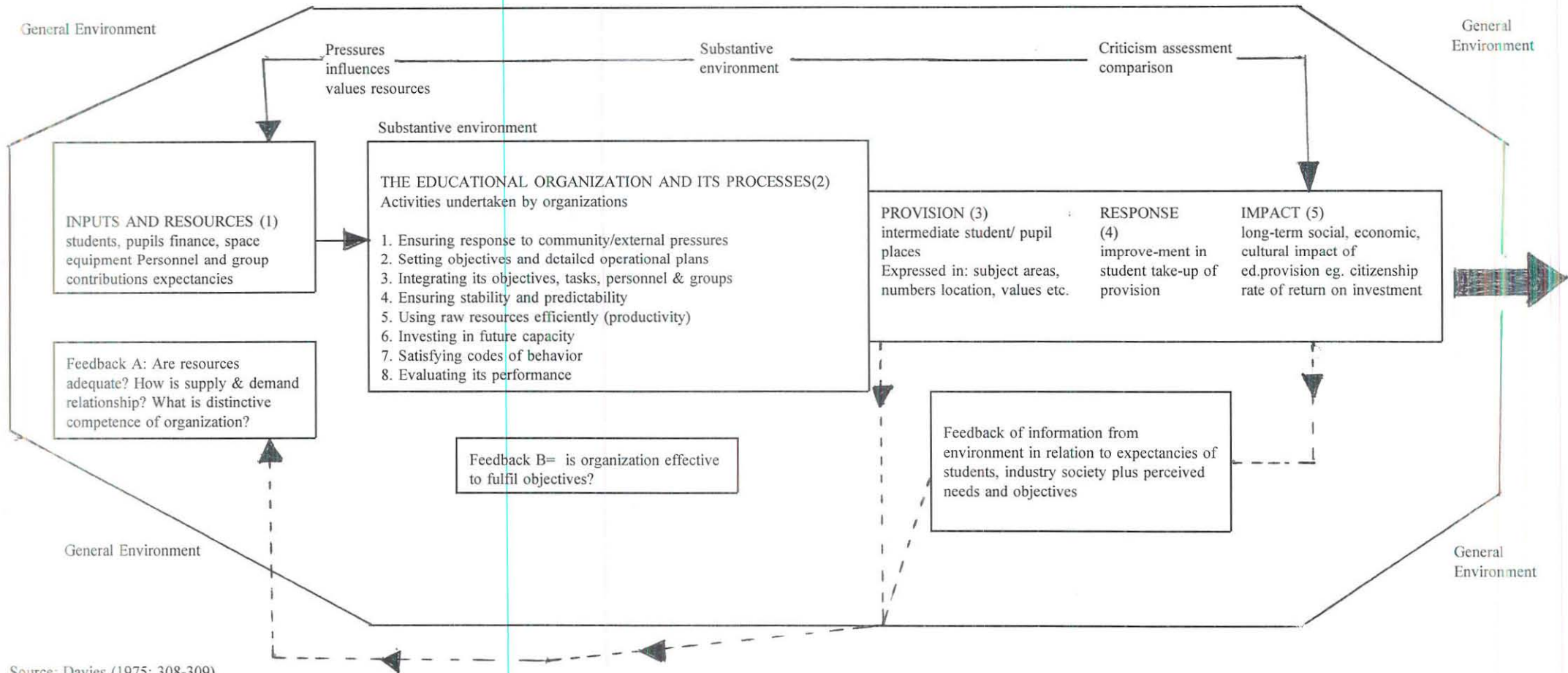
Apparently, when compared with government inputs and when opportunity costs to households are included in the calculations, public support in terms of financial resource does have a highly substantial but hidden share to sustain the existing schools everywhere (Moegiadi, in the edition of Shaeffer, 1992: 95; Preston, 1991: 275).

In theory, schooling should be equal in all aspects. Yet, school systems inevitably "mirror" the resources of their

supporting public environmental-suprasystem or "a community gets what it deserves" (McCarty in the edition of Derghon, 1971:347-348; Moegiadi in the edition of Shaeffer, 1992: 92-101).

This indicates that since education is obviously expensive, the presence or absence of public support to schools with resources is the most decisive factor in determining the overall quality of school systems. This leads to the question of quality of education in relation to organizational effectiveness (see Figure 8).

Figure 8: A Systems Model of Educational Institution in the Context of Organizational Effectiveness



Source: Davies (1975: 308-309).

To this end, good management of school resource is supporting factor for more public participation (Moegiadi in the edition of Shaeffer, 1992: 95; Jean, 1985: 312; Bush et al., 1980: 45-47).

Moegiadi in the edition of Shaeffer (1992: 103) suggests that to overcome the problem of the public that cannot afford to pay the financial contribution, they should be encouraged to contribute in non-monetary forms equivalent to the amount of money they are expected to pay. This alternative would give them a choice in the type of participation they could offer.

Katz and Kahn in Silver (1983:53) distinguished between maintenance inputs as those required simply to sustain the system and production inputs as those used for growth and goal attainment. Yet, the financial and material resource support from parents or the public in various forms especially in developing countries do not cover the operational cost let alone to carry out other development projects (Mogiadi in the edition of Shaeffer, 1992: 96).

Nonetheless, it is only the public and the mobilization of its resources that can ensure schooling (Goldring, 1991: 220).

Besides, it should be borne in mind that the support of schools has been through public taxation, and the people must support the program of schools (Douglass, 1954: 507; Hoy and Miskel, 1987: 95).

Therefore, as Ranson (1988: 6-7) put it, education must be accountable to society and economy.

This is because school systems' dependence on the public is determined by the following factors (Hoy and Miskel, 1987: 95-96).

First, The importance of the resource to the organization's continued operation and survival that affect the level of dependency.

Second, The amount of discretion the other party has over the allocation and use of the resource.

Third, The number of alternatives or extent of control that the other has over the resource. In other words, the dependence of one organization on the other derives from the concentration of resource control.

Accordingly, the public: (1) expect that schools are provided with sufficient, competent, and experienced teachers and (2) expect that class-size be adjusted to suit specific needs (Marsh, 1988: 95-103).

2.3.2 Political-Legal Dimension of Participation

The political-legal dimension of public participation is the general political climate of the society, the degree of concentration of political power and the nature of political organization (degrees of decentralization, diversity of functions, etc.) (Kast and Rosenzweig, 1985: 137). Accordingly, there seems to be a growing realization that the

practices of education are highly political and should not be confined only to the initiatives and care of the teaching profession (Marsh, 1988: 109).

According to Sander (1989: 228), political dimension involves the strategies of concrete action of the participants in the education system. The importance of the political dimension is rooted in the specific responsibilities of the education system.

The importance of political dimension is also found in the education system that involves various conditioning circumstances of the environment, and it is influenced by powerful external variables. Hence, for increased public participation and effectiveness through economic efficiency, educational administrators seek responsiveness to the public or the external environment.

As a result, the public is likely to acquire power and influence in the educational operation of the school as an organization if it is formally organized as interest groups and Coalitions (Goldring, 1993: 98).

Schwartz in Goldring (1991: 215) notes that public "involvement" encompasses "ideological" demands, that is, it represents an attempt to influence learning structures and curricula in light of personal values and perspective on life. And a high correlation was found between the level of public

involvement in the development and activities of alternative educational programs, and the intensity of public's ideological tendencies.

Peterson in Goldring (1991: 220) stated that the actions of public coalitions are intended to influence decision-makers at various levels of educational establishment in order to bring about the enactment of educational policies consistent with their beliefs and outlooks.

Thus, guidelines for obtaining increased public participation or "involvement" through associations and committees should be provided by governments (Moegiadi: in the edition of Shaeffer, 1992: 104; Douglass, 1954: 508). For this reason it has become a central plan of government policy in many countries (Morgan et al., 1992: 11).

With regard to the legal application, it is the constitutional consideration, the nature of the legal system, specific laws concerning the formation, and control of organizations (Kast and Rosenzweig, 1985: 137). Thus, as McCarty in the edition of Deighton (1971: 348) put it, educational systems are essentially political subdivision of local governments that reflect on the expectations of their governing people.

Hence, government representatives, that include city and community elected and appointed officials can provide

resources for schools as necessary (Nichols in the edition of Deighton, 1971: 343).

As a result, principals have to administer their schools according to local powers, where the public is involved in local school policy-making (Goldring, 1993: 94; Hanson, 1991: 137). For example, in the USA, from the perspective of the last 30 years, there have been certain forms of public "involvement" as legal provision for an elected school board to function at the local school. The legal provision has been decentralized level; because, the school board is supposed to be a representative of the public. Thus, the board has specific power and authority to operate schools and share policy decisions (Gorton et al., 1988: 66).

However, in less developed countries like that of Papua New Guinea and other European countries like Ireland, school boards of management appeared to be little participative in policy related activities of schools; they are only confined to pupils discipline matters (Preston, 1991: 283; Morgan et al., 1992: 15).

Nonetheless, in a wider perspective, schools in many countries have experienced an increasing participation or "involvement" in local legislation of education. Thus, school management boards have moved from having an advisory role to have a policy determining role (Hopes in Poster and Day, 1988: 93).

As environmental suprasystem perspective illustrates, the public being the main source of school resources, the school board as a representative of the public makes policy decisions (Silver, 1983: 77).

Consequently, public or community power is held over members of community-wide boards or committees and also over professionals implementing the policies of those committees or boards (McCarty and Ramsey, 1971: 16). So, with the legal perspective, the public has the right to: (1) be able to appeal against decisions that are considered to be unsatisfactory (Marsh, 1988: 95) and (2) to question whether or not school resources are used efficiently (Moegiadi in the edition of Shaeffer, 1992: 102).

In connection to the experience of legal provision to public participation, in countries like that of the UK, it has passed through various phases: (a) the first phase of 1969-75 is that attached the quality of comprehensive schooling and the need to strengthen the "voice" of parents; (b) the second phase of 1974-80 is that developed "parents charter" a theory which tied educational quality to consumer accountability and (c) the third phase of 1984-88 is that conceives a great change in parental power culminating in parliament in 1987-88 with the new Education Reform Bill (Ranson, 1988: 10).

In the Ethiopian context, in relation to the legal-support for public power legislations (Negarit Gazeta No.206

of 1980 and 260 of 1984) issued by the Ethiopian government and the guidelines set by the Ministry of Education indicate that: (1) on the part of the schools to give due services to the community and (2) on the part of the community to allow the school to prepare students for employable skills and attitudes (Zaudneh, 1989: 8). And more recently, the new Ethiopian Educational and Training Policy declares public participation as a legal provision (TGE, 1994: 28).

2.3.3 Social Dimension of Participation

The social dimension of public participation is related to the definition of social roles, the nature of social organization, and development of social institutions (Kast and Rosenzweig, 1985: 137).

The social dimension includes the cultural aspects like the historical background, values norms of the society, views on authority relationship, rationalism, science and technology. Moreover, the social dimension includes demographic aspects that constitutes the nature of human resource, their number, distribution of age and gender, rural types and urbanization (Kast and Rosenzweig, 1989: 137).

When we say cultural aspects of social dimension, it covers the philosophical, anthropological, biological, psychological, sociological values and characteristics of participants in the educational system and society in general (Sander, 1989: 228). Again as Sander has identified it, the

role of an educational administrator is one that includes coordinating the action and interaction of the persons and groups who participate directly or indirectly in educational processes. As to the cultural aspect, relevance that corresponds to the level of technological-educational development of a society is used as the basic criterion in the administration of educational systems.

As a result, when instructional programs are enriched with community or public resources, learning becomes more relevant and meaningful to students (Nichols in the edition of Deighton, 1971: 342).

Therefore, we can say that the public in general, as its right does have values supported and acknowledged if it is able: (1) to discuss values implicit in the educational program; (2) to insist that the teaching of schools is not in conflict with the values of people; (3) to expect the school to reinforce the broad cultural experiences and aspirations of the public or the society (Marsh, 1988: 95).

As Rose in Gittel in the edition of Deighton (1971: 352), community action groups such as PTAs, citizens' associations observed, like all outer-directed voluntary associations can function as mechanisms for social change, assuring vitality to the system. Almond and verba in Deighton (1971: 352) have

indicated what has been realized by social scientists that "... the more active such voluntary associations are in society, the more competent the citizenary".

Moreover, the most recent and future-oriented form of public participation is where the school serves as an equal partner, possibly as coordinating institution in developing or enhancing educational, recreational, social, cultural and health activities as a community-education. This partnership enables to have more social influence over educational systems (Gorton et al., 1988: 66-67).

2.3.4 Technological-Educational Dimension of Participation

Concerning the technological-educational dimension of public participation, technological refers to the level of scientific and technological advancement in society (Kast and Rosenzweig, 1985: 137-141). This includes the physical base (plant, equipment, facilities) and the knowledge base of technology (the degree to which the scientific and technological community is able to develop new knowledge and apply it).

Educational refers to general educational level of population that includes the degree of sophistication and specialization in the education system. Technological conditions are changing rapidly and organizational change also takes place in a corresponding rate as a result of the change of environmental contexts.

Thus, the pedagogical or technological-educational dimension of educational administration refers to the educational principles, scenarios, and techniques that are intrinsically committed to the effective attainment of the objectives of a school system. And the attainment of educational objectives can be realized through the support or participation of the public environmental-suprasystem (Sander, 1989: 228).

As a result, public participation increases richness and variety of the school learning environment, because of the wide range of skills, knowledge, and attitudes that can be provided by the public environmental-suprasystem (Marsh, 1988: 84). Therefore, the type of content chosen has to depend upon environmental potential, local needs, and the social-cultural conditions of the public (Moegiadi in the edition of Shaeffer, 1992: 98).

For this reason, it is necessary to incorporate problems of the public related to the environment such as draught, natural degradation, ecological imbalances, pollution, old and new diseases into school curriculum (Ekanayake, 1987: 129).

Moreover, to make education beneficiary to the public, the business community can become actively involved in

programs related to technical and vocational training of the would be employees (Gittel in the edition of Deighton, 1971: 353; Gorton et al., 1988: 44-45).

Besides, parents are supposed to raise issues such as the strategies to be adopted in the teaching-learning process; so that the public can have an input in the instructional planning and implementing (Morgan et al., 1992: 15-16).

In addition, the public or parents are to instill in their children a respect for learning, habits of study, and the ability to set goals and work diligently. Parents are also expected to participate in their children's education by monitoring their progress as well as encouraging their achievement. To this end, researchers have found the greatest impact on the children's learning-attitudes, values, habits (Redding, 1991: 149).

Thus, effective schools are places where principals, teachers, students and parents agree on the goals, methods, and content of schooling (Redding, 1991: 150). They are united by understanding the significance of a coherent curriculum, public recognition and giving incentives for students who succeed, promoting a sense of school pride and protecting school time for learning.

Furthermore, public participation is likely to improve educational program by ensuring the full advantage of taking local technology and knowledge (Bamberger, 1988: 9). For instance, for school systems in the rural areas, rural technology refers to all activities and skills of rural people in their day to day activities (Ekanayake, 1987: 129).

This leads to the development of self-reliance and recognition of local talents that would be a significant contribution for the curriculum and instruction with regard to techniques of agriculture and the like. This can bring relevance (Sander, 1989: 227-229) that has the importance of adopting the methods by the community to solve their problems and would also help to gain an insight into the learning-teaching process (Ekanayake on page 129).

In relation to the learning-teaching process, the use of public resources as an integral part of instruction has been common in developed societies (Nichols in the edition of Deighton, 1971: 344-345). For example, supervised farming programs for the future farmers consist projects and work experiences in farm-related occupations. To have such public participation, parents, employees and employers within the public are expected to cooperate with vocational teachers in aiding students to fulfil agricultural education based on the concept described by Nichols in the edition of Deighton (1971: 344-345) as "learning to do, doing to learn, earning to live, living to serve."

In other vocational fields, there are cooperative programs whereby students attend schools part-time in shops of business and industrial establishments as students' occupational training. And this program is closely related to the instruction provided in classrooms. This makes students to be competent and productive employees after leaving the school system as an output and enter to the public-environmental-suprasystem (Silver, 1983: 53-54). Besides, when conducted properly, trips, tours, on-the-spot observations on public resources based on the level of students' maturity and its relevance to classroom lessons are among the best of the school system's instructional procedures. Because such programmes are much easier to recall than that are acquired through second hand activities (Nichols in the edition of Deighton, 1971: 344-345).

Similarly, Izbecki in Hughes et al. (1987: 442) has noted that public support can be used in a variety of ways in aiding and sustaining the work of professionals. This means, there is an important aspect to use resource persons in the teaching-learning situations along with a trained or professional pedagogue. This is so because the resource person would bring the public or the community into focus (Ekanayake, 1987: 136). In this manner, the public do possess a wide range of specialist skills that can be welcome as an addition to school curriculum (Marsh, 1988: 92).

Reference to specialists, it includes such skilled persons as musicians, artists, hobbyists, professionals, sales and services workers, merchants, businessmen, bankers, industrialists, farmers, home makers; as school aids that are having resources to provide school systems (Nichols in the edition of Deighton, 1971: 342-343). Citizens' advisory committees are other very valuable resource bodies for school systems, often known as councils at the school level and a committee at the department or subject level. As Stearns (1955: 300) has described it, citizens' committees can provide additional means of assigning specific tasks to qualified citizens who otherwise might have not relationship to local education except through the payment of taxes or registration fee or school fees.

Thus, the technological-educational dimension of public participation, as the last dimension, ends chapter II (review of the related literature) here.

Next, the study deals with the presentation, analysis and interpretation of data using review of the related literature as a theoretical frame work in chapter III.

CHAPTER THREE

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

This part of the study deals with the presentation, analysis and interpretation of the data. The data was gathered through a questionnaire from two groups of respondents. The first group includes principals, deputy principals, unit leaders teachers from schools as educational systems. The second group of respondents comprizes school administration committee members, parent committee members parents as representatives of the public environmental suprasystem. Of the total questionnaires distributed for the representatives of the schools and the public representatives, 295 (98%) and 293 (98%) respectively were returned. Also the data obtained through the structured interview made to all principals of the schools taken for this study were used as supportive to the questionnaire in the analysis of the study.

In the course of studying the public suprasystem's participation in the educational operation of the educational systems (the schools) of central Ethiopia, there were dimensions in use as sources of variation. And these dimensions are: school level, school size, school status (government or non government appropriations), experience of principals, as well as geographical setting of schools

forthcoming under 3.1, 3.2, 3.3, 3.4 and 3.5 respectively. In the process of presentation, analysis and interpretation of the data, 4 tables are displayed under each dimension. Under the first, tables 1,5,9,13,17 are used for the variation in the openness amplitude of schools. Under the second, tables 2,6,10,14 and 18 are used for the extent of public influence on schools. Under the third, tables 3,7,11,15 and 19 are used for the magnitude of the dimensions of public participation. And under the fourth, tables 4,8,12,16, and 20 are used for the summary of the total public participation.

In writing the findings during the course of the presentation, analysis and interpretation of data, the following steps were attended to. First, whether there is a significant difference between the two categories under each dimension was indicated. Second, the direction of the difference between the categories under each dimension was specified. Third, the results were cross-checked as to whether they are consistent with the literature. Fourth, it was attempted to hypothesize as much as possible when the results are found inconsistent with the literature using the structured interview.

In processing the data gathered, one-way ANOVA Mean and Correlation statistical techniques are mainly used.

One-way ANOVA is used (because the dimensions of level, size, status, experience of principals, and geographical

setting are used with two dichotomous categories) to find whether there is significant difference between the categories under each dimension. And the data is processed with a computer.

In relation to the usage of ANOVA, a summary of whether the difference between the categories under each dimension is statistically significant or non-significant (at 0.05 level of significant) is possible to refer in Appendix A-1. In addition, the summary includes list of dimensions, tables, probabilities, categories, and mean scores.

Correlation coefficient is made in use to show the relationship between an item and another, a dimension, a major component of the systems approach in dealing with this study (openness amplitude of schools, public influence on schools, and the dimensions of public participation) as can be referred from Appendix B-1. Correlation coefficient is also used to see the relationship between a dimension and a major component, as well as between a major component and another as it is possible to see in Appendix B-2.

Ultimately correlation coefficient is used in this study to see the state of public participation (the degree of public participation in general or on the whole) in the educational operation in schools of central Ethiopia.

The list of summarized items of the questionnaire are separately made available in Appendix H-1 so that they could be suitable for computer consumption and for reference.

Mean scores made available in Appendix A-1 are used to show the direction or as how the differences between the categories under each dimension are found significant or non-significant (by writing which category has the larger mean score and which one has the smaller mean score). The mean scores are also obtained from what is processed with a computer.

Moreover, the calculations to show the relationship between: economic background and public participation in primary schools, economic background and public participation in secondary schools, economic expenditure and academic achievement of primary schools, economic expenditure and academic achievement of secondary schools, public participation on the whole and academic achievement of primary schools, public participation on the whole and academic achievement of secondary schools are found displayed on appendices C-1, C-2, C-3, C-4, D-1 and D-2 respectively. Besides, the relationship between classroom - student ratio and academic achievement of both primary and secondary school levels which is possible to exhibit on appendices E-1 and E-2 are respectively analyzed.

3.1 Public Participation in Educational Operation in Government Schools by Level

Table 1

ANOVA of Openness Amplitude of Schools
with Respect to Their Level

Source	SS	DF	MS	F
Level	289.49	1	298.48	10.43*
Residual	10766.67	388	27.75	
Total	11056.14	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be seen from table 1, the observed value $F(1,388) = 10.43$ is greater than the table value (3.86). So, there is a statistically significant difference between primary and secondary government schools in their openness amplitude to the public. The primary level category has larger mean score (32.02) than the secondary level category (30.30).

With regard to openness of the school, the government primary school level category has better amplitude of openness to the participation, support and appropriate interaction with the public than the secondary level category. As a result, there is negative correlation (-0.05)

found between school level and openness amplitude. Moreover, the primary level category for feedback facilities and its effort in maintaining its position to its environmental suprasystem demand is found to be better.

As the openness of the schools to the interwork, support as well as interaction and the permeableness of the schools for public involvement is found to be correlated at 0.34, where parents are more welcome in primary schools than in secondary schools. This acceptance of parents is particularly to involve them in academic activities and disciplinary actions. Accordingly, the public feels a sense of ownership more towards the primary than the secondary government schools.

The correlation coefficient between the degree of permeableness of the schools to the public and the principals' performance as middle managers is found to be 0.43.

Thus, the principals' performance of government primary schools as middle managers are better in negotiating and dealing extensively and continuously with the public. That makes the correlation coefficient between level and the principals' performance as middle managers to be -0.14.

Since principals' performance as middle managers and their degree of positive attitude towards public

participation does have a correlation of 0.57, the primary school principals have more positive attitude towards public or parental participation. This means, the secondary school principals do see public involvement as a source of worry more than the primary school principals. Hence, the correlation coefficient between level and the degree of principals positive attitude happen to be -0.24.

In the same manner, the correlation coefficient between the positive attitude of principals and the balance of relationship of the schools with the public obtained in this study is 0.58. Then regarding the balance of relationship between the schools and the public, principals of the primary level have less difficulty of the split of loyalty and dual responsibility toward the interests of teachers and the public.

As a result, when compared with the principals of secondary schools, those of the primary level are in a better position in experiencing a face-to-face or two-way communication between their school and the public. This caused the correlation coefficient between school level and maintaining a balanced relationship to be -0.18.

Speaking of the level of the schools' boundaries, there is strong positive correlation between maintaining balance of relationship of schools and the schools' level of boundary to buffer public demands at 0.54 coefficient. Thus, the primary

schools do exercise lower level boundary to buffer public demands. This again is because, the primary schools exercise more collaboration to reach at a common goal with parents or the public and more socialization by persuading the public to acquaint with the schools' programs or objectives than the secondary category of schools.

As a result, the correlation coefficient between school level and level of boundary as well as the degree of socialization strategy in responding to public demands are found as -0.14 and -0.20 respectively.

This could be due to the effectiveness of the boundary spanners of primary schools as educational systems with the public environmental-suprasystem where, the correlation coefficient between school level and the effectiveness of boundary spanning is found as -0.12. This shows that the school principals, the school administration committee members of primary schools are better in representing as well as sensing the attitudes, needs, beliefs, values, goals, rules and regulations of both the school and the public. Because, a positive correlation between the strategy of responding public demands and the effectiveness of boundary spanning is obtained as 0.41 coefficient.

The effectiveness of boundary spanning is also found positively correlated with the types and the levels of public involvement at 0.42, and 0.46 coefficients respectively.

Yet, the relationships between school level and the types, and the levels of public involvement are found negatively correlated at -0.06 and -0.01 respectively. Accordingly, concerning the types of public involvement, the interests of the public do more converge or are found to be more appropriate with primary schools category than those of secondary schools. This is so because, most of the society is proximate to type I families (C/F pp.47-48 of this) which are with subsistence type of living and mainly less literate. That again corresponds with the level of enlightenment of the significance of further schooling for their children. In other words, the society in general does not see further education as its concern. Besides, students of primary schools are younger in age that obliges for frequent communication, and primary schools are proximate to the parents of students than secondary schools; because secondary schools are located far away. For this reason, the correlation coefficient between the appropriateness of family type and the level of public involvement is obtained strongly as well as positively as 0.51.

Likewise, the level of public involvement in primary schools are with better position that can be taken as "high level involvement" (C/F pp.45-46 of this). Accordingly, primary schools are in a better standing in the activities of school administration committees and parent committees than that of the secondary schools.

Through their relationship that is found as 0.34 correlation coefficient, the level of school boundaries can affect schools' autonomy in light of decentralizing or devolving school matters(except policy and technical matters) to the public. Accordingly, there is more delegation to the public for primary schools than secondary schools so that the public influences the direction and execution of primary schools' educational programs than those of the secondary schools, because the public feels that the primary schools "belong" to it more than the secondary schools. That is why this study shows -0.24 correlation coefficient between school level and autonomy of schools in light of delegation responsibility to the public.

