The Effect of Learning Strategies, Learning Models, and Learning Innovation on Educators' Performance and Education Quality in Senior High Schools in Makassar

Erni Ratna Dewi

STIKIP Andi Matapa Pangkep, South Sulawesi, Indonesia

Abstract – **To achieve success in managing and organizing national teaching system governed by law, the operational quality of education needs to be improved in line with the changes and the dynamic development of education. The key to the success of the education quality is in accordance with the achievement of the educators' performance reflected in the teaching-learning process performed based on the learning strategies, teaching models and learning innovation. This study aims at analysing the impact of strategies, models and learning innovations on the educators' performance at the high schools in Makassar. It is also to analyse whether learning strategies, learning models, and learning innovations affect the quality of high school education in Makassar. In addition, it is to analyse the educators' performance toward the quality of high school education in Makassar. Furthermore, it aims at analysing whether the strategies, models, and learning innovations through an educator's performance affect the quality of high school education in Makassar or not.**

Keywords – **Learning Strategies, Learning Models, Learning Innovation**

1. Introduction

Understanding national education in Indonesia has become a must for the country to hold a national education system for all Indonesian citizens. This goal has been stated in the Preamble of the 1945 Constitution which states "... the intellectual life of the nation". The elaboration exists in the body of the Act of 1945 Article 31, paragraph (1) that is, every citizen has the right to get instruction, and paragraph (2) that is, the government shall manage and organize a national teaching system that is regulated by law. This is an ideological foundation for the Indonesian people to pay attention and give priority to the national teaching system, cultivated and organized by the government through the Ministry of Education conducted by the department in each province, district, and city. The implementation of national teaching system is regulated in Law Number 20 in 2003 on National Education System which is applied to the High School or equivalent.

In realizing the success in managing and organizing national teaching system that is governed by law, the operational quality of education needs to be improved in line with the changes and the dynamic development of education. The key to the success of the quality of education in Indonesia, including South Sulawesi province and specifically in the city of Makassar, in accordance with the achievement of the performance of senior high School teachers in Makassar is reflected in the teaching-learning process based on learning strategy, learning models and learning innovation.

However, in reality, the quality of high school education in Makassar still needs to be improved, especially with regard to the quality of graduates, teachers, and availability of support facilities, and a system of teaching. Indications of decreasing quality of education cannot be separated from the effects of the achievement of the teachers' performance, and it is based on several things. The first is the assessment

of the ability of planning and preparation for teaching. The second is the mastery of the material being taught to students. The third is the mastery of methods and teaching strategies. The fourth is giving tasks to students. The fifth is the ability to manage students, and capacity to make an assessment and evaluation. The percentage of empirical observations about the teachers' performance and quality of education in Makassar in five years is shown in the following table.

Table 1. Percentage of Empirical Observations about teachers' Performance and Quality of Education in Makassar from 2011 to 2015

Year	% Teachers' Performance	% Education quality	Expectation Standard
2011	82.9	80.6	> 90%
2012	85.6	84.4	> 90%
2013	79.5	80.3	> 90%
2014	82.6	81.9	> 90%
2015	83.7	82.5	> 90%

Table 1. above shows that the percentage of the teachers' performance has not reached the expectation standard that is > 90%. The achievement of this teachers' performance affects the percentage of education quality that has not reached the expectation standard that is above 90%. Therefore, it is necessary to find a solution to increase the percentage of the teachers' performance and quality of education. One of the causes, why the teachers' performance and the quality of education are decreased, is determined by learning activities including learning strategies, teaching models and learning innovations that have not been actualized maximally. The understanding of this issue needs to be analyzed through the research gap and theory gap.

The research gap of this study shows that learning strategies which are applied are not in accordance with the explicit purpose, the subject of study, learning materials, student characteristics, and instructional media and supporting activities. In fact, the theory advanced by [1] found that learning strategies determine the success in improving the performance and quality of education.

The research gap of applied learning models has not being actualized well. The learning model is not active, creative, effective, and fun. According to the theory proposed by [2], a successful model for delivering learning is realized in accordance with the performance and quality of education.

