EFFECTIVE COMPETENCY BASED SCHOOL MODEL

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ABSTRACT

The problem of school performance, especially the performance of personnel involved in school organizations (principals, teachers and staff), is rated lowly. Therefore, the ability of people in school organizations is required to ensure that the school's target will be achieved effectively. This study was conducted by using mixed method (embedded qualitative-quantitative type mix): the qualitative method as the primary method and the quantitative method as secondary method that was carried out in one stage of the study (the qualitative-quantitative stage together). Open and closed questionnaires through predetermined respondents, as well as documentation studies were used as data collection tool. Meanwhile, the data was analyzed by using statistical approach (quantitative) and data transformation (qualitative) was obtained from sources or participants determined in the study. The results showed that from the characteristics of (1) collegiality collaboration skills among teachers, (2) understanding cognitive processes in the administration of teaching, (3) mastery of subject knowledge structures, (4) understanding and appreciation of values, beliefs, and (5) teaching standards, convey direct and positive influence on student and teacher performance. Based on these competency characteristics, teacher and student performance can be predicted, whether effective or not.

Keywords: Effectiveness, School Model, Competency

INTRODUCTION

The various education problems occur in Indonesia are basically quite same with the educational problems that exist in various regions. In Medan, North Sumatera, schools at the junior and senior high school levels remain possess various weaknesses, such as school standardization. Data from the Medan City Education Department regarding quality qualifications for junior high schools and Madrasah shows that there are still many schools in SMP (Junior High School) / Madrasah rated in low quality qualifications. Among 367 SMPs / Madrasahs, 213 of them still possess the qualifications for independent coaching schools (SPM), which are schools that need more accompaniments to be more independent. As many as 46 junior high schools / madrasas with national standard pre-school quality qualifications (Pre SSN) are schools that still have not matched some national education standards set by the government. While the remaining 93 SMP / Madrasahs meet the national school standard qualifications (SSN), which are schools that possess all education standards. Concluding the data, there are 75.57% of SMP / Madrasahs in Medan with low quality qualifications that did not meet the education service standards set by the government, both in terms of management and other supporting aspect. Meanwhile, only 24.43% have met the standard.

The paradigm of education quality has actually been echoed for certain time period by the Government of Indonesia through Government Regulation No. 13 of 2015 concerning national education standards (SPN). With the regulation of the SPN, it is expected high educational equality; education that is equitable and able to guarantee students learning atmosphere and improve students competitiveness. However, it is faced the reality that currently the quality and capability of schools in Medan have not been able to compete at both the national and international levels. As an assessment of quality schools in Indonesia version of the Ministry of Education and Culture that was published by The Asian Parent Indonesia, which measured the index of school integrity and ability for 6 years in a row, assign the capability of schools (public school) in Medan is still far from being nationally qualified. Thus, advanced schools are still held by private institutions.

Tabel 1 Best Senior High School (Public or Private) in Indonesia

Version of Department of Education and Culture (Published by API)

Province	Regency/City	School
Nangroe Aceh Darusalam	Banda Aceh	SMA Negeri 19 Model
North Sumatera	Medan	SMA Sutomo 1

West Sumatera	Padang	SMA Negeri 2
	Padang	SMA Negeri 1
	Padang	SMA Negeri 11
	Padang	SMA Negeri 12
	Padang	SMA Negeri 8
	Padang	SMA Negeri 7
Riau	Pekanbaru	SMA Negeri 4
		SMA Negeri 1
Jambi	Jambi	SMA Negeri 1
South Sumatera	Palembang	SMA Kesuma Bangsa
	Palembang	SMA Negeri 9
DKI Jakarta	Jakarta	SMA Negeri2
		SMA Negeri 1
		SMA Santa Ursula
		SMA K 2 Penabur
		SMA Kanisus
-	-	-

Source: *The Asian Parent Indonesian*, 2016

Based on the data in Table 1 above, it can be concluded that generally the competitiveness of schools (public senior high school) in Medan is still lowly rated. It must be recognized that the reforms in improving the quality of education in Medan are still stagnant and far from expectation of the community. In facing this era of globalization, education in Medan should be able to respond to developments and changing of paradigm and the need to increase the competitive advantage in the era of globalization. The effectiveness of schools is still rated lowly according to researchers, due to current school practices that still use academic success criteria (ouput oriented) and have not focused on internal process success criteria: the relationship between personal organizations (organizational climate) and the harmony of relationships (environmental adaptation) in organizational environment, so that the internal and external effectiveness of schools is difficult to realize. Schools that focus on output oriented in reality cause inequality when they are linked with the school system. A good system is achieved when

each school elements are interdependent and contributive, so that they are able to become supporting for the school.