Table 2
ANOVA of Public Influence on Schools with
Respect to Their Level

Source	SS	DF	MS	F
Level	294.41	1	296.41	22.69*
Residual	5068.91	388	13.06	
Total	5365.32	389		

*P < 0.05 (There is a statistically significant difference at 0.05).

As can be observed from table 2, the observed value, $F(1,388) = 22.69$, is greater than the table value (3.86).

Thus, there is a statistically significant difference in public influence on schools between the government primary and secondary school levels. The primary level category has larger mean score (24.21) than the secondary level category (22.47).

On the subject of public influence on the schools' educational operation, the public does its influence more on the educational operation of primary schools than on that of secondary schools. This includes the determination of school policies and programs. For this reason, the study shows a correlation coefficient between school level and the extent of public influence on schools to be -0.23.

Along these lines, the correlation coefficient between public influence on the schools' educational operation and the prevalence of appropriate environmental dimensions of the schools is obtained as 0.38. This includes the uncertainty, the clustering, and the question of scarcity. Accordingly, as to the uncertainty, the primary schools are more confronted with public demands on the process of their educational operation. In relation to the clustering, the public is more organized to deal with the primary schools. This might be due to the prevalence of stronger school administration committees and parent committees in all primary schools whether they are of rural or urban geographical setting.

Moreover, due to the general lower economic status of our society, the public is more able to support primary schools than secondary schools with relation to the scarcity dimension. Consequently, the correlation coefficient between school level and the prevalence of appropriate environmental dimensions of schools happen to be -0.15.

Taking into account the appropriateness of environmental dimensions of schools, its correlation coefficient with the appropriateness of environmental characteristics is found to be 0.10.

Despite that the primary and secondary school categories have got environmental characteristics of both placid randomized in the rural areas and placid clustered in the urban areas, the secondary schools category are found experiencing even lower interdependence in both environments with the public. This is mainly because, the students of the urban secondary schools do come from more diversified community economically, educationally as well as locality wise. Thus, the correlation coefficient between school level and the appropriateness of environmental characteristics in this study has been found to be -0.07. This can be a sign for the public being traditional or lagging behind the secondary level; that makes the primary schools not to be at the take - off stage as the secondary schools.

Inasmuch as the correlation between the appropriateness of environmental characteristics and the degree of having pluralistic community power structure to be 0.08, the community power structure to the primary schools is found to be more suitable than to the secondary schools. Yet again, the correlation coefficient between school level and the degree of being suitable community power structure to schools with regard to their level is obtained as -0.05. This means that the degree of being pluralistic of the public representative body be it kebele or wereda council is found to be more suitable to the primary school level category than that of the secondary.

As a result, as to how the degree of being pluralistic community power structure and the nature of the school administration committee be correlated at 0.16 coefficient; the primary schools do have school administration committees represented geographically the schools' catchment area. And committee members are elected periodically according to the regulation having strong interest to participate. Besides, the primary schools have better parental attendance in general annual or periodic meetings than the secondary schools. Accordingly, the correlation coefficient between level of schools and the degree of the strength of school administration committees happens to be -0.27.

As the strength of school administration committees and the balance of relationship of the schools and the public go

being correlated at 0.58 coefficient, the primary schools do exceed the secondary schools in maintaining their relationship with the public. Accordingly, there is more satisfactory collaboration between primary schools and the public or parents. There is also better relationship between the school administration committees and parents, parents and teachers, school administration committees and teachers in the primary school level category than in the secondary. This makes the school level to be correlated with maintaining balance of relationship between schools and the public at -0.22 coefficient.

Likewise, parents, being the major components of the public, do exercise better participation as their right more in the educational operation of primary schools than that of the secondary schools. Here exercising parental right includes getting information about the schools, having access to the acquaintance of student academic outcomes, visiting programs in the schools, being represented in the decision-making body of the schools.

This makes the correlation coefficient between maintaining balance of relationship and exercising parental right in schools to be 0.59. As a result, the correlation coefficient between school level and the effectiveness of parental right come about with -0.16.

Yet, as the correlation coefficient between the effectiveness of public right and managing external environment be 0.37, in managing the external environment of schools, the primary schools as educational systems are found to be better. This means that the primary schools are better in establishing favourable linkages with their respective public environmental suprasystem as well as in shaping environmental elements.

With regard to the creation of favourable linkages, the primary schools are better in cooperation with their surrounding non-government organizations. That, in turn, can enable them to be influenced by the non-government organizations in their educational operation. Besides, they use more co-optation by means of bringing leaders from important elements in their environment to participate in school administration committees. As to the shaping of their environmental elements, the primary schools are yet better in exercising politicking as a technique to influence their respective local administrative body. That is to make its rules and regulations suit in their educational operation than the secondary schools. With regard to politicking, the possible factors that limited the secondary level are the distribution of origin of students, level of education of the teaching staff, and the complexity of educational program in secondary schools. Accordingly, the correlation coefficient between school level and managing external environments of schools is found to be -0.06.

Once more, the correlation coefficient between managing the external environment of schools and the degree of acquisition of appropriate role of principals in the school administration committees has happened to be 0.20.

By the same token, the degree of strength of the school administration committee and the extent of the principals acquisition of appropriate role in the committee does have a correlation coefficient of 0.35 (C/F pp.82-83 of this).

Consequently, the primary school principals are found to play the role of a principal influencing and being influenced in the committee and work with what the majority believes or decides than the principals of secondary schools. For this reason, the correlation coefficient between school level and the appropriateness of the role of principals in school administration committees is found to be -0.13.

Table 3

ANOVA of the Dimensions of Public Participation in Schools
with Respect to Their Level

Source	SS	DF	MS	F
Level	328.63	1	328.63	16.86*
Residual	7364.13	388	19.50	
Total	7892.72	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be shown on table 3, the observed value $F(1,388) = 16.86$ is greater than the table value (3.86). Hence, there is a statistically significant difference in the dimensions of public participation between the government primary and secondary school levels. The primary level category has larger mean score (24.31) than the secondary level category (22.47).

The public as a suprasystem of educational systems (schools), its major venue of participation comprises of the economic, political-legal, social, and educational-technological dimensions.

With respect to the economic dimension, the magnitude of public participation may vary from level to level depending on its capacity to support. Actually as is possible to observe from the table above, there is a significant difference in participating by the public to support the primary and secondary level categories. Accordingly, the primary schools exceed the secondary schools in obtaining financial and material resources. This makes the correlation coefficient between school level and the size of public economic support to schools be -0.18.

In this manner, the size of economic support from the public, and public expenditure when compared with that of the government's becomes negatively related at -0.01 correlation coefficient.

Another way of putting this is, in comparison, the public economic contribution to education at the primary level is greater than that of the secondary level though it is still lower when compared to that of the government. Thus, the correlation coefficient between school level and the size of public expenditure in relation to the government's becomes -0.05. This again means, as the school level increases, the public economic expenditure when compared to that of the governments' decreases; or the government makes more expenditure on secondary schools while the public do more on primary schools.

However, there is no correlation coefficient available in this study between the size of public expenditure in the educational operation of schools and the management of resources provided by the public. Any way, the primary level category of schools are in a better standing in the management of resources provided by the public than the secondary category. As a result, school level and the management of resources are negatively correlated at -0.34 coefficient. Accordingly, the primary schools have more efficient use with this respect in addition to their better position in presenting financial report to the public or parents. Besides, there is better control carried out over the school resources by the school administration committees of primary schools. Again, this can be an indication of that school administration committees as representatives of the

public are stronger in primary schools than in secondary schools.

With regard to the political-legal dimension of public participation, for the cause that the public being a source of school resources, it is supposed to have political-legal empowerment over the schools. For this reason the political-legal empowerment of the public over schools is related with: the size of public economic support positively at 0.40, the size of public expenditure in relation with that of government's negatively at -0.08, and with the management of resources provided by the public positively at 0.58 correlation coefficients.

On this account, the first coefficient shows that whenever the size of public economic support increases, the political-legal empowerment of the public correspondingly increases. That includes the capacity of school administration committees as public representatives to make recommendations regarding the educational operation of schools and to have the schools' policy determining role . The second coefficient indicates that when the government's expenditure increases, the political-legal empowerment of the public decreases. In like manner, the third coefficient shows that the political-legal empowerment of the public increases directly proportional to the efficient management of resources.

And yet, the correlation coefficient between school level and the political-legal empowerment of the public over schools is found as -0.24 showing that the public has better political-legal empowerment over the primary than the secondary schools.

There is strong as well as positive relationship found between the political-legal empowerment of the public and the legal provision to the public by local government to participate in school matters (with 0.61 correlation coefficient). Hence, the correlation coefficient between school level and the magnitude of this legal provision to the public is found as -0.24. This is an indication that the public is more encouraged by its respective local government or administration to participate in primary schools. In addition, the primary school principals are better aware of the legal involvement of the public as its right to participate. This shows that the public is able to appeal against decisions made by educational administration more in primary schools than in secondary schools. Moreover, the public can question more at the primary level than at the secondary as to whether or not school resources are used efficiently. This may be again due to the less openness of the schools at the secondary level than those at the primary in approaching the public.

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With regard to the social dimension of public participation in the educational operation of schools, for the most part, it is the social interaction of the schools as educational systems with their public suprasystem.

In this connection, the social interaction of the public is found correlated with the political-legal empowerment of the public at 0.47 coefficient; and it is found correlated with the legal provision of the government to the public to participate in school matters at 0.57 coefficient.

On this account, the correlation coefficient between school level and the degree of social interaction of the schools with the public is found negative as -0.12. Accordingly, the primary level category of schools do have better social interaction with the public. That better interaction in turn capacitates the public to have more influence on the primary than on the secondary schools.

This is to say that, the primary school principals are in a relatively better standing as for: coordinating the interaction between their schools and the public, making culturally relevant decisions concerning the program of their schools, and as for making their schools to serve as coordinating institutions for the public activities (such as social, recreational, cultural as well as health activities).

Furthermore, there is strong positive correlation coefficient found between the degree of social interaction of schools with public and the degree of acknowledgement of societal values by schools in their educational operation at 0.51. Therefore, the primary schools overdo the secondary schools in their acknowledgement of the societal values in their endeavour to educational operation.

Hence, the primary schools are relatively better as for enabling the public to: discuss values implicit in the educational program, insist that the teaching of the school is not in conflict with values of the people, as well as for enabling the public to participate in developing extra-curricular activities. Accordingly, the correlation coefficient between school level and the degree of acknowledgement of the societal values in educational operation is found to be -0.06.

The fact that the primary schools surpass the secondary schools in their acknowledgement of the societal value could be due to a relatively greater openness of the former over the latter. This is so because, openness amplitude of schools is strongly correlated with the degree of social interaction of schools and with the degree of acknowledgement of societal values at 0.57 and 0.53 coefficients respectively.

With respect to the technological-educational dimension of public participation in the educational operation of schools, there are three aspects to note: the magnitude of public participation to enrich varieties of educational programs in schools, the utilization of public resources by schools, and the scope of the activities of parent committees as advisory bodies.

These aspects of technological-educational dimension of public participation are found related positively with the degree of social interaction of schools with the public at 0.41, 0.39 and 0.39 respectively. And these three aspects of technological educational dimension of public participation are also related with the degree of acknowledgement of societal values in the educational programs of schools at 0.66, 0.46, and 0.48 correlation coefficients respectively. Accordingly, the correlation coefficient between school level and the first aspect, (public participation to enrich varieties of the educational program) is found as -0.01. Thus, primary schools possibly, due to their surpassing the secondary schools with respect to the economic, political-legal, and social dimensions of public participation, are found better with respect public participation to enrich varieties of the educational program.

This means, the primary schools are in a relatively better standing as for their attempt to: make the educational content depend upon the potential or needs of the public,

resolve environmental problems for instance by planting seedlings, enable parents raise issues of strategies to be adopted in the teaching-learning process, have parents that encourage their children work hard and diligently, and use local technologies to enrich the content.

Be that as it may, the second aspect of technological-educational dimension of public participation (the extent of utilization of public resources by schools) is found correlated positively with school level at 0.05 coefficient. This can be in use as an indicator that the secondary schools are overdoing the primary schools in coordinating trips and visits for students to their surrounding government and private organizations as public resources.

With the exception of this, the primary level category of schools are still found exceeding the secondary school category as regards to the third aspect of the technological-educational dimension of public participation (the scope of parent committees' activities as advisory bodies). Thus the scope of the activities of parent committees is related with school level at -0.18 correlation coefficient.

All other things being equal, the position of the primary schools as compared to that of the secondary schools in total public participation is seen on table 4 below.

Table 4

ANOVA Summary of Public Participation in Schools with
Respect to Their Level

Source	SS	DF	MS	F
Level	2990.77	1	2990.77	17.84*
Residual	65028.97	388	167.60	
Total	68019.74	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As it is possible to see on table 4, the observed value $F(1,388) = 17.84$ is greater than the table value (3.86). So, there is a statistically significant difference in public participation as a whole between government primary and secondary school levels. Totally, the primary level category has larger mean score (83.13) than the secondary level category (77.59).

This serves as an evidence of the fact that the primary schools are in a better status with regard to their openness amplitude. That includes lower level boundaries to buffer public demands, more accountability to the public as maintaining autonomy of schools in light of decentralization than the secondary schools. Accordingly, the correlation coefficient between school level and openness amplitude of

schools to the public as a major component of the systems approach is found being -0.19.

The primary schools do also exceed the secondary schools in being influenced by the public with appropriate environmental dimensions, characteristics, and with appropriate community power structure. This in turn enables the primary schools to have better balanced relationship with their public environmental-suprasystem. Thus, the correlation coefficient between school level and the extent of public influence on schools' educational operation as the second major component of the approach in dealing with this study is obtained as -0.25.

As regards to the dimensions of public participation, the public do participate better in primary schools particularly in the economic, political-legal, social, and technological-educational dimensions. As a result, the correlation coefficient between school level and the magnitude of the dimensions of public participation as the third major component of the systems approach is found to be -0.20.

All in all the correlation coefficient between school level and public participation as a whole is -0.23.

3.2 Public Participation in Educational Operation in Government Schools by Size

Table 5

ANOVA of Openness Amplitude of Schools with
Respect to Their Size

Source	SS	DF	MS	F
Size	304.58	1	304.58	10.99*
Residual	10751.56	388	27.71	
Total	11056.14	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As displayed on table 5, the observed value $F(1,388) = 10.99$ is greater than the table value (3.86). So, there is a statistically significant difference between small-size and large-size government schools in their openness amplitude to the public, classified on their student population. The small-size category has larger mean score (32.05) than the large-size category (30.28).

In relation to the systems approach of studying the degree of openness of organizations, table 5 above shows that small-size schools as educational systems are found more open to the public environmental-suprasystem than large-size schools. Accordingly, they are more open to the public to

visit, to support as well as for appropriate interaction. Besides, small-size schools are in a better position than large-size ones to receive feedback from the public and in demonstrating adaptation with public demands. As a result, the correlation coefficient between school size and the degree of openness of schools is obtained as -0.07.

Thus, small-size schools are more permeable than large-size schools for public involvement in their educational operation that includes curricular and extra-curricular activities. For this reason, the public has a feeling of ownership towards small-size schools more than the large-sizes. This can be again due to the reason that most of the small-size schools are in the primary level category of schools as well as in homogeneous communities.

Furthermore, the closer interaction of the principals with the public enables the small-size schools to be more effective in their performance as "middle managers". This means that their opportunity to have access with homogeneous society can enable them to negotiate extensively to get the available resources from the public more than that of the large-size schools. This makes then that the correlation coefficient between school-size and principals' performance as middle managers be -0.02. In this way, the degree of openness of schools to the public and the performance of principals as "middle managers" have positive as well as strong relationship at 0.57 correlation coefficient.

Again, there is strong relationship between the principals' performance as middle managers and the positive attitude of principals towards public participation at 0.57 correlation coefficient. Possibly, this can facilitate for the small-size school principals to have better attitude towards public participation than that of the large-size schools. Consequently, the correlation coefficient between school size and the positive attitude of principals towards public participation in the educational operation of schools is found as -0.07.

Moreover, by virtue of the positive as well as strong correlation coefficient found between the positive attitude of principals towards public participation and maintaining balance of relationship of the schools with the public (at 0.58 correlation coefficient), teachers of these schools can have better acquaintance with the public.

Therefore, the principals' problem of split loyalty and dual responsibility towards teachers and the public or parents is found lower in small-size than in those large-size schools. As a result, there is a better face-to-face relationship or two-way communication between the public and small-size schools than large-size schools. Seeing the position of small and large sizes of schools with this respect, the correlation coefficient between school size and maintaining the balance of relationship of schools with the public is found as -0.04.

The strong relationship found with maintaining the balance of relationship at 0.54 correlation coefficient be the cause of having better access to the public, the small-size schools are found exercising less buffering to public demands. Accordingly, the correlation coefficient obtained between school size and schools' level of boundaries to buffer public demands is -0.02.

Be that as it may, no correlation is found between school size and the appropriateness of strategy in responding public demands. However, 0.02 correlation coefficient is found between the effectiveness of boundary spanners (principals, school administration committees or parent committees) and school size. Here, the positive correlation coefficient obtained between school size and the effectiveness of school boundary spanners can be in use as an indicator for the difference in geographical setting of the small-size and large-size schools have. This is to say that the small-size schools are from rural while the large-size schools are from urban geobgraphical settings.

On that ground, though the public representatives (school administration committees) as boundary spanners are found stronger in small-size, the school representatives (the principals) also as boundary spanners are relatively found weaker than that of the large-size schools. On the other

side, the school administration committees of the large-size schools are found weaker while the principals are stronger than that of the small-size schools.

Yet, school size is correlated with the appropriateness of the type and level of public involvement at -0.18 and -0.14 coefficients respectively. This shows the compatibility of the type of families of the rural-type (which are more of homogeneous) to the small-size schools while not the diversified urban-type to the large-size schools.

This means, as mentioned above, the relationship of the small-size category of schools is stronger than the relationship of the large-size category of schools with their respective public environmental-suprasystem. Such wise, the small-size schools have relatively higher level of public involvement may be due to the more openness they have when compared with the large-size schools.

As a result, the public is found more responsible to the small-size than to the large size schools in light of devolving or delegating educational responsibilities. In this connection, devolution or delegation of educational responsibilities to the public as autonomy of schools is found strongly correlated with the appropriateness of the type of involvement and with the level of involvement at coefficients 0.36 and 0.41 respectively.

Table 6

ANOVA of Public Influence on Schools with
Respect to Their Size

source	SS	DF	MS	F
Size	49.80	1	49.80	3.64
Residual	5315.52	388	13.70	
Total	5365.32	389		

As it is possible to exhibit on table 6, the observed value $F(1,388) = 3.64$ is less than the table value (3.86). So, there is no statistically significant difference in the acquisition of public influence between the government schools with small-size and large-size student population. The small-size schools' category has a mean score of 23.70, while the large-size schools' category has 22.98.

Thus, public influence on the educational operation of small-size and large-size schools is exerted in a more or less similar extent. Accordingly, the small-size and large-size schools are on a similar status in the acquisition of public influence in their educational operation particularly in: the prevalence of appropriate environmental dimensions (uncertainty, clustering, and scarcity), the appropriateness to environmental characteristics (ranging from placid-randomized to disturbed-reactive), and in the degree of

appropriateness of community power structure (the degree of being suitable to local community power structure).

As a result, the relationship between school size and public influence on schools educational operation as a whole is found correlated at -0.10. This shows that the small-size schools are better influenced by the public albeit the difference with the large-size schools with this regard is statistically non-significant.

Table 7

ANOVA of the Dimensions of Public Participation in
Schools with Respect to Their Size

Source	SS	DF	MS	F
Size	532.19	1	532.19	28.05*
Residual	7360.56	388	18.97	
Total	7892.76	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As is illustrated by table 7, the observed value $F(1,388) = 28.05$ is greater than the table value (3.86). So, there is a statistically significant difference in the dimensions of public participation between the government schools with small- size and large-size student populations.

The small-size category of schools has larger mean score (24.57) than the large-size category (22.23). As regards the public economic support to schools, it is found negatively related with school size at -0.19 correlation coefficient. This indicates that primary schools make a major body of the small-size category. So, there is more public economic support to small-size schools than to the large-size schools related to what has been discussed under Table 3.

In this study, it has been found that the size of public economic expenditure when compared with that of the government is correlated with the size of public economic support to schools negatively at -0.01 coefficient. And this relative public expenditure is also correlated with school size at -0.31. This is to say that, as the public economic support increases, this public expenditure in relation to that of the government decreases.

Accordingly, the public makes more expenditure on small-size schools where the government makes relatively less expenditure; and less in the large-size category of schools where the government makes relatively more expenditure.

Moreover, a negative correlation is available at -0.15 coefficient between school size and the management of resources. As a result, the small-size schools go beyond the large-size schools in the efficient use of resources. This includes better exercise in presenting financial report to

the public as well as better control of the management of resources by school administration committees as representatives of the public.

With regard to the political-legal dimension of public participation in the educational operation of small-size and large-size schools, school size and the legal empowerment of the public over schools are found negatively correlated at -0.12 coefficient. Thus, the public has more legal empowerment over the small-size category of schools. This can be due to the reason that the category of the small-size schools are found comprising primary of schools as their major body which are found in a better position with this respect than the secondary schools' category. This implies that the category of secondary schools is mainly a major body of the large-size schools.

Thus, the public representatives of the small-size schools are more empowered to make recommendations regarding the educational operation of the schools as well as to have better policy determining role in the schools.

The other possible reason to the more public empowerment over small-size schools is the relationship between the size of public economic support to schools and the political-legal empowerment of the public over the schools. This is so because, this relationship indicates positive correlation coefficient at 0.40. This is to say that as there is more

size of public economic support to small-size schools, there is more political-legal empowerment of the public over the schools. And as there is less public economic support to large-size schools, there is obviously less political-legal empowerment of the public over these schools.

In addition, there is a strong positive correlation coefficient (0.61) between the degree of political-legal empowerment of the public over schools and the degree of legal provision to the public by local government or administration to participate in school matters. Therefore, the small-size schools as an acquisition of legal provision, when compared to the large-size schools are found in a better stage. Accordingly, the small-size schools are found better than the large-size schools as for: their respective local administration to encourage the public or parents for increased involvement through the school administration or parent committees, their principals to be aware of the legal involvement of the public as its right, the public to appeal against school decisions which they found are unsatisfactory, and as for the public, ability to question whether or not the school resources are used efficiently. These can be taken as causes for the negative relationship between school size and the degree of legal provision by the government to the public to participate at -0.11 correlation coefficient.

With regard to the social dimension of public participation in the educational operation of the small and large size schools, the small-size schools are in a better position than the large-size schools. This means that the small-size schools are better in maintaining social interaction with the public and in their acknowledgement of the societal values in their educational operation.

As a result, school size is related with the degree of social interaction and the degree of acknowledgement of societal values at -0.07 and -0.13 respectively. This being the case, due to the embodiment of primary schools in small-size and the secondary schools in large-size categories as major portions, the small-size schools are found better in relation to social interaction. In this regard, small-size schools are found better through their effort to make decisions of their programs be relevant to public needs and values. Besides, the small-size schools are found better in serving as coordinating institutions of public activities as well as in their acknowledgement of societal values in their educational operation.

With regard to the technological-educational dimension of public participation in the educational operation of small-size and large-size schools, the small-size schools do relatively exceed the large-size schools in three aspects. To this end, the correlation coefficient obtained between school size and the magnitude of public participation to

enrich varieties of school educational programs as the first aspect is found to be -0.19.

Likewise, the relationship between school size and the extent of utilization of public resources (governmental or private establishments) by schools as a second aspect of the dimension is found as -0.08 correlation coefficient.

By the same token, there are strong and positive relationships found between the magnitude of public participation to enrich varieties of school educational programs (the first aspect), as well as the extent of utilization of public resources (the second aspect) being in coincidence with the third aspect. This means that the first two aspects are found correlated with the strength of parent committees' activities as advisory bodies (which is the third aspect) equally at 0.51 coefficient. Thus, the small-size schools do exceed the large-size schools with respect to strength of parent committees; for which reason the correlation coefficient between school size and the strength of parent committee working as advisory bodies is obtained as -0.06.

On the whole, the relative standing of the small and large size of schools with regard to the total public participation is apparently seen summarized on Table 8.

Table 8

ANOVA Summary of Public Participation in Schools with
Respect to Their Size

Source	SS	DF	MS	F
Size	2459.99	1	2459.99	14.56*
Residual	65559.75	388	168.97	
Total	68019.74	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As is seen on table 8, the observed value $F(1,388) = 14.56$ is greater than the table value (3.86). So, there is a statistically significant difference between small-size and large-size schools in public participation as a whole. The category of small-size schools has larger mean score (82.90) than the large-size schools (77.87).

As a result, the small-size schools are better in their openness amplitude having lower boundary in responding to public demands. They are also better in the extent of having access to the public as an autonomy of schools in relation to the delegation of educational responsibilities to the public. This makes the correlation coefficient between school size and openness amplitude of schools as a major component of the systems approach to be -0.09.

Yet, the small and large sizes of schools are found in having similar public influence on their educational operation. As a result, the correlation coefficient between school size and the extent of public influence on schools as the second major component is found to be -0.10.

However, the small-size schools are still in a better standing with regard to the acquisition of economic, political-legal, social, and technological-educational dimensions of public participation. As a result, the correlation coefficient between school size and the magnitude of the dimensions of public participation is found to be -0.22.

The Reason for this is, in addition to their being less open system (C/F p.32 of this), the large-size schools which are more of urban schools instead of following the "organic" mode of administration, are found exercising the "Mechanistic" trend of approaching the public (C/F pp.69-70 of this).

