

Does Ricosre Learning Have The Potential to Improve Students' Decision Making Ability?

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Abstract: The RICOSRE learning model can influence the decision making skills of class X students of two high school. The research used was quasi-experimental with pretest and posttest non-equivalent control group design. The research sample was students of two high school which are determined by random sampling. Data collected in the form of pretest and posttest scores. It used Anakova technique to analyze the data. The result confirmed that the RICOSRE learning model affected the decision making skills of class X students with an increase of 63.69%.

Key Words: RICOSRE learning model; decision making skills

Abstrak: Model pembelajaran RICOSRE dapat berpengaruh terhadap keterampilan pengambilan keputusan siswa kelas X di kedua SMA. Penelitian yang digunakan adalah kuasi eksperimen dengan *pretest posttest non-equivalent control group design*. Sampel penelitian, yaitu siswa di kedua SMA yang ditentukan secara *random sampling*. Data yang dikumpulkan berupa skor *pretest* dan *posttest*. Analisis data menggunakan teknik Anakova dan hasilnya yaitu model pembelajaran RICOSRE berpengaruh terhadap keterampilan pengambilan keputusan siswa kelas X dengan peningkatan sebesar 63,69%.

Kata kunci: model pembelajaran RICOSRE; keterampilan pengambilan keputusan

INTRODUCTION

The key to education systems around the world is skills of the 21st Century that can improve the abilities and competitiveness of students when faced with real-life challenges (Talat & Chaundry, 2014). Skills of the 21st Century stress the capacity of students to express ideas and opinions in different ways and contexts as an important part of scientific literacy (Chung, Yoo, Kim, Lee, & Zeidler, 2016). Skills of the 21st Century include all the skills a person requires to meet challenges effectively in an increasingly complex life (Redhana, 2019). Decision-making skills are gained by the awareness and reasoning of students in order to consider problems and are a learning technique (Freed & Wong, 2019). Thinking by using reasoning aims at obtaining proper choice or decision (Soenarko, Andayani, & Junaidi, 2018).

The preliminary test results that were administered at Malang City's state senior high schools suggest that the decision-making skills of the students are still weak. In particular, the literacy capacity of students in Malang is still poor, including decision-making skills. The low

decision-making skills are due to the fact that students are only taught based on content thus students do not experience the opportunity to discuss and argue before making decisions, lack of interaction between students. In addition, students have less potential in scientific decision making and the knowledge that students acquired is never applied in the decision-making process (Siribunnam, Nuangchalerm, & Jansawang, 2014).

The RICOSRE Learning Model can be used as a solution to overcome the problems found and train students' decision-making skills. This problem-based learning model is expected to improve decision-making skills. The RICOSRE learning model was developed by (Mahanal & Zubaidah, 2017) which consists of (1) *Reading*, (2) *Identifying the Problem*, (3) *Constructing the Solution*, (4) *Solving the Problem*, (5) *Reviewing the Problem Solving*, and (6) *Extending the Problem Solving*. The RICOSRE learning model has several advantages, one of which is to activate students' creative thinking skills through problem-solving skills. The RICOSRE learning model can help students to be actively involved in identifying problems, solving problems and finding solutions to solve the problems.

METHOD

This research was a quasi-experimental study with a *non-equivalent pretest-posttest control group design*. The independent variable was a learning model (RICOSRE), while the dependent variable was the student's decision-making skills. The sample used was students in three classes at SMAN 1 and SMAN 7 Malang with a total of 187 students who were selected using *random sampling* after going through the equivalence test. The research was conducted in the odd semester of the 2019/2020 school year. *A pretest and posttest were also administered as data collection instrument*. The data obtained were first tested using the prerequisite test and it was followed by a hypothesis test carried out using the Anacova test.

RESULTS

The summary of Anacova test for hypothesis testing about students' decision-making skills is presented in Table 1.

The summary of the results of the hypothesis test of the student's decision-making skills (Table 2) shows that F counts 20,835 and $0,000 < 0.05$. Based on the results of the analysis, students' decision-making skills are influenced by the learning model. The decision making skills of students in the positive control class and the negative control class differed significantly from the experimental class with a corrected average difference of 55.00 (50%) for the experimental class, 37.00 (%) for the positive control class and 18.00 (%) for the negative control class which confirm the RICOSRE learning model affect students' decision-making skills.

DISCUSSION

The results showed the potential of the RICOSRE learning model in influencing and improving students' decision-making skills due to the syntax in the learning model which will be described as follows. First, there are several syntaxes in the RICOSRE learning model which is able to facilitate students in enriching activities and gathering information, such as *reading, identifying problems, extension problem solving, and reviewing problem solving*.

Student decision-making during RICOSRE learning is higher compared to conventional learning and it cannot be separated from the characteristics of RICOSRE learning. Reading activities, identifying problems, and forming solutions in the RICOSRE syntax are activities that empower higher-order thinking skills. Increasing students' decision-making skills is indicated by an increase in activities that can spur activities to make choices through the stage of *reading*. Reading is an activity that can be used to obtain information and can empower higher-order thinking skills and create a person's mindset (Zubaidah, 2014). Higher-order thinking skills in reading are carried out by making connections with interrelated elements in the reading text, carrying out correct thought processes and concluding the reading logically (El-Koumy, 2006). Choosing the type of information to read includes making decisions for yourself (Mañá, Vidal-Abarca, & Salmerón, 2017).