In this regard, research on effective school development through the human resource approach needs to be held. The results obtained can bring effective contributions to educational practices, especially for schools, in the context of optimizing school performance through developing competencies and activities that empower people in sustainable ways. Therefore, the specific objectives of this study are: (1) Developing an effective competency-based school model, (2) Generating a competency-based school model that can be applied in schools in practical and effective ways. This research will be practically useful for school management in order to improve the quality of education in schools and the development of human resources in order to achieve the competitive advantage of schools in providing education services. As defined by Dalydan Chrispeel (2005: 26), effective schools are related to the quality of education services and the level of community satisfaction with school performance. Moreover, Lazotte (2011: 8) stated that modern organizations considered the sustainability of organizations depends on their customers (consumers). Creemers (1999: 1-7) measured school performance specifically the people involved in school organizations (principals, teachers and staffs) are needed to ensure that school goals will be achieved effectively. Hence, the benefits of this research development will be beneficial for the development of science and technology, especially in the field of education, in order to solve educational problems.

In addition, the school is an instrument for learning and teaching, and also a place to deliver and receive lessons. School is a place for education as well as a place where people expect for a better life in the future. Schools as education centers have responsibility and function to carry out the process of teaching and learning activities that have been planned, so as to produce skilled and educated individuals who are always needed for the implementation of development. Hence, school is defined as an organization, as a social organization that has a certain structure that involves a number of people with the main responsibility to carry out its function to meet a need. Therefore school has certain structure and purpose.

Robbins (1994: 7) explains that in discussing the effectiveness of an organization, it can be broadly distinguished in four approaches, each of which has assumptions and interpretation and how they affect managers, they are: (1) approach to objectives, (2) approach system, (3) strategic constituent approach, and (4) competitive value approach.

Objective Approach. The goal achievement approach assumes that the organization is a unit that being created deliberately, rationally, and seeks for goals. Therefore, the achievement of successful goals becomes appropriate measure of effectiveness. However, the achievement of objectives can be legitimate measure in measuring organizational effectiveness, other assumptions should also be validated. First, the organization should set its final goals. Second, these goals should be identified and set well in order to be understood. Third, these objectives should be in few numbers in order to be easily managed. Fourth, there should be a consensus or agreement on these goals. Finally, the progress towards those goals must be measurable.

Systems Approach. In term of the system, organizational effectiveness implies that the organization consists of interconnected sub-sections. If one sub-section indicates bad performance, it will result negative impact on overall system performances. Effectiveness requires awareness and successful interaction with environmental constituencies. The management team should not fail in maintaining good relations with customers or suppliers, government agencies, labor unions, and similar constituencies who have power to disrupt stable organizational operations. Schereens (2000) said that in a systems approach, organizations must be able to maintain their survival. Its implication is that organizations must be truly flexible, which means securing important resources and other inputs. Thus, in this approach, flexibility and adaptability are important requirements for organizational effectiveness, for survival.

Strategic Constituent Approach. The approach to achieving goals sets organizations as intentionally created, rational, and seeks goals. The constituency-strategic approach indicates organizations differently. Organizations are assumed to be political arenas where vested interests compete to control resources. In this context, the effectiveness of the organizations becomes assessment of the extent to which an organization's success in gaining the demands of its critical constituency where the parties on which the organization depends on for its future survival. The range of the "political area" further assumes that organizations bring a number of constituencies with different levels of power who try to gain their interests. But each constituency also possesses unique set of values, so their preferences may not be appropriate.

Competitive Value Approach. The values obviously more advanced than merely acknowledgment of wide variety of choices. This approach assumes that various choices can be consolidated and organized. The approach of competing values indicates that there is common element that underlies every criteria of comprehensive

organizational effectiveness and these elements can be combined in several ways to produce basic set of competitive values. The first set, flexibility versus control, where flexibility related to innovation, adaptation and change. Meanwhile control related to stability, order, and the possibility of predictions versus productivity. This is in relation to whether emphasis should be placed on the welfare and development of people within the organization itself. The dichotomy of humans and organizations is another collection of dimensions that are fundamentally contradictory, related to the feelings and needs of people contained in the organization against attention to achieving productivity. Moreover, the third set, related to the way versus againsts the goal. One emphasizes internal and long-term process, the other emphasizes final and short-term goals.

Based on the approaches in organizational effectiveness explained above, Steer (1980: 23) divided four characteristics of effectiveness, they are: (1) organizational characteristics, (2) environmental characteristics, (3) characteristics of workers, and (4) management characteristics. Organizational characteristic is the relationships that are relatively fixed as the composition of human resources contained in the organization. School as social institution, consists of people with various patterns of determined interaction, which is developed to achieve goals, which has relatively identifiable constraints. In case the school consists of people who work together, the school contains its structural unit. The structural unit is a unique way of placing people in order to create the organization. In structural unit, humans are placed as part of relatively fixed relationship that will determine the patterns of interaction and behavior that os oriented to task.