Thus, the correlation coefficient obtained between school size and public participation all in all is -0.14.

3.3 Public Participation in Educational Operation in Schools by Appropriation (Status)

Table 9

ANOVA of Openness Amplitude of Schools with
Respect to Their Appropriation

Source	SS	DF	MS	F
Appropriation	157.66	1	157.66	6.53*
Residual	9434.57	391	24.13	
Total	9592.23	392		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As is made evident on table 9, the observed value $F(1,391) = 6.53$ is greater than the table value (3.86). Thus, there is a statistically significant difference between government and non-government schools in their openness amplitude to the public.

The category of schools with non-government appropriation has larger mean score (31.55) than the category with government appropriation (30.28).

Accordingly, the non-government schools are found to be open to the interwork, support, and appropriate relationship with the public more than the government schools. This makes

the correlation coefficient between school appropriation and the degree of openness to be found as 0.09.

However, though positive correlation coefficient (0.34) was found between the general degree of openness and the permeableness in academic matters to the public, the government schools exceed the non-government schools with this respect. This can be used as a sign for the non-government schools to be more of closed system than the government schools as regards to the academic matters.

This is mainly because, the non-government schools are in nature "wild" educational organizations that depend on competition based on their quality of educational outcome (C/F p.30 of this). This again makes the non-government schools to reach their end by using higher level of boundary especially to protect the academic quality. However, the government schools as "domesticated" educational organizations that depend relatively less on competition are found exceeded by the non-government schools in the general openness amplitude to the public. For this reason, the dimension of appropriation and one of the major components of the systems approach (the openness amplitude) on the whole are positively related at 0.04 correlation coefficient.

Other evidences for this are the positive relationships the school appropriation dimension has with the principals' performance as middle managers and with the positive attitude

of principals towards public participation at correlation coefficients of 0.05 and 0.07 respectively.

With respect to the level of schools' boundaries, in virtue of the strong as well as positive correlation, it has, with principals' performance as middle managers, the non-government schools as indicated above do overdo the government schools by having lower level boundary in buffering public demands. Moreover, because of the strong positive relationship the level of school boundary has with the positive attitude of principals towards public participation, the schools with non-government appropriation are better in having lower level of school boundary in general. Such wise, the non-government schools do exercise less formalization as their strategy towards public demands when compared with that of the government schools. And instead they use more coalition-collaboration and socialization. For this reason, the correlation coefficient obtained between the level of school boundary to buffer public demands and the proper strategy in responding to public demands is strong as well as positive as 0.43.

In the same manner, those boundary spanners that include the principals (representing their schools as educational systems) and the school administration committees or parent committees (representing the public suprasystem) are relatively found more effective in non-government schools than in government schools.

Accordingly, those public or parental representatives take more active part in the activities of parent committees or school administration committees that can be classified as high level involvement. Furthermore, they also participate in the extent of formal-structural involvement level serving as governors. Yet, the government schools are relatively found in a low level involvement classification that is limited only to the traditional one-way relationship (C/F p.45 of this), only when the school takes the initiative.

Moreover, the students of the non-government schools do come from families with better economic status when compared with those of the government schools*. Hence, they can be categorized (C/F pp.47-48 of this) mostly under type II and some under type III families for their capacity to exert more pressure on schools and for their interest to have an active role in their children's education. Accordingly, there is positive correlation found between school appropriation and the appropriateness of the type of public involvement at 0.20 coefficient.

*It is to be noted that from the random selection of the "public" school sector the non-government school category has not included some of the poorly operating "public" schools.

With regard to managerial efficiency, there is a positively strong correlation coefficient found between the type of public involvement and the autonomy of schools in light of delegation of educational responsibilities to the public at 0.36. As a result, the non-government schools are "free" from the enacted bureaucracy of the higher echelons of the Ministry of Education. Instead by their nature of appropriation, in these schools, the responsibility of educational operation is found more devolved to public representatives. This in turn can have an increase in public influence in the direction and execution of educational programs. On this account, the correlation coefficient obtained between school appropriation and devolving of responsibility to the public as autonomy of schools is positive 0.11.

Table 10

ANOVA of Public Influence on Schools with
Respect to Their Appropriation

Source	SS	DF	MS	F
Appropriation	149.76	1	149.76	11.84*
Residual	4944.52	391	12.65	
Total	4094.28	392		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As table 10 indicate, the observed value $F(1,391) = 11.84$ is greater than the table value (3.86). Hence, there is a statistically significant difference in public influence between the schools with the government and non-government appropriations. The non-government appropriation category has larger mean score (24.22) than the government (22.98).

In the matter of public influence that includes the determination of school policies and programs on schools as educational systems of the public suprasystem, the non-government schools do experience more than those of the government. That being the case, the correlation coefficient found between appropriation of schools and the extent of experiencing public influence by schools on their educational operation is 0.01.

Generally speaking, the correlation coefficient between the extent of experiencing public influence by schools and the prevalence of appropriate environmental dimensions (that includes uncertainty, clustering and scarcity) in the educational operation of schools is found to be 0.38. On this account, the non-government schools are better suited to their environmental dimensions. This is to say that when the non-government schools are confronted with public demands as uncertainty in a possibly more clustered way, by their nature of appropriation, they are more flexible so that they can cope up better than the government schools.

As it ought to be, in relation to the question of scarcity, these schools with non-government appropriation are also better provided with the necessary resources than the government schools.

This being so, the correlation coefficient between the prevalence of appropriate environmental dimensions and the appropriate characteristics of schools' environment is 0.10. As a result of this relationship, the correlation coefficient between school appropriation and the acquisition of appropriate environmental characteristics of schools is found as 0.09. In connection with the appropriateness of environmental characteristics of schools, the non-government schools are found in a relatively disturbed-reactive than the government schools. This environmental characteristic of the non-government schools is realized when we see the nature of the parent clientele they serve as a major component of the public suprasystem. Because, the parent clientele the government schools serve is economically as well as educationally is not that much better than the nature of the rural community which is more of placid-randomized or placid-clustered.

As the appropriateness of environmental characteristics go with the degree of acquisition of appropriate community power structure, yet their correlation coefficient is found as 0.08. And the correlation coefficient between school appropriation and the degree of appropriateness of community

power structure is found as -0.05. This is a representation of matching of the government schools to the community power structure in their respective attendance areas more than the non-government schools. This is because, the public suprasystem of government schools when compared with those of the non-government is not dominated by individuals or groups so that their influence or interest is not reflected on their educational operation. However, the influence on the non-government schools is not considered as an impediment or as hampering.

Nevertheless, the degree of appropriateness of the community power structure is related with the strength of school administration committees or parent committees positively at 0.16 correlation coefficient. In this manner, the correlation coefficient between appropriation of schools and the strength of school administration committees or parent committees is found to be 0.01. These indices are possibly indicators of the better standing of the non-government schools' administration committees or parent committees in: representing geographically different sectors of the schools' catchment areas that is again due to the diversified nature of parents, the effectiveness of periodic election of committee members, parental attendance in general or periodic meetings, and showing strong interest to participate or serve in the school administration or parent committees.

As a result of the relationship between the strength of school administration or parent committees and the balance of relationship of schools with the public (0.58 correlation coefficient), the non-government schools have better acquisition of relations with the public. This means that the non-government schools are better than the government schools because they acquire good relations that should exist between: the schools and the public or parents, the school administration or parent committees and the public or parents, parents and teachers, school administration or parent committees and teachers.

For this reason, the correlation coefficient between appropriation of schools and maintaining balance of relationship of schools with the public has been found as 0.10.

Maintaining balance of relationship of the schools with the public being a ground for the effectiveness of public right to participate in the educational operation of schools, they are able to have a correlation coefficient between them justifiable as much as 0.58. Taking this into account, appropriation of schools is still positively correlated with the effectiveness of public participation as its right at 0.18 coefficient. At that rate, the public or parents are more able to be given information about school procedures and

have the access to academic records, as well as to visit and question school programs in the non-government schools than in the government schools.

The effectiveness of public right in the educational operation of schools and managing the schools' external environments are found to be related as cause and effect to each other at 0.37 correlation coefficient. As a result, the correlation coefficient obtained between appropriation of schools and the extent of managing external environment is 0.15. On that account, the schools with non-government appropriation surpass the government appropriated ones in establishing favourable linkages with their public suprasystem. Besides, they surpass also in shaping their environmental elements as strategies to manage their external environments.

This is to say that the non-government schools, one way or the other, have entered into venture with other organizations, while the government schools do not seem to have such linkage. Additionally, the non-government schools overgo the government schools in using co-optation by bringing leaders from important elements in the public and in utilizing lobbying exceedingly to influence bylaws of their respective administrative areas.

Yet, the correlation coefficient found between managing external environments of schools and the extent of

appropriateness of the school principals' role in the school administration or parent committees is 0.20. This coefficient is not with standing the correlation coefficient obtained between school appropriation and the appropriateness of principals' role, which is -0.11. As may be expected, this index can serve as a hint of the condition that government schools' principals are at a better rate with regards to their role appropriateness for the reason of appropriation. That again depends on the confidence or guarantee they have to continue to carry out their professional task. Another way of putting this is, the principals of the schools of the non-government appropriation either are more dominated by individuals in the committees or are found to be dominating.

Table 11

ANOVA of the Dimensions of Public Participation in
Schools with Respect to Their Appropriation

Source	SS	DF	MS	F
Appropriation	255.76	1	255.76	16.59*
Residual	6062.67	191	15.51	
Total	6318.43	192		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be evinced on table 11, the observed value $F(1, 391) = 16.49$ is greater than the table value (3.86). In

this case, there is a statistically significant difference in the dimensions of public participation that includes the economic, political-legal, social, and educational-technological dimensions of participation between the government and non-government school appropriations. The category of non-government schools has larger mean score (23.85) than those of the government (22.23).

In relation to the economic dimension of public participation, the size of economic support to non-government schools is found relatively better than to the government schools. This difference in getting economic support makes the correlation coefficient between school appropriation and the size of economic support to schools be 0.03. Thus, the non-government schools are more provided in terms of finance and material resources by the public than the government schools.

Again, the size of economic support to schools is related with the size of public expenditure when compared with that of the government's negatively at -0.01 correlation coefficient. Public expenditure decreases in government schools where the government makes more expenditure while increases in non-government schools where the government makes less expenditure.

As to the management of resources provided by the public, the non-government schools overdo the government

schools in having efficient use. This includes financial report provision under better public control; (under the control of school administration committees or parent committees). This makes the correlation between appropriation of schools and the management of resources to be found positively at 0.02 coefficient.

With regard to the political-legal dimension of public participation in the educational operation of schools, there is a variation by appropriation, (between the government and non-government schools). Accordingly, by virtue of the larger size of public economic support to the non-government schools, the political-legal empowerment of the public to influence these schools exceeds than to influence the government schools. This empowerment is expressed by making recommendations regarding the educational operation by having the policy determining role of the schools through the representatives of the public; (through the school administration committees or parent committees). As a result, the size of public economic support or expenditure on schools and the degree of political-legal empowerment of the public over schools is found correlated at 0.40 coefficient.

Likewise, the degree of political-legal empowerment of the public over the schools and the degree of legal provision to the public by the government to participate in school matters are related at 0.61 correlation coefficient. Thus, the non government schools when compared to that of the

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government schools are in a better standing as for: their local administration to encourage the public for increased involvement through school administration committees or parent committees, their principals to be aware of the legal involvement of the public as its right, the public to appeal against school decisions which it found are unsatisfactory, as well as for the public to question whether or not school resources are used efficiently.

Yet, may be due to the nature of their appropriations, there seems to be more legal provision to the public by the government to participate in the government schools than in the non-government schools. For this reason, these legal affairs (the legal empowerment of the public over schools and the legal provision to the public by the government to participate) are found correlated with school appropriation at -0.01 and -0.11 respectively.

However, in general, the non-government schools are better in the political-legal dimension of participation. This is so because, over and above the strong correlation these legal affairs have with the economic dimension of public participation, they also are found having positive as well as strong relationships with the schools' openness amplitude, and with the degree of public influence on schools similarly at 0.65 coefficient. Moreover, these legal affairs are related with the extent of public influence again similarly at 0.68 correlation coefficients. Hence, it is possible for

one to say that the non-government schools are found to be better with regard to the acquisition of the political-legal dimension of public participation.

With regard to the social dimension of public participation, the government schools are found ahead in maintaining social interaction with the public and in acknowledging societal values in their educational programs. Thus, these aspects of the social dimension of public participation are found related with school appropriation at -0.12 and -0.04 correlation coefficients respectively.

This is an indication of the fact that the urban location of the non-government schools has made them to be with relatively less social interaction and with less acknowledgement of societal values in their educational operation. By the same token, due to the representation of both rural and urban geographical settings in the category of schools with the government appropriation, these government schools can have relatively better situation of social interaction. Thus, their principals are better able to coordinate the interaction and to make culturally relevant decisions regarding school programs. Besides, they are found better in making the schools serve as coordinating institutions of public activities.

With regard to the technological-educational dimension of public participation, positive correlation is found

between school appropriation and the three aspects of this dimension of public participation. This means that school appropriation is found correlated with the magnitude of public participation to enrich varieties of schools' educational programs, the extent of schools' utilization of public resources and the strength of the activities of parent committees as advisory bodies at 0.05, 0.04, and 0.06 coefficients respectively.

Accordingly, the non-government schools are found in a better standing than the government schools with respect to public participation to enrich varieties. This position of the non-government schools is particularly as for: their effort to make the educational content depends upon the needs of the public, their attempt to make their education being development oriented so that it can resolve environmental problems, their endeavour to enable parents raise issues of strategies to be adopted in the teaching-learning process, and their being host to students whose parents do encourage their children to study or work diligently. Likewise, the non-government schools are found in a better stage as to making available resource persons share their knowledge and as to making their students attend school part-time programs in their surrounding government or private organizations.

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These non-government schools also overdo the government schools in coordinating trips and visits for students to their surrounding governmental or private establishments as public resources to enable them enrich their knowledge.

Furthermore, parent committees of the non-government schools are relatively stronger than those of the government schools in working as advisory bodies. Here, the technological-educational dimension of public participation with regard to appropriation seems contradictory with what has been discussed under table 9 (with respect to openness of schools to the public in academic matters). Yet this can be resolved by distinguishing the difference between efficiency (which is doing the right thing) and effectiveness (which is serving or working in the interest of the clientele or service recipients) whereby the non-government schools are found exercising both of them better than the government schools.

Eventually, this can be justified by the positive as well as strong correlation coefficients obtained between these three aspects of the technological-educational dimension of public participation (public participation to enrich varieties of educational programs, the schools' utilization of public resources, the activities of parents' committees as advisory bodies) and the: openness amplitude of schools to the public at 0.56, 0.50, 0.61, extent of public influence on schools at 0.58, 0.47, 0.65, dimensions of public

participation at 0.74, 0.67, 0.68, and total public participation as a whole at 0.68, 0.60, and 0.73 respectively.

For the most part, the position of non-government schools in relation to the government schools with regard to the total public participation in their task of educational operation can be seen as a summary on table 12.

Table 12

ANOVA Summary of Public Participation in Schools
with Respect to Their Appropriation

Source	SS	DF	MS	F
Appropriation	1834.23	1	1834.23	12.82*
Residual	55940.46	191	143.07	
Total	57774.69	192		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be seen on table 12, the observed value $F(1,391) = 12.82$ is greater than the table value (3.86). As a result, there is a statistically significant difference in the total public participation between the educational operation in government and non-government school appropriations. The category of schools with the non-government appropriation has larger mean score (82.19) than those with government appropriation (77.87).

Accordingly, the non-government schools overgo the government schools in their being more open. In account of this, these non-government schools have lower boundaries to respond to public demands, and they are found more autonomous as a result of their more accountability to the public. Hence, the correlation coefficient between school appropriation and the openness amplitude of schools is found as 0.04. On the side of their being more open, they are also at a better standing in their acquisition of public influence with appropriate environmental dimensions as well as appropriate environmental characteristics. However, they are found being less appropriate to their surrounding community power structure as compared to that of the government schools. The reason is their being host to students from more diversified public. This makes the correlation coefficient between school appropriation and the extent of public influence on schools to be 0.12.

As for the dimensions of participation, the non-government schools do still exceed the government schools especially in the matters of economic and technological-educational dimensions of public participation. On the other hand the government schools are found favourable with regard to the political-legal and social dimensions of public participation. This is possibly due to their difference in appropriation and their availability in more diversified public environmental-suprasystem. However, in general, the non-government schools are yet in a better standing for which

reason, the correlation coefficient between school appropriation and the magnitude of the dimensions of public participation positively to be 0.05.

All in all, school appropriation is found correlated with the total public participation in the educational operation of schools positively at 0.07 coefficient.

3.4 Public Participation in Educational Operation in Government Schools by Experience of Principals

Table 13

ANOVA of Openness Amplitude of Schools with Respect to the Experience of Principals

Source	SS	DF	MS	F
Experience of Principals	350.43	1	350.43	12.70*
Residual	10705.71	388	27.59	
Total	11056.14	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As is set forth on table 13, the observed value $F(1,388) = 12.70$ is greater than the table value (3.86). So, there is a statistically significant difference between the government schools with inexperienced and experienced principals in their openness amplitude to the public. The government schools with experienced principals have larger

mean score (32.10) than the government schools with inexperienced principals (30.21).

Thus, for the appropriate interaction with the public, the degree of openness of those schools with experienced principals exceeds those schools with relatively inexperienced principals. This means, those schools with experienced principals are able to develop their capacity of feedback facilities more than those with inexperienced principals. So they are better in maintaining their position with regard to their environmental demands (which is of public demands). Accordingly the correlation coefficient found between experience of principals and the degree of openness is 0.04.

Due to the experience they accumulate and possibly due to the strong correlation it has with the degree of openness of schools to the public (at 0.37 coefficient), experienced principals made their schools more permeable to the public in the realm of academic and extra-curricular activities. This in turn makes the permeableness of the schools to the public in academic and related matters and the experience of principals be related at 0.31 correlation coefficient. Again, the accumulation of experience certainly made those principals to be more effective in serving as middle managers confidently considering schools belong to the public or considering the public as their schools' higher suprasystem.

Accordingly, there is strong relationship between the degree of permeableness to the public in academic as well as related matters and the principals' performance as middle managers at 0.43 correlation coefficient. As a result the correlation coefficient obtained between experience of principals and their performance as middle managers is found to be 0.11. For this reason, those experienced principals are found candid in explaining the need of the school for resource and do also negotiate extensively and continuously using their wisdom and tact with the public.

Again, there is positive as well as strong correlation coefficient found between the principals' performance as middle managers and their attitude towards public participation at 0.57 correlation coefficient. Thus, in a relative sense, like that of the inexperienced principals, those experienced principals do not regard public "involvement" as a source of problem or concern; instead, they consider it as a source of assistance. For this cause the correlation coefficient between experience of principals and principals' attitude towards public participation is found to be 0.05.

Moreover, experienced principals are found bestowed with the ability of handling any conflict of demand between the public and the professional staff. Possibly for that cause, there is positive as well as strong correlation coefficient obtained between the attitude of principals towards public

involvement and the balance of relationship of schools with the public at 0.58. So, those schools with better experienced principals are found to be able to relieve the difficulty of principals' split of loyalty than those with inexperienced principals. As a result, those schools with experienced principals do exercise better communication of two-ways between the school and the public in more balanced state by creating favourable conditions. By virtue of this state, they know which school activities interest the public more than those inexperienced principals. Hence, this balance of relationship of schools with the public has positive relationship with experience of principals at 0.10 correlation coefficient.

With regard to the level of boundaries' being high or low in the schools with experienced and inexperienced principals, experienced principals can have better confidence to confront demands than inexperienced ones. Thus, schools with experienced principals do exercise lower boundary than those with relatively inexperienced principals. This exercise makes the correlation coefficient between experience of principals and the appropriate level of school boundary to buffer public demands to be 0.15. The reason for those inexperienced principals to buffer public demands more can be their being emotional that again depends on experience.

Accordingly, as there is strong as well as positive correlation (0.43) between level of school boundary and the

strategy in responding to public demands, it is found obvious that experienced principals do exercise more of collaboration and socialization strategies. These strategies are based on negotiation and persuasion respectively. This approach of experienced principals might have helped their schools to enjoy the active part which the public takes in their educational operation. Thus, the correlation coefficient obtained between experience of principals and the strategy of responding public demands is found positive at 0.16.

Experienced principals are more enthusiastic again because they have already developed better and positive attitude towards public participation. They are committed to strengthen school administration committees or parent committees. This commitment in turn can increase the effectiveness of principals in representing their schools as educational systems, and of the committees in representing the public-suprasystem. All in all, it helps both sides to become effective boundary spanners. This also makes the relationship between the appropriateness of response strategy and the effectiveness of boundary spanners to be correlated positively at 0.41 coefficient. On this account, the effectiveness of boundary spanners and the experience of principals are found related at 0.06 correlation coefficient.

Eventually, there is a positive relationship between the effectiveness of boundary spanners and the degree of autonomy of schools as a delegation of educational responsibilities to

the public at correlation coefficient of 0.42. Likewise, experienced principals involve the public in a better degree than those inexperienced. So, they can share the responsibility they have with the public. And in turn, sharing of responsibility with the public assisted their schools to gain an exceeding magnitude of power delegation which is an intentional due to their being better self sustained.

Table 14

ANOVA of Public Influence on Schools with Respect
to the Experience of Principals

Source	SS	DF	MS	F
Experience of principals	164.55	1	164.55	12.28*
Residual	5200.77	388	13.40	
Total	5365.32	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As it is possible to note from table 14, the observed value $F(1,388) = 12.28$ is greater than the table value (3.86). Hence, there is a statistically significant difference in public influence on government schools with inexperienced and experienced principals. The schools with experienced principals have larger mean score (23.98) than those with inexperienced principals (22.69).

In the subject of public influence on the educational operation of schools, those schools with experienced principals overgo the schools with relatively inexperienced principals. In view of this, these schools with experienced principals enable the public to have the role of the determination of school policies and programs. As a result, the experience of principals and the extent of public influence on schools are found correlated positively at 0.15 coefficient.

Despite that public influence is correlated with the scope of the appropriateness of environmental dimensions to schools at 0.38 coefficient, there is no correlation found between the experience of principals and the scope of prevalence of appropriate environmental dimensions. This is so because, the environmental dimensions that comprize public demands as uncertainty, with somehow clustered way, as well as the ability of the public suprasystem in providing resources are out of the control of the schools.

However, the scope of appropriateness of environmental dimensions and environmental characteristics of schools are related positively at 0.10. Thus, the correlation coefficient between experience of principals and the appropriateness of environmental characteristics is found to be 0.06. This shows that those schools with experienced principals have better interaction with their public environmental-suprasystem. This means, the schools with experienced

principals are found better off whether the environmental characteristics are placid-randomized (which is of rural type with a relatively stable and less complex), or disturbed-reactive (which is more complex, diversified in nature). This seems to be due to the ability of the principals that again due to their better experience.

In the same manner, the correlation coefficient between the appropriateness of environmental characteristics and community power structure happens to be 0.08. As a result, the experience of principals and the appropriateness of community power structure are correlated positively at 0.06 coefficient. This is to say that whether the nature of the administrative councils as public representatives are pluralistic or not, by the experience which these principals have, these schools can make better interaction with them in their task of educational operation. When we say pluralistic, the individuals serving as public representatives in local administrative councils are supposed to reflect various interests. And those various interests in turn can be reflected in the school administration committees.

Accordingly, the appropriateness of community power structure and the strength of school administration committees is related positively at 0.16 correlation coefficient. Hence, the correlation coefficient between the experience of principals and the strength of school administration committees is positively found to be 0.10.

This index is a representation of the fact that, in schools where experienced principals are available, there is a relatively better representation of the public. This representation includes comprising members geographically from different sectors of the school catchment area in the school administration committees, and the effectiveness of the periodic election of committee members. And this has resulted more satisfactory parental attendance in general annual or periodic meetings with a stronger interest to participate in committee membership.

The strength of school administration committees is correlated with the balance of relationship of the school and the public to be 0.58 coefficient. Thus, the correlation coefficient between the experience of principals and the degree of maintaining balance of school-public relationships is positively found as 0.07. That being so, the schools with experienced principals overstep those schools with relatively inexperienced principals with regard to having satisfactory collaboration between school and the public. As a result, they are found having better relationship between the school administration committees and parents, between parents and teachers, and between school administration committees and teachers.

All in all, the correlation coefficient between the relationship of school members with the public (as maintaining balance of school-public relationship), and the

effectiveness of public right in participating in the educational operation of schools is found to be 0.59. Thus, the experience of principals is related with the effectiveness of public right of participation positively at 0.05 correlation coefficient.

In this connection, the schools with experienced principals are in a better position in making the public to get information about school procedures and to have access to the academic records of students outcomes as well as to visit school programs. Besides, those relatively experienced principals are better in enabling the public to be represented on the decision-making bodies and in enabling the public to question the educational programs and policies of the schools.

For the most part, the correlation coefficient between the effectiveness of public right in participating in the educational operation of schools and managing the external environment of schools is found to be 0.36. This makes the experience of principals to be related positively with the extent of managing the external environments of schools at 0.05 correlation coefficient. Thus wise, the schools with relatively experienced principals are ahead of those with inexperienced in establishing favourable linkages and with relation to shaping their environmental elements. This is to say that the relatively experienced principals are better in creating linkages with their surrounding non-government

organizations; and they are better in using cooptation to make important persons represented in the decision-making body of their schools. They do also exceed those relatively inexperienced principals in utilizing politicking as their device to influence the regulations of their localities when they found it problematic in their endeavour of fulfilling the task of educational operation.