The research gap of learning innovation has not been actualized as expected. Teachers have not actualized innovative ways in designing and planning the learning process. Learning theory proposed by [3] states that learning activities became the innovative inspiration in developing behavior, cognitive, and humanistic to produce learning outcomes for teachers' performance and quality of education.

By understanding the research and theory gap of the above variables which influence the achievement of the performance and quality of education, it becomes interesting to observe the effect of strategies, models and learning innovations on the performance of teachers and the quality of high school education in Makassar.

Based on the background described above, the problems in this research are as follows:

1. Do the strategies, models and learning innovations affect the teachers' performance in senior high school in Makassar?
2. Do the strategies, models and learning innovations affect the quality of education in senior high school in Makassar?
3. Does the teachers' performance affect the quality of education in senior high school in Makassar?
4. Do the strategies, models and learning innovations through the teachers' performance affect the quality of education in senior high school in Makassar?

2. Literature Review

This study shows the direct relationship between the independent variables, intervening variable and dependent variable. In this research, there are five variables observed consisting of three independent variables, one intervening variable, and one dependent variable. The independent variables are learning strategies, learning models, and learning innovations. The intervening variable is teachers' performance, and the dependent variable is the quality of education.

The Concept of Learning Strategy

The effectiveness of learning is educating students using educational principles and theories of learning that are a major determinant of educational success. Learning is not only how teachers teach something to the students but also how students learn [4]. In addition, learning is a process of interaction between learners and the environment so that their behavior changes to be better.

Based on the definitions described above, it can be concluded that learning is a process of activities in which there is the interaction between teachers and students and students and students so that the students' behavior changes to be good behavior. Learning is a process of two-way communication; the teaching is performed by teachers as educators, while the learning is carried out by the students as learners. Learning design should consider the following matters. First, learning is conducted with the real experience and authentic environment since this is necessary to allow a person to proceed in learning. Second, learning content must be designed to be relevant to the characteristics of students because the learning provides knowledge, attitudes, and abilities. Third, learning provides media and learning resources which are needed since the availability of media and learning resources allow students to gain learning experience concretely, broadly, and deeply. Fourth, formative assessment of students' learning outcomes is performed as a diagnostic test to provide a learning experience on an ongoing basis and within the framework of lifelong learning.

In each of the learning, the achievement of learning goal is an essential for achievement since learning goal is a benchmark of student success in learning. The objective of learning is guidance in order that the subject of study masters some skills, knowledge, and attitudes that are appropriate learning content after they follow the process of learning. Learning will run well if all the components in it are fulfilled. Therefore, in teaching physical education teacher has to pay attention and prepare learning components that will be implemented.

There are some learning components which need to be considered by teachers. First, the aim explicitly pursued through learning is in the form of knowledge and skills or attitudes which are formulated in specific learning objectives in the form of awareness of the nature of knowledge, tolerance, precision in language and so forth. Second, the subject of learning is a major component in learning because it is not only as the subject but also an object. As the subject, students are individuals who do the teaching and learning process. Third, the subject matter is also a major component in the learning process, because it will shape learning activities. Fourth, learning strategies is a common pattern to realize the learning process to achieve the learning objectives. In applying the learning strategies, teachers need to select appropriate learning models, appropriate teaching methods, and teaching techniques that support the implementation of teaching methods. To determine the appropriate learning strategies, teachers should consider the objectives, characteristics of students, the subject matter, and

instructional strategies so that they can function optimally. Fifth, Learning Media is a tool used by teachers in the learning process to help convey the message of learning. Sixth, the supports referred to in the learning system are facilities, learning resources or books, and learning materials.

A reality right now shows that the learning outcomes are influenced by the students' learning, lesson planning, and environmental management and social learning in the classroom, which in turn will impact on the quality of student learning outcomes. In the implementation of learning, the learning environment is not maximally empowered. The learning environment of students in schools both in class and in the environment that support the learning process in the classroom is not maximally arranged. In addition, the teachers in teaching apply current models or learning approach, but it is not accompanied by classroom setting required by the model or approach.