Characteristic of the environment consists of two aspects. The first aspect is the external environment where the environment outside the organizational boundaries and bring very influential on the organization, especially in making decisions and taking action. The second aspect is the internal environment, known as organizational climate; the overall environment in organizational environment. Moreover, worker characteristic is the most influential factor on effectiveness. Within each individual various differences will be found, but individual awareness of these differences is very important in efforts to achieve the organizational goals. So if an organization wants to achieve the goals, the organization should be able to integrate individual goals with organizational goals.

Management characteristic is work strategies and mechanisms designed to control all the things within the organization so that effectiveness will be achieved. Management policies and practices are the tools for leaders to manage all activities to achieve

organizational goals. In carrying out the system, management policies and practices should be focus on humans; not only concerned with the strategy and mechanism of work. This mechanism includes the formulation of strategic objectives, the search and utilization of resources, the creation of an achievement environment, the communication process, and leadership and decision making, as well as the adaptation to changing organizational innovation environments.

Based on the perspectives of school success, effective schools refer to the extent to which schools are able to achieve the stated educational goals and objectives. As Cravens et al (2011: 152) explained that school effectiveness is related to the ability of schools to empower the most important resources; humans to achieve goals for carrying out effective learning processes because the characteristic of school institutions is the occurrence of good teaching and learning processes and the involvement of all human elements in schools that ultimately impact on student learning outcomes. In other words, the school is categorized into effective if the school can achieve what has been planned.

The assessment of school effectiveness is not only measured to the extent that school output has the ability, skills and attitude value. The effectiveness of schools can also be measured by human behavior and the processes that occur in schools that give impact on achieving the goals. Townsend (1994: 41) stated that school effectiveness is analyzed through the processes that occur in schools. To understand an effective school is to look at the processes that take place in its institution, which can provide overview to find out how to make the school successfully achieve its goals. Furthermore, Townsend (1994) stated that school effectiveness is not only limited to the process of maximizing academic achievement, but more than how to give attention to learning, personal development and self-esteem of students, life skills, problem solving ways of learning, independence development, and confidence increase that the activities possess will get more achievements. The statement above is in line with Uline et al (1998: 17) statement which stated that the effectiveness of schools can be measured from how all components of the school process and interactions with each other in an integrated manner in supporting the success of education in schools.

The general understanding of effective schooling is also related to the formulation of what should be finished with what has been achieved. So that a school will be stated as effective if there is a strong relationship between what has been formulated to be achieved with the results achieved by the school. Otherwise, the school is stated as ineffective when the relationship between those aspects is low. The paradigm of effective school according

to Scheerens (2000: 9) in his paper titled "improving school effectiveness", that without the relationship, there are more opportunities to take action that the quality of education should be started at school. Correspondingly, Hargreaves (2001: 487) mentioned that the achievement of educational goals and objectives to be very important by looking at the extent to which school effectiveness can be achieved. This means that in the context of creating school effectiveness and efforts to improve the quality of education, overall comprehension of school institutions is very important, because the main base of education is schools. School effectiveness shows the process of engineering various sources and methods that are directed on optimizing learning process in schools. Mulyasa (2002: 88) school effectiveness statement refers to the empowerment of all components of the school as the learning place organization based on the main tasks and their respective functions in the program structure with the aim that students learn and achieve competent predetermined results.

Based on the description above, it can be concluded that school effectiveness can be analyzed and measured in three ways or approaches. First, school effectiveness can be analyzed and measured from school resources (resource approach). It means that the success of a school is determined by the strength of the school on obtaining its resources, both physical and non-physical, which are in accordance with the needs of the organization. Second, school effectiveness can be determined by the processes that occur in schools (process approach). It means the implementation of activities and all programs that have been carried out both internally and externally as well as the existing organizational mechanisms have impact on the output. Third, the success of the school is determined by the extent to which the goals that have been formulated being achieved (goals approach). Hence, school success is measured by the goals and objectives that have been planned and the extent to which the targets have been achieved. Thus, the focus of the school is only focused on the goals that have been formulated.

Nowadays, there has been an alteration in paradigm in the field of education. Many organizations that are engaged in business, industry and educational services find that the key in achieving the highest level of competence in the organization is the ability to maximize the benefits of the organization, such as products that well-known by the public, technology, assets, quality education programs, and others. One of the keys to the success of the organization is the human resources (HR). Many experts in the field of education stated that improving school performance and productivity is directly related to how to manage their human resources well and not to the availability of tools (facilities and

infrastructure) or funds. According to the concept of human capital, organizational effectiveness depends on human resources. In line with Robbin and Coulter (2007: 312) statement, many modern organizations now claim that our human resources (HR) are our most important assets. Mathis and Jackson (2002: 121) believed that HR management can help create important strategic advantages and can help sustainable organizational competitive advantage.

