

CHAPTER III

RESEARCH METHODOLOGY

A. Location, Population and Sample of Research

1. Location of Research

In order to shape the scope of the research, this study is conducted in the certain location. Here, the research study is particularly targeted in the public elementary schools in Coblong sub-district in Bandung city, Indonesia. And also, the study is mainly focused on the perspectives and effectiveness of implementing the concept of school-based management policy (SBM).

2. Population and Sample of Research

Arikunto (2010: 173) states that population is the entire subject of the research, while Margono (2010: 118) says population is all data which become the researcher's attention in a certain place and time. To Hinton (2005: 48) explained that the population of study can be a complete set and can also be any part of a particular category that researchers want to conduct.

Based on the statements above, the population in this study is all the public elementary schools where have already been effectively implemented the SBM policy in Coblong sub-district, Bandung city, Indonesia. According to the data of Dinas Pendidikan Kota Bandung in 2014, there are 36 public elementary schools in Coblong sub-district; therefore all of those schools are chosen for subject study.

In addition, a total population sampling is used in this study because the total population is very small. Total population sampling is a type of purposive sampling technique/ non-probability sampling techniques chosen to examine the entire population that has a particular set of characteristics (Patton, 1990, 2002; and Kuzel, 1999; as cited in Lund Research Ltd, 2012). And the respondents for each school are two people (one principal and one head of school committee) who are representatives of individual school and delegated with power and authority in making decisions, planning school policies, setting school vision and mission,

monitoring, implementing and evaluating the programs at school level through open participations of school stakeholders based on the school-based management policy (Indonesian Ministry of Education, the SBM guidelines 2004).

Thus, this research study will select all those 36 public elementary schools where have been implementing the policy of school-based management (SBM). The total population in this research study is shown in the table below:

Table 3.1: Total Population of Research

No.	Name of Schools	Principal	Head of SC	Respondents
1	SDN CISITU 1	1	1	2
2	SDN CISITU 2	1	1	2
3	SDN CIPAGANTI 2	1	1	2
4	CIPAGANTI 4	1	1	2
5	SDN CIHAMPELAS 1	1	1	2
6	SDN CIHAMPELAS 3	1	1	2
7	SDN COBLONG 1	1	1	2
8	SDN COBLONG 2	1	1	2
9	SDN COBLONG 3	1	1	2
10	SDN COBLONG 4	1	1	2
11	SDN COBLONG 5	1	1	2
12	SDN COBLONG 6	1	1	2
13	SDN PELESIRAN	1	1	2
14	SDN NEGLASARI 1	1	1	2
15	SDN NEGLASAI 3	1	1	2
16	SDN SENANGGALIH	1	1	2
17	SDN LANGENSARI 1	1	1	2
18	SDN LANGENSARI 5	1	1	2
19	SDN NEGLASARI 4	1	1	2
20	SDN NEGLASARI 2	1	1	2
21	SDN NEGLASARI 5	1	1	2
22	SDN HAURPANCUH 1	1	1	2
23	SDN HAURPANCUH 2	1	1	2
24	SDN HAURPANCUH 3	1	1	2
25	SDN HAURPANCUH 4	1	1	2
26	SDN TILIL 1	1	1	2
27	SDN TILIL 2	1	1	2
28	SDN TILIL 3	1	1	2
29	SDN TILIL 4	1	1	2

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30	SDN TIKUKUR 1	1	1	2
31	SDN TIKUKUR 2	1	1	2
32	SDN TIKUKUR 3	1	1	2
33	SDN TIKUKUR 4	1	1	2
34	SDN TIKUKUR 5	1	1	2
35	SDN SEKELOA 1	1	1	2
36	SDN SEKELOA 2	1	1	2
Total Respondents		36	36	72

B. Research Design

In order to get the valid and reliable data, the method used in this study is descriptive survey of a quantitative approach. This approach seeks to describe the current status of an identified variable to provide systematic information about a phenomenon in the research issues. The analysis and synthesis of the collected data provide the test of the hypothesis. Systematic collection of information requires careful selection of the units studied and careful measurement of each variable. According to Omar (2004: 81), he states that “descriptive method can provide research correlation, descriptive analysis method can describe the things that reveal facts, classification and measurement, and whereas to be measured is a fact that serves to define what happens.” Meanwhile RJ Hilsden (2001: 23) gives a restriction on descriptive research, namely "research directed to provide the symptoms, the facts or events in systematic and accurate information on the properties of a particular population or region."