The theory of constructivism learning proposed by Piaget emphasizes that our knowledge is a construction of our own. In addition, learning theory of social constructivism proposed by [5] emphasizes the need for social interaction. Moreover, knowledge is formed by the structure of one's conception when he interacts with his environment [1]. Therefore, in this section, we will discuss topics related to the physical environment and psycho-social environment in the classroom, which can facilitate learning activities.

In order to achieve effective results, conducive conditions need to be created. The conducive conditions can be achieved by doing activities such motivating student to perform a variety of learning activities that are interactive.

The Concept Learning Model

Learning model is a learning plan that describes the process adopted in the teaching and learning process in order to achieve specific changes in the expected student behavior. An ideal learning goal is intended when the materials which have been learned can be controlled entirely by the students. Mastery learning is the achievement of each unit of study material both individually, and in groups, or in other words, it is fully mastered [6]. The main intention of mastery learning is allowing 75% to 90% of students to achieve the same high learning in the teaching of classical groups. Another aim of the mastery learning is to improve the efficiency of learning, interest in learning, and positive student attitudes toward the subject matter being studied. The level of mastery has some criteria. First, the achievement is 75% of the material of each subject through formative assessment. Second, it reaches 60% of the ideal value

obtained by calculating the results of the test sub-summative. Third, curricular or students get sixty in reports relating to these subjects.

A crucial important which is faced is how most of the students can learn more effectively and master the materials and skills which are considered essential to its development [7]. An effort that can be run is to give individual assistance according to the needs and differences of each student. In the effort, several factors that affect the ability to do assignment need to be considered. They are a talent to learn something, the quality of teaching, the ability to understand the teaching, perseverance, and time available for learning. The most effective way is tutoring for each child, and the tutor must provide assistance according to the needs of the children. This method is certainly expensive and difficult to be implemented in schools. Although it cannot be implemented on considerations of cost, it can be used as capital for other endeavors. To achieve the full learning, the non-grade school that is without a school grade level is conducted. This system allows the child to move forward according to the respective speeds.

The efforts to achieve full assignment, prerequisites for the achievement need to be investigated. One of the prerequisites is formulating learning material that must be mastered, and its purpose must be put forth in a summative evaluation tool, that is, in order to know the level of student success. Research conducted by researchers about the learning method through mastery learning can increase the students' interest in learning because through this method the student can see and observe directly the process shown by the teacher, so it is more powerful and imprint in the hearts of the students. It can be concluded that the application of mastery learning in cooperative methods can increase students' motivation. Mastery learning approach can improve the understanding of the concept because the teacher gives the steps clearly and always reminds students to learn teaching materials that have been discussed or have not been discussed. Based on this finding, it shows that teaching approach greatly affects student learning outcomes, and appropriate teaching methods help students to be successful in learning.

The previous research differs from the research conducted by the author. In this study, the author emphasizes on improving students' learning outcomes on mathematics by using mastery learning approach. The steps of learning activities based on the theory of operant conditioning proposed by [8] are as follows. The first is studying the condition of the classroom in which the teacher seeks and finds out the student's behavior whether it is positive or negative. The positive behavior will be strengthened, while the negative behavior will be weakened or reduced. The second is making a list of positive reinforcements in which teacher seeks behavior that is preferred by students. For example, behavior that is punished, and school activities that can be used as a booster. The third is selecting and determining the order of learned behavior and the type of the reinforcement. The fourth is making learning program. This learning program provides the desired sequence of behaviors, reinforcement, time, behavior and evaluation.

Learning method is a way to facilitate students in achieving a certain competence [9]. It is true both for teachers (i.e., in the selection of teaching methods) and for students (in choosing learning strategies). Thus, the better the method used, the more effective the achievement of learning objectives. The learning method is an elaboration of the approach, and it is implemented by using learning techniques.

The steps of learning method play a major role, which can increase student learning outcomes. Mastery learning which is intended is an approach in learning that requires students to thoroughly master the whole standard of competence and basic competences of specific subjects. In the simplest model, if every student is given the time needed to reach a level of mastery, and if he or she spends the required time, it is likely that students will achieve the mastery level of competencies. On the contrary, if the students are not given enough time or they cannot use the time that is required maximally, then their mastery level of the competency is low.