Human ability or competence in the organization is the most important factor that must be developed, maintained, and improved in quality, because it can provide benefits and advantages for the organization. Byham, William and Moyer (1996) stated that an organization will have an advantage if it is able to develop the HR competencies of the organization. Spencer and Spencer (1993: 45) defined that competency is a number of individual characteristics related to the reference to targeted behavioral criteria and the best performance in job or situation that is expected to be fulfilled. Colquitt, et al (2007: 172) and Slocum and Hellrigel (2009: 227) stated that competencies include natural talent and learning abilities that needed to succeed in completing various tasks. Capability is a natural gift that helps employees learn certain tasks faster and act them better.

Hoy and Miskel (2014: 451) stated that effective school models are oriented to school human resource (HR competency based) which reflect the professional abilities of teachers which are reflected in the quality of student learning experiences that interact in process of teaching and learning. This condition is influenced by: (1) the level of teacher mastery of the subject matter and mastery of the structure of scientific concepts, methods, and approaches, (2) the style or art and teaching procedures, utilization, and effective and efficient learning facilities, (3) the understanding of the teacher to the characteristics of groups and individual students, (4) the ability of teachers to create creative dialogue and create a pleasant learning environment, and (5) the teacher's personality. In the study of competency-based effective school models, basically focuses more on how the strategic planning process and more apply the functions of human resource management and empowerment in order to achieve competitive competition.

In general, the competency-based effective school model illustrates the combination of behavior between knowledge, skills and characteristics are needed to effectively demonstrate its role in the organization and its performance. According to Manopo (2010: 41), competency model leads to two kinds of important questions, they are: (1) whether the skills, knowledge, and characteristics needed in work, and (2) what behaviors that brings direct impact on performance and success in profession.

Hardjoesoedarmo (2004) stated that in implementing the competency model, there are principles that must be implemented, they are: (1) schools should be able to plan and put themselves according to their abilities and potential, to optimize all available school resources to achieve school goals, (2) schools should be able to respond to strategic issues such as school-based management, education level unit curriculum, contextual teaching, and others in school management to improve the quality, and (3) school should emphasize objectivity, scientific and being systematic during the strategy implementation.

Hawley and Rolly (2007: 122) stated that the efforts to improve the quality of education in schools should be completed by efforts to improve professional abilities and to improve the quality of the teacher's personality. At the school level, these efforts are demonstrated in activities such as (1) collegiality interactions between teachers, (2) understanding cognitive processes in the administration of teaching, (3) mastery of subject knowledge structures, (4) ownership of understanding and appreciation on values, beliefs, and standards, (5) teaching skills, and (6) knowledge of how students learn.

RESEARCH METHODOLOGY

This study was implemented in Medan, in some State High Schools. The respondents were Medan State High Schools teachers, both as civil servants and not civil servants. Randomly, amomng of 451 teachers, sample of 304 teachers was determined. This research is a mixed research, which is a combination of qualitative and quantitative approaches. The technique used in the research is mixed method (embedded quantitative-qualitative mix type), where quantitative method as the primary method that guides qualitative data as a secondary method, which implemented in one research stage (qualitative-quantitative stages together) to test whether (1) there is collegiality interactions among teachers, (2) there is understanding cognitive processes in the organization of teaching, (3) mastery of subject knowledge structures, (4) ownership of understanding and appreciation of values, beliefs and standards, and (5) significant teaching skills affect the knowledge of students learning. Reswell (2014: 176) mentioned that embedded strategies are very attractive, where the analysis of two types of data simultaneously being analyzed by means of comparison or description side by side as two different images that present joint assessment of problem. The validity procedure of the research data uses statistical approach to quantitative data and data transformation for

qualitative. The embedded approach can conduct surveys and at the same time with conducted interviews, observation and detailed documentation studies.

The procedures and stages of this research are: data collection, data analysis, data interpretation, and model design. The general flowchart of research procedures are as follow:

1. Preliminary study. This study was carried out through library and field research. Literature study was carried out by examining various theories, concepts, and relevant research results. In field studies, the authors analyzed with observation techniques, interviews, and documentation studies by using the field approach, then the initial data in the analysis related to the characteristics of effective schools in terms of competency of HR (Principal / Teacher / Employee) in supporting school performance.

2. Planning the initial model development. The development of effective initial school model based on competency is based on the results of preliminary studies that occur in the field and literature review. This technique is related to the conditions of the subject's needs so that the model design process involved principals, teachers and staffs both in groups and individually.

3. Testing the instrument. Firstly, the researchers validated the instrument in order to develop the construct of the model that has been designed, then validation was done by the principals, experts / experts and practitioners, or expert judgment of education. Model design validation was very important in this stage, in order to improve and refine the model design.

4. Conducting instrument testing in the field that is limited (internal) in several State Senior High Schools, with the principal validator in order to obtain various suggestions and input from the school principals. The whole process of the limited trial result then being evaluated to obtain definitive formula regarding the instrument. Then, revisions and improvements are realized.