However, by principle, the overall structure for a quantitative design is based on the scientific method. It uses deductive reasoning, where the researcher forms a hypothesis, collects data in an investigation of the problem, and then uses the data from the investigation, after analysis is made and conclusions are shared to prove the hypotheses not false or false. With this stance, the basic procedure of a quantitative design is: making observations about something that is unknown, unexplained, or new by investigating the current theory surrounding the research

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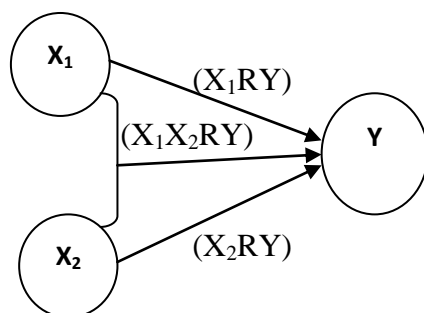
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problem or issues; hypothesizing an explanation for those observations; making a prediction of outcomes based on the hypotheses by formulating a plan to test the prediction; collecting and processing data; and verifying the research findings by making final conclusions and presenting the findings in an appropriate form.

Simply speaking, this research will be based on the hard documents, theory interpretations, data populations (questionnaires with a total number of population and sample selection), and data analysis. It will be relied on the numerical data (primary and secondary data). It claims for developing knowledge, such as cause and effect thinking, reduction to specific variables, hypotheses and questionnaire responses, the use of measurement and observation, and the test of theories. The research will isolate the three variables and causally relates them to determine the magnitude and frequency of relationships.

In addition, the research study will be determined with the variables to investigate and chooses instruments, which will respond highly reliable and valid data. This means that the two variables of research issues: independent (X_1 , X_2) and dependent (Y) are inevitably correlated to the research study.

The figure below is used to determine the correlation coefficient of the variable X_1 to Y , X_2 to Y , and X_1 and X_2 to Y of this research study:



Where:

X_1 = Influence of Principal Leadership

X_2 = Engagement of School Committee

Y = Effectiveness of Implementing SBM

R = Correlation Coefficient between X_1 and X_2 to Y

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Based on the figure above, it means that the two independent variables of the correlation coefficient between the influence of principal leadership (X_1) and engagement of school committee (X_2) will make a change to the effectiveness of implementing school-based management (Y). In this sense, the researcher can draw a conclusion that the descriptive method of analysis is suitable to use in this study, because it is in accordance with the purpose of research, which is to get an overview on the influence of principal leadership (X_1), and the engagement of school committee (X_2) toward the effectiveness of school-based management (Y).

C. Operational Definition

1. Effectiveness of School-Based Management (Y)

School-based management (SBM) is defined as a form of decentralization that can improve the educational outcomes and increase client satisfaction. It also emphasizes the individual school (represented by principals, teachers, parents, and other members of school community) as the primary unit for improving education and the redistribution of decision-making authority over the school operations as the primary means by which this improvement can be stimulated and sustained (World Bank, 2007). It is a form of educational governance at school level by granting authority and power to all stakeholders for making shared decisions and taking shared responsibilities (Vernez, G., & Karam, R. Marshal, J. 2012).

Thus, the effectiveness of school-based management is referred to the successful implementation of decentralization at school level. According to Dr. K. Pushpanadham (in the ABAC Journal Vol. 26, No. 1, 2006:43), the effectiveness of implementing SBM would be appeared in these areas: (1) involvements of staff in decisions about programs and organization; (2) involvements of parents and others in the community in the school; (3) efficient and effective allocation of resources based on the school budget; (4) strong instructional leadership and a focus on educational concerns; (5) environmental supports of professional growth

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and collaboration; (6) long term academic improvement; (7) positive attitudes and support for the school demonstrated by staff, students, parents, and the community; (8) positive behavior modeled by the staff; (9) and the school should be successful and effective in meeting its goals.

There are three dimensions in implementing the SBM policy. And for its effectiveness can be measured by the authorities of school itself as the follows:

- (1) Budget Management: School principal and school committee can make decisions over expenditures, allocations, and find funds from various sources with accountability (World Bank, 2007; Barrera-Osorio, Fasih & Patrinos, 2009:5; and UNESCO, 2012).
- (2) Staff Management: Principal and in some case with discussions among school committees can decide to promote, compensate, hire or terminate staff or teachers, this also include right to assign staff (David Lustick and Jing Lei, 2005: 64; Lunenburg et al., 2006: 14).
- (3) Curriculum Development: Based on SBM policy, each local school can develop its core curriculum, select textbook and improve the instructional programs (World Bank, 2007; UNESCO, 2012).

Based on the definitions above, SBM is to foster school management by giving more decision-making authority to parents and community with autonomy in setting school vision, mission, goals, and policies. It requires changes in school governance and management, strategic planning, school financing, accountability, and the development of new skills for staff members.