The level of mastery of competencies (degree of learning) in which it is a function of time spent in learning and the time needed to learn [10]. Meanwhile, conventional learning is where talent or attitude of the students is normally dispersed and given the same learning and teaching in the amount of time available for learning. Therefore, the learning outcomes achieved would normally spread anyway. It can be said that the relationship between talent and mastery level is high. In conventional learning, the students should respect their talents spread normally, and they should be given the opportunity to learn the same for every student. However, they should be given a different treatment in the quality of learning. It is likely that students who can achieve mastery level will multiply. In this case, the relationship between talents and success will become increasingly smaller. Schematically, the concept of learning outcomes as a result of learning with mastery learning approaches can be described as follows. Mastery learning of the concepts above seems quite clear that the expectation to enhance the average results of students in learning mathematics is by providing quality learning that is more appropriate. In addition, special attention to students who are

slow in order to master the standards of competence or basic competence needs to be considered. Based on the concept, it can be noted that the main principles of mastery learning is that competence that should be achieved by students is formulated has a hierarchical structure. The evaluation used should be the assessment of the benchmark reference. In addition, each competency should be given feedback. Remedial learning and guidance when necessary should be provided. Furthermore, enrichment programs for students who achieve mastery level earlier need to be provided.

The Concept of Learning Innovation

The learning process is the heart of education that needs to be considered since the learning activity is the transformation of concepts, values, and integrated educational materials. Associated with future demands which are not only competitively but also strongly associated with advances in technology and information, then the quality of the developed learning system should be able to improve the various weaknesses quickly.

One way that can be developed is to do innovative techniques in learning through conventional learning system which is changed to an innovative learning system that is more effective and efficient with the supporting means and adequate infrastructure. Learning by utilizing information and technology tools through the Internet is one of the appropriate alternatives, and can overcome the various problems of learning, although the education system in Indonesia is heterogeneous due to the geographical location which strongly influences the advancement of information technology.

We must realize that the development of informatics has entered into various aspects of life, including education especially learning interventions by the existence of this technology. Along with the development of computer applications in education, various learning material has been produced and consumed by the learner through the medium of information technology in the form of packaging which is varied. It is unlike with the traditional learning process which relies on teachers as a foremost learning resource, while other sources are just a complement to the learning activities that are usually already outlined in teaching program outline.

Advances in information technology create positive impacts for the advancement of education today especially computer technology and Internet, both regarding hardware and software, providing lots of offers and choices for education to support the learning process. Advantages offered not only lies in the speed factor to obtain information but also multi-media facilities that can make learning more attractive and interactive.

In line with the development of internet technology, many learning activities can be done by utilizing this technology. With the developments in the field of learning as described above, the traditional or conventional learning process that occurs in the classroom, in the era of decentralization and globalization, started to lose their shape. In addition, in reality and on a larger scale, traditional-conventional learning activities require considerable expense in preparing the infrastructure (rooms, laboratories, libraries, furniture, instructional media, and others). With such conditions, today many education providers began to look at the application of the concept of distance learning as an alternative learning which is considered more effective and efficient, particularly as the effects of the emergence of rapid growth that occurred in the field of telecommunications and information technology. Various technologies and applications are created in an effort to support the operational activities and the organization of human life, including teaching and learning activities.

Innovative techniques in learning, in this case, utilize information technology. The term of information technology was born in the twentieth century that begins with the formation of the information society. This term uses the information, basically everything to do with the term of Communication Technology which is known in advance. We can see that there is a communication technology that serves as the distribution of information, there is also information technology that serves as storage and processing of information. This last function causes people to call communication technology as information technology.

Information technology is processing and dissemination of data by a combination of computers and telecommunications [11]. Information technology emphasizes the construction of the data. It focuses on how data is processed using computers and telecommunications.

The Concept of Teachers' Performance

Running a performance function does not stand alone, but it is related to the ability to work and the level of achievement of the work that can be influenced by the needs of work motivation in carrying out its duties and functions well. Thus, the individual performance can be improved if there is a match between the job and the ability to work that grew out of motivation to work, so it needs the motivation to contribute to improving the performance. On another level, the performance means the act of displaying or carrying out an

activity to provide an understanding of the meaning of the objectives to be achieved [7]. Educator's performance is the result of work (output) of both quality and quantity of human resources to achieve the appropriate considerations of efficiency and effectiveness in carrying out the task with the responsibility given to him. The assessment of performance refers to the quality of work, speed or accuracy of work, work initiative, workability, and communication ability.