5. Conducting a major field trial, which provides an assessment or distribution of questionnaires, include: principals, teachers and staffs in selected state high schools, then collecting data through observation interviews. Every data collected was analyzed for the next result is evaluated to obtain a definitive formula regarding the results of this main field test. And then, the researchers processed the data, and design the construct of the designed model.

Moreover, the data collection tools used in this study were as follows:

1. Questionnaire. The questionnaire or research questionnaire was specifically designed. Considering the method used was an embedded mix technique, the questionnaire designed in this study was a closed and open questionnaire conducted in one stage of the study.

2. Observation. Observations were made by observing and tracing the activities of all respondents and overall school activities for the collection of preliminary data. The observation tool used was observation sheet that has been prepared previously.

3. Documentation. Documentation was carried out for the collection of data available in schools relating to job description and the work of all personnel in the school.

Moreover, the data of this study were analyzed by using quantitative and qualitative analysis (mixed) with an embedded approach, where the quantitative method as the primary method of research, while the qualitative method as the secondary method. Quantitative data analysis was analyzed by using descriptive and inferential statistical techniques statistics that aimed at estimating the generality of a population by using sample data. In addition, statistical testing was aimed to test the research hypotheses as formulated in the objectives of this study. Hypothesis testing was implemented by using path analysis. Path Analysis as part of inferential statistics of parametric types can only be implemented, if the analysis requirements are met.

There are several analysis requirements that should be matched so that the conclusions drawn will not be deviate from the truth, they are: (a) the sample used in the study was taken randomly, (b) the pattern of data distribution of each exogenous variable or endogenous variable in the model was normal, (c) the relationship between exogenous variables and endogenous variables in the model is linear, additive, and causal, (d) measured variable data is interval data, (e) the variable was measured without error, (f) causal flow in the model was one direction (recursive model), and (g) residual variables did not correlate with other residual variables or with other variables that precede it in the model. In this regard, Riduwan and Kuncoro (2011: 151) proposed the assumptions underlying the use of path analysis, they are: (a) the relationship between variables in the model is linear, additive, and causal, (b) the residual variable does not correlate with the variables that precede it in nor does the model correlate with other residual variables, (c) causal flow in the system is unidirectional, (d) variables measured at an interval scale, and (e) variables measured without errors. Furthermore, Pedhazur (2012: 41) stated that

more operationally, before an inferential analysis was conducted, the data analysis requirements test was first performed, including: normality test, linearity test, feasibility test of regression model, accuracy of predictor test, feasibility test of regression coefficient, multi-collinearity test, and autocorrelation test. Autocorrelation tests are only performed on time series data and not necessarily to be done on cross section data such as on questionnaires where all variables are measured simultaneously at the same time.

To complete the hypothesis testing, the correlation analysis and path analysis were calculated. The statement of the hypothesis in this study is as follows:

H0: $\rho yx = 0$: There is no relationship or effect of x on y

H1: $\rho yx > 0$: There is a relationship or effect of x on y

The test was calculated with the condition of rejecting H_0 if $t_{count} > t_{table}$ with formula :$t_k = \frac{\rho_k}{se_{\rho k}}(dk = n - k - 1)$.

Based on the equation model above, then the framework of the empirical causal relationship in this study consists of three structural equations, they are:
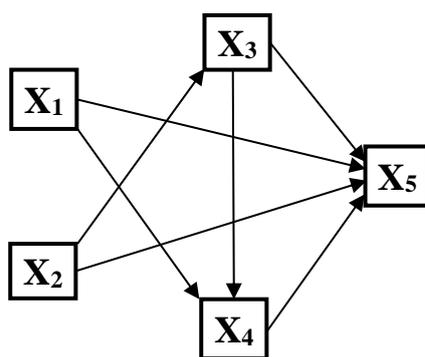
Picture 1. Research Model

Note:

X1: collegiality collaboration skills among teachers,

X2: understanding cognitive processes in the administration of teaching

X3: mastery of subject knowledge structure

X4: understanding and appreciation of values, beliefs and teaching standards

X5: students' knowledge and learning skills

Sub structure-1 : $X_3 = \rho_{X_3X_1} X_1 + \rho_{X_3X_2}X_2 + \varepsilon_1$..(1)

Sub structure-2 : $X_4 = \rho_{X_4X_1} X_1 + \rho_{X_4X_2}X_2 + \rho_{X_4X_3}X_3 + \varepsilon_2$..(2)

Sub structure-3 : $Y = \rho_{YX_1} X_1 + \rho_{YX_2}X_2 + \rho_{YX_3}X_3 + \rho_{YX_4}X_4 + \varepsilon_3$...............................(3)

Qualitative data analysis is meant to reduce data based on embedded techniques; the primary (quantitative) method that guides the secondary (qualitative) method. Quoting Creswell's opinion (2014: 321), embedded strategy is characterized as a mixed method strategy that applies one stage of quantitative and qualitative data collection at one time. The testing of the validity of qualitative data was using descriptive approach and thematic analysis of text or images. Meanwhile, qualitative data analysis procedures stages included are (1) data transformation, i.e. describing data, coding and themes qualitatively then comparing with qualitative data, (2) exploring outler, for the case of quantitative data can be continued through qualitative interviews, and (3) making a matrix or table, i.e. making a combination of quantitative and qualitative data presentation in the form of matrix tables and figures and drawing conclusions.