2. Influence of Principal Leadership (X_1)

The influence of principal leadership is a strength of school principal's roles and responsibilities in managing school such as assuring instruction aligned to the state academic standards; maintaining continuous improvement; designing instruction for student success; developing partnership with student's parents and community; and nurturing a school culture (Shelly Habegger, 2008:42-43). While

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Sun, Creemers and Jong (2007: 97) define principal leadership's influence as an empowerment of school leader for managing personnel (hiring, firing, promoting teachers and school staff members), time and finance, spiritual and human resources support, and school improvement. The main focuses of principal are to influence in these areas: school leadership; teacher evaluation; student disciplines; developing, implementing, and evaluating programs; reviewing policies and procedures; setting school schedule; hiring new teachers; building parents and community relations; and authority delegation (Derrick Meador, 2013).

According to Michael Usdan, Barbara McCloud, and Mary Podmostko, et al., (as cited in the School Leadership for the 21st Century Initiative, Leadership for Student Learning, October 2000: 8), the influence of principal is done through performing the principal's key roles. It is defined as leadership in the three key dimensions for school improvement as the followings:

(1) Instructional leadership: focusing on strengthening the teaching and learning, the professional development (staff), data-driven decision-making and accountability;

(2) Community leadership: manifesting in a big-picture awareness of the school's role in society; shared leadership among educators, community partners and residents; close relations with students' parents and others; and advocacy for school capacity building and resources;

(3) Visionary leadership: guiding or demonstrating energy, commitment, entrepreneurial spirit, values and conviction that all children will learn at high levels, as well as inspiring others with this vision both inside and outside the school building. It is the action undertaken by an effective instructional principal in four key roles in SBM implementation: designer of involvement; motivator/coach; facilitator of change; and liaison to outside world (Priscilla Wohstetter & Kerri L. Briggs, 1994: 17).

3. Engagement of School Committee (X₂)

The term engagement shares meaning with involvement and participation. Thus, the engagement of school committee is an involvement or participation of the people who are elected as committee members of a school. Those elected members have power and authority to make decisions for their school affairs. According to Queensland's article cited by Emerson, Fear, Fox, and Sanders (in the Parent and Community Engagements Framework, 2012:2), the engagements of school committee are to strengthen the students' outcomes through effective partnerships between principals, teachers, students, parents and the community.

The Indonesian Ministry of National Education (2002) states that school committee's engagements are to get involved in these areas: an advisory agency in determining/approving educational policies at the school level; a supporting agency in supporting school both in financial and non-financial matters at school level; a controlling agency for the purpose of accountability and transparency at school level; and a mediator in communicating between school, government, and community.

However, Foxborough Public School (2008) and Triton Regional School (Massachusetts, USA, 2013) have common ideas that the engagements of school committee are normally to fulfill the five dimensions of roles at school level as the followings:

- (1) Policy making: the school committee is responsible for development of the school policy as guides for administrative action and for employing a superintendent who will implement its policies.
- (2) Appraisal: the school committee is responsible for evaluating the effectiveness of its policies and their implementation.
- (3) Provision of financial resources: the school committee is responsible for adoption of a budget that will enable the school system to carry out the committee's policies.

- (4) Public relations: the school committee is responsible for providing adequate and direct means for keeping the local citizenry informed about the schools and for keeping itself and the school staff informed about the needs and wishes of the public.
- (5) Educational planning and evaluation: the committee is responsible for ensuring that educational objectives are set that promote continual improvement of the educational programs.

In brief, the engagement of school committee is a participation with right in these areas: sharing decision-making in setting school vision, mission, and goal; planning, implementing, monitoring, and evaluating the school programs; managing school budget; hiring, terminating, compensating; bridging relations; promoting parental and community participation through sensitizing, involving and effectively communicating educational information to all parents, pupils, community stakeholders, and toward local authorities for seeking effectiveness of quality education, student outcomes, quality teaching and building the good environments or conditions of school.

D. Research Instrument

The research instruments used in data collection are questionnaires. In this sense, questionnaires are a number of written questions used to obtain information from respondents in terms of statements about personal or things that are known (Arikunto, 2010:128). Therefore, the questionnaires of the research instrument are given to the respondents of principals and heads of school committee.

Based on the reason above, the instrument (questionnaires) in this study will be used in the preparation of model of Likert Scale. According to Riduwan and Kuncoro (2007:20), Likert Scale is used to measure the attitudes, opinions and perceptions about a person or group social events or symptoms. By using the Likert Scale, the variables to be measured are translated into dimensions, the dimensions are translated into sub-variables and sub-variables are translated into

indicators. With measurable indicators can be used as a starting point to make the item instrument in the form of questions or statements that need to be answered by the respondents.

In addition, the respondents will be asked to answer the closed-ended questions regarding with these three issues: 1) Influence of Principal Leadership (X_1); 2) Engagement of School Committee (X_2); and 3) Effectiveness of School-Based management (Y) of the research study.