Identifying problems is a process of training students to identify problems in reading. Problem identification is a problem-solving process by considering various conditions around (Abazov, 2016). Problem solving is an activity of thinking and analyzing to find answers to

Table 1. The Summary of ANACOVA Test on Students' Decision-Making Skills

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9611.293	9	1067.921	30.63	0.000
Intercept	4273.641	1	4273.641	122.58	0.000
Pre_PK	6461.663	1	6461.663	185.34	0.000
Model	1452.823	2	726.411	20.835	0.000
Error	6171.06	177	34.865		
Total	856700	187			
Corrected Total	15782.352	186			

Table 2. The Summary of ANACOVA Test about The Influence of Learning Model on Students' Decision-Making Skills

Class	Pretest	Posttest	Margin	Increase	PKCorr	Notation
Conventional	32.63	68.19	35.55	108.94%	68.19	a
RICOSRE	27.86	70.56	42.69	153.23%	70.56	b
Guided Inquiry	32.25	74.24	41.98	130.14%	74.24	c

a problem (Fema, 2005). Problem solving done by students is able to find the solution criteria needed to solve a problem (Mahanal & Zubaidah, 2017). The activity of identifying problems provides a contribution to empower indicators to identify choices in decision-making skills.

The third stage of the RICOSRE syntax is *constructing solution*. It is the stage for solving the problems that they found. Constructing the solution determines a strategy to form a solution that will be used to solve a problem (Posamentier & Krulik, 2009). The solutions developed or found can be obtained through the *brainstorming* which is a process to produce as many solutions as possible (Montesinos, 2010). The activity of building solutions contributes to empower indicators to find relevant information on decision-making skills.

The fourth stage of the RICOSRE syntax is *Solving the Problem*. Problem-solving is a process of finding relationships between previous experiences that have been obtained from the reading process and then given solutions to solve pre-existing problems (Olatide, 2015). The information that students have should be used to solve problems in problem-solving activities. The stage of *problem-solving* trains students to synthesize information from various sources using information-seeking strategies using effective keywords to find solutions to problems (Greenstein, 2012). Students are expected to be able to think deeply to identify information that will be used to solve problems. This activity contributes to empowering the indicators to determine the choice of decision-making skills.

The fifth stage of the RICOSRE syntax is *Reviewing the Problem Solution*. Previously several solutions have been selected to solve the problem, but at this stage, the best solution will be chosen to solve the problem. The solution chosen is reviewed for its advantages and disadvantages before use. The sixth stage of the RICOSRE syntax is *Extending the Problem Solving*. At this stage, the previously selected solution is used to solve a similar problem. This means that students expand the problem or look for similar problems and then solve it with the solution they have chosen.

Decision making is a series of activities that involve the purpose of the decision to be taken, developing and evaluating the effectiveness of the various alternatives available, selecting and implementing alternative choices and ultimately monitoring the results of implementation to ensure that the decision objectives are achieved (Sola, 2019). Decision-making is a very important skill in life because making the right decisions will lead to positive changes in a person's life while

making wrong decisions will have a negative impact (Kaşkaya & Calp, 2017). Most of the students stated that the things that determine the decision-making process are attitudes, values, ethics, knowledge and personal experiences (Eş & Öztürk, 2019). The stages of decision-making are finding problems to solving problems using the best problem solving. Small mistakes in solving a problem or making decisions can have a negative impact on a process and can even lead to new problems (Hapsari, 2016). In determining the right choice, there are usually two or more alternative choices based on information and experience and at the end of the process it is expected to find an appropriate, quality and reasonable solution (Vrchota & Švárová, 2015).

Decision-making needs to pay attention to student characteristics that lead to the development of students' thinking skills towards problematic material and further leads students to think critically in seeing the phenomena that occur in the surrounding environment to then decide something to solve the problem (Badarudin, 2017). Someone who thinks scientifically to make a decision first applies it with action (Rofiq, 2016). When students make decisions, they must pay attention to several perspectives from different points of view where the interaction between these points of view will affect all decisions that have been taken (Halverson, Siegel, & Freyermuth, 2009). Decision-making is determined as a student guide in considering a problem from various perspectives (Lee & Grace, 2010). Every individual has different knowledge or opinions to make decisions (Carnevale, Inbar, & Lerner, 2011). Discussions can be obtained of high quality decision making where the guidelines for decision-making frameworks are very useful for students because they can guide students in discussions and do not miss the topic of discussion (Grace, 2009). To generate an adaptive solution should present the choices to other people and ask for support (Memorandum & Soresi, 2004).

CONCLUSION

RICOSRE learning model is potential in influencing and improving the decision-making skills of the tenth graders of senior high in Malang. The future research could test the consistency of RICOSRE's potential in its influence on students' decision-making skills and its interactions with the dependent variable and other independent variables that influence the learning process in the classroom.

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