RESULT AND DISCUSSION

1. Result of Quantitative Data Analysis

This study is aimed to develop an effective competency-based school model seen from the characteristics of (1) collegiality collaboration skills among teachers, (2) understanding cognitive processes in the administration of teaching, (3) mastery of subject knowledge structure, (4) understanding and appreciation of values, beliefs, and (5) teaching standards. Based on these competency characteristics, the linkage or causality relationship was tested through the path analysis developed. Meanwhile, as the conceptual framework developed in this study was the pathway a decomposition model, where the decomposition model is an analysis model that seeks causality relationships between research variables both the influence of direct and indirect variables. Meanwhile, non-clausal relations or correlational relationships that occur between exogenous variables are not included in the analysis. Based on the research findings, the path analysis of the research model is as follow:
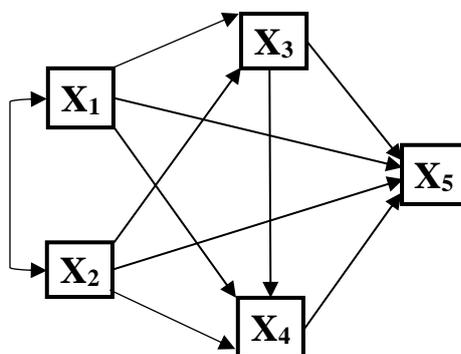
Picture 2. Research Model

Note:

X1: collegiality collaboration skills among teachers,

X2: understanding cognitive processes in the administration of teaching

X3: mastery of subject knowledge structure

X4: understanding and appreciation of values, beliefs and teaching standards

X5: students' knowledge and learning skills

Table 2. Summary of Results of Descriptive Statistics Calculation

		X1	X2	X3	X4	X5
N	Valid	304	304	304	304	304
	Missing	0	0	0	0	0
Mean		148.17	145.56	141.78	142.42	144.71
Median		147.50	146.00	142.00	143.00	145.00
Std. Deviation		12.723	14.844	12.087	16.463	13.498
Variance		161.883	220.340	146.102	271.016	182.205
Minimum		100	99	89	97	97
Maximum		179	185	176	184	178

Note:

X1 = collegiality collaboration ability

X2 = understanding cognitive processes

X3 = mastery of subject knowledge structure

X4 = understanding and appreciation of teaching values and standards

X5 = knowledge of how students learn

Based on Table 2 above, it can be seen that the average data of collegiality collaboration ability (X1) is 148.17 with standard deviation in 12.723. The average data variable understanding cognitive processes (X2) is 145.56 and the standard deviation is 14.844. The average mastery variable data structure of subject knowledge (X3) is 141.78 and the standard deviation is 12.087. Likewise, the average variable of understanding and comprehension of grades and teaching standards (X4) is 142.42 and the standard deviation (standard deviations) is 16.463. While the average knowledge variable data of

how students learn (X5) is 144.71 and the standard deviation (standard deviation) is 13.496.

Test data analysis requirements on this study was using several analysis requirements, they are: testing data normality, linearity test and multicollinearity. The normality test results of the research data indicate the Asymp value. Sig (2-tailed)> 0.05, then the population is normally distributed. Furthermore, the calculation of linearity test with Deviation from Linearity obtained all significance values greater (sig)> 0.05. Likewise, the results of the analysis of research data all forms of regression are linear and mean at α of 0.05 which means there is no multi-collinearity.

The school effectiveness model is generally formulated by using five variables, each of which have been tested for its influence in path analysis; collegiality collaboration ability (X1), understanding cognitive processes (X2), mastery of subject knowledge structure (X3), comprehension and appreciation of grades and teaching standards (X4), and knowledge of how students learn (X5), and test the hypotheses of each equation in the sub-structure of the model.

Table 3. Research Findings Models

Model	Persamaan Empirik	R square
Model 1	$X_3 = 0{,}131\,X_1 + 0{,}280\,X_2 + 0{,}897\,\varepsilon_1$	0,103
Model 2	$X_4 = 0{,}127\,X_1 + 0{,}136\,X_2 + 0{,}247\,X_3 + 0{,}886\,\varepsilon_1$	0,124
Model 3	$X_5 = 0{,}117\,X_1 + 0{,}144\,X_2 + 0{,}176\,X_3 + 0{,}187\,X_4 + 0{,}837\,\varepsilon_1$	0,163

Based on the \above findings model in Table 3, it can be explained that for the structural equation model I above as follows: there is a direct influence on the ability of collegial collaboration among teachers on the understanding of cognitive processes in the administration of teaching, which is equal to 0.131. Meanwhile, the direct effect of understanding cognitive processes in organizing teaching on the understanding of cognitive processes in administering teaching is 0.280. While, the influence of collegial collaboration ability between teachers and understanding cognitive processes in the implementation of teaching together on understanding cognitive processes in the administration of teaching amounted to 0.103 or 10.3%.