By the same token, the correlation coefficient obtained between managing the external environment of schools and the appropriate role of principals in school administration committees is found to be 0.20. On that account, the relatively experienced principals do play more professional and appropriate role in the school administration committees. This role appropriateness includes making effective of what the majority of committees' members decide than the inexperienced principals with neither being dominated by powerful members nor being dominant in the committee. As a result, the experience of principals and their role appropriateness with this regard is found to be positively related at 0.07 correlation coefficient.

Table 15

ANOVA of the Dimensions of Public Participation in Schools
with Respect to the Experience of Principals

Source	SS	DF	MS	F
Experience of Principals	267.88	1	267.88	13.63*
Residual	7624.88	388	19.65	
Total	7892.76	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As table 15 can indicate, the observed value $F(1,388) = 13.63$ is greater than the table value (3.86). Thus, there is a statistically significant difference in the economic, political-legal, social and technological-educational dimensions of public participation between the government schools with relatively inexperienced and experienced principals. The schools with experienced principals have larger mean score (24.21) than those schools with inexperienced principals (22.56).

As to the economic dimension, the size of public economic support to the schools with experienced principals do get relatively more than what is done to those schools with inexperienced principals in terms of financial and material resources. This makes the relation between experience of principals and the provision of economic support to schools be correlated at 0.01 coefficient.

This being the case, the size of public expenditure in the educational operation of the schools when compared with that of the government expenditure is still found less. This is so because, the size of public expenditure is found decreasing proportionally following that of the government. AS a result, the correlation coefficient between experience of principals and the size of public expenditure in relation to that of the government is found to be negative at -0.04.

Thus, though the size of public expenditure on the schools with experienced principals is higher than in those with relatively inexperienced principals, still when compared with that of the government it is less. The reason is, both categories of schools are of the same appropriation. This means that the government expenditure is yet more in both categories when compared with that of the public expenditure.

Concerning the efficient management of school resources that includes the provision of financial report to the public as well as controlling the resources through the school administration committees, those schools with experienced principals are found to be better than those with inexperienced principals. Consequently, the correlation coefficient between experience of principals and the efficient management of school resources is found positive as 0.11.

With regard to the political-legal dimension of public participation in the educational operation of schools, those schools with relatively experienced principals are in a better condition than those with inexperienced principals. The schools with experienced principals are found better as regards to the acquisition of political empowerment of the public over them. Accordingly, the relationship between public economic support and the degree of political-legal empowerment of the public over schools is found at 0.40 correlation coefficient. Thus, the relationship between experience of principals and the political-legal empowerment of the public over schools is found at 0.09. This can serve as an indicator that those experienced principals do allow the public to be empowered to make recommendations regarding the educational operation of their schools and to have the policy determining role of the schools.

Likewise, as an acquisition of legal provision, those schools with experienced principals as compared to those with relatively inexperienced principals are in a better status as for: their local administration to encourage the public for increased involvement through school administration and parent committees, their school principals being aware of the legal involvement of the public as its right, the public to appeal against decisions made by educational administration which it finds is unsatisfactory, and the public to question whether or not the school resources are used efficiently. On this account, the relationship between experience of

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principals and the degree of legal provision by local government or administration to the public to participate is found positive as 0.11 correlation coefficient.

With regard to the social dimension of public participation in the educational operation of schools, those schools with experienced principals do exceed the schools with inexperienced principals in maintaining social interaction of their schools with the public. And they are also found better in acknowledging the societal values in their endeavour to educational operation. On this account, the correlation coefficients found between the experience of principals and maintaining social interaction, acknowledging societal values are positive as 0.17 and 0.11 respectively.

Thus, possibly due to the better experience of their principals, those schools with experienced principals overgo those schools with inexperienced principals as for: coordinating the interaction between their schools and the public, making culturally relevant decisions on the program of their schools, and making their schools serve as coordinating institutions for developing public activities. Likewise, those schools with experienced principals are found more open in enabling the public to discuss values implicit in the educational program of their schools. Besides, they are found more open in enabling the public to insist that the

teaching in their schools is not in conflict with their values as well as in enabling the public to participate in developing extra-curricular activities.

With regard to the technological-educational dimension of public participation in the educational operation of schools, the schools with experienced principals are found to be better in the first and third aspects. This is to say that they are better as regards to the participation of public to enrich varieties of schools' educational programs and the strength of activities of parent committees as advisory bodies. As a result, these aspects are found correlated with experience of principals at 0.10, 0.06 coefficients respectively. Consequently, by virtue of the relatively better accumulation of experience they have, these principals enable their schools to have more public participation to enrich varieties by facilitating for: the content taught to depend upon the need or potential of local people, the educational program to contribute in the effort of resolving environmental problems, the schools to be more open to the public to raise issues of strategies to be adopted in the educational program, parents to encourage and monitor their children work hard, their schools to take the advantage of using local technologies as teaching aids, and their schools to use resource persons to share their knowledge to students. Similarly, those schools with experienced principals do possess stronger parent committees

working as advisory bodies than the schools with relatively inexperienced principals.

Whereas, regarding the extent of utilization of public resources by coordinating trips and visits for students to their surrounding government or private establishments (as the third aspect of the technological-educational dimension of public participation), these schools with experienced principals are found behind the schools with relatively inexperienced principals. As realized in this study, this can happen because the schools with experienced principals are more of primary schools. Again the reason for this is that the primary schools are with relatively lower economic capacity when compared to those schools with relatively inexperienced principals which are mainly of secondary schools. Hence, the correlation between experience of principals and the extent of schools' utilization of public resources is negatively obtained as -0.01 coefficient.

Taking all things together, Table 16 reveals the status of the schools with experienced principals as compared to those schools with relatively inexperienced principals in public participation in their educational operation.

Table 16

ANOVA Summary of Public Participation in Schools with
Respect to the Experience of Principals

Source	SS	DF	MS	F
Experience of Principals	2550.25	1	2550.25	15.11*
Residual	65469.49	388	168.74	
Total	68019.74	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be observed on table 16, the observed value $F(1,388) = 15.11$ is greater than the table value (3.86). Consequently, there is a statistically significant difference in public participation as a whole between the government schools with inexperienced and experienced principals. The schools with experienced principals have larger mean score (82.90) than those with a relatively inexperienced principals (77.79).

In this connection, the schools with relatively experienced principals are found in a better status in their openness amplitude with the acquisition of lower boundary in responding to public demands. And they are found better in exercising the power of the public in relation to delegation of responsibility to the public. For this reason, the

correlation coefficient between experience of principals and openness amplitude of schools to the public becomes 0.09.

Possibly due to the more experience their principals have, these schools are also in a better standing than those schools with inexperienced principals in the acquisition of public influence as a suprasystem influence on them. Consequently, the correlation coefficient between experience of principals and the extent of public influence on schools as educational systems is obtained as 0.12. This means, they are in a better position in making appropriate their environmental dimensions and characteristics as well as the community power structure they are found in.

Furthermore, those schools with relatively experienced principals, for the most part, also overdo those with inexperienced principals in their acquisition of the economic, political-legal, social, technological-educational dimensions of public participation. Accordingly, the correlation coefficient between experience of principals and the magnitude of the dimensions of public participation is achieved as 0.11.

Generally, the correlation coefficient between experience of principals and the total public participation is obtained again as 0.11.

3.5 Public Participation in Educational Operation in Government Schools by Geographical Setting

Table 17

ANOVA of Openness Amplitude of Schools with
Respect to Their Geographical Setting

Source	SS	DF	MS	F
Geographical Setting	304.58	1	304.58	10.99*
Residual	10751.56	388	27.71	
Total	11056.14	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As it is exhibited on table 17, the observed value $F(1,388) = 10.99$ is greater than the table value (3.86). In this case, there is a statistically significant difference between the openness amplitude of rural and urban government schools to the public. The rural school category has larger mean score (32.05) than the urban school category (30.28).

It is obvious that the majority of the population in developing countries like Ethiopia does live in rural geographical setting. On the other side, majority of the population in the urban geographical setting is still found in a mode of life which is not significantly different from that of the rural though the type of occupation varies. This

being the situation, as the systems approach of understanding organizations justifies, schools as educational systems cannot be "free" from the inescapable demands of public environmental-suprasystem. The question lies here, on the degree of openness they have.

As a result, rural government schools are found more open to the appropriate relationship with their respective public environmental-suprasystem than urban government schools. Thus, the correlation coefficient between the degree of openness in general and geographical setting of schools has been found negative as -0.10 . The reason for the government rural schools to exceed their counterpart urban schools is the high discrepancy between rural and urban categories with respect to their size as discussed above under table 5. This is because most of the small-size schools are situated in the rural areas which are less of closed systems unlike the urban schools which are more of large-size schools.

Moreover, positive correlation exists between the degree of openness in general and the degree of permeableness of the schools to the public in academic matters in particular at 0.34 . In view of this, the more homogeneity of the rural community or public has facilitated for more interaction between the public and the rural schools. This is to say that the rural schools are able to develop relatively better feedback facilities that in turn enables them to maintain a

favourable position in relation to their environmental demands.

Thus, these factors made the degree of urbanization and the schools' permeableness to the public for the appropriate interaction in academic matters to be negatively correlated at -0.10 coefficient.

Moreover, the positive correlation (0.43 coefficient) found between the degree of permeableness of the schools to the public in academic matters and the effectiveness of principals' performance as middle managers made principals of the rural schools to be more effective in negotiating and dealing extensively as well as continuously with the public.

On the other hand, for the reason that the urban schools are more of closed systems, there appears a relative decrease of the sense of ownership and responsibility the public towards these schools. Accordingly, the correlation coefficient between geographical setting and principals' effectiveness as middle managers is obtained as -0.12.

This and the strong as well as positive relationship (at 0.57 coefficient) between principals' effectiveness as middle managers and their attitude towards public participation have assisted the rural schools as educational systems to have balanced relationship with their public environmental-suprasystem.

As a result, the correlation coefficients obtained between geographical setting and the principals' attitude towards public participation and maintaining balance of relationship of the school with the public are -0.07 and -0.04 respectively. This means that the two-way relationship between the schools and the public is exercised relatively better in the rural areas.

In relation to the difference of the level of boundaries of those categories, the relatively less openness of urban schools made them to use more of formalization rather than socialization as their response strategy to buffer public demands. This can be due to the more heterogeneity or diversification of the urban public as well as their being higher in size. And this in turn made the urban schools' category to have higher level boundary than that of the rural category of schools.

Moreover, the less effectiveness of the school boundary spanners (that includes the principal, the school administration or parent committees representing the educational system and the public suprasystem respectively) can be a major factor for the urban government schools to have less openness to the public. Because school administration or parent committees especially in the typical urban areas are found to be very weak or nearly non-existent.

Thus, it is obvious that the classification of the level of public involvement in the educational operation of urban schools to be more of low-level (C/F p.45 of this) as well as level 1 relationship (C/F p.51 of this). However, the type of families are of type II (C/Fpp.47-48 of this) in a relative sense when compared to the rural category of schools.

As to the relative autonomy of schools in light of devolving responsibility to the public, it is found to have negative correlation (-0.10) with the degree of urbanization or geographical setting. This is because, schools are found less open when they are situated in a relatively urban area that in turn can relatively decrease public participation. Again because, the degree of public participation goes along with the degree of devolving educational responsibility to the public.

Table 18
ANOVA of Public Influence On Schools with
Respect to Their Geographical Setting

Source	SS	DF	MS	F
Geographical Setting	49.80	1	49.80	3.64
Residual	5315.52	388	13.70	
Total	5365.32	389		

As can be seen from table 18, the observed value

$F(1,388) = 3.64$ is less than the table value (3.86). As a result, there is statistically non-significant difference in public influence on government rural and urban schools. The rural category of schools has 23.70 mean score while the urban category has 22.98.

Thus, with regard to public influence, the rural and urban government schools are found to be on the same footing. Be that as it may, the correlation coefficient between geographical setting of schools and the extent of public influence on the educational operation of rural and urban schools as a whole is obtained as -0.01. This is another sign for the prevalence of the non-significant difference between these categories of schools' educational operation in being influenced by their public environmental-suprasystem.

Table 19

ANOVA of the Dimensions of Public Participation in
Schools with Respect to Their Geographical Setting

Source	SS	DF	MS	F
Geographical Setting	532.19	1	532.19	28.05*
Residual	7360.56	388	18.97	
Total	7892.76	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As can be seen from table 19, the observed value $F(1,388) = 28.05$ is greater than the table value (3.86). Consequently, there is a statistically significant difference in the economic, political-legal, social, and technological-educational dimensions of public participation between the government schools with rural and urban geographical settings. The schools with rural geographical setting have larger mean score (24.57) than the schools with urban geographical setting (22.23).

As for the economic dimension of public participation is concerned, the size of public economic support to the rural schools is found more than that of the urban schools. Accordingly, the rural schools get more financial and material resources from the public than do the urban schools. This makes the relation between geographical setting of schools and the size of public economic support to schools be negatively correlated at -0.14 coefficient.

However, as compared to that of the government's economic expenditure, this public economic expenditure is found to be less than what the government spends for these rural schools. This happens may be due to the proportional decrease of public economic expenditure as there is an increase of government economic expenditure.

Hence, the relation between public economic support or expenditure and this public economic expenditure when

As can be seen from table 19, the observed value $F(1,388) = 28.05$ is greater than the table value (3.86). Consequently, there is a statistically significant difference in the economic, political-legal, social, and technological-educational dimensions of public participation between the government schools with rural and urban geographical settings. The schools with rural geographical setting have larger mean score (24.57) than the schools with urban geographical setting (22.23).

As for the economic dimension of public participation is concerned, the size of public economic support to the rural schools is found more than that of the urban schools. Accordingly, the rural schools get more financial and material resources from the public than do the urban schools. This makes the relation between geographical setting of schools and the size of public economic support to schools be negatively correlated at -0.14 coefficient.

However, as compared to that of the government's economic expenditure, this public economic expenditure is found to be less than what the government spends for these rural schools. This happens may be due to the proportional decrease of public economic expenditure as there is an increase of government economic expenditure.

Hence, the relation between public economic support or expenditure and this public economic expenditure when

compared to that of the government becomes negatively correlated at -0.01 coefficient. This again means, as the degree of urbanization increases, the public economic expenditure in relation to that of the government decreases.

Besides, the correlation coefficient between geographical setting of schools and the management of resources provided by the public is found as -0.16 . Because, the rural schools are found in a better stage in the efficient use of school resources with financial report provision to the public and with better control of the resources by the representatives of the public (or by the school administration committees).

With regard to the political-legal dimension of public participation in the educational operation of schools, the degree of political-legal empowerment of the public over schools show variation in geographical setting wise. Accordingly, the rural schools are in a better standing than urban schools as regards to the political-legal empowerment of the public being in a position to make recommendations regarding the educational operation as well as having policy determining role of these schools. On this account, the correlation coefficient between school geographical setting and the degree of public empowerment over schools is found as -0.17 . In addition to this, there is positive correlation coefficient between the size of public economic support to

schools and the political-legal empowerment of the public over schools at 0.40.

These rural schools, as an acquisition of legal provision are once more at a better rate as for: the encouragement of the public by local administration to be involved increasingly being represented by school administration committees, the awareness of principals of the legal involvement of the public as its right, the ability of the public to appeal against decisions made by the schools, the public to question whether or not school resources are used efficiently. To this end, the correlation coefficient between school geographical setting and the degree of legal provision to the public by government to participate is obtained as -0.21. The reason for this is the strong as well as positive relationship (at 0.61 correlation coefficient) found between the magnitude of the political-legal empowerment of the public over schools and the legal provision to the public by local government to participate in school matters.

With regard to the social dimension of public participation in the educational operation of schools, the correlation coefficient between geographical setting and the magnitude of social interaction of the schools is found to be

-0.17. Besides, the correlation coefficient between the geographical setting of schools and the degree of acknowledgement of societal values in the educational program is found to be -0.19.

Accordingly, the rural schools are in a relatively better position in maintaining social interaction with the public. Because, their principals do coordinate the interaction and make culturally relevant decisions of the program of their schools, in addition to enabling their schools serve as coordinating centers for public activities.

On top of this, the rural schools are relatively found more open for the public through representatives to: discuss values implicit in the educational program insist that the teaching is not in conflict with the values of the people, and participate in developing extra-curricular activities of the schools. There are two possible reasons for the rural schools as regards to the social dimension of public participation in the operation of education. One reason is the relative homogeneity of the rural communities in nature that can be more compatible for social interaction with the rural schools. On the other hand, the urban communities' being more of diversified nature, can hinder the urban schools to exercise such an interaction. The second reason is the variation with respect to the strength of boundary spanners (the school administration committees and

parent committees, whereby, they are found weaker in the urban geographical setting).

With regard to the technological-educational dimension of public participation in the educational operation of rural and urban schools, the rural schools do still exceed the urban schools as for: the magnitude of public participation to enrich varieties of educational programs, the extent of utilization of public resources, and as for the strength of parent committees. Accordingly, negative correlation coefficients are obtained between these three aspects of technological-educational dimension of participation, and the schools' geographical setting at -0.10 , -0.06 , and -0.05 respectively. On this account, may be due to the more interaction of the schools with the public, the rural schools are in a better standing as for public participation to enrich varieties. This includes, making the content taught to base on local potential and needs, attempting to resolve environmental problems, and utilizing local technologies as well as resource persons. Here participating in planting seedlings, inviting or working together with farmers in agricultural education, and enabling students to visit the available establishments in their surrounding can be taken as examples.

Furthermore, these rural schools too are found better when compared with the urban schools as regards to the strength of parent committees, though their educational level

may limit their scope of participation, and yet having the commitment.

All in all, by taking into account the degree of prevalence of the major components of the systems approach in dealing with public participation, the position of the rural schools as compared to the urban schools can be seen on table 20.

Table 20

ANOVA Summary of Public Participation in Schools with
Respect to Their Geographical Setting

Source	SS	DF	MS	F
Geographical Setting	2459.99	1	2459.99	14.56*
Residual	65559.75	388	168.97	
Total	68019.74	389		

* $P < 0.05$ (There is a statistically significant difference at 0.05).

As is shown on table 20 the observed value $F(1,388) = 14.56$ is greater than the table value (3.86). Hence, there is a statistically significant difference in public participation as a whole between schools with rural and urban geographical settings. Totally, the rural school category has larger mean score (82.90) than the urban category (77.87).

Accordingly, the rural schools are relatively in a better condition having lower boundaries or being more open in responding to public demands. This assisted the open rural schools to be better with regard to the delegation of educational responsibility to the public as autonomy of schools in light of decentralization. Thus, the correlation coefficient between geographical setting and the openness amplitude of schools as a whole is found as -0.11.

However, the rural and urban schools are found in a similar status with regard to the acquisition of public influence on their educational operation. For this reason, the correlation coefficient between geographical setting of schools and the extent of public influence on schools' educational operation is found as -0.01.

Yet, rural schools are further getting better magnitude of the economic, political-legal, social, technological-educational dimensions of public participation when compared with that of the urban schools. This makes the correlation coefficient between geographical setting of schools and the magnitude of the dimensions of public participation all in all to be -0.17.

As justified under table 8, all this happens to the urban schools for the reason that they follow the incompatible "mechanistic" approach of administration being located in diversified public environmental suprasystem

instead of exercising the "organic" style which is compatible for such location.

On the whole, the correlation coefficient obtained between geographical setting of schools and the total public participation in the educational operation of schools is -0.11.

Generally speaking then, the possibility of over going of the categories of primary, small-size, non-government schools as well as the schools with experienced principals and with rural geographical setting, correspondingly on the categories of secondary, large-size, government schools as well as the schools with inexperienced principals and with urban geographical setting is apparently seen on Appendix A-1.

This is possibly due to their variation in openness amplitude to the public, in the extent of public influence they have, and in the magnitude of the prevalence of the dimensions of public participation. Here, it is necessary for one to note that these have served in this study as major components of the systems approach. Again, this variation is the result of the strong as well as positive relationships between them; i.e., between: openness amplitude of the schools to the public and the extent of public influence on schools at 0.76; the openness amplitude of schools to the public and the magnitude of the prevalence of the dimension

of public participation at 0.77; the extent of public influence on schools and the magnitude of the prevalence of the dimensions of public participation at 0.79 correlation coefficients that are possible to refer in appendix B-2. And all in all, the stronger relationship between these major components of the systems approach and the total public participation obtained ranging from 0.91 to 0.93 correlation coefficients (which is apparently seen again on Appendix B-2) can be taken as causes.

In relation to the decisiveness of the major components of the systems approach variables, the relationship between economic background of parents (that is measured based on their ability to pay annual registration and school fee) and the total state of public participation (measured based on the data with a Likert scale response) has shown negative correlation (-0.12) in primary schools, while positive in secondary schools (0.30). This is also possible to refer in appendices C-1 and C-2 respectively.

Here again, school level as a means of classification (irrespective of their size, appropriation, and their principals' experience as well as their geographical setting) is used for the reason that school fee as well as registration fee and measurement of academic achievement based on school level can by no means be the same.

Yet, it has been realized under 3.1 that the primary schools category surpass the secondary schools category in public participation in their educational operation in relation to the major components of the systems approach in dealing with public participation. This means, economic background in this study is not found as a decisive factor for the degree of public participation in primary schools. Moreover, despite that the economic background is lower yet, the status of public participation being better in rural than in urban geographical setting as found under 3.5 is another evidence for this.

However, the better economic background parents or the public have, the more public participation is found in secondary schools category, though, it could not change its status when compared with the primary schools category. This is for the reason that the secondary schools category are found being more of closed system. Besides, (C/F pp.47-48 of this) for instance type III families (with higher economic background) are found less participative relatively than type II families (with lower economic background).

Last but not least, in the Ethiopian situation, having higher economic status does not guarantee for the public enlightenment about the significance of public participation or public commitment to participate in the educational operation of schools. This is, may be, the public in general

considers that educational responsibility is only of the government, or leaving all affairs of education to schools.

Be that as it may, the variation in the degree of economic expenditure on education can result in a difference in academic achievement, which is the main concern of schools. On this account, the correlation coefficients obtained between the (public or parental) economic expenditure and the terminal academic achievement in primary schools (0.80), and in secondary schools (0.98) can be seen on appendices C-3 and C-4 respectively.

Here, when the issue of economic expenditure in relation to academic achievement is raised, it is necessary also to understand that it is related to the size of schools that in turn leads to the question of the size of classrooms or classroom - student ratio.

This is because, as can be seen on appendices E-1 and E-2 for primary and secondary school levels respectively, positive correlations are found between classroom - student ratio and terminal academic achievement at 0.28 coefficient in primary schools and at 0.75 coefficient in secondary schools. Here the relationship found in secondary schools can

especially be taken as a strong as well as positive relationship. Thus, the smaller the school or the class-size the better the academic achievement.

Thus, the presentation, analysis and interpretation of the data of public participation in the educationl operation in schools of central Ethiopia dealt using the systems approach in chapter III came to an end. And what is dealt in this chpater leads to the summary, conclusion and recommendations made next in chapter IV.

CHAPTER FOUR

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The purpose of this study is mainly to examine the state of public participation in the educational operation in schools of central Ethiopia for its accommodation of diversified public as well as several categories of schools.

Accordingly, it was assumed that public participation in the educational operation in schools of central Ethiopia possibly varies in accordance with school level, size, appropriation (status), and the experience of principals as well as geographical setting. Thus, the study is made to base on the major components of the systems approach: the openness amplitude of schools as educational systems, the public as environmental - suprasystem of school systems and its influence, and the dimensions of public participation as environmental - suprasystem support to schools.

In an attempt to have a balanced approach, the study used 30 schools that comprize 10 government from rural, 10 government from urban, and 10 from non-government schools. Again, the 10 schools from the rural include 5 government primary and 5 government secondary. Similarly, the 10 urban schools include 5 government primary and 5 government secondary. The 10 non-government schools include 5 primary and 5 secondary from "public" and Mission schools. Schools were

selected on the basis of stratified and purposeful sampling from northern, southern, western, eastern Shoa and from Addis Ababa.

Moreover, the respondents who participated in this study include one principal, two deputy principals, two unit leaders and five department heads. This makes 10 respondents from each school system and 10 from school administration or parent committee members (or parents) from the public suprasystem. All in all 20 respondents concerning each school using purposeful as well as simple randomization were taken.

Thus, out of the 600 questionnaires distributed, 295 (98%) from the respondents representing the school systems and 293 (98%) from the respondents representing the public suprasystem were collected. Besides, the structured interview made for the 30 principals of the sampled schools was used as a supportive instrument in analysing the data.

In order to analyse the data obtained, it was processed with a computer using the statistical tools of one-way ANOVA so as to find whether or not the categories under each dimension vary statistically as well as significantly, mean scores to see the direction of variation, and correlation coefficient in order to relate the items with one another. Relationships of items with dimensions and with major components of the systems approach, as well as relationships of the dimensions with the major

components of the systems approach were also made. Besides, these major components of the approach were made to relate with one another .

To achieve the purpose, basic questions were raised as a premise as to how the state of public participation in the educational operation of schools varies between: primary and secondary, small-size and large-size, government and non-government, the schools with inexperienced and experienced principals, and rural and urban schools.

As a result, the analysis made to warrant the following major findings and conclusion.

4.1 Summary

4.1.1 With Respect to the Openness Amplitude of Schools as Educational Systems to the Public as Their Environmental-Suprasystem

Taking all into account, the categories of schools with primary level, the small-size, non-government appropriation, experienced principals, and rural geographical setting for the most part are found exceeding with regard to:

4.1.1.1 being open and permeable to the interaction, feedback facilities, involvement of parents as major components of the public in academic matters.

4.1.1.2 the performance of principals as middle managers, because they have better understanding towards public involvement in educational affairs. Thus their principals are found dealing as well as negotiating extensively and continuously with the public enabling their school systems to be dully open. This state of affairs again helped these schools to maintain the balance of relationship with the public.