And to obtain information from the field study, the questionnaires will be use with the multiple choices in a form of Likert Scale of five weighted options as shown the table below:

Table 3.2: Value of Likert Scale

Alternative Answers	Question Scores
Very High	5
High	4
High Enough	3
Low	2
Very Low	1

1. Influence of Principal Leadership (X_1)

To know the level of the Influence of Principal Leadership (X_1) in the day-to-day school operations, the researcher designs a table of brief aspects of the study variable as shown below:

Table 3.3: Aspects of Instrument

Variable (X_1)	Definition	Dimensions	Indicators	Items
	A strength of school principal's roles and responsibilities such as assuring instruction		- Strengthening the teaching and learning - Improving professional growth & skills for staff	

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The Influence of Principal Leadership	aligned to the state academic standards; maintaining continuous improvement; designing instruction for student success; developing partnership with parents and community; and nurturing a school culture (Shelly Habegger, 2008).	Instructional Leadership	<ul style="list-style-type: none"> - Assuring academic standard for student outcomes - Designing instructional programs, - Hiring & firing teachers - Assigning, promoting & compensating staff - Making school policies & disciplines 	1, 2, 3, 4, 5, 6, & 7
		Community Leadership	<ul style="list-style-type: none"> - Promoting awareness of the school's roles in society - Sharing leadership with educators, community residents & committees - Close relations with students' parents, staff and community - Advocacy for school capacity building and resources 	8, 9, 10, 11, 12, 13, 14 & 15
		Visionary Leadership	<ul style="list-style-type: none"> - Demonstrating energy, commitment, values and entrepreneurial spirit - Inspiring others with clear vision both inside and outside the school - Involvement designer of all stakeholders - Motivator or coach of participants/stakeholders - Facilitator of change 	16, 17, 18, 19, 20, 21, 22 & 23

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			- Liaison to outside world	
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2. Engagement of School Committee (X₂)

To know the times/ how often the Engagement of School Committee (X₂) is done in school affairs, the researcher designs a table of brief aspects of the study variable as shown below:

Table 3.4: Aspects of Instrument

Variable (X ₂)	Definition	Dimensions	Indicators	Items
Engagement of School Committee	The involvements of the people who are elected as committee members of a school and those members have power and authority to make decisions for their school affairs to strengthen the students' outcomes through effective partnerships between principals, teachers, students, parents and the community (Queensland, 2012).	- Making school policies	- Initiating and approving the educational policies - Consulting in setting school vision, mission and goals	1,2,3, 4 & 5
		- Policy Appraisal	- Evaluating the effectiveness of school policies & disciplines - Monitoring & evaluating the educational programs	6, 7, 8, 9 & 10
		- Provision of financial resources	- Supporting both in financial & non-financial matters - Controlling budget with accountability - Adapting budget plan	11, 12, 13, 14 & 15
		- Public relations	- Bridging information of school to community - Mediating relations in school & outside school - Involving parents, community & partners	16, 17, 18, 19 & 20

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		- Educational planning & evaluation	- Analyzing, researching, planning, & ensuring educational objectives - Promoting continuous quality improvement - Effective teaching-learning environments for student success	20, 21, 22, 23, 24 & 25
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3. Effectiveness of School-Based Management (Y)

To know the Effectiveness of School-Based Management (Y) is done in school community, the researcher designs a table of brief aspects of the study variable as shown below:

Table 3.5: Aspects of Instrument

Variable (Y)	Definition	Dimensions	Indicators	Items
Effectiveness of School-Based Management	The success of decentralization at school level through involvements of teachers, parents and community in setting school vision, mission, goals, policies, strategic planning, financing, accountability, and developing skills for staff members (Dr. K. Pushpanadham, 2006:43).	- Budget Management (autonomy & accountability)	- Allocating resources - Supporting funds - Setting budget policy & planning	1, 2, 3, 4 & 5
		- Staff Management (autonomy)	- Making human resource policy & planning - Hiring & firing staff and teachers - Promoting & compensating staff - Assigning staff - Professional trainings	6, 7, 8, 9, 10 & 11
		- Curriculum Development (autonomy)	- Improving instructional programs & educational outcomes - Professional & skills	12, 13, 14, 15, 16 & 17,

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			development - Selecting textbooks - Instructional schedule	
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E. Instrument Development Process

In data collection, the techniques are needed to use the most appropriate, so that it can get the valid and reliable data. In this study, the researcher will use some steps as the followings:

1. Determination of Data Collection Tool

A tool is questionnaire will be used. Questionnaire is a list of questions to others who are willing to respond in accordance with the user demand in granting respondents to checklist answers to the required questions (Riduwan, 2010: 99). Therefore, questionnaires used in this study are closed-ended questions, which respondents have to answer the questions relate to the studied variables only.