Furthermore, the structural equation model 2 shows that there is a direct influence on the ability of collegiality collaboration among teachers on the understanding and appreciation of values, beliefs and teaching standards with 0.127. Moreover, the effect

of understanding cognitive processes in organizing teaching on the understanding and appreciation of values, beliefs and teaching standards is 0.136. The influence of mastery of subject knowledge structure on the understanding and appreciation of values, beliefs and teaching standards is 0.886. While the influence of collegiality collaboration skills among teachers, understanding cognitive processes in organizing teaching and mastering the structure of subject knowledge together towards understanding and appreciation of values, beliefs and teaching standards is 0.124 or 12.4%.

Furthermore, structure equation model 3 shows that there is a direct influence on the ability of collegiality collaboration among teachers on student learning knowledge with 0.117. The effect of understanding cognitive processes in organizing teaching on student learning knowledge is 0.144. The influence of mastery of subject knowledge structure on student learning knowledge is 0.176, while the influence of understanding and appreciation of the values, beliefs and teaching standards on student learning knowledge is equal to 0.187. While the direct influence of collegiality collaboration skills among teachers, understanding cognitive processes in the administration of teaching, mastery of subject knowledge structures, understanding and appreciation of values, beliefs and teaching standards together on student learning knowledge is 0.163 or 16 , 3%.

Based on the findings above, it can be concluded that the effectiveness of schools (in this case the ability, knowledge and skills of students) is largely determined by the ability of collegiality collaboration among teachers, understanding cognitive processes in organizing teaching, mastery of the structure of subject knowledge, and understanding and appreciation of values, beliefs and standards of teaching.

2. Results of Qualitative Data Analysis

Qualitative data was collected based on findings which gained from interviews of teacher ability that reflected in the quality of the learning experiences of students who interact in the process of the teaching and learning process. This condition is strongly influenced by: (1) the level of teacher mastery on subject matter and mastery of the structure on scientific concepts, (2) methods, approaches, styles or arts, and teaching procedures, utilization, and effective and efficient learning facilities, (3) understanding of teachers to the characteristics of groups and individual students, (4) the ability of teachers to create creative dialogue and create pleasant learning environment, and (5) the personality of the teachers. In addition, the efforts obtained by schools to improve and realize school effectiveness are through efforts to improve teacher abilities and to improve

the quality of the teacher's personality. The efforts obatined are to encourage the involvement and utilization of teacher competencies in realizing school effectiveness. This condition is strongly influenced by:

1. The level of teacher mastery on subject matter and mastery of the structure on scientific concepts.
2. Methods, approaches, styles or arts and procedures for teaching, utilization, learning facilities effectively and efficiently.
3. Teachers' understanding of group and individual student characteristics.
4. The teachers' ability to create creative dialogue and create pleasant learning environment.
5. Personality of the teachers.

This qualitative data finding strongly support the model developed. Based on the data collected shows that characteristics (1) collegiality collaboration skills among teachers, (2) understanding cognitive processes in the administration of teaching, (3) mastery of subject knowledge structure, (4) understanding and appreciation of values, beliefs, and (5) teaching standards, greatly affect students' knowledge on learning. Furthermore, the characteristics of these abilities bring positive and significant effect on the level of performance of teachers in Medan State High Schools. Thus, the effective and ineffective teacher performance is also determined by the five characteristics of the competency.

CONCLUSION AND SUGGESTION

The findings of this study shows the competency-based school effectiveness model that is tested statistically (fix model), where the competency-based school effectiveness model is measured through the characteristics of (1) collegiality collaboration skills among teachers, (2) understanding cognitive processes in the administration of teaching, (3) mastery of subject knowledge structure, (4) understanding and appreciation of values, beliefs, and teaching standards, and (5) knowledge of how students learn, bring direct and positive influence on student knowledge. The findings also explain whether teacher performance at school is effective or not. As well known, in the context of school-based management that applied by schools today, teacher empowerment is very important. In school-based management, this matter implies that schools should be managed openly and democratically, and should develop the aspirations and needs of teachers to schools through teacher involvement and

empowerment. This finding reflects how much the influence in teacher empowerment has on teacher performance. Although the studies on the effect of empowerment on work motivation are still few, this study has proven that empowerment has significant effect on increasing school effectiveness. As the findings of the field interview, there are four things that should be developed and cultivated in order to improve teacher and student performances, they are: (1) characterizing spirit of hard work, (2) characterizing spirit of competition combined with spirit of cooperation, (3) characterizing habit of positive thinking , and (4) characterizing competence. In addition, there are two matters that bring important role in efforts to create climate of competitive spirit and teacher work motivation, they are: (1) school management support in empowering teachers to work, (2) school culture, values, attitudes and positive behavior developed in the school environment. These matters will encourage teachers to have achievements and be ready to compete in a competitive ways.