4.1.1.3 having lower boundaries that enable to exercise less buffering of public demands, and, using coalition-collaboration as well as socialization strategies in responding to public demands because of the better effectiveness of their boundary spanners.

4.1.1.4 securing better autonomy in light of decentralization. These schools due to the better involvement of the public in their educational operation they have secured better sharing of responsibility with the public and are relatively more accountable to their major customer (the public). Then the public has been able to develop the feeling that the schools do belong to it.

4.1.2 With Reference to the Public as Environmental - Suprasystem of Schools as Educational Systems and Its Influence

For the most part, except the schools with small — size and rural geographical setting, the other schools of primary,

non-government, and the schools with experienced principals continue to be better influenced by the public than the secondary, the government schools and the schools with inexperienced principals in their educational operation within their dimensions respectively. On another side, the categories of schools under the dimensions of size and geographical setting are more or less on the same status in this regard.

Accordingly, these schools that are influenced more by the public are found relatively in a better standing as to:

4.1.2.1 the public role in having part in the determination of schools' policies and programs. This can be as a result of their condition being suitable for their environmental dimensions. Here, the obvious factors are the acquisition of stronger school administration committees, higher level of parental enlightenment, and better experience of principals by the primary, non-government schools, and the schools with better experienced principals respectively. As a result, these schools are found to be more responsive to public educational demands as uncertainty, with a relatively clustered or organized way, and get better economic support from the public in relation to the question of scarcity.

4.1.2.2 the acquisition of appropriate environmental characteristics. On this account, the primary schools are available in both "placid-clustered" and "disturbed-reactive"

environments which are rural and urban geographical settings respectively. Thus, they are found exercising ways of administration that are "mechanistic" in the rural and "organic" in the urban that might enable them to have appropriate environmental characteristics. And the non-government schools and the schools with experienced principals as their location is typically urban, their environmental characteristics can be classified under "disturbed-reactive". That in turn makes their way of administration more of "organic" because of their appropriation and the experience of their principals. Therefore, they are relatively found to be more appropriate to their environmental characteristics.

4.1.2.3 having appropriate community power structure. This is to say that the schools with primary level, non-government appropriation, and with experienced principals in addition to their better openness to public participation are available dually or for the most part in relatively diversified or heterogeneous geographical setting. Thus, in a relative sense, pluralistic interest can be represented in their respective attendance areas of local administration. As a result, the people in the administration committees or parent committees of these schools are yet with relatively pluralistic interest. This enabled these schools to have appropriate community power structure (the pluralistic community powerstructure).

4.1.2.4 the effectiveness of public right to involve in the educational operation of schools. This in turn enabled these schools excel in managing their environments by establishing favourable linkages, and in shaping their environmental elements through cooptation and politicking respectively.

4.1.2.5 the appropriate role of principals in the school administration committees or parent committees to perform professionally. This is to say that the principals of these schools are carrying out their task in the committees without being dominant or being dominated.

4.1.3 With Regard to the Dimensions of Public Participation as Environmental-Suprasystem Support to Schools

Generally speaking, the categories of primary, small-size, non-government schools as well as the categories of schools with relatively experienced principals and rural geographical setting are found in a better position than their counterparts with regard to the following dimensions of public participation.

4.1.3.1 the economic dimension of public participation. These categories of schools are found in a better position as regards to the size of public economic support and the size of public economic expenditure when compared with that of the government economic provision. Here, as the size of government expenditure on schools increases, the size of public economic

support is found to be relatively decreasing. Moreover, these schools are better as to the management of school resources.

4.1.3.2 the political-legal dimension of public participation. Along the lines of political-legal dimension, what made the categories of schools with primary level, small-size, experienced principals, and rural geographical setting to be better is their being in a better stage as regards to the political-legal empowerment of the public over these schools. And it is also the legal provision which the public gets from its respective local government or administration to participate in school matters that made these schools to be better in regard to the political-legal dimension of participation.

Here, what is found peculiar is, the category of schools with the non-government appropriation seemingly to be behind the government schools in this respect. This can be due to their nature of appropriation. Yet this could not affect their status in relation to this dimension of public participation and in relation to the magnitude of the dimensions of participation. In view of this, a strong relationship is found between the size of public economic support and political-legal empowerment of the public over schools as well as with the legal provision aspect.

4.1.3.3 the social dimension of public participation. Here, these schools with better position as regards to the economic

and political-legal dimensions are also found overdoing in their social interaction with the public. Moreover, they are found better in acknowledging the societal values in their educational programs.

4.1.3.4 the technological-educational dimension of public participation. Accordingly, the primary the small-size, the non-government, the schools with experienced principals and the rural schools are found in a relatively better status as for the public participation to enrich varieties of their schools' educational program and for the activity of parent committees in their schools as advisory bodies. However, with regard to the utilization of public resources, the primary schools are found behind the secondary, while the schools with experienced principals are behind those with inexperienced ones.

4.2 Conclusion

The systems paradigm was made in use as a venue to examine the state of public participation taking the public as environmental-suprasystem of schools and the schools as educational systems of the public in Central Ethiopia. Accordingly, it was necessary to identify and examine the rate of participation by level, size, appropriation, experience of principals, and geographical setting dimensions based on the major components of systems approach. The major components of the systems approach as used in dealing with this study are the openness amplitude of schools to the public as educational

systems, the public as environmental-suprasystem of school systems and its influence, and the dimensions of public participation as environmental-suprasystem support to schools.

Taking all things together, it was evidenced that the primary schools by level, the small-size schools by the size of student population, the non-government schools by appropriation (government-run), the schools with experienced principals by the experience of principals, and the rural schools by geographical setting are relatively found surpassing correspondingly their counterparts within their respective dimension in public participation in the task of educational operation. The schools which are found being surpassed include those with secondary level, large-size, government appropriation, inexperienced principals, and urban geographical setting.

On the account of basic questions raised as to whether there is a statistically significant difference in public participation between the educational operation of the categories of schools under each dimension or not, it was apparently seen that the surpassing schools overgo their counter parts of schools. This includes, their openness amplitude to public participation, particularly, their degree of permeableness to public involvement in academic matters, their level of boundary being lower in responding to public demands using coalition-collaboration and socialization strategies, and their accountability to the public in light of

decentralization. These schools are found better in receiving relatively more public influence in their educational operation appropriate with their environmental dimensions and characteristics, as well as with the community power structure of their attendance areas. These schools are also found in a relatively better position as regards to the economic, political-legal, social, and technological-educational dimensions of public participation.

Thus, in public participation in the educational operation in schools of central Ethiopia, it is generally possible to conclude that there is a statistically significant difference between: primary and secondary, small-size and large-size, government and non-government schools, and between schools with inexperienced and experienced principals, as well as between rural and urban schools.

Another way of putting this is that the dimensions of schools' level, size geographical setting (though not with standing as the level and size increases and with the degree of urbanization respectively) appropriation, experience of principals can generally be taken as major factors for the magnitude of public participation in the educational operation in schools of central Ethiopia.

This difference is possibly due to the positive as well as strong relationships obtained among the major components of the systems approach in dealing with the state of public

participation as well as between these major components and the state of public participation as a whole.

Moreover, the positive relationship between the economic background of parents (which are major components of the public) and the magnitude of public participation in educational operation (obtained taking the systems approach as a ground) can also be in use as one means to see the variation in the state of public participation. This is particularly seen in secondary schools irrespective of their size, appropriation, the experience of their principals, and their geographical setting

Hence, the better the economic background of parents, the higher is the public participation. This can be realized when one sees the participation of parents of children in non-government schools in addition to what is found in the secondary schools irrespective of their appropriation.

Eventually, it is possible to realize that, as there is more public participation whatever the means may be, there is the possibility of achieving better academic achievement that makes public participation in the educational operation of schools pertinently valuable.

Despite the fact that there is generally a statistically significant difference in public participation between the categories under each dimension, the differences between the

mean scores and especially the correlation coefficients between certain dimensions (as independent variables) and the items of public participation (as dependent variables) are obtained being too low. This can serve as an indicator that public participation in the educational operation in schools of central Ethiopia is still at its stage of infancy that necessitates the schools to work harder in this regard. And the disparity found among the categories of schools, some being relatively better than others seem to be taken as being "better" than "worse".

4.3 Recommendations

On the basis of the findings and the conclusion drawn, the following recommendations are made with special emphasis on what is expected from the schools, the public, and the government (policy makers).

4.3.1 With Respect to the Acquisition of the Due Amplitude of Openness by Schools as Educational Systems to the Public Environmental-Suprasystem Participation

4.3.1.1 Schools as educational systems, as regards their openness amplitude, are supposed to be open and permeable to the variety of energy and information inputs from their public environmental-suprasystem. From this perspective, systems vary with respect to the general range of inputs, and quality that depends on the availability of resources, (financial, material human, direction or information resources).

Being aware of openness, schools maintain a "steady state" or dynamic equilibrium if they are to grow. Thus, schools have to demonstrate adaptation by selecting a variety of means by:

4.3.1.1.1 emphasizing on the needs of the public for instance on trade education if it is a demand of the public.

4.3.1.1.2 involving all sectors of the public.

4.3.1.1.3 making "bottom-up" planning.

4.3.1.1.4 planning and implementing of educational activities in more participatory and collaborative ways with the public.

4.3.1.1.5 acquiring face-to-face relationships or two-way communication between the schools themselves and the public suprasystem.

4.3.1.1.6 having due amplitude of openness towards the public. To do this, it is necessary to exercise appropriate strategies such as socialization with the due degree of buffering public demands and due interaction to protect the quality of education.

4.3.1.1.7 being open to provide factual information to the public pertaining to the educational operation of the schools.

To this end, school principals as practitioners and as middle managers as well as boundary spanners (between their school systems and the public suprasystem) are expected to show efforts with reference to:

4.3.1.1.8 negotiating and dealing extensively as well as regularly with the public.

4.3.1.1.9 being candid in explaining the need for assistance from the public using wisdom.

4.3.1.1.10 having positive attitude towards what ever demand comes from the public, with the belief that public-school relationships can bring worthwhile partnership as a source of assistance.

4.3.1.1.11 keeping balance of relationship to alleviate the problem of split of loyalty and dual responsibility toward teachers and parents in relation to protecting academic quality.

4.3.1.1.13 being enthusiastic to stimulate strong school administration committees.

4.3.1.1.14 facilitating good relationships for teachers with the school administration committees and parent committees as well as parents.

In relation to Parent-Teacher relationship, teachers being aware of their role in widening the scope of public participation, they are supposed to develop good contact being responsive to parents not only on disciplinary problems. Thus, they should develop stronger contact with parents in relation to the progress of students regularly in academic and related matters.

4.3.1.2 On the part of the public as environmental-suprasystem of schools as educational systems, it is expected to:

4.3.1.2.1 take the courage to correct schools through participation so that they would not lose their equilibrium being in conflict with public demands.

4.3.1.2.2 influence the educational operation of schools being organized where the initiative can be taken by local administrative councils as representatives of the public).

4.3.1.2.3 invest on the education of school children particularly in the realm of selection of schooling, having input in the curricula and in involving in extra curricular activities.

4.3.1.2.4 be represented on school administration committees, and parent committees substantially as the school administration committees and parent committees as boundary

spanners representing the public suprasystem are supposed to facilitate better school-public relationship.

4.3.1.2.5 seek greater role in the education of school children to make the aims of schools and the public confluent.

4.3.1.2.6 initiate communications and enter into dialogue with the school representatives so that the flow of information is two ways.

4.3.1.3 As long as schools meet the broad social goals and goals of the national educational policy, the government or policy makers should provide them with some degree of autonomy in light of decentralizing educational responsibility to the public. In view of this, educational outcome in schools has shown variation with respect to being governmental or non-governmental systems which are related with autonomy of schools in light of decentralization.

Thus, on the part of the government, it is expected to:

4.3.1.3.1 "separate" educational policy and administrative practices whereby the efficiency, effectiveness, responsiveness, and relevance in administrative strategy to attain the goals established in the national educational policy to be increasingly improved.

4.3.1.3.2 enable the decentralization process reach upto school environments; otherwise, suspending it somewhere above at the regional or zonal level does not ensure its effectiveness since decentralization should not be confused with democracy, as well as centralization with authoritarianism. For instance, in our case, it is possible to note that the educational administration being decentralized is may be upto regional level that cannot avoid centralization.

4.3.1.3.3 reduce the bureaucratic control of schools by the echelons in the educational administrative hierarchy, instead, it is better to enable schools to be appropriately accountable to the main beneficiary, (the public). This is so because, schools as educational systems do belong to the public suprasystem, that in turn can be a means for increased public participation.

4.3.1.3.1 assign principals with the field of Educational Administration when they are available, if not, crash programs in training should be arranged in school-public relations.

4.3.2 With Reference to Enhancing the Public Environmental-Suprasystem Influence on Schools as Educational Systems

4.3.2.1 It is inescapable for schools from the influence of the public environmental-suprasystem in clustered or

unclustered form of demands as uncertainty and also from economic influence in relation to the question of scarcity.

On this account, schools are assumed to show efforts in:

4.3.2.1.1 enabling the public to have a part in the determination of school policies and programs through their representatives (the school administration committees and parent committees) or through general open assemblies.

4.3.2.1.2 being responsive to public demands in planning and implementing educational programs paying attention to its relevance with the needs of the public. That in turn can facilitate public participation in the educational operation of schools.

4.3.2.1.3 managing their environments so that good and proper school-public interaction can be enhanced by:

4.3.2.1.3.1 entering into venture in vocational education with their surrounding government and non-government organizations or establishments considering generally as public resources;

4.3.2.1.3.2 using cooptation by bringing leaders from important elements in the public or in the environment into school policy or decision-making body, so that the public is more able to influence schools;

4.3.2.1.3.3 using politicking as a means of shaping environmental elements, particularly in influencing local administration rules and regulations through school administration committees (lobbying to protect unwanted influences).

School principals in their endeavour to enhance public influence on schools have to:

4.3.2.1.4 be aware of the fact that the characteristics of public environmental-suprasystem can cause constraints or opportunities to their school systems. Then pass decisions and make plans following the "mechanistic" style of management when the public is of homogeneous or the situation is stable, and "organic" style when their schools face heterogeneous type of public or changing conditions. Because environmental characteristics vary from highly stable or less complex (homogeneous public with lower diversity of demands) such as placid-randomized and placid-clustered, to less stable or more complex (hetero-geneous public with higher diversity of demands) such as disturbed-reactive and turbulent fields.

4.3.2.1.5 act as professional advisors in school administration committees based on educational research and theory not to be limited only with carrying out the policy handed down to them, nor forced to shape their views by powerful individuals in the committees.

To be effective in participation in the educational operation of school systems representing the public suprasystem the school administration committees or boards are supposed to:

4.3.2.1.6 exercise pluralistic ways of carrying out their responsibilities. They have to represent various interests that enable them to be active but not rigidly bounded to one position.

4.3.2.1.7 represent geographically different sectors of the schools' catchment areas so that various interests can be voiced.

4.3.2.1.8 be elected or appointed periodically according to policy.

4.3.2.1.9 carry out their meetings periodically as well as consistently according to their internal convention.

4.3.2.2 The public as suprasystem of school systems, in relation to environmental demands, is expected to raise educational demands as "uncertainty" being organized as "clustering" under school administration committees as well as under parent committees. Besides, the public is supposed to support schools to alleviate their resource problems as "scarcity" as much as its capacity if schools are to show progress in their educational operation. Accordingly, the

public or parents (being the major components of the public) have to develop:

4.3.2.2.1 clarity about the goals of school programs through their representatives (the school administration committees and parent committees that are supposed to serve as bridge mediators or boundary spanners between the school systems and the public suprasystem).

4.3.2.2.2 capacity to understand the problems of instruction so that they can increase supporting the schools with financial, material, information or direction resources as much as their capacity permits.

4.3.2.2.3 capacity to influence the decision-making of schools' educational operations directly as well as through the school administration committees as their representatives.

4.3.2.2.4 the habit of attending in general and periodic meetings more increasingly from what is prevailing now.

4.3.2.2.5 interest in being volunteers to participate in school matters.

4.3.2.2.6 good relations with teachers and take the initiative through parent committees to establish PTAs considering that teachers are the most concerned ones to children next to parents.

4.3.2.3 The government should work hard for a profound result in the participation of the public in the educational operation of schools by:

4.3.2.3.1 providing those areas with low socio-economic status with basic infrastructure so that they would not be passive in the educational operation of schools. The more the public is enlightened, the better it understands the significance of education, and the less it is random in character.

4.3.2.3.2 updating the work and organization design of schools in such a way that the schools can have better and due interaction with the public so that schools can cope up with public needs. School systems with differentiated subsystems in heterogeneous environments are more likely to be more innovative than less differentiated schools operating even in a relatively stable homogeneous environments.

4.3.2.3.3 encouraging and endorsing to the public the importance of pluralistic public interest through available means such as policies, directives especially through the mass media on the account that the community power structure of certain environments can have considerable influence over the educational operation of schools.

4.3.2.3.4 strengthening school administration committees by establishing them as education or school boards at Wereda (District) level so that coordination in assisting schools with

the necessary resources (financial, material, information or direction resources) would be enhanced.

4.3.2.3.5 facilitating for the strengthening of school parent committees under the would be education or school boards. This means to work representing the needs and demands of the public in general and of parents of school children in particular. If school parent committees are well strengthened, they can be made in use as ground for the establishment of PTAs in our case. That in turn enables the public to have better influence on the educational operation of schools.

4.3.2.3.6 engaging the public in school affairs by means of acquaintance with the curriculum progressively using mass media. That in turn can enable the government or policy makers sense the needs of the public to be implicit in the curriculum.

4.3.2.3.7 establishing policies whereby the public as its right can: be given information about school procedure, have access to student outcomes by visiting educational programs, be represented on the decision-making bodies of schools, and question the educational program of its local school.

4.3.3 With Regard to Intensifying the Dimensions of Public Participation in the Educational Operation of Schools

In Ethiopia schools are pertinently in need of public participation to alleviate their problems of educational operation vis-a-vis the economic, political-legal, social as well as technological-educational dimensions. The means to intensify these dimensions is mainly sharing of the burden of government with the public through participation.

To this end, the following are supposed to be effective for the improvement of educational operation in schools, by the schools, the public and the government or policy makers.

4.3.3.1 On the Part of Schools the Following are expected

4.3.3.1.1 As regards to economic dimension

4.3.3.1.1.1 schools being aware of the fact that good management of school resources is a supporting factor for increased public participation, they have to disclose financial report together with their work plan to the public or parents. Therefore, schools have to use resources efficiently.

4.3.3.1.1.2 school administration committees are supposed to show their effort enthusiastically in encouraging, mobilizing and coordinating the public to support schools with resources in monetary or non-monetary forms.

4.3.3.1.1.3 school administration committees have to control the management of school resources that in turn can enable them to sense or understand school needs.

4.3.3.1.2 As to the political-legal dimension

4.3.3.1.2.1 As per the various reflections of interests of community power structure, issues that can in turn influence the nature of school administration committees or boards vary from community to community. Thus, schools are supposed to be more responsive to the public organized or individual demands in the process of educational operation.

4.3.3.1.2.2 schools should be aware of the fact that the public has the legal right to participate in school matters.

4.3.3.1.2.2 schools do also have to create good and proper interaction with local administration councils, for the reason that schools have to operate their function according to local rules and regulations. Functioning according to local rules and regulations by schools in turn enables to get legal protection or support in their effort to involve the public in educational operation.

4.3.3.1.3 With regard to the point of the social dimension, schools should:

4.3.3.1.3.1 try to coordinate the actions and interests of persons and groups that participate directly or indirectly in the educational process in order to socialize the school with the public visibly.

4.3.3.1.3.2 show efforts to make the educational program appropriately relevant to the culture and values of the public.

4.3.3.1.3.3 allow and enable the public to discuss values to be implicit in the educational program with due attention that the teaching-learning process is not in conflict with the values of the people, and to expect that the schools reinforce the broad values of cultural experiences and aspirations of the public.

4.3.3.1.3.4 serve as an equal 'partner" possibly as coordinating institution in developing educational, recreational, social, cultural, and health activities of the public so that public participation can be increased due to the increase of the feeling of belongingness.

4.3.3.1.4 On the subject of the technological-educational dimension, schools have to:

4.3.3.1.4.1 show effort in making their education to be able to serve as a means to solve public environmental problems so that the significance of education can be visible

to the public, for which cause the state of public participation in educational operation can be improved.

4.3.3.1.4.2 allow the public to raise issues such as strategies to be adopted in the teaching-learning process.

4.3.3.1.4.3 take the advantage of local technology and knowledge as well as methodology to enrich their educational programs.

4.3.3.1.4.4 try to utilize environmental resources as public resources properly through short visits, tours as well as on-the-spot observations based on the level of students' maturity or related to classroom activities.

4.3.3.1.4.5 invite resource persons among the public to share their knowledge and experience to young students.

4.3.3.2 The following are expected from the public.

4.3.3.2.1 With respect to the economic dimension, focus has to be made by the public on:

4.3.3.2.1.1 supporting schools in economic resources, (financial and material resources).

4.3.3.2.1.2 production inputs for growth and educational goal attainment instead of maintenance inputs simply required

to sustain the school systems. This is to say that public economic support should concentrate more on the construction of new schools to improve the existing (prevailing) classroom-student ratio. Hence, the problem of conducting educational programs on the double shift basis could be alleviated; since quality of education which is the major issue of schools is related mainly with classroom-student ratio as found in this study.

4.3.3.2.1.3 investing privately on the construction and establishment of new schools that have dual advantages: economically to the owners and quality of education to the public in general.

4.3.3.2.2 As regards to the political-legal dimension, the public has to be aware that it has the legal ground to participate in school matters.

4.3.3.2.3 As for the social dimension, the public has to feel that schools do belong to it and has to participate in the form of voluntary associations.

4.3.3.2.4 Speaking of the technological-educational dimension , it is expected from:

4.3.3.2.4.1 the business community to actively involve itself in programs related to technical and vocational education of the would be employees such as allowing school-

part-time attendance to students in their organizations, to make education beneficially to the public.

4.3.3.2.4.2 parents as major components of the public also to assist schools by making their children work hard and diligently for better outcome as one channel of participation.

4.3.3.2.4.3 the public to enrich the variety of education of its children as much as its capacity permits through participating in extra curricular activities.

4.3.3.3 On the part of the government, the following are expected.

4.3.3.3.1 In relation to the economic dimension, the following are expected from:

4.3.3.3.1.1 the government or local administration councils in joint venture with indigenous or foreign NGOs to encourage the public through increasing expenditure proportionally to the public share to construct additional schools. This can be done by making the public aware of the fact that schools "mirror" the resources of their supporting public environmental-suprasystem since "a public or a community gets what it deserves" in relation to quality of education.

4.3.3.3.1.2 the government to seek for profound solution for the problem of classroom-student ratio. For instance, by

enlightening the public through mass media and by making family planning enclosed in the educational program that in the long run can improve the prevailing problems of educational resource scarcity. This should be so due to the fact that the country is found with very low rate of participation in education of the school-age children.

4.3.3.3.2 As regards to the political-legal dimension, the following are expected from the central government, local government or policy makers, considering that schools as educational systems of the public suprasystem are essentially subdivisions of local governments which are representatives of the public. On this account, the government or local central governments have to:

4.3.3.3.2.1 facilitate conditions that allow the educational policies to be appropriately consistent with the needs and beliefs of the public.

4.3.3.3.2.2 provide guide lines or policies for increased public participation in the educational operation of schools through voluntary associations such as parent committees or associations, specialists, and various trade associations.

4.3.3.3.2.3 establish policies for government representatives that include city, wereda, zonal, regional councils and public elected or appointed officials that they are supposed to encourage the public to participate directly

or through its representatives (through school administration committees as well as parent committees in the educational operation of schools).

4.3.3.3.2.4 provide policies that enable schools to use government or non-government industrial, agricultural and business establishments and museums, libraries, national parks as public resources in their endeavour to enrich the variety of education related to class activities.

4.3.3.3.2.5 provide policies that enable the public to appeal against school decisions that are considered to be unsatisfactory; and also enable it to question whether or not school resources are used efficiently.

4.3.3.3.3 Concerning the social dimension, the government has to:

4.3.3.3.3.1 provide guide-lines for schools to serve as social institutions in addition to their major tasks and that in turn can be in use as a means for the closer interaction between the schools and their respective public or community.

4.3.3.3.3.2 be ware that it would seem palatable to have degreed primary school principals as the opportunity to influence the public at the primary level has greater potential.

4.3.3.3.4 As to the technological-educational dimension, the government has to make:

4.3.3.3.4.1 the curriculum design to be in such a way that the content depends upon environmental potential, local needs, and socio-cultural conditions of the public. This can assist in resolving the man-made as well as natural problems the public faces.

4.3.3.3.4.2 the school parent committees to be strengthened in such a way that they can act as advisory bodies emphasizing on academic and related matters of schools.

This brings the study to an end.