2. Preparation of data collection tool

Data collection tool in the preparation of this study are as follows:

- Creating variable that will be investigated in accordance with the given subject, namely variables: Influence of Principal Leadership (X_1); Engagement of School Committee (X_2); and Effectiveness of School-Based Management (Y).
- Constructing the aspects of questionnaires into questions.
- Formulating criteria scores for each item according to the statistical analysis by using a Likert Scale.

3. Instrument Test

Upon completion of data collection tool, then the next step is to test the form of a questionnaire instrument or questionnaires disseminated throughout the respondents to the principals and heads of school committees in the 36 public elementary schools in Coblong sub-district, Bandung city. In the test instrument is used by statistical analysis. Statistical test aims to test the validity and reliability of the collected data so that it can be justified scientifically. The processes of test validity and reliability are illustrated as the follows:

a. Test Validity

Test Validity describes how the questionnaire is really able to gauge what will be, so the validity of test is the more appropriate tool of the planned target. Validity value is essential to the value of the correlation function to calculate the used items. The technique used is the total item correlation is consistency between the scores of items that can be seen overall magnitude of correlation coefficient between each item with an overall score, which is the basis of the Pearson Product Moment Correlation.

Related to the validity testing of the instrument according to Riduwan and Kuncoro (2008: 109-110), it is explained that validity is a measure of the degree of reliability or correctness of a measuring instrument. A good questionnaire should be able to measure with a clear framework of the research to be measured. Validity means the extent to which the precision and accuracy of a measuring instrument in doing the measuring function. Test of validity means testing the procedures to see whether in the form of questionnaires as a measuring instrument can measure carefully or not.

Validity is a measurement that indicates the validity of research instrument (Arikunto, 2006: 170). To get data of the research, the instrument should be valid

one. A test will be valid if the content of the test is consistent with the stated goal for which the test being administrated.

In order to test the validity of the instrument, the formula will be used by Pearson Product Moment (Akdon & Hadi, 2005: 144) as the follows:

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\} \{n \sum Y^2 - (\sum Y)^2\}}}$$

Where:

- r : Correlation Coefficient
- N : Number of Respondents
- $\sum XY$: Number of products X and Y pair scores
- $\sum X$: Total score in distribution X
- $\sum Y$: Total score in distribution Y
- $\sum X^2$: Total score squares in the distribution of X
- $\sum Y^2$: Total score of squares in Y distribution

Then the number of T-test calculations with the formula:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

Where:

- t : Value T-Test Calculation
- r : Coefficient Correlation
- n : Total Respondents

For critical values of the t distribution (Table t), $\alpha = 0.05$ and degree of freedom (df = n - 2), and the validity of instrument can be seen as below:

If $t_{\text{count}} > t_{\text{table}}$ means that the instrument is valid.

If $t_{\text{count}} < t_{\text{table}}$ means that the instrument is invalid.

For calculation used Statistical Package for the Social Sciences (SPSS) version 19, which serves to measure the validity of any item questionnaire used as a measure of research.

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b. Test Reliability

According to Arikunto (2006: 188), reliability is reliable if the result of it shows constancy. It means if a test is tested in another time or place the result of it is constant.

Reliability test is done to obtain the level of accuracy (reliability) data collection tool (instrument) which is used. To measure the level of reliability of the instrument, the researcher will conduct an analysis of test instruments using the Split-Half (odd-even) and calculate reliability throughout the test Spearman Brown formula premises, namely:

$$r_{11} = \frac{2r_b}{1 + r_b}$$

Where:

r_{11} = Reliability Internal Whole Instrument

r_b = Product Moment Correlation between the First and Second Hemisphere

For distribution $\alpha = 0.05$, and test two parties with degrees freedom (df = n-2), so that the reliability can be known as below:

If $r_{\text{count}} > r_{\text{table}}$, it means reliable

$r_{\text{count}} < r_{\text{table}}$, it means not reliable.

Tools Statistical Package for the Social Sciences (SPSS) version 19 is also used for processing, testing and data analysis to know the reliability of the research instrument.

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4. Results of Instrument Test

a. Influence of Principal Leadership (X₁)

To determine the validity and reliability of each item of significance value of items by comparing the correlation value of r_{count} with value of r_{table} is 0.482. If r_{count} is smaller than r_{table} ($r_{\text{count}} < r_{\text{table}}$), then it is concluded that the item is not valid. Otherwise, if r_{count} is greater than r_{table} ($r_{\text{count}} > r_{\text{table}}$) then the item is valid.