The educator is a key element in the educational system, especially in schools [12]. All other components, ranging from the curriculum, infrastructure, and costs will be meaningless if the essence of learning that is the interaction between learners and educators is not qualified. All other components, especially the curriculum will be "alive" if they are implemented by educators. It can be stated that the role of educators in transforming inputs of education is very crucial. In addition, many experts say that there will be no change or an increase in quality in the school without changes and improvement of the quality of educators.

The characteristics of educators who have high teaching quality [13] are as follows. First, they work with students individually. Second, they have good preparation and planning of teaching. Third, they utilize learning tool. Fourth, they involve students in the learning experience. Fifth, they are active leadership from educators.

Concept of Education Quality

Education is a combination of human development and social heritage [11]. In addition, education is the formation of conscience. Education is a process of self-formation and self-determination in an ethical manner, in accordance with conscience. Education is all one with growing [14]. It has no end beyond itself. In the broad sense, it is defined that education is a device in which social groups continue their existence, renew, and maintain their ideals [15]. Education is a process used by any individual to acquire knowledge or insight or to develop attitudes or skills [16]. Education is all ethical, creative, systematic, and intentional actions assisted by scientific methods and techniques, directed at achieving specific educational objectives.

From the various definitions mentioned above, it can be concluded that education is a fundamental human phenomenon in human life to deliver the child to the world of human civilization. Education is also an existential and authentic guidance so that children learn to recognize the unique identity, can survive and be able to have, continue and develop social heritage.

The purpose of education includes an overview of a good, noble, worthy, and true value for life. Therefore, the purpose of education has two functions. The first is to give directions to all the educational activities and the second is something to be achieved by all educational activities.

As a component of education, the purpose of education occupies an important position among other educational components. It can be said that all of the components of all educational activities are conducted solely for the achievement of these objectives.

Thus, activities that are not relevant to these objectives are considered deviant, so that the occurrence must be prevented. It can be seen that the purpose of education is normative. It contains elements of coercive norms. However, it is not on the contrary to the nature of the development of learners, and it can be accepted by the public as the value of life.

In relation to the very crucial objective, then it becomes a must for educators to understand it. The educators who have a lack of understanding of the purpose of education can lead to misunderstandings in implementing education. These symptoms are called theoretical symptoms [17].

The education process is an activity to mobilize all components of education performed by educators which are directed to the achievement of educational goals. How the educational process is carried out largely determines the quality of the achievement of the educational goals. The quality of the education process is implicated in two aspects, namely the quality of components and the management quality.

Based on the description above, the hypotheses proposed in this study are as follows. First, directly the learning strategies, learning models, and learning innovations have a positive and significant impact on the performance of educators at the high school in Makassar. Second, directly the learning strategies, learning models, and learning innovations have a significant and positive effect on the education quality in high school in Makassar. Third, the performance of educators directly has a positive and significant impact on the quality of education in high schools in Makassar. Fourth, indirectly the learning strategies, learning models, and learning innovation through the performance of educators have a positive and significant impact on the education quality in high school in Makassar city, Indonesia.

3. Methods

This study is an exploratory research in which the researcher is trying to find relationships that are relatively new. The explanatory research is research conducted by explaining the symptoms caused by an

object of research. The total of the population is 7,655 high school teachers. Furthermore, the sampling was selected using Slovin formula. Therefore, the sample in this study is 380 respondents. Data analysis techniques used in explaining the phenomenon in this study is a descriptive statistical analysis technique and AMOS SEM analysis.

4. Results and Discussion

Based on the method of determining the value in the model, the variables to test the first model are grouped into exogenous variables and endogenous variables. Exogenous variable is a variable whose value is determined outside the model. Endogenous variable is a variable whose value is determined by an equation or model-established relationships. The exogenous variables are testing learning strategies, learning models and learning innovations as independent variables. The endogenous variables are the performance of teachers and quality of education.