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APPENDICES

APPENDIX A-1

Summary of Whether the Difference between the Categories Under Each Dimension is Statistically Significant or Non-Significant

Dimension	Tables	Df	Table Value at 0.05	Obs. Value (F)	Probability (P)	Whether Significant or Non-Significant at 0.05*	Categories	Mean (X)
LEVEL	Table 1	1,388	3.86	10.46	0.0013	Significant	Primary	32.02
							Secondary	30.30
	Table 2	1,388	3.86	22.69	0.0001	Significant	Primary	24.21
							Secondary	22.47
	Table 3	1,388	3.86	16.86	0.0001	Significant	Primary	24.31
							Secondary	22.47
	Table 4	1,388	3.86	17.84	0.0001	Significant	Primary	83.13
							Secondary	77.59
SIZE	Table 5	1,388	3.86	10.99	0.0010	Significant	Small-size	32.05
							Large-size	30.28
	Table 6	1,388	3.86	3.64	0.0573	Non-Significant	Small-Size	23.70
							Large-size	22.98
	Table 7	1,388	3.86	28.05	0.0001	Significant	Small-size	24.57
							Large-size	22.23
	Table 8	1,388	3.86	14.56	0.0002	Significant	Small-size	82.90
							Large-size	77.87
APPROPRIATION	Table 9	1,391	3.86	6.53	0.0110	Significant	Government ⁿ	30.28
							Non-government	31.55
	Table 10	1,391	3.86	11.84	0.0006	Significant	government	22.98
							Non-government	24.22
	Table 11	1,391	3.86	16.49	0.0001	Significant	Government	22.23
							Non-government	23.85

Dimen- sion	Tables	DF	Table Value at 0.05	Obs. Value (F)	Proba- bility (p)	Whether Significant or Non-Significant at 0.05*	Categories	Mean ($\bar{X}$)
	Table 12	1,391	3.86	12.82	0.0004	Significant	Government	77.87
							Non-government	82.19
EXPER- IENCE OF PRIN- CIPALS	Table 13	1,388	3.86	12.70	0.0004	Significant	Inexperienced	30.21
							Experienced	32.10
	Table 14	1,388	3.86	12.28	0.0005	Significant	Inexperienced	22.69
							Experienced	23.98
	Table 15	1,388	3.86	13.63	0.0003	Significant	Inexperienced	22.56
							Experienced	24.21
	Table 16	1,388	3.86	15.11	0.0001	Significant	Inexperienced	77.79
							Experienced	82.90
GEO- GRA- PHICAL SETT- ING	Table 17	1,388	3.86	10.99	0.0010	Significant	Rural	32.05
							Urban	30.28
	Table 18	1,388	3.86	3.64	0.0573	Non-Significant	Rural	23.70
							Urban	22.98
	Table 19	1,388	3.86	28.05	0.0001	Significant	Rural	24.57
							Urban	22.23
	Table 20	1,388	3.86	14.56	0.0002	Significant	Rural	82.90
							Urban	77.87

* DECISION RULE: If the observed F value is greater than the table value at 0.05, there is a statistically significant difference. Or, if P (probability of the observed or calculated) is less than 0.05 then there is a significant difference.

APPENDIX A-2

Numeric Variables of Items, Dimensions, Major Components of Systems Approach

FILE ADDES

DES FILE OF NUMERIC VARIABLES FROM FILE ADFILE

PAGE 1

	NAME	TYPE	MEAN	S.D.	LOW	HIGH	M1	M2	M3	GOOD
1	SERNO	DI	295.4013	169.4713	1	588	0	0	0	586
2	ITEM1	DI	3.1058	0.7034	1	4	0	0	0	586
3	ITEM2	DI	2.6246	0.7296	1	4	0	0	0	586
4	ITEM3	DI	3.0870	0.6876	1	4	0	0	0	586
5	ITEM4	DI	3.1229	0.6421	1	4	0	0	0	586
6	ITEM5	DI	2.9846	0.7290	1	4	0	0	0	586
7	ITEM6	DI	3.1758	0.6780	1	5	0	0	0	586
8	ITEM7	DI	3.0904	0.6246	1	4	0	0	0	586
9	ITEM8	DI	2.6911	0.7833	1	4	0	0	0	586
10	ITEM9	DI	2.4727	0.5992	1	4	0	0	0	586
11	ITEM10	DI	2.4454	0.6413	1	4	0	0	0	586
12	ITEM11	DI	2.4898	0.8253	1	4	0	0	0	586
13	ITEM12	DI	2.2509	0.8166	1	4	0	0	0	586
14	ITEM13	DI	2.2799	0.6591	1	4	0	0	0	586
15	ITEM14	DI	2.9215	0.5940	1	4	0	0	0	586
16	ITEM15	DI	2.7833	0.4012	1	4	0	0	0	586
17	ITEM16	DI	2.7696	0.6867	1	4	0	0	0	586
18	ITEM17	DI	2.8942	0.6985	1	4	0	0	0	586
19	ITEM18	DI	2.6024	0.6923	1	4	0	0	0	586
20	ITEM19	DI	2.4488	0.6576	1	4	0	0	0	586
21	ITEM20	DI	2.6826	0.5773	1	4	0	0	0	586
22	ITEM21	DI	2.3823	0.6997	1	4	0	0	0	586
23	ITEM22	DI	2.7730	0.6144	1	4	0	0	0	586
24	ITEM23	DI	2.7628	0.7888	1	4	0	0	0	586
25	ITEM24	DI	2.7662	0.7724	1	4	0	0	0	586
26	ITEM25	DI	2.6894	0.6837	1	4	0	0	0	586
27	ITEM26	DI	2.8891	0.6185	1	4	0	0	0	586
28	ITEM27	DI	2.4642	0.7062	1	4	0	0	0	586
29	ITEM28	DI	2.3652	0.6213	1	4	0	0	0	586
30	ITEM29	DI	2.4505	0.8800	1	4	0	0	0	586
31	ITEM30	DI	2.5068	0.8914	1	4	0	0	0	586
32	LEVEL	DI	1.5017	0.5304	1	2	0	0	0	586
33	SIZE	DI	1.3703	0.4833	1	2	0	0	0	586
34	APPROP	DI	1.3345	0.4722	1	2	0	0	0	586
35	EXPER	DI	1.4317	0.4957	1	2	0	0	0	586
36	GEOS	DI	1.6706	0.4704	1	2	0	0	0	586
37	OPENESS	DI	31.2901	5.1581	12	43	0	0	0	586
38	INFLUENCE	DI	23.6331	3.5849	14	34	0	0	0	586
39	PARTICIPATION	DI	23.5427	4.1992	12	35	0	0	0	586
40	TOTAL	DI	60.9727	12.5530	42	114	0	0	0	586

LIST ADCORR,
STUB %

APPENDIX B-1

Correlation Coefficients Between Item and Another Dimensions, Major Component (of Systems Approach); Between Dimension and Major Component; Between Major

Component and Another

FILE ADCORR		Component and Another							
DOUBLE PRECISION CORRELATIONS OF ADFILE		PAGE 1							
ROW LABEL	SERNO	ITEM1	ITEM2	ITEM3	ITEM4	ITEM5	ITEM6	ITEM7	ITEM8
SERNO	1.000000	0.058322	-0.086803	-0.015615	-0.061189	-0.108847	-0.068947	-0.112260	-0.215572
ITEM1	0.058322	1.000000	0.337338	0.567651	0.512431	0.499908	0.376739	0.378950	0.378888
ITEM2	-0.086803	0.337338	1.000000	0.426442	0.419762	0.368398	0.323698	0.299713	0.433754
ITEM3	-0.015615	0.567651	0.426442	1.000000	0.572054	0.514249	0.462175	0.483185	0.360962
ITEM4	-0.061189	0.512431	0.419762	0.572054	1.000000	0.577454	0.476521	0.466719	0.452773
ITEM5	-0.108847	0.499908	0.368398	0.514249	0.577454	1.000000	0.538125	0.491141	0.473559
ITEM6	-0.068947	0.376739	0.323698	0.462175	0.476521	0.538125	1.000000	0.426633	0.414540
ITEM7	-0.112260	0.378950	0.299713	0.483185	0.466719	0.491141	0.426633	1.000000	0.413499
ITEM8	-0.215572	0.378888	0.433754	0.360962	0.452773	0.473559	0.414540	0.413499	1.000000
ITEM9	0.110168	0.343473	0.371410	0.360505	0.359733	0.372757	0.337921	0.241826	0.417106
ITEM10	-0.039680	0.338612	0.354211	0.260758	0.344182	0.380189	0.354214	0.290356	0.457833
ITEM11	-0.028307	0.322841	0.300210	0.295289	0.424992	0.373385	0.334702	0.285344	0.379762
ITEM12	-0.086485	0.257258	0.344822	0.314202	0.319305	0.302252	0.253675	0.226910	0.369781
ITEM13	0.072899	0.249445	0.339745	0.187582	0.225616	0.236677	0.237855	0.146039	0.263698
ITEM14	0.176006	0.142656	0.113050	0.179996	0.164288	0.186713	0.191381	0.115934	0.080047
ITEM15	-0.049342	0.012306	0.025905	0.046769	0.097395	0.019733	0.059323	-0.002921	-0.032766
ITEM16	-0.153439	0.383183	0.400243	0.390070	0.467497	0.501697	0.424887	0.391396	0.483867
ITEM17	-0.032304	0.402040	0.441817	0.464099	0.482603	0.544004	0.479698	0.456883	0.469917
ITEM18	0.065894	0.370888	0.367293	0.431952	0.502382	0.502757	0.451453	0.364011	0.469701
ITEM19	0.079357	0.263035	0.294787	0.283973	0.298338	0.306820	0.279029	0.283907	0.355794
ITEM20	-0.138178	0.284905	0.227966	0.194603	0.266812	0.272737	0.186461	0.127163	0.221281
ITEM21	-0.099283	0.251127	0.382065	0.197228	0.283408	0.303117	0.268932	0.175013	0.359198
ITEM22	0.350819	-0.023450	-0.076010	0.034700	0.044814	-0.026881	-0.023076	0.089315	-0.163643
ITEM23	-0.187328	0.273280	0.302401	0.372200	0.462652	0.436583	0.436069	0.338526	0.368042
ITEM24	-0.154836	0.388575	0.402139	0.405336	0.488917	0.467249	0.421379	0.348655	0.448265
ITEM25	-0.227514	0.413216	0.413510	0.388488	0.453112	0.480862	0.446168	0.406140	0.503504
ITEM26	-0.178769	0.368659	0.324247	0.384504	0.408878	0.458762	0.413459	0.415416	0.440675
ITEM27	-0.073530	0.276064	0.415093	0.275750	0.311333	0.345929	0.386274	0.214702	0.420218
ITEM28	0.016334	0.326032	0.374590	0.269585	0.341536	0.348294	0.390236	0.253915	0.421721
ITEM29	0.012334	0.348134	0.314451	0.262796	0.361718	0.370528	0.365569	0.277169	0.388104
ITEM30	-0.049633	0.409654	0.392084	0.333266	0.442550	0.437815	0.385597	0.320259	0.459766
LEVEL	0.484517	-0.044220	-0.049743	-0.142022	-0.240068	-0.175652	-0.139441	-0.194649	-0.118551
SIZE	-0.153127	-0.065163	-0.031668	-0.019988	-0.069753	-0.037202	-0.021607	0.002116	0.018173
APPROP	0.816817	0.093989	-0.066567	0.052344	0.072835	-0.004915	-0.002405	-0.004213	-0.154604
EXPER	-0.347794	0.040355	0.028276	0.105221	0.053247	0.098794	0.150193	0.155233	0.062254
CFG	0.608151	0.007335	-0.121820	-0.001073	-0.069544	-0.069615	-0.037933	-0.055534	-0.179102
OPENESS	-0.081470	0.680804	0.628560	0.710545	0.752101	0.754488	0.677057	0.636519	0.707025
INFLUENCE	-0.014419	0.447243	0.491005	0.474157	0.532307	0.545344	0.484440	0.404206	0.521333
PARTICIPATION	-0.099624	0.450458	0.489534	0.443640	0.543318	0.547760	0.535049	0.427715	0.548792
TOTAL	-0.074405	0.586920	0.589788	0.599183	0.674024	0.679739	0.622611	0.542547	0.655265

FILE ADCORR

DOUBLE PRECISION CORRELATIONS OF ADFILE

PAGE 2

ROW LABEL	ITEM9	ITEM10	ITEM11	ITEM12	ITEM13	ITEM14	ITEM15	ITEM16	ITEM17
SERNO	0.110168	-0.039680	-0.028307	-0.086485	0.072899	0.176006	-0.049342	-0.133439	-0.032304
ITEM1	0.343473	0.338612	0.322841	0.257258	0.249445	0.142656	0.012306	0.383183	0.402040
ITEM2	0.371410	0.354211	0.300210	0.344822	0.339745	0.133056	0.025905	0.400243	0.441817
ITEM3	0.360505	0.260758	0.295289	0.314202	0.187582	0.179996	0.046769	0.390070	0.464099
ITEM4	0.359733	0.344182	0.424992	0.319303	0.225616	0.164288	0.097395	0.467497	0.482603
ITEM5	0.372757	0.380189	0.373385	0.302252	0.236677	0.186713	0.019733	0.501697	0.544004
ITEM6	0.337921	0.354214	0.334702	0.253675	0.237055	0.191381	0.059323	0.424887	0.479698
ITEM7	0.241826	0.296056	0.285344	0.226910	0.146039	0.115934	-0.002921	0.391396	0.456863
ITEM8	0.417106	0.457833	0.379762	0.369781	0.263690	0.080047	-0.032706	0.483867	0.489917
ITEM9	1.000000	0.514157	0.364101	0.361594	0.426245	0.138048	0.017976	0.447842	0.430056
ITEM10	0.514157	1.000000	0.413836	0.393277	0.440514	0.132287	0.108333	0.438944	0.441030
ITEM11	0.364101	0.413836	1.000000	0.507293	0.394983	0.211076	0.061118	0.482929	0.484419
ITEM12	0.361594	0.393277	0.507293	1.000000	0.377511	0.188681	0.095079	0.398885	0.373245
ITEM13	0.426245	0.440514	0.394983	0.377511	1.000000	0.104249	-0.007855	0.403289	0.372616
ITEM14	0.138048	0.132287	0.211076	0.188681	0.104249	1.000000	0.077928	0.156742	0.223029
ITEM15	0.017976	0.108333	0.061118	0.095079	-0.007855	0.077928	1.000000	0.164184	0.179142
ITEM16	0.447842	0.438944	0.482929	0.398885	0.403289	0.156742	0.164184	1.000000	0.563392
ITEM17	0.430056	0.441030	0.484419	0.373245	0.372616	0.223029	0.079142	0.583392	1.000000
ITEM18	0.457966	0.441786	0.449144	0.421655	0.334230	0.206654	0.105266	0.551284	0.588037
ITEM19	0.315294	0.343872	0.340791	0.261107	0.384155	0.191013	0.064812	0.418657	0.423598
ITEM20	0.310920	0.290065	0.258674	0.285213	0.211400	0.206383	0.170375	0.349896	0.247224
ITEM21	0.420420	0.450279	0.433088	0.361434	0.345906	0.134026	0.012926	0.439734	0.380192
ITEM22	-0.037755	-0.072702	-0.009648	-0.066904	0.098035	-0.020800	0.024143	-0.039056	0.015647
ITEM23	0.331626	0.323973	0.436074	0.344615	0.318607	0.179090	-0.000561	0.526885	0.518983
ITEM24	0.401696	0.462366	0.550028	0.515935	0.360469	0.168593	0.116398	0.578296	0.562417
ITEM25	0.404833	0.432832	0.476034	0.430622	0.333580	0.183998	0.117187	0.622794	0.596808
ITEM26	0.298523	0.400448	0.344380	0.339471	0.244024	0.153074	0.102876	0.491083	0.463408
ITEM27	0.369313	0.467324	0.439323	0.438001	0.414570	0.152216	0.019862	0.467593	0.484371
ITEM28	0.453796	0.539004	0.420667	0.442396	0.409539	0.114862	0.059335	0.445873	0.463333
ITEM29	0.331307	0.397909	0.305274	0.258730	0.256752	0.139715	0.065449	0.412438	0.463019
ITEM30	0.477732	0.434483	0.426619	0.438160	0.340998	0.141427	0.178803	0.580118	0.550910
LEVEL	-0.062549	-0.010359	-0.240024	-0.233203	-0.146574	-0.074311	-0.051699	-0.264965	-0.219541
SIZE	-0.174565	-0.141420	-0.151193	-0.075514	-0.213218	0.238393	0.000213	-0.113350	-0.081223
APPROP	0.195438	0.003967	0.114076	0.008124	0.209528	0.093769	-0.049063	0.036381	0.102286
EXPER	-0.101230	0.023197	0.025447	0.154264	0.001018	0.057240	0.063277	0.090830	0.067964
GEOG	0.019591	-0.124849	-0.103376	-0.073807	-0.005439	0.323351	-0.036457	-0.155908	-0.038602
OPENESS	0.620310	0.629867	0.621509	0.497268	0.425108	0.226715	0.054295	0.650575	0.691238
INFLUENCE	0.551948	0.572157	0.609156	0.665615	0.604973	0.419956	0.273879	0.757847	0.738782
PARTICIPATION	0.509283	0.581486	0.582173	0.523526	0.472513	0.208321	0.087060	0.677682	0.666464
TOTAL	0.616422	0.647237	0.654046	0.600310	0.529455	0.292707	0.142202	0.751180	0.756648

DOUBLE PRECISION CORRELATIONS OF ADFILE

PAGE 3

ROW LABEL	ITEM18	ITEM19	ITEM20	ITEM21	ITEM22	ITEM23	ITEM24	ITEM25	ITEM26
SERNO	0.065894	0.079357	-0.138178	-0.099283	0.350819	-0.187328	-0.154836	-0.227514	-0.178769
ITEM1	0.370888	0.263035	0.284905	0.251127	-0.023450	0.273280	0.388575	0.413216	0.368859
ITEM2	0.367293	0.294787	0.227966	0.382065	-0.076010	0.302401	0.402139	0.413510	0.324247
ITEM3	0.431952	0.283973	0.194603	0.197228	0.034700	0.372200	0.405336	0.386468	0.384504
ITEM4	0.502382	0.298338	0.266812	0.283408	0.044814	0.462652	0.488917	0.453112	0.408878
ITEM5	0.502757	0.306820	0.272737	0.303117	-0.026881	0.436583	0.467249	0.480822	0.458762
ITEM6	0.451453	0.279029	0.186461	0.268932	-0.023076	0.436069	0.421379	0.446168	0.413459
ITEM7	0.364011	0.283907	0.127163	0.175013	0.080315	0.338526	0.348655	0.406140	0.415416
ITEM8	0.469701	0.355794	0.221281	0.359198	-0.163643	0.368042	0.448265	0.503504	0.440675
ITEM9	0.457966	0.315294	0.310920	0.420420	-0.037755	0.331626	0.401696	0.404853	0.298523
ITEM10	0.441786	0.343872	0.290065	0.450279	-0.072702	0.323973	0.462366	0.432832	0.400448
ITEM11	0.449144	0.340791	0.258674	0.433088	-0.009648	0.436074	0.550028	0.476034	0.344380
ITEM12	0.421655	0.261107	0.285213	0.361434	-0.066904	0.344615	0.515935	0.430622	0.339471
ITEM13	0.334230	0.384155	0.211408	0.345906	0.098035	0.318607	0.360469	0.333580	0.244024
ITEM14	0.206654	0.191013	0.206383	0.134026	-0.020800	0.179090	0.168593	0.183998	0.153074
ITEM15	0.105206	0.064812	0.170375	0.012926	0.024143	-0.000561	0.116398	0.117187	0.102876
ITEM16	0.551284	0.418607	0.349896	0.439734	-0.039056	0.526885	0.578290	0.622794	0.491083
ITEM17	0.588037	0.423598	0.247224	0.380192	0.015647	0.518983	0.562417	0.596808	0.463408
ITEM18	1.000000	0.366386	0.308155	0.441379	0.084875	0.471826	0.564367	0.572908	0.447759
ITEM19	0.366386	1.000000	0.200280	0.321259	0.057929	0.274780	0.344939	0.378993	0.464204
ITEM20	0.308155	0.200280	1.000000	0.258577	-0.150444	0.266062	0.370021	0.360460	0.279437
ITEM21	0.441379	0.321259	0.258577	1.000000	-0.012568	0.387558	0.402902	0.480864	0.382556
ITEM22	0.084875	0.057929	-0.150444	-0.012568	1.000000	0.001595	-0.083193	-0.147748	-0.070863
ITEM23	0.471826	0.274780	0.266062	0.387558	0.001595	1.000000	0.582187	0.528745	0.401446
ITEM24	0.564367	0.344939	0.370021	0.402902	-0.083193	0.582187	1.000000	0.610020	0.468064
ITEM25	0.572908	0.378993	0.360460	0.480864	-0.147748	0.528745	0.610020	1.000000	0.573238
ITEM26	0.447759	0.404204	0.279437	0.382556	-0.070863	0.401446	0.468064	0.573238	1.000000
ITEM27	0.451581	0.397273	0.185893	0.498280	-0.040448	0.403568	0.475088	0.546895	0.505522
ITEM28	0.493136	0.367980	0.223624	0.511949	-0.033271	0.365361	0.484543	0.516909	0.408052
ITEM29	0.451656	0.320539	0.167545	0.325053	0.025034	0.393647	0.379056	0.423280	0.358907
ITEM30	0.602576	0.311753	0.293180	0.436495	0.032054	0.465768	0.578629	0.556648	0.388642
LEVEL	-0.163338	-0.056875	-0.134215	-0.177626	-0.045998	-0.343230	-0.244427	-0.223270	-0.118129
SIZE	-0.126291	-0.125812	0.023754	-0.186783	-0.309431	-0.145843	-0.120292	-0.111759	-0.068222
APPROP	0.182664	0.148823	-0.105274	0.031450	0.491906	0.020611	-0.019580	-0.106560	-0.118975
EXPER	0.052776	0.049564	0.067517	0.011286	-0.036922	0.104960	0.089953	0.113860	0.173177
GFOG	0.001371	0.031055	-0.077173	-0.141409	0.137208	-0.160226	-0.165253	-0.212298	-0.166414
OPENESS	0.648461	0.454931	0.355891	0.477926	-0.040600	0.551739	0.648655	0.652336	0.574310
INFLUENCE	0.735987	0.619619	0.523383	0.513990	0.000934	0.553095	0.679569	0.679433	0.551345
PARTICIPATION	0.681200	0.486748	0.338426	0.674005	0.088239	0.701012	0.747555	0.774456	0.676117
TOTAL	0.746822	0.548599	0.432356	0.599282	0.015375	0.651870	0.751305	0.760222	0.646901

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ROW LABEL	ITEM27	ITEM28	ITEM29	ITEM30	LEVEL	SIZE	AFKPROP	EXPER	GEOD
SERNO	-0.073530	0.016334	0.012334	-0.059633	0.464517	-0.153127	0.616817	-0.343794	0.608151
ITEM1	0.276064	0.326032	0.338134	0.409654	-0.044220	-0.153127	0.616817	-0.343794	0.608151
ITEM2	0.415093	0.374590	0.344551	0.392084	-0.097453	-0.065163	0.603989	0.400355	0.007335
ITEM3	0.275750	0.269585	0.282796	0.333266	-0.12022	-0.031668	0.066567	0.028276	0.121820
ITEM4	0.311333	0.341536	0.321718	0.442550	-0.120068	-0.019988	0.032344	0.105221	0.001073
ITEM5	0.355929	0.348294	0.3170528	0.437845	-0.150652	-0.069793	0.072835	0.053247	0.006954
ITEM6	0.366274	0.399236	0.335569	0.385937	-0.139441	-0.037202	0.004915	0.098794	0.037933
ITEM7	0.214702	0.253915	0.277169	0.320259	-0.146649	0.002116	0.004213	0.155233	0.025534
ITEM8	0.40218	0.421721	0.368104	0.459766	-0.18551	-0.018173	0.154604	0.062254	0.179102
ITEM9	0.359313	0.453796	0.331307	0.477732	-0.062549	-0.174565	0.195438	0.101230	0.019591
ITEM10	0.467324	0.539004	0.397909	0.434483	-0.010359	-0.141420	0.003967	0.023197	0.124849
ITEM11	0.439323	0.420667	0.365274	0.426619	-0.20024	-0.151193	0.114076	0.325447	0.13376
ITEM12	0.430001	0.442396	0.236730	0.438160	-0.233203	-0.075514	0.008124	0.154264	0.073807
ITEM13	0.414570	0.409539	0.256752	0.340998	-0.146574	-0.213218	0.209528	0.001018	0.005439
ITEM14	0.132216	0.114802	0.139715	0.141427	-0.073311	0.238393	0.093769	0.057240	0.323351
ITEM15	0.019862	0.059335	0.005449	0.178803	-0.051699	0.000213	0.049063	0.063277	0.036457
ITEM16	0.445793	0.445873	0.442438	0.500118	-0.264965	-0.113350	0.006081	0.096830	0.155908
ITEM17	0.483371	0.463333	0.463019	0.550916	-0.219541	-0.108123	0.102286	0.067964	0.038602
ITEM18	0.451581	0.493136	0.431056	0.602576	-0.133338	-0.126291	0.182664	0.052776	0.001371
ITEM19	0.397273	0.367980	0.320539	0.311753	-0.17626	-0.186783	0.031450	0.011286	0.077173
ITEM20	0.185893	0.223624	0.167545	0.032854	-0.035998	-0.125812	0.491926	0.036922	0.137208
ITEM21	0.498280	0.511949	0.328053	0.436495	-0.17626	-0.186783	0.031450	0.011286	0.077173
ITEM22	-0.040448	-0.033271	0.025934	0.032854	-0.035998	-0.125812	0.491926	0.036922	0.137208
ITEM23	0.403568	0.365361	0.333647	0.465768	-0.035998	-0.125812	0.491926	0.036922	0.137208
ITEM24	0.475088	0.484543	0.379050	0.578829	-0.244427	-0.120292	0.019580	0.089953	0.160226
ITEM25	0.546895	0.516909	0.432880	0.556646	-0.244427	-0.120292	0.019580	0.089953	0.160226
ITEM26	0.505522	0.438052	0.358907	0.388642	-0.118129	-0.111759	0.106560	0.113860	0.212298
ITEM27	1.000000	0.660981	0.457855	0.480990	-0.055453	-0.128835	0.035766	0.105334	0.166914
ITEM28	0.660981	1.000000	0.432273	0.511770	-0.07505	-0.189248	0.049075	0.103263	0.125647
ITEM29	0.478955	0.483273	1.000000	0.511770	-0.04830	-0.164130	0.056112	0.057794	0.058024
ITEM30	0.460990	0.510456	0.511710	1.000000	-0.182176	-0.064130	0.056112	0.057794	0.058024
LEVEL	-0.055453	-0.007505	0.044830	-0.064130	1.000000	-0.076830	0.064814	0.057794	0.058024
SIZE	-0.128835	-0.189248	-0.079421	-0.064130	-0.076830	1.000000	-0.393837	0.180542	0.537422
AFKPROP	-0.035786	0.102263	-0.035786	0.055712	0.004614	-0.393837	1.000000	-0.201636	0.496796
EXPER	0.105304	-0.102263	-0.011674	0.057794	-0.046083	0.180594	-0.201636	1.000000	0.046373
GEOD	-0.125647	-0.102263	-0.08024	-0.054353	-0.001239	0.537402	0.496796	0.046373	1.000000
OPENESS	0.532669	0.559450	0.501751	0.609795	-0.133565	-0.091891	0.035890	0.087308	0.103574
INFLUENCE	0.577846	0.577499	0.448610	0.649174	-0.226446	-0.098054	0.116037	0.115254	0.012986
PARTICIPATION	0.705738	0.742865	0.673841	0.683002	-0.200554	-0.226446	0.051413	0.107330	0.171585
TOTAL	0.673823	0.679146	0.601339	0.734649	-0.232653	-0.144000	0.069024	0.108751	0.107482