From the test result of validity and reliability of variable (X₁) is shown as the follows:

Table 3.6: Validity Test Result of Items X₁

No. Items	r_{count}	r_{table}	Description
1	0.565	0.482	Valid
2	0.897	0.482	Valid
3	0.782	0.482	Valid
4	0.832	0.482	Valid
5	0.738	0.482	Valid
6	0.709	0.482	Valid
7	0.749	0.482	Valid
8	0.897	0.482	Valid
9	0.832	0.482	Valid
10	0.911	0.482	Valid
11	0.411	0.482	Not Valid (Not used)
12	0.782	0.482	Valid
13	0.897	0.482	Valid
14	0.537	0.482	Valid
15	0.594	0.482	Valid
16	0.616	0.482	Valid
17	0.686	0.482	Valid

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18	0. 897	0.482	Valid
19	0. 897	0.482	Valid
20	0. 782	0.482	Valid
21	0. 816	0.482	Valid
22	0. 782	0.482	Valid
23	0. 621	0.482	Valid
24	0. 608	0.482	Valid

From the 24 items of the questions on Influence of Principal Leadership (X_1) with 17 respondents, there is item invalid; item number 11. The calculation value of r_{count} from the Guttman Split-Half Coefficient is 0.981. Then consulted with r_{table} where $df = (n-2)$, $df = 17-2 = 15$ at the 5% level is 0.482. This means that the questionnaire of (X_1) is reliable, because the r_{count} is greater than the r_{table} ($r_{\text{count}} > r_{\text{table}}$).

Table 3.7: Reliability Test Result of X_1

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.943
		N of Items	12 ^a
	Part 2	Value	.934
		N of Items	12 ^b
	Total N of Items		24
Correlation Between Forms			.967
Spearman-Brown Coefficient	Equal Length		.983
	Unequal Length		.983
Guttman Split-Half Coefficient			.981

a. The items are: item1, item2, item3, item4, item5, item6, item7, item8, item9, item10, item11, item12.

b. The items are: item13, item14, item15, item16, item17, item18, item19, item20, item21, item22, item23, item24.

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b. Engagement of School Committee (X_2)

To determine the validity and reliability of each item of significance value of items by comparing the correlation value of r_{count} with value of r_{table} is 0.482. If r_{count} is smaller than r_{table} ($r_{\text{count}} < r_{\text{table}}$), then it is concluded that the item is not valid. Otherwise, if r_{count} is greater than r_{table} ($r_{\text{count}} > r_{\text{table}}$) then the item is valid.

From the test result of validity and reliability of variable (X_2) is shown as the follows:

Table 3.8: Validity Test Result of X_2

No. Items	r_{count}	r_{table}	Description
1	0.902	0.482	Valid
2	0.494	0.482	Valid
3	0.527	0.482	Valid
4	0.762	0.482	Valid
5	0.865	0.482	Valid
6	0.902	0.482	Valid
7	0.725	0.482	Valid
8	0.904	0.482	Valid
9	0.494	0.482	Valid
10	0.665	0.482	Valid
11	0.902	0.482	Valid
12	0.798	0.482	Valid
13	0.695	0.482	Valid
14	0.413	0.482	Not Valid (not used)
15	0.665	0.482	Valid
16	0.902	0.482	Valid
17	0.665	0.482	Valid

18	0.762	0.482	Valid
19	0.865	0.482	Valid
20	0.860	0.482	Valid
21	0.740	0.482	Valid
22	0.762	0.482	Valid
23	0.758	0.482	Valid
24	0.947	0.482	Valid
25	0.695	0.482	Valid
26	0.762	0.482	Valid

From the 26 items of the question on Engagement of School Committee (X_2) with 17 respondents, there is item invalid; item number 14. The calculation value of r_{count} from the Guttman Split-Half Coefficient is 0.974. Then consulted with r_{table} where $df = (n-2)$, $df = 17-2 = 15$ at the 5% level is 0.482. This means that the questionnaire of (X_2) is reliable, because the r_{count} is greater than the r_{table} ($r_{\text{count}} > r_{\text{table}}$).

Table 3.9: Reliability Test Result of X_2

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.929
		N of Items	13 ^a
	Part 2	Value	.928
		N of Items	13 ^b
	Total N of Items		26
Correlation Between Forms			.950
Spearman-Brown Coefficient	Equal Length		.974
	Unequal Length		.974
Guttman Split-Half Coefficient			.974

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Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.929
		N of Items	13 ^a
	Part 2	Value	.928
		N of Items	13 ^b
Total N of Items			26
Correlation Between Forms			.950
Spearman-Brown Coefficient	Equal Length		.974
	Unequal Length		.974
Guttman Split-Half Coefficient			.974

a. The items are: item1, item2, item3, item4, item5, item6, item7, item8, item9, item10, item11, item12, item13.

b. The items are: item14, item15, item16, item17, item18, item19, item20, item21, item22, item23, item24, item25, item26.

c. Effectiveness of School-Based Management (Y)

To determine the validity and reliability of each item of significance value of items by comparing the correlation value of r_{count} with value of r_{table} is 0.482. If r_{count} is smaller than r_{table} ($r_{\text{count}} < r_{\text{table}}$), then it is concluded that the item is not valid. Otherwise, if r_{count} is greater than r_{table} ($r_{\text{count}} > r_{\text{table}}$) then the item is valid.