The model is said to be good if the development of the hypothetical model theoretically is supported by empirical data. From the evaluation of the eight criteria of goodness of fit indices, it is seen that the value of chi-square is still great, and it seems that some criteria do not match the value of cut off which is determined. Therefore, the model is modified by performing the correlation between error indicators in accordance with the instructions of the modification indices. The test results are evaluated on based models goodness of fit indices, and the results can be seen in Table 1. in which the criteria of the models, as well as the critical values that have compatibility data are presented.

Table 2. Evaluation of the criteria of Goodness of Fit Indices Overall Model

Goodness of fit index	Cut-off Value	The Results of the Initial Stage	Notes	The Results of the Final Stage	Notes
Chi-square	Expected to be small	992.428	Marginal	269.155	Good
probability	≥ 0.05	0000	Marginal	0103	Good
CMIN/DF	≤ 2.00	3.151	Marginal	1.117	Good
RMSEA	≤ 0.08	0.090	Marginal	0.021	Good
GFI	≥ 0.90	0.763	Marginal	0933	Good
AGFI	≥ 0.90	0.715	Marginal	0949	Good
TLI	≥ 0.94	0.78	Marginal	0.988	Good
CFI	≥ 0.94	0808	Marginal	0.962	Good
Df		315		241	

The evaluation results for the initial stage indicate all the eight criteria for goodness of fit indices do not meet the cut-off value. Therefore, the model needs to be modified in accordance with the instructions of the modification indices, as previously described. After modifying the model, the final stage indicates that the criteria goodness of fit indices has been met based on the criteria cut off value. Therefore, the model has been appropriate to be analyzed. Overall the empirical model is shown in the following table regarding the direct effect and the indirect effect of the variables. The test results are presented in the following table.

Table 3. Hypothesis of Direct Effect and Indirect Effect

Hypothesis	Independent variable	Intervening Variable	Dependent Variable	Standardize Direct Effect	Indirect Effect	Total Effect	P-Value	Notes
1	Learning Strategy (X1)	-	Educators' performance (Y)	-0.146	-	-0.146	0.385	Negative and not significant
2	Learning Model (X2)	-	Educators' performance (Y)	0.602	-	0.602	0.021	Positive and Significant
3	Learning Innovation (X3)	-	Educators' performance (Y)	0.545	-	0.545	0.019	Positive and Significant
4	Learning Strategy (X1)	-	Quality of Education (Z)	-0.425	-	-0.425	0.401	Negative and not Significant
5	Learning Model (X2)	-	Quality of Education (Z)	0.965	-	0.965	0.032	Positive and Significant
6	Learning Innovation (X3)	-	Quality of Education (Z)	1.976	-	1.976	0.000	Positive and Significant
7	Educators' performance (Y)	-	Quality of Education (Z)	2.360	-	2.360	0.000	Positive and Significant
8	Learning Strategy (X1)	Educators' performance (Y)	Quality of Education (Z)	-0.425	-0.345	-0.770	0.401	Negative and not Significant
9	Learning Model (X2)	Educators' performance (Y)	Quality of Education (Z)	0.965	1.421	2.386	0.032	Positive and Significant
10	Learning Innovation (X3)	Educators' performance (Y)	Quality of Education (Z)	1.976	1.287	3.263	0.000	Positive and Significant

From all of the variables, there are five paths which directly give positive and significant effect, and two paths directly give negative and insignificant effect. Furthermore, one path indirectly gives negative and insignificant effect, while the two other paths give positive and significant effect. The interpretation of Table 2. for direct effect can be explained as follows:

1. Learning strategy directly give a negative effect that is -0.146 and has an insignificant effect that is 0385 on the performance of educators.
2. The learning model directly gives the positive effect that is 0602 and has a significant effect that is 0.021 on the performance of educators.
3. Learning innovation directly gives a positive effect that is 0.545 and has a significant effect that is 0.019 on the performance of educators.