APPENDIX B-2

Summary of Correlation Coefficients Between: Item and Major Components (of Systems Approach); Dimensions and Major Components; Major Components and Major Components

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DOUBLE PRECISION CORRELATIONS OF ADFILE

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ROW LABEL	OPENESS	INFLUENCE	PARTICIPATION	TOTAL
SERNO	-0.081470	-0.014419	-0.099624	-0.074405
ITEM1	0.680804	0.447243	0.450458	0.586920
ITEM2	0.628560	0.491005	0.489534	0.589788
ITEM3	0.710545	0.474157	0.443640	0.599183
ITEM4	0.752101	0.532807	0.543318	0.674024
ITEM5	0.754488	0.545344	0.547760	0.679739
ITEM6	0.677057	0.484440	0.535049	0.622611
ITEM7	0.636519	0.404206	0.427715	0.542547
ITEM8	0.707025	0.521333	0.548792	0.655265
ITEM9	0.620310	0.551948	0.509283	0.616422
ITEM10	0.629867	0.572157	0.581496	0.647237
ITEM11	0.621509	0.609156	0.582173	0.654046
ITEM12	0.497268	0.665615	0.523526	0.600310
ITEM13	0.425108	0.604973	0.472515	0.529455
ITEM14	0.226715	0.419958	0.208321	0.292707
ITEM15	0.054295	0.273879	0.087060	0.142202
ITEM16	0.650575	0.757847	0.677682	0.751180
ITEM17	0.691238	0.738782	0.666484	0.756648
ITEM18	0.648461	0.735987	0.681200	0.746822
ITEM19	0.454931	0.619619	0.486748	0.548599
ITEM20	0.355891	0.533383	0.338426	0.432356
ITEM21	0.477926	0.513990	0.674005	0.599282
ITEM22	-0.040680	0.000934	0.088239	0.015375
ITEM23	0.551739	0.553095	0.701012	0.651870
ITEM24	0.648655	0.679569	0.747555	0.751305
ITEM25	0.652306	0.679433	0.774456	0.760222
ITEM26	0.574310	0.551345	0.676117	0.646901
ITEM27	0.532669	0.577846	0.765738	0.673823
ITEM28	0.559450	0.577499	0.742865	0.679146
ITEM29	0.501751	0.468610	0.673841	0.601339
ITEM30	0.607795	0.649174	0.683000	0.734649
LEVEL	-0.193565	-0.256446	-0.200554	-0.232653
SIZE	-0.091851	-0.098054	-0.220476	-0.144000
APPROP	0.035890	0.116037	0.051413	0.069024
EXPER	0.087308	0.115254	0.107330	0.103751
GEJO	-0.103574	-0.012986	-0.171585	-0.107482
OPENESS	1.000000	0.761582	0.764950	0.927104
INFLUENCE	0.761582	1.000000	0.787345	0.907480
PARTICIPATION	0.764950	0.787345	1.000000	0.921646
TOTAL	0.927104	0.907480	0.921646	1.000000

END OF FILE WHEN READING A COMMAND FROM FILE 5

APPENDIX C-1

Calculation for Correlation Coefficient between Economic Background and Public Participation in Primary Schools

No.	Name of the School	Econ. Back-ground as per the Ability to pay Annual school & Reg. fee (X)	Public Participation as per the Likert Scale Response (Y)	XY	X ²	Y ²
1	Arsi Negele	10	1487	14870	100	2211169
2	Chacha	10	1784	17840	100	3182656
3	Yekatit 23	12	1736	20832	144	3013696
4	Endebir	13	1450	18850	169	2102500
5	Kokabe Tsibah	20	1620	32400	400	2624400
6	Modjo	20	1735	34700	400	3010225
7	Menelik II	22	1559	34298	484	2430481
8	Tesfa Kokeb	22	1600	35200	484	2560000
9	Misrak Goh	22	1662	36564	484	2762244
10	Africa Andnet	130	1729	224770	16900	2989441
11	Assai	220	1815	399300	48400	3294225
12	Bole Community	230	1705	392150	52900	2907025
13	Bethlehem	235	1665	391275	55225	2772225
14	Miskaye Hizunan	370	1319	510230	136900	1901641
$\Sigma =$		1336	22926	2163279	313090	37761928

$$N\Sigma XY - \Sigma X \Sigma Y$$

$$I = \frac{[N\Sigma X^2 - (\Sigma X)^2] [N\Sigma Y^2 - (\Sigma Y)^2]}{}$$

$$= \frac{30285906 - 30629136}{}$$

$$= \frac{[4383260 - 1784896] [528666992 - 525601476]}{}$$

$$= -0.12$$

Where, N = 14

$$\Sigma XY = 2163279$$

$$N\Sigma XY = 14 \times 2163279 = 30285906$$

$$\Sigma X = 1336$$

$$\Sigma Y = 22926$$

$$\Sigma X \Sigma Y = 1336 \times 22926 = 30629136$$

$$\Sigma X^2 = 313090$$

$$N\Sigma X^2 = 14 \times 313090 = 4383260$$

$$(\Sigma X)^2 = (1336)^2 = 1784896$$

$$\Sigma Y^2 = 37761928$$

$$N\Sigma Y^2 = 14 \times 37761928 = 528666992$$

$$(\Sigma Y)^2 = (22926)^2 = 525601476$$

APPENDIX C-2

Calculation for Correlation Coefficient between Economic Background and Public Participation in Secondary Schools

No.	Name of the School	Econ. Background as per the Ability to Pay Annual School & Reg. Fee (X)	Public Participation As Per the Likert Scale Response (Y)	XY	X ²	Y ²
1	Gedeo	16	1635	26160	256	2673225
2	Enewary	16	1724	27584	256	2972176
3	Addis Ketema	18	1423	25614	324	2024929
4	SOS	20	1257	25140	400	1580049
5	Endebir	20	1351	27020	400	1825201
6	Nefassilk	20	1448	28960	400	2096704
7	Modjo	20	1666	33320	400	2775556
8	Yekatit 12	25	1466	36650	625	2149156
9	Arsi Negele	25	1608	40200	625	2585664
10	Awolia	30	1428	42840	900	2039184
11	Higher 7	30	1553	46590	900	2411809
12	Nazareth	516	1440	743040	266256	2073600
13	St. Mary	633	1638	1036854	400689	2683044
14	Yehiwot Berhan	645	1626	1048770	416025	2643876
15	St. Joseph	737	1621	1194677	543169	2627641
$\Sigma =$		2771	22884	4383419	1631625	35161814

$$N\Sigma xy - \Sigma x \Sigma y$$

$$\begin{aligned}
 r &= \frac{[N\Sigma x^2 - (\Sigma x)^2] [N\Sigma y^2 - (\Sigma y)^2]}{65751285 - 63411564} \\
 &= \frac{[24474375 - 7678441] [527427210 - 523677456]}{0.30}
 \end{aligned}$$

Where, N = 15

$$\Sigma xy = 4383419$$

$$N\Sigma xy = 15 \times 4383419 = 65751285$$

$$\Sigma x = 2771$$

$$\Sigma y = 22884$$

$$\Sigma x \Sigma y = 2771 \times 22884 = 63411564$$

$$\Sigma x^2 = 1631625$$

$$N\Sigma xy = 15 \times 1631625 = 24474375$$

$$(\Sigma x)^2 = (2771)^2 = 7678441$$

$$\Sigma y^2 = 35161814$$

$$N\Sigma y^2 = 15 \times 35161814 = 527427210$$

$$(\Sigma y)^2 = (22884)^2 = 523677456$$

APPENDIX C-3

Calculation for Correlation Coefficient between
Economic Expenditure and Terminal Academic Achievement of
Primary Schools

No.	Name of the School	Eco.Exp. as Per Annual Sch. & Reg. Fee (X)	Academic Achievement as Per the Percent of Students Passed Grade 8 National Exam (Y)	XY	X ²	Y ²
1	Arsi Negele	10	241/451=53	530	100	2809
2	Chacha	10	126/202=62	620	100	3844
3	Yekatit 23	12	803/1116=72	864	144	5184
4	Endebir	13	48/198=24	312	169	576
5	Kokebe Tsibah	20	709/1109=64	1280	400	4096
6	Modjo	20	261/324=81	1620	400	6561
7	Misrak Goh	22	284/550=52	1144	484	2704
8	Menelik II	22	538/897=60	1320	484	3600
9	Tesfa Kokeb	22	843/1338=63	1386	484	3969
10	Africa Andnet	130	496/716=69	8970	16900	4761
11	Assai	220	129/130=99	21780	48400	9801
12	Bole Community	230	147/152=97	22310	52900	9409
13	Bethlehem	235	247/254=97	22795	55225	9409
14	Miskaye Hizunan	370	152/152=100	37000	136900	10000
$\Sigma =$		1336	993	121931	313090	76723

$$N\Sigma xy - \Sigma x \Sigma y$$

$$\begin{aligned}
 r &= \frac{[N\Sigma x^2 - (\Sigma x)^2] [N\Sigma y^2 - (\Sigma y)^2]}{1707034 - 1326648} \\
 &= \frac{[4383260 - 1784896] [1074122 - 986049]}{0.80}
 \end{aligned}$$

Where, N = 14

$$\Sigma xy = 121931$$

$$N\Sigma xy = 14 \times 121931 = 1707034$$

$$\Sigma x = 1336$$

$$\Sigma y = 993$$

$$\Sigma x \Sigma y = 1336 \times 993 = 1326648$$

$$\Sigma x^2 = 313090$$

$$N\Sigma x^2 = 14 \times 313090 = 4383260$$

$$(\Sigma x)^2 = (1336)^2 = 1784896$$

$$\Sigma y^2 = 76723$$

$$N\Sigma y^2 = 14 \times 76723 = 1074122$$

$$(\Sigma y)^2 = (993)^2 = 986049$$

APPENDIX C-4

Culculation for Correlation Coefficient between Economic
Expenditure and Terminal Academic Achievement of
Secondary Schools

No.	Name of the School	Eco.Exp. as Per Annual School & Reg.Fee (X)	Academic Achievement as Per the Percent of Students with 3.00 and above GPA of the E.S.L.C.E (Y)	XY	X ²	Y ²
1	Enewary	16	9/163 = 6	96	256	36
2	Gedeo	16	14/176 = 8	128	256	64
3	Addis Ketema	18	170/1362 = 13	234	324	169
4	SOS	20	5/552 = 0.9	18	400	0.81
5	Endebir	20	10/431 = 2	40	400	4
6	Modjo	20	6/115 = 5	100	400	25
7	Arsi Negele	25	3/200 = 2	50	625	4
8	Yekatit 12	25	133/1300 = 10	250	625	100
9	Higher 7	30	11/1018 = 1	30	900	1
10	Awolia	30	4/62 = 7	210	900	49
11	Nazreth	516	83/102 = 81	41796	266256	6561
12	Yehiwot Berhan	645	55/59 = 93	59985	416025	8649
13	St. Joseph	737	85/105 = 81	59697	543169	6561
$\Sigma =$		2118	309.9	162634	1230536	22223.81

$$\frac{N \Sigma xy - \Sigma x \Sigma y}{\dots}$$

$$\begin{aligned}
 r &= \frac{[N \Sigma x^2 - (\Sigma x)^2] [N \Sigma y^2 - (\Sigma y)^2]}{2114242 - 656368.2} \\
 &= \frac{[15996968 - 4485924] [288909.53 - 96038.01]}{0.98}
 \end{aligned}$$

Where, N = 13

$$\begin{aligned}
 \Sigma xy &= 162634 \\
 N \Sigma xy &= 13 \times 162634 = 2114242 \\
 \Sigma x &= 2118 \\
 \Sigma y &= 309.9
 \end{aligned}$$

$$\begin{aligned}
 \Sigma x \Sigma y &= 2118 \times 309.9 = 656368.2 \\
 \Sigma x^2 &= 1230536 \\
 N \Sigma x^2 &= 13 \times 1230536 = 15996968 \\
 (\Sigma x)^2 &= (2118)^2 = 4485924 \\
 \Sigma y^2 &= 22223.81 \\
 N \Sigma y^2 &= 13 \times 22223.81 = 288909.53 \\
 (\Sigma y)^2 &= (309.9)^2 = 96038.01
 \end{aligned}$$

APPENDIX D-1

Calculation for Correlation Coefficient between Public Participation and Terminal Academic Achievement of Primary Schools

No.	Name of the School	Public Participati on as Per the Likert Scale Response (X)	Academic Achievement as Per the Percent of Students Passed Grade 8 National Exam (Y)	XY	X ²	Y ²
1	Miskaye Hizunan	1379	152/152 = 100	137900	1901641	10000
2	Endebir	1450	48/198 = 24	34800	2102500	576
3	Arsi Negele	1487	241/451 = 53	78811	2211169	2809
4	Menelik II	1559	538/897 = 60	93540	2430481	3600
5	Tesfa Kokeb	1600	843/1338 = 63	100800	2560000	3969
6	Kokebe Tsibah	1620	709/1109 = 64	103680	2624400	4096
7	Misrak Goh	1662	284/550 = 52	86424	2762244	2704
8	Bethlehem	1665	247/254 = 97	161505	2772225	9409
9	Bole Community	1705	147/152 = 97	165385	2907025	9409
10	Africa Andent	1729	496/716 = 69	119301	2989441	4761
11	Modjo	1735	261/324 = 81	140535	3010225	6561
12	Yekatit 23	1736	803/1116 = 72	124992	3013696	5184
13	Chacha	1784	126/202 = 62	110608	3182656	3844
14	Assai	1815	129/130 = 99	179685	3294225	9801
$\Sigma =$		22926	993	1637966	37761928	76723

$$r = \frac{N \Sigma xy - \Sigma x \Sigma y}{\sqrt{[N \Sigma x^2 - (\Sigma x)^2] [N \Sigma y^2 - (\Sigma y)^2]}}$$

$$= \frac{22931524 - 22765518}{\sqrt{[528666992 - 525601476] [1074122 - 986049]}}$$

$$= \frac{1637966}{\sqrt{30765518 \times 88073}}$$

$$= \frac{1637966}{524122} = 0.3125$$

Where, N = 14

$$\Sigma xy = 1637966$$

$$N \Sigma xy = 14 \times 1637966 = 22931524$$

$$\Sigma x = 22926$$

$$\Sigma y = 993$$

$$\Sigma x \Sigma y = 22926 \times 993 = 22765518$$

$$\Sigma x^2 = 37761928$$

$$N \Sigma x^2 = 14 \times 37761928 = 528666992$$

$$(\Sigma x)^2 = (22926)^2 = 525601476$$

$$\Sigma y^2 = 76723$$

$$N \Sigma y^2 = 14 \times 76723 = 1074122$$

$$(\Sigma y)^2 = (993)^2 = 986049$$

APPENDIX D-2

Calculation for Correlation Coefficient between Public Participation and Terminal Academic Achievement of Secondary Schools

No.	Name of the School	Public Participati on as Per the Likert Scale Response (X)	Academic Achievement as Per the Percent of Students with 3.00 and above GPA of the E.S.L.C.E. (Y)	XY	X ²	Y ²
1	SOS	1257	5/552 = 0.9	1131.3	158049	0.81
2	Endebir	1351	10/431 = 2	2702	1825201	4
3	Addis Ketema	1423	170/1362 = 13	18499	2024929	169
4	Awolia	1428	4/62 = 7	9996	2039184	49
5	Nazreth	1440	83/102 = 81	116640	2073600	6561
6	Yekatit 12	1466	133/1300 = 10	14660	2149156	100
7	Higher 7	1553	11/1040 = 1	1553	2411809	1
8	Arsi Negale	1608	3/200 = 2	3216	2585664	4
9	St. Joseph	1621	85/105 = 81	131301	2627641	6561
10	Yehiwot Berhan	1626	55/59 = 93	151218	2643876	8649
11	Gedeo	1635	14/176 = 8	13080	2673225	64
12	Modjo	1666	6/115 = 5	8300	2775556	25
13	Enewary	1724	9/163 = 6	10344	2972176	36
$\Sigma =$		19798	309.9	482640.3	30382066	22223.81

$$N\Sigma xy - \Sigma x \Sigma y$$

$$r = \frac{[N\Sigma x^2 - (\Sigma x)^2] [N\Sigma y^2 - (\Sigma y)^2]}{6274323.9 - 6135400.2}$$

$$= \frac{[394966858 - 391960804][288909.53 - 96038.01]}{0.18}$$

$$= \frac{[394966858 - 391960804][288909.53 - 96038.01]}{0.18}$$

$$\begin{aligned} \text{Where, } N &= 13 \\ \Sigma xy &= 482640.3 \\ N\Sigma xy &= 13 \times 482640.3 = 6274323.9 \\ \Sigma x &= 19798 \\ \Sigma y &= 309.9 \\ \Sigma x \Sigma y &= 19798 \times 309.9 = 6135400.2 \\ \Sigma x^2 &= 30382066 \\ N\Sigma x^2 &= 13 \times 30382066 = 394966858 \\ (\Sigma x)^2 &= (19798)^2 = 391960804 \\ \Sigma y^2 &= 22223.81 \\ N\Sigma y^2 &= 13 \times 22223.81 = 288909.53 \\ (\Sigma y)^2 &= (309.9)^2 = 96038.01 \end{aligned}$$

APPENDIX E-1

Calculation for Correlation Coefficient Between Classroom -
Student Ratio and Terminal Academic Achievement of
Primary Schools

No.	Name of the School	Classroom - Student Ratio (X)	Academic Achievement as Per the Ratio of Students Passed - students Sat for Grade 8 National Exam (Y)	XY	X ²	Y ²
1	Tesfa kokeb	1:161 = 0.006	843/1338 = 0.63	0.00378	0.000036	0.3969
2	Kokebe Tsibah	1:137 = 0.007	709/1109 = 0.64	0.00448	0.000049	0.4096
3	Yekatit 23	1:137 = 0.007	803/1116 = 0.72	0.00504	0.000049	0.5184
4	Modjo	1:137 = 0.007	261/324 = 0.81	0.00567	0.000049	0.6561
5	Arsi Negele	1:133 = 0.008	241/451 = 0.53	0.00424	0.000064	0.2809
6	Menelik II	1:122 = 0.008	538/897 = 0.60	0.00480	0.000064	0.3600
7	Africa Andnet	1:108 = 0.009	496/716 = 0.69	0.00621	0.000081	0.4761
8	Misrak Goh	1:104 = 0.010	284/550 = 0.52	0.00520	0.000100	0.2704
9	Chacha	1:103 = 0.10	126/202 = 0.62	0.00620	0.000100	0.3844
10	Assai	1:94 = 0.011	129/130 = 0.99	0.01089	0.000121	0.9801
11	Miskaye Hizunan	1:84 = 0.012	152/152 = 1.00	0.01200	0.000144	1.0000
12	Endebir	1:80 = 0.013	48/198 = 0.24	0.00312	0.000169	0.0576
13	Bole Community	1:80 = 0.013	147/152 = 0.97	0.01261	0.000169	0.9409
14	Bethlehem	1:71 = 0.014	247/254 = 0.97	0.01358	0.00169	0.9409
Σ		0.135	9.93	0.09782	0.001391	7.6723

$$r = \frac{N \Sigma xy - \Sigma x \Sigma y}{\sqrt{[N \Sigma x^2 - (\Sigma x)^2] [N \Sigma y^2 - (\Sigma y)^2]}}$$

$$= \frac{1.36948 - 1.34055}{\sqrt{[0.019474 - 0.018225][107.4122 - 98.6049]}}$$

$$= 0.28$$

Where, N = 14

$$\Sigma xy = 0.09782$$

$$N \Sigma xy = 14 \times 0.09782 = 1.36948$$

$$\Sigma x = 0.135$$

$$\Sigma y = 9.93$$

$$\Sigma x \Sigma y = 0.135 \times 9.93 = 1.34055$$

$$\Sigma x^2 = 0.001391$$

$$N \Sigma x^2 = 14 \times 0.001391 = 0.019474$$

$$(\Sigma x)^2 = (0.135)^2 = 0.018225$$

$$\Sigma y^2 = 7.6723$$

$$N \Sigma y^2 = 14 \times 7.6723 = 107.4122$$

$$(\Sigma y)^2 = (9.93)^2 = 98.6049$$

APPENDIX E-2

Calculation for Correlation Coefficient Between Classroom -
Student Ratio and Terminal Academic Achievement of
Secondary Schools

No.	Name of the School	Classroom - Student Ratio (X)	Academic Achievement as Per the Ratio of the No. of Students with 3.00 and above GPA - the No. of Students Sat for the E.S.L.C.E. (Y)	XY	X ²	Y ²
1	Yekatit 12	1:159=0.006	133/1300 = 0.102	0.000612	0.000036	0.010404
2	Addis Ketema	1:155=0.007	170/1362 = 0.125	0.000875	0.000049	0.015625
3	SOS	1:131=0.008	5/552 = 0.009	0.000072	0.000064	0.000081
4	Arsi Negele	1:119=0.008	3/200 = 0.015	0.000120	0.000064	0.000225
5	Higher 7	1:116=0.009	11/1048 = 0.011	0.000099	0.000081	0.000121
6	Gedeo	1:100=0.010	14/176 = 0.080	0.000800	0.000100	0.006400
7	Enewary	1:95=0.011	9/163 = 0.055	0.000605	0.000121	0.003025
8	Modjo	1:84=0.012	6/115 = 0.052	0.000624	0.000144	0.002704
9	Endebir	1:58=0.017	10/431 = 0.023	0.000391	0.000289	0.000529
10	Awolia	1:52=0.019	4/62 = 0.065	0.001235	0.000361	0.004225
11	St. Joseph	1:51=0.020	85/105 = 0.810	0.0162010	0.000400	0.656100
12	Nazareth	1:49=0.020	83/102 = 0.810	0.0162010	0.000400	0.656100
13	Yehiwot Berhan	1:45=0.022	55/59 = 0.930	0.0204610	0.000484	0.864900
$\Sigma =$		0.169	3.087	0.058293	0.002593	2.220439

$$N\Sigma xy - \Sigma x \Sigma y$$

$$r = \frac{[N\Sigma x^2 - (\Sigma x)^2] [N\Sigma y^2 - (\Sigma y)^2]}{0.757809 - 0.521703}$$

$$= \frac{[0.033709 - 0.028561][28.865707 - 9.529569]}{0.75}$$

Where, N = 13

$$\Sigma xy = 0.058293$$

$$N\Sigma xy = 13 \times 0.058293 = 0.757809$$

$$\Sigma x = 0.169$$

$$\Sigma y = 3.087$$

$$\Sigma x \Sigma y = 0.169 \times 3.087 = 0.521703$$

$$\Sigma x^2 = 0.002593$$

$$N\Sigma x^2 = 13 \times 0.002593 = 0.033709$$

$$(\Sigma x)^2 = (0.169)^2 = 0.028561$$

$$\Sigma y^2 = 2.220439$$

$$N\Sigma y^2 = 13 \times 2.220439 = 28.865707$$

$$(\Sigma y)^2 = (3.087)^2 = 9.529569$$

APPENDIX F

Classification of Government Schools by Size As Per Their Student Population

No.	Name of the School	Student Population	Classification
1	Modjo Secondary	1007	Small-Size
2	Enewary Secondary	1044	"
3	Enewary Primary	1060	"
4	chacha Primary	1137	"
5	Endebir Secondary	1155	"
6	Gedeo Secondary	1195	"
7	Endebir Primary	1202	"
8	Arsi Negele Secondary	1672	"
9	Arsi Negele Primary	2267	"
10	Modjo Primary	2320	"
11	Tesfa Kokeb Primary	2582	Large-Size
12	SOS Secondary	2621	"
13	Misrak Goh Primary	3753	"
14	Kokebe Tsibah Primary	4204	"
15	Menelik II Primary	4523	"
16	Higher 7 Secondary	4843	"
17	Addis Ketema Secondary	5877	"
18	Nefas Silk Secondary	6634	"
19	Yekatit 12 Secondary	6827	"
20	Yekatit 23 Primary	7380	"

Calculation for Median to Classify Schools by Size

$Md =$ The average of $n/2 + n+2/2$
 $=$ The average of $2320 + 2582$
 $=$ 2451

Where, $Md =$ Median

$n = 20$

$n/2 = 20/2 = 10 =$ the 10th in the array
 $= 2320$

$n+2/2 = 20+2/2 = 11 =$ the 11th in the array
 $= 2582$

APPENDIX C

Classification of Schools by Experience of Principals

No.	Name of the School	Principal's Years of Experience	Classification
1	Indebir Secondary	1	Unqualified
2	Los Secondary	1	"
3	Henry Secondary	1	"
4	Higher 7 Secondary	1	"
5	Maras Sikh Secondary	1	"
6	Indebir Primary	1	"
7	Maras II Secondary	1	"
8	Golao Secondary	1	"
9	Maras Girls Secondary	1	"
10	Maras Primary	1	"
11	Maras Secondary	1	Unqualified
12	Maras II Primary	1	"
13	Maras II Primary	1	"
14	Maras Women Secondary	1	"
15	Maras Girls Primary	1	"
16	Maras Primary	1	"
17	Maras Primary	1	"
18	Maras Girls Primary	1	"
19	Maras Girls Primary	1	"
20	Maras Girls Primary	1	"

Classification of Schools by Experience of Principals

1. The following table shows the classification of schools by experience of principals.

APPENDIX H-1

Summarized Items of the Questionnaire in Light of the Systems Approach

	<u>Major Component of the Systems Approach</u>	<u>Item No.</u>	<u>Item</u>
A	The openness amplitude of schools as educational systems to public participation	1.	Openness of the school to the gaze, support of the public
		2.	Permeableness of the school to public involvement in academic matters
		3.	Principal's performance as a middle manager
		4.	Positive attitude of the principal towards public participation
		5.	Balance of relationship between the school and the public
		6.	School's level of boundary to buffer p[ublic demands
		7.	Principal's proper strategy in responding to public demands
		8.	Effectiveness of school boundary spanners
		9.	Appropriateness of the type of public involvement
		10.	Appropriateness of the level of public involvement
		11.	Autonomy of schools
B	The public as environmental-supprasystem of school systems and its influence	12.	Public influence on the school's educational operation
		13.	Appropriateness of environmental dimensions to the school
		14.	Appropriateness of environmental characteristics to the school
		15.	Being under pluralistic community power structure
		16.	Strength of school administration or parent committee
		17.	Condition of relationship between school members and the public
		18.	Effectiveness of public right in the educational operation
		19.	Managing the school's external environment
		20.	Appropriateness of principal's role in school administration or parent committee

- | | |
|---|---|
| C Dimensions of public participation as environmental-suprasystem support to schools | <ul style="list-style-type: none"> 21. Size of public economic support to schools 22. Public expenditure in relation to governmental expenditure on school 23. Management of resources 24. Political-legal empowerment of the public over the school 25. Legal provision to the public to participate in school matters 26. Social interaction of the school with the public 27. Acknowledgement of societal values in educational operation of the school 28. Public participation to enrich varieties of educational programs 29. Utilization of public resources by the school 30. Parent committee's activity as an advisory body |
|---|---|
-

APPENDIX H-2

ADDIS ABABA UNIVERSITY

FACULTY OF EDUCATION

GRADUATE PROGRAMME

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

A questionnaire to be filled by School Representatives
(Principals, Deputy Principals, Unit Leaders, Department
Heads and Teachers) and by Public Representatives
(School Administration Committee Members,
Parent Committee Members and Parents)

I. Introduction

The purpose of this questionnaire is to gather data pertaining to public participation in the educational operation in schools of central Ethiopia. The purpose of this study is purely academic. The answers you provide to this questionnaire will in no way affect you personally or organizationally.