From the test result of validity and reliability of variable (Y) is shown as the follows:

Table 3.10: Validity Test Result of Y

No. Items	r_{count}	r_{table}	Description
1	0.961	0.482	Valid
2	0.819	0.482	Valid
3	0.841	0.482	Valid

4	0.961	0.482	Valid
5	0.872	0.482	Valid
6	0.841	0.482	Valid
7	0.529	0.482	Valid
8	0.614	0.482	Valid
9	0.950	0.482	Valid
10	0.961	0.482	Valid
11	0.887	0.482	Valid
12	0.961	0.482	Valid
13	0.978	0.482	Valid
14	0.850	0.482	Valid
15	-.425	0.482	Invalid (not used)
16	0.978	0.482	Valid
17	0.529	0.482	Valid
18	0.773	0.482	Valid

From the 18 items of the questionnaire on Effectiveness of Implementing School-Based Management (Y) with 17 respondents, there is one item invalid. The invalid item is number 15. The calculation value of r_{count} from the Guttman Split-Half Coefficient is 0.990. Then consulted with r_{table} where $df = (n-2)$, $df = 17-2 = 15$ at the 5% level is 0.482. This means that the questionnaire of variable Y is reliable, because the r_{count} is greater than r_{table} ($r_{\text{count}} > r_{\text{table}}$).

Table 3.11: Reliability Test Result of Y

Reliability Statistics			
Cronbach's Alpha	Part 1	Value	.949
		N of Items	9 ^a
	Part 2	Value	.918

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N of Items		g^b
Total N of Items		18
Correlation Between Forms		.982
Spearman-Brown Coefficient	Equal Length	.991
	Unequal Length	.991
Guttman Split-Half Coefficient		.990

a. The items are: item1, item2, item3, item4, item5, item6, item7, item8, item9.

b. The items are: item10, item11, item12, item13, item14, item15, item16, item17, item18.

F. Techniques of Data Collection

These are the tools and approaches used to collect data to answer the research question and/ hypothesis. More than one technique can be employed; the commonest are questionnaires and observation. Technique of data collection is the way that can be used by the researcher to collect data (Arikunto, 2006: 149). To collect the data, the research writer uses a test as an instrument. Test is a series of questions or exercises of other means of measuring skill, knowledge, intelligence, and capacities of aptitudes or an individual or groups (Arikunto, 2006: 150).

Based on this, data from the field will be collected through questionnaires. The researcher administers the questionnaires personally. And the researcher will also visit the schools mentioned in the population and sample for obtaining the opinions of school principals and heads of school committees (teachers, parents, and community representatives) of those public elementary schools in Coblong, Bandung city. Thus, the ways of collecting data are classified into two sources. Firstly, the sources of primary data are collected through direct observations and questionnaires. Secondly, the sources are done through secondary data such as hardcopies of documents (books, school reports, journals, and so on).

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G. Techniques of Data Analysis

Once the data is collected, it will be analyzed through the statistical test techniques beginning with the simple regression equations and correlation and multiple regression correlation and hypothesis testing. The techniques of data processing and analyzing are very important in research activities. Thus, data processing steps used in this study are as the follows:

1. Test of Weighted Means Scored (WMS)

A Weighted Means Score/ weighted grade is merely the average of a set of grades, where each set carries a different amount of importance (Wikipedia). This activity is scoring in alternative answers given by the respondents in accordance with the predetermined weights. Any statement in each variable has 5 answers through scoring criteria starting from 1,2,3,4, and 5 with provisions for statements with the calculated description. Calculation of percentage figures of each variable aims to determine the general trend of respondents are variables of Influence of Principal Leadership (X_1), Engagement of School Committee (X_2), and the Effectiveness of Implementing School-Based Management (Y).