4. Learning strategy directly has a negative effect that is -0.425 and has an insignificant effect that is 0.401 on the quality of education of the educators.
5. The learning model directly gives a positive effect that is 0.965 and has a significant effect that is 0.032 on the quality of education of the educators.
6. Learning innovation directly has a positive effect that is 1.976 and has a significant effect that is 0.000 on the quality of education of the educators.
7. The performance of an educator directly has a positive effect that is 2360 and has a significant effect that is 0.000 on the quality of education of the educators.
8. Learning strategy indirectly through the performance of educators has a negative effect that is 0.345 on the quality of education.
9. The learning model indirectly through the performance of educators has a positive effect that is 1.421 on the quality of education.
10. Learning innovation indirectly through the performance of educators has a positive effect that is 1.287 on the quality of education.

5. Conclusion

Based on the results of this research that have been described, some conclusions can be drawn. First, learning strategy directly has a negative and insignificant effect on the performance of educators. Second, learning model directly has a positive and significant effect on the performance of educators. Third, learning innovation directly has a positive and significant effect on the performance of educators. Fourth, learning strategy directly has a negative and insignificant effect on the education quality. Fifth, learning model directly has a positive and significant effect on the education quality. Sixth, learning innovation directly has a positive and significant effect on education quality. Seventh, the performance of educators directly has a positive and significant effect on the quality of education. Eighth, indirectly the learning strategy through the performance of educators has a negative and insignificant effect on the quality of education. Ninth, indirectly learning model through the performance of educators teaching has a positive and significant impact on the quality of education. Tenth, indirectly learning innovation through the performance of educators has a positive and significant effect on the quality of education.

References

[1] Glasersfeld, E. von. (2005). Thirty years constructivism. *Constructivist Foundations*, *1*(1), 9–12.

[2] Mulyasa, E. (2005). Menjadi guru profesional menciptakan pembelajaran kreatif dan menyenangkan. *Bandung: Remaja Rosdakarya*.

[3] Anderson, T. (2004). Towards a theory of online learning. *Theory and Practice of Online Learning*, *2*, 109–119.

[4] Hersey, P., Blanchard, K. H., & Johnson, D. E. (2007). *Management of organizational behavior* (Vol. 9). Prentice hall Upper Saddle River, NJ.

[5] Vygotsky, L. (1978). Interaction between learning and development. *Readings on the Development of Children*, *23*(3), 34–41.

[6] Regan-Smith, M., Young, W. W., & Keller, A. M. (2002). An efficient and effective teaching model for ambulatory education. *Academic Medicine*, *77*(7), 593–599.

[7] Kemp, R., Schot, J., & Hoogma, R. (1998). Regime shifts to sustainability through processes of niche formation: the approach of strategic niche management. *Technology Analysis & Strategic Management*, *10*(2), 175–198.

[8] Davis, M. J., Heller, S., & Skiner, T. C. (2008). Education and autocontrol diabetics patients. *BMJ*, *336*, 491–5.

[9] Slavin, R. E., & Cheung, A. (2005). A synthesis of research on language of reading instruction for English language learners. *Review of Educational Research*, *75*(2), 247–284.

[10] Johnson, D. W., & Johnson, R. T. (2002). Cooperative learning and social interdependence theory. In *Theory and research on small groups* (pp. 9–35). Springer.

[11] Henderson, A. T. (2007). *Beyond the bake sale: The essential guide to family-school partnerships*. The New Press.

[12] Quible, Z. K. (2005). Blogs and written business communication courses: A perfect union. *Journal of Education for Business*, *80*(6), 327–332.

[13] Sahertian, P. A. (2000). *Konsep dasar & teknik supervisi pendidikan: dalam rangka pengembangan sumber daya manusia*. Penerbit Rineka Cipta.

[14] Dewey, J. (1978). *The Middle Works, 1899-1924: How we think and selected essays, 1910-1911* (Vol. 6). Southern Illinois University Press.

[15] Horne, M., Woodhead, K., Morgan, L., Smithies, L., Megson, D., & Lyte, G. (2007). Using enquiry in learning: From vision to reality in higher education. *Nurse Education Today*, *27*(2), 103–112.

[16] Cayne, B. S. (1981). *The Encyclopedia Americana*. Grolier, Inc.

[17] Tirtarahardja, U., & Sula, L. (2000). *Pengantar pendidikan*. Departemen Pendidikan & Kebudayaan.