Yet, the success of this study highly depends on the sincerity and frankness of your response.

Thank you in advance for your co-operation.

N.B.

- No need of writing your name.
- You are expected to respond only in relation to your school.

II. Personal Background

2.1 Sex _____

2.2 Age _____

2.3 Your Academic Qualification _____

III. Question Items

Direction:

Please indicate with " ✓ " mark as a response representing the best degree of your agreement to each statement in only one among the boxes provided under the degrees of agreement that are found coded with numbers according to the key below.

Key

- 4 = Strongly Agree;
 3 = Agree;
 2 = Disagree;
 1 = Strongly Disagree

A. With Respect to the Degree of Openness of the School to the Public

No.	Item	Response			
		4	3	2	1
1.	The school opens its doors:				
	a. For the public to observe its all activities				
	b. to receive feedback from the public or parents				
	c. to parental need or demand in its instructional operation				
2.	The public or parents:				
	a. are involved in extra curricular activities				

No.	Item	Response			
		4	3	2	1
3.	b. are involved in disciplinary actions				
	c. have a sense of ownership towards the school				
	The school principal in his interaction for support with the public or parents; he:				
	a. negotiates extensively				
4.	b. is candid in expressing the need of the school				
	c. uses wisdom and tact				
	The school principal:				
	a. has the belief of that parents are a source of assistance and are able to raise the quality of the school's educational operation				
	b. believes that parents are concerned for their children's education				
	c. uses regular consultation with parents				
	d. stimulates the school's administration committee or parents committee for commitment				
	e. does not view that parents do not cooperate in effort to enhance the school's program and instead are overly critical				
5.	With regard to the balance of relationship between the school and the public or parents:				

No.	Item	Response			
		4	3	2	1
	a. the principal is not in difficulty because of his split of loyalty and dual responsibility towards teachers and parents				
	b. there is a well-balanced not-one-sided relationship between the school and the public or parents				
	c. the school takes the initiative for the public or parents to participate by means such as organizing meetings etc.				
6.	With regard to the school's openness to the public in relation to buffering or screening public demands:				
	a. the school responds to all possible public or parental demands vis-a-vis the education of their children				
	b. there is no frequent conflict between the public or parental demands and the school				
7.	The principal's frequent strategy in responding to public or parental demands is:				
	a. co-operation				
	b. trying to convince the public or parents				
	c. not using bureaucratic decisions				
8.	With regard to public-school relationship in relation to boundary spanning:				
	a. there is school-public relations officer in the school				

No.	Item	Response			
		4	3	2	1
	b. the school-public relations officer of the school is effective in facilitating the interaction of the school with the public or parents				
	c. the school administration is effective in sensing the expectations of the public or parents				
	d. the school administration committee or parent committee is effective in bridging the school with the public or parents				
9.	With regard to the phases of public or parental involvement:				
	a. parents do press requirements on the school				
	b. generally the public or parents are less critical to the school's way of educational operation				
	c. the public or parents show high interest to participate in the educational matters of the school				
	d. parents do understand or are aware of what they have to gaze at in the school's operation				
	e. parents invest more time on their children's education follow-up				
10.	With regard to the levels of public or parental involvement:				
	a. the flow of information on the educational matters between the school and the public or parents is of two-way direction				

No.	Item	Response			
		4	3	2	1
11.	b. the public or parents are less passive with school matters				
	c. the public or parents adequately participate in the school instructional programs voluntarily				
	Because the public or parents provide direction or leadership, feedback or information, financial and material resources to the school directly or through the school's administration committee or parent committee, the school's administration committee or parent committee:				
	a. is more concerned than the higher echelons on the Ministry of Education to the school's educational operation representing the public or parents				
	b. can hire and fire personnel of the school as necessary				
	c. can make over all decisions regarding the school's educational operation				
	d. can influence the direction and execution or educational matters in the school rather than merely receive what is decided by higher echelons in the educational structure				

B. With Respect to the Public Influence on the School's Educational Operation

No.	Item	Response			
		4	3	2	1
12.	There is enough public or parental participation in the school's educational determination of:				
	a. policies				
	b. program				
13.	With regard to the certainty, clustering and scarcity of the school environment:				
	a. there is high demand by the community or parents for change of certain school programs or decisions				
	b. the community around the school or parents oftenly raises demands being organized				
	c. the local community or parents have available resources to sustain the program of the school for a viable educational operation				
14.	With regard to the type of the public as an environment:				
	a. the majority of the students were not born in that area				
	b. ethnically students do come from diversified parental roots				
	c. economically students do come from diversified parental roots				
	d. educationally students do come from diversified parental roots				
15.	The community power structure in mass organizations such as Kebele in your locality where the school is situated is occupied:				
	a. not by more people with high economic status				

No.	Item	Response			
		4	3	2	1
	b. not by one major family group				
	c. not by competing groups in the community				
	d. by individual persons without being neither from one family group nor from one competing group				
	e. not by people with strength or power to influence the community				
16.	With regard to the public or parental participation in the school's educational operation:				
	a. the school administration committee or parental committee members represent geographically different sectors of the school catchment area				
	b. the school administration committee or parental committee members are elected periodically according to the regulation				
	c. parental attendance in general annual or periodic meetings is found to be satisfactory				
	d. generally the public parents show strong interest to participate or serve as school administration committee or parent committee members				
17.	With regard to the co-operation and balance of relationship between the school and the public or parents for educational operation:				
	a. there is satisfactory collaboration between the school and the public or parents				
	b. there is good relationship between the school administration committee or parents committee and parents				

No.	Item	Response			
		4	3	2	1
18.	c. there is good relationship between parents and teachers				
	d. there is good relationship between the school administration committee or parents committee and teachers				
	In the educational operation of the school, parents:				
	a. get information about the school procedures				
19.	b. have access to the interpretation of records of students outcomes				
	c. visit program in the school				
	d. are represented on decision-making body of the school				
	e. question the educational program and policy of the school				
	In relation to the school's establishing favourable linkages:				
	a. there is a non-government organization that influences the school's educational program				
	b. the school co-operates with the surrounding non-government organization				
	c. the school brings leaders or members from government or non-government organizations into the decision-making body of the school				
	d. the school influences local directives that seem unwanted through the school administrative committee or parental committee				

No.	Item	Response			
		4	3	2	1
20.	With regard to the principal's role in relation to the local people power structure:				
	a. he does not play what has been believed by a dominant person or persons in the school administration committee or parent committee				
	b. he works with what the majority of the school administration committee or parent committee members believe or decide				
	c. he does not work as initiator of action in the school administration committee or parent committee				
	d. he does not act as a decision maker in the school administration committee or parent committee				

C. With Respect to the Dimensions of Public Participation

No.	Item	Response			
		4	3	2	1
21.	The public or parents give enough support to the school with:				
	a. financial resource				
	b. material resource				
	c. alternative resource				
22.	Public expenditure in the educational operation of the school compared to that of government:				
	a. is higher				
	b. is not equivalent				
	c. there is no financial budget allocated by the government to run the school				

No.	Item	Response			
		4	3	2	1
23.	d. there is no financial budget allocated by the government for salary payment				
	With regard to the management of resources provided by parents or the public:				
	a. there is efficient use				
	b. there is financial report presented				
24.	c. the school administration committee or parent committee controls the management of the resources provided by parents				
	The school administration committee or parent committee:				
	a. make recommendations regarding the educational operation of the school				
	b. has the school's policy determining role				
25.	With regard to the legal provision of the public or parents in relation to their right of participating in school matters:				
	a. local administration encourages the public or parents for increased involvement through the administration committee or parent committee of the school				
	b. the school principal is aware of the legal involvement of the public or parents as their right in the educational operation of the school				

No.	Item	Response			
		4	3	2	1
26.	c. the public or parents appeal against decisions made by the educational administration which they found are unsatisfactory				
	d. the public or parents question whether or not the school resources are used efficiently				
	With regard to the interaction of the school and the public in the educational operation:				
27.	a. the principal coordinates the interaction between the school and the public or parents				
	b. the principal makes culturally relevant decisions of the school's program				
	c. the school serves as coordinating institution by developing activities to the community such as recreational or social or cultural or health etc.				
28.	Parents or the public in general:				
	a. do discuss values implicit in the educational program of the school				
	b. do insist that the teaching of the school is not in conflict with values of the people				
28.	c. do participate in developing the school's co-curricular activities				
	With regard to public participation to enrich varieties of school programs:				
	a. the content taught to children depends upon the potential or local needs of the public				

No.	Item	Response			
		4	3	2	1
	b. the school program attempts to resolve the environmental problems such as drought, ecological imbalance, etc.				
	c. parents raise issues of strategies to be adopted in the teaching-learning process				
	d. parents encourage their children to have study habits or work diligently				
	e. in monitoring their children progress, parents make interaction with the school				
	f. the school uses local technologies of either agricultural or industrial in its operation to enrich the content				
	g. adult farmers or industrialists, or specialists, or agriculturalists who ever are available in the surrounding cooperate in providing vocational training				
	h. as vocational training, students attend school part-time in the surrounding government or private agricultural or industrial or business establishments related to the instruction provided in the classroom				
29.	The school co-ordinates trips and visits for students to the surrounding government or private organizations to enrich their knowledge				
30.	The school's parent committee actively participates as an advisory body in the school's instructional program				

Thank you again for your cooperation.

APPENDIX H-3

ADDIS ABABA UNIVERSITY
FACULTY OF EDUCATION
GRADUATE PROGRAMME
DEPARTMENT OF EDUCATIONAL ADMINISTRATION

Structured Interview to School Principals

INTRODUCTION

The purpose of this questionnaire is to gather data pertaining to public participation in the educational operation in schools of central Ethiopia. The purpose of this study is purely academic. The answers you provide to this questionnaire will in no way affect you personally or organizationally.

Yet, the success of this study highly depends on the sincerity and frankness of your response.

I. Personal Background

1. Sex: _____
2. Age: _____
3. Your Academic Qualification: _____
4. Your Field of Specialization: _____
5. Total Years of service: _____
 - 5.1 As a teacher _____
 - 5.2 As a principal _____

- II. 1. Name of the school: _____
2. Year of establishment: _____
3. Level: _____
4. Student population: _____
5. Staff population:
 - 5.1 Academic staff
 - 5.1.1 Male _____
 - 5.1.2 Female _____
 - 5.1.3 Total _____

6. Appropriation:
- 6.1 Whether the school is government or non-government (specify) _____
- 6.2 Type of non-government school (Public, Mission, etc). (specify) _____
7. Geographical setting and demographic condition of the school:
- 7.1 Local area or Kebele _____
- 7.2. Woreda _____
- 7.3 Zone _____
- 7.4 Region _____
- 7.5 Whether the society where the school is situated is generally homogenous or heterogenous (specify) _____
- 7.6 Whether the local community is generally with high or low economic status (specify) _____
- 7.7 Whether the local community is generally literate or illiterate (specify) _____
- 7.8 Whether the members of the local community are generally of young or old age (specify) _____
- 7.9 Whether the majority of the local community members are of male or female population (specify) _____
8. With regard to the academic achievement of the school:
- 8.1 Number of students passed to grade 7 sitting grade 6 National/Regional examination in the last three academic years:

Academic Year	Total No. of Students Sat for the Exam	No. of Students Passed to Grade 7
1984 E.C.		
1985 E.C.		
1986 E.C.		
Total		

8.2 Number of students passed to grade 9 sitting grade 8 National examination in the last three academic years:

Academic Year	Total No. of Students Sat for the Exam	No. of Students Passed to Grade 9
1984 E.C.		
1985 E.C.		
1986 E.C.		
Total		

8.3 Number of students passed to the next higher grade since 1986 E.C. academic year:

Grades	1	2	3	4	5	6	7	8	9	10	11	12	Total
No.of students sat for the final exam.													
No.of students passed to the next grade													

8.4 Number of students in relation to their E.S.L.C.E. results achievement since the last the academic years:

Academic Years	Students Achieved 2:00-2:49 GPA	Students Achieved 2:50-2:59 GPA	Students Achieved 3:00-3:49 GPA	Students Achieved 3:50-4:00 GPA
1984 E.C.				
1985 E.C.				
1986 E.C.				
Total				

9. Total average amount of school or registration fee per year and per student by grade level:

Grades	1	2	3	4	5	6	7	8	9	10	11	12
Annual total average school fee per student in Birr												

10. With regard to classroom students ratio:

- 10.1 Number of shifts _____
- 10.2 ~~Total number of classrooms~~ _____
- 10.3 Number of sections per shift _____
- 10.4 Total number of sections in both shifts _____
- 10.5 Total number of students _____

11. With regard to the function of the school's administration committee or parent committee in relation to community power structure for educational operation:

11.1 whether or not a school administration committee or parent committee is established in the school (specify). _____

11.2 whether or not the committee's decision making is usually dominated by one or few powerful members (specify). _____

11.3 whether or not the committee oftenly uses voting for psing decisions (specify). _____

11.4 whether or not the committee oftenly uses discussion than voting to arrive at consensus (specify). _____

11.5 whether or not decisions in the committee frequently tend to follow the lead of the principal (specify). _____

12. With regard to the nature of the students of the school:

12.1 whether or not the students of the school are generally with less discipline problems (specify).

12.2 whether or not the students of the school are generally with less academic problems (specify).

Thank you for your co-operation.

APPENDIX H-4

Calculation of Reliability Coefficient of the Instrument
(Questionnaire) As Per the Major Components of the Systems
Approach, As Dimensions

Chronbach's Formula

$$r = \frac{K}{K-1} \left[\frac{1 - \sum_{i=1}^K S_i^2}{S_x^2} \right]$$

Where, N = the no. of respondents = 96
K = the no. of items
 $\sum_{i=1}^K S_i^2$ = the sum of variances of responses
 S_x^2 = the variance of the sum of responses

1. With respect to the openness amplitude of schools to public participation

$$r = \frac{11}{10} \left[\frac{1 - 6.77}{30.78} \right]$$

Where, k = 11
k-1 = 11-1 = 10
 $\sum_{i=1}^K S_i^2 = 6.77$
 $S_x^2 = 30.78$

= 0.86

2. With respect to the extent of public influence on schools

$$r = \frac{9}{8} \left[\frac{1 - 4.769}{10.51} \right]$$

Where, k = 9
k-1 = 9-1 = 8
 $\sum_{i=1}^K S_i^2 = 4.69$
 $S_x^2 = 10.51$

= 0.63

3. With respect to the magnitude of the dimensions of public participation

$$r = \frac{10}{9} \left[\frac{1 - 6.765}{27.18} \right]$$

Where, k = 10
k-1 = 10-1 = 9
 $\sum_{i=1}^K S_i^2 = 6.65$
 $S_x^2 = 27.18$

= 0.83

4. Total reliability coefficient of the instrument

$$r = \frac{30}{29} \left[\frac{1 - 18.1}{159.35} \right]$$

Where, k = 30
k-1 = 30-1 = 29
 $\sum_{i=1}^K S_i^2 = 18.1$
 $S_x^2 = 159.35$

= 0.93

APPENDIX H-5

Rate of Return of Questionnaires

Schools	School Representatives			Public Representatives			Total		
	Expected	Collected		Expected	Collected		Expected	Collected	
	No.	No.	%	No.	No.	%	No.	No.	%
Enewary primary	10	10	100	10	10	100	20	20	100
Endebir "	10	10	100	10	10	100	20	20	100
Arsi Negele "	10	9	90	10	9	90	20	18	90
Modjo "	10	10	100	10	10	100	20	20	100
Chacha "	10	10	100	10	10	100	20	20	100
Misrak Goh "	10	10	100	10	10	100	20	20	100
Kokebe Tsibah "	10	10	100	10	10	100	20	20	100
Yekatit 23 "	10	10	100	10	10	100	20	20	100
Tesfa Kokeb "	10	10	100	10	10	100	20	20	100
Menelik II "	10	9	90	10	10	100	20	19	95
Bethlehem "	10	10	100	10	10	100	20	20	100
African Andnet "	10	10	100	10	10	100	20	20	100
Bole Community "	10	10	100	10	10	100	20	20	100
Assai "	10	10	100	10	9	90	20	19	95
Miskaye Hizunan "	10	9	90	10	9	90	20	18	90
Enewary Secondary	10	10	100	10	10	100	20	20	100
Endebir "	10	10	100	10	10	100	20	20	100
Arsi Negele "	10	9	90	10	9	90	20	18	90
Modjo "	10	10	100	10	9	90	20	19	95
Gedeo "	10	10	100	10	10	100	20	20	100
Addis Ketema "	10	10	100	10	10	100	20	20	100
SOS "	10	10	100	10	10	100	20	20	100
Yekatit 12 "	10	9	90	10	9	90	20	18	90
Higher 7 "	10	10	100	10	10	100	20	20	100
Nefas Silk "	10	10	100	10	10	100	20	20	100
Nazreth "	10	10	100	10	10	100	20	20	100
St. Joseph "	10	10	100	10	10	100	20	20	100
Yehiwot Berhan "	10	10	100	10	9	90	20	19	95
St. Mary "	10	10	100	10	10	100	20	20	100
Awolia "	10	10	100	10	10	100	20	20	100
Total	300	295	98	300	293	98	600	588	98

APPENDIX I-1
Sample Schools

No.	Name of the School	Level	Geographical Setting	Appropriation
1	Enewary	Primary	Northern Shoa	Government
2	Enewary	Secondary	Northern Shoa	"
3	Endebir	Primary	Southern Shoa	"
4	Endebir	Secondary	Southern Shoa	"
5	Aris Negele	Primary	Easter & Central Shoa	"
6	Aris Negele	Secondary	" " " "	"
7	Modjo	Primary	" " " "	"
8	Modjo	Secondary	" " " "	"
9	Chacha	Primary	Western Shoa	"
10	Gedeo	Secondary	" "	"
11	Misrak Goh	Primary	Addis Ababa	"
12	Kokebe Tsibah	"	"	"
13	Yekatit 23	"	"	"
14	Tesfa Kokeb	"	"	"
15	Menelik II	"	"	"
16	Addis Ketema	Secondary	"	"
17	SOS	"	"	"
18	Yekatit 12	"	"	"
19	Higher 7	"	"	"
20	Nefas Silk	"	"	"
21	Bethlehem	Primary	"	Non-Gov.
22	Africa Andenet	"	"	"
23	Bole Community	"	"	"
24	Asai	"	"	"
25	Miskaye Hizunan	"	"	"
26	Nazreth	Secondary	"	"
27	St. Joseph	"	"	"
28	Yehiwot Berhan	"	"	"
29	St. Mary	"	"	"
30	Awolia	"	"	"

APPENDIX I-2

Sample Schools by Dimension and Category

<u>Dimension</u>	<u>Category</u>	<u>No.</u>	<u>Name of the Sample School</u>
Level	Primary	1	Enewary
		2	Endebir
		3	Chacha
		4	Modjo
		5	Arsi Negele
		6	Mirak Goh
	Secondary	7	Kokebe Tsibah
		8	Yekatit 23
		9	Tesfa Kokeb
		10	Menelik II
Size	Small	1	Enewary
		2	Endebir
		3	Gedeo
		4	Modjo
		5	Arsi Negele
		6	Addis Ketema
		7	SOS
		8	Yekatit 12
		9	Higher 7
		10	Nefas Silk
		1	Modjo Primary
		2	Arsi Negele Primary
		3	Arsi N. Secondary
		4	Endebir Primary

<u>Dimension</u>	<u>Category</u>	<u>No.</u>	<u>Name of the Sample School</u>
Size	Small	5	Gedeo Secondary
		6	Endebir Secondary
		7	Chacha Primary
		8	Enewari Primary
		9	Enewary Secondary
		10	Modjo Secondary
		1	Yekatit 23 Primary
		2	Yekatit 12 Secondary
		3	Nefas Silk Secondary
		4	Addis Keteme Secondary
		5	Higher 7 Secondary
	Large	6	Menelik II Primary
		7	Kokebe Tsibah Primary
		8	Misrak Goh Primary
		9	SOS Secondary
		10	Tesfa Kokeb Primary
		1	Misrak Goh Primary
		2	Kokebe Tsibah Primary
		3	Yekatit 23 Primary
		4	Tesfa Kokeb Primary
	Government	5	Menelik II Primary
		6	Addis Ketema Secondary
		7	SOS Secondary
Status		8	Yekatit 12 Secondary
		9	Higher 7 Secondary
		10	Nefas Silk Secondary

<u>Dimension</u>	<u>Category</u>	<u>No.</u>	<u>Name of the Sample School</u>
Status		1	Bethlehem Primary
		2	Africa Andenet primary
		3	Bole Community Primary
		4	Assai Primary
	Non-Government	5	Miskaye Hizunan Primary
		6	Nazareth Secondary
		7	St. Joseph Secondary
		8	Yehiwot Berhan Secondary
		9	St. Mary Secondary
		10	Awolia Secondary
Experience of Principals	Schools with Inexperienced	1	Modjo Primary
		2	Arsi Negele Secondary
		3	Gedeo Secondary
		4	Yekatit 12 Secondary
		5	Endebir Primary
		6	Nefas Silk Secondary
		7	Higher 7 Secondary
		8	Enewary Secondary
		9	SOS Secondary
		10	Endebir Secondary
	Schools with Experienced	1	Misrak Goh
		2	Kokebe Tsibah Primary
		3	Arsi Negele Primary
		4	Enewary Primary

<u>Dimension</u>	<u>Category</u>	<u>No.</u>	<u>Name of the Sample School</u>
Experience of Principals	Schools with Experienced	5	Chacha Primary
		6	Tesfa Kokeb Primary
		7	Addis Ketema Secondary
		8	Yekatit 23 Primary
		9	Menelik II Primary
		10	Modjo Secondary
		1	Enewary Primary
		2	Endebir Primary
		3	Chacha Primary
		4	Modjo Primary
Geographical Setting	Rural	5	Arsi Negele Primary
		6	Enewary Secondary
		7	Endebir Secondary
		8	Gedeo Secondary
		9	Modjo Secondary
		10	Arsi Negele Secondary
		1	Misrak Goh Primary
		2	Kokebe Tsibah Primary
		3	Yekatit 23 Primary
		4	Tesfa Kokeb Primary
	Urban	5	Menelik II Primary
		6	Addis Ketema Secondary
		7	SOS Secondary
		8	Yekatit 12 Secondary
		9	Higher 7 Secondary
		10	Nefas Silk Secondary

DECLARATION

I hereby declare that this thesis is my original work done under the guidance of Dr. Zaudneh Yimtatu and has not been presented for a degree in any other university. All sources of material used for this thesis have been duly acknowledged.

Name: Tadesse Mekuria
Signature: 
Date: June 3, 1996