The variable percentage is calculated by using the general description of each variable described by the average score obtained from the formula below:

$$\bar{X} = \frac{X}{N}$$

Where:

\bar{X} : Average Value found

X : Total composite score (frequency multiplied by the weighting for each alternative category answer)

N : Number of respondents

Determination of clustering criteria of Weighted Means Scored (WMS) for the average score of each possible answer is as below:

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Table 3.12: Determination of Weighted Means Scored

Range of Values	Criteria	Interpretation
		Variables: X ₁ , X ₂ and Y
4,01-5,00	Very Good	Very High (5)
3,01-4,00	Good	High (4)
2,01-3,00	Good Enough	High Enough (3)
1,01-2,00	Low	Low (2)
0,01-1,00	Very Low	Very Low (1)

2. Testing Research Hypotheses

The technique used in testing the hypothesis in this study is done through the help of the computer program Statistical Package for the Social Sciences (SPSS) version 19. And the analysis technique used in this study is the correlation analysis (Pearson Product Moment) and multiple correlations. This analysis determines the effect of Influence of Principal Leadership (X₁) and Engagement of School Committee (X₂) toward the Effectiveness of School-Based Management (Y) in the public elementary schools in Coblong sub-district, in Bandung city.

a. Simple Correlation Analysis

Here, the formula of Pearson Product Moment (PPM) is used as below:

$$r_{hitung} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\} \{n \sum Y^2 - (\sum Y)^2\}}}$$

Where:

r_{count} : correlation coefficient

X_i : Total score of items

ΣY_i : Total score total (all items)

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n : Number of respondents

Correlation r with the provisions of PPM is not more than the value of r ($-1 \leq r \leq +1$). If the value of $r = -1$ means a perfect negative correlation, $r = 0$ means no correlation. Meanwhile, $r = 1$ means that the correlation is very strong. Meaning of the value r will be consulted with a correlation coefficient value interpretation table r (Riduwan, 2010: 221).

Table 3.13: Value “ r ” of Correlation Coefficient

Interval Coefficient	Level of Relationship
0,00 – 0,199	Very Low
0,20 – 0,399	Low
0,40 – 0,599	Strong Enough
0,60 – 0,799	Strong
0,80 – 1,000	Very Strong

b. Multiple Correlation Analysis

Determination of the effect of variables X_1 and X_2 to variable Y is used with the multiple correlation formula as below:

$$R_{X_1, X_2, Y} = \sqrt{\frac{r_{X_1, Y}^2 + r_{X_2, Y}^2 - 2(r_{X_1, Y}) \cdot (r_{X_2, Y}) \cdot (r_{X_1, X_2})}{1 - r_{X_1, X_2}^2}}$$

Description:

$R_{YX_1X_2}$ = correlation between variables X_1 with X_2 toward a variable Y

r_{YX_1} = product moment correlation between X_1 and Y

r_{YX_2} = product moment correlation between X_2 and Y

$r_{X_1X_2}$ = product moment correlation between X_1 with X_2

c. Significant Test

For testing the significance, the formula is used as below:

$$t_{hitung} = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

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Where:

t_{count} : Value t

r : Correlation coefficient value

Distribution (Table t) for $\alpha=0.05$, and degree of freedom ($df = n-2$), the rule: if $t_{\text{count}} > t_{\text{table}}$, it means significant; if $t_{\text{count}} < t_{\text{table}}$, it means not significant.

d. Testing Coefficient Determination

To measure the size of the distribution given by the variable X to variable Y, then use the formula coefficient determinant as below:

$$KD = r^2 \times 100\%$$

Where:

KP : Determinants coefficient value

r : correlation coefficient value

e. Simple Regression Analysis

Regression analysis is intended to determine the functional relationship between the study variables. In this study, simple regression analysis formula is used as below:

$$Y' = B_0 + X_1 B_1$$

Where:

Y = Dependent Variable

B0 = Constant (Intercept)

B1 = Constant variable

f. Testing Multiple Correlation Significance

To test the significance of the multiple coefficient correlation, the formula is used as below:

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$$Fh = \frac{R^2 / k}{(1-R^2)/(n-k-1)}$$

Where:

R = multiple correlation coefficient

k = number of independent variables

n = number of sample members then the value of F compared with the value of F table with degrees of freedom, df = k numerator and denominator df = (nk-1) and standard error of 5% with the following provisions:

If $F_{count} > F_{table}$ then reject H_0 , it means significant

If the $F_{count} < F_{table}$ then accept H_0 , it means not significant

g. Multiple Regression Analysis

Multiple regression analysis is a forecast tool influences the value of two or more independent variables on the dependent variable for presence or absence of a causal relationship between two variables function more freely with the dependent variable.

To determine the effect of independent variables on the dependent variable is controlled by the independent variables, or jointly used multiple regression analysis formula as below:

$$Y' = a + b_1X_1 + b_2X_2 + E$$

Description:

Y ' = Y appraiser value (dependent variable) from the regression equation

a = constant (the value of Y 'when X = 0)

b_1 = regression coefficient X_1

X_1 = free variable X_1

b_2 = regression coefficient X_2

X_2 = free variable X_2

E = Predictor (bully)

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