As the research findings described above, there are some suggestions that have been put forward to realize the effectiveness of schools so the efforts made by schools: schools should involve more participation of school members and their users; increase the flexibility of the management of educational resources, transparency, and accountability for cooperation; increase school awareness and responsibility; joint decision making that more involves teachers and school committees; and utilize the budget or funding collected from the community. In addition, efforts to improve the quality of teaching in schools should be completed by efforts to improve professional abilities and improve the quality of the teacher's personality. At the school level, these efforts are shown in the following model activities:

1. The collegiality interaction between teachers.
2. Understanding cognitive processes in the administration of teaching.
3. Mastery of the structure of subject knowledge.
4. Understanding and appreciation of values, beliefs and standards.
5. Teaching skills.
6. Knowledge the ways of how students learn.

To make the effectiveness of the school realized in the school, the institutions should be able to consider the following aspects:

1. Having input of potential students in accordance with the demands of the curriculum, Education facilities and educational equipment, learning materials, and administrative and managerial capabilities.

2. Having environmental input in the form of supporting capacity of parents or the community, and conditions and situations of supporting physical and social environment.

3. Measuring the process, by looking at the level of efficiency and effectiveness in organizing learning and training, including management behavior, effective allocation of time for learning or training, and student behavior.

4. Evaluation of outputs, by looking at the level of attainment of the institution and student achievement, such as increasing intake or enrollment, the number of class stays, the level of knowledge and skills gained from learning or practicing, and changing attitudes and behavior.

5. Assessing the graduates, whether the graduates have brought impact in the midst of society, indirect or long-term results as the result of the learning or training process obtained by students, acceptance and success of studies at higher levels of education, success in obtaining employment, and the amount of income earned.

REFERENCES

Bedi, A., and Garg, A. The effectiveness of private versus public schools: the case of Indonesia. Journal of Development Economics, 61(2), 2000, Pp 463-94

Colquitt, LePine, et al (2009). Organizational Behavior. Harper and Row : New York.

Creemers, Bert P.M. Primary Education Quality Improvement Project (PWQIP). Indonesian Quartely. Vol 2, 1999, Pp 1-7

Creswell, J.W. (2014). Research Design: Pendekatan Kuantitatif, Kualitatif dan Mixed. Edisi Ketiga. Pustaka Pelajar. Yogyakarta.

Daly, AJ dan Chrispeel, A. From Problem to Possibility : Leadership for Implementing and Deepening the Processes of Effective Schools. Journal Effective Schools.Vol 4 No.1. 2005, Pp 26-35

Hardjosoedarmo, Soewarso. (2004). Total Quality Management.Andi : Yogyakarta.

Hargreaves, D.H. A Capital Theory of School Effectiveness and Improvement.British Educational Research Journal, Vol. 27, No. 4, 2001. Pp 487-503

Hawley, W.D and Rolly, D.L. The Keys to Effective Schools: Educational Reform as Comtinuos Improvement. Corwin Press and NEA. California.2007. Pp 122-128

Hoy, W.K dan Miskel, C.G. (2014). Administrasi Pendidikan: Teori, Riset dan Praktik. Pustaka Pelajar. Jogjakarta.

Lazotte, L.W. Effective Schools : Past, Present, and Future. Journal for Effective Schools. Vol 10 No.1.2011, Pp 1-8

Manopo, Christine (2010). Competency Based Talent and Performance Management System. Salemba Empat : Jakarta.

Mulyasa, E. (2002). Manajemen Berbasis Sekolah: Konsep, Strategi dan Implementasi. Remaja Rosda Karya. Jakarta.

Riduwan dan Kuncoro, E.A. (2011).Cara Menggunakan Dan Memakai Path Analysis.Alfabeta. Bandung.

Robbin, S.P (1994) Organisasi: Teori dan Praktik. Erlangga, Jakarta

Robbins, Stephen dan Coulter, Marry (2007).Manajemen.Erlangga. Jakarta

Sagala, Saiful.(2007). *Manajemen Strategik dalam Peningkatan Mutu Pendidikan.* Jakarta : Alfabeta

Steers, R. M. (1980). Efektivitas Organisasi. Erlangga. Jakarta.

Schereens, J. (2000). Improving Schools Effective. Terjemahan CV. Logos Wahana Ilmu. Tangerang.

Spencer, L.M, and Spencer, S.M. (1993). Competence at Work: Model for Superior Performance. Wiley. New York.

Townsend, Tony. (1994). Effective Scholling for the Community.London and New York.Routledge.