

Self Efficacy and Problem Solving Ability of Economics Students in Indonesia

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Abstract—Research aims to determine the relationship between self-efficacy and the ability to solve economic problems. Self-efficacy affects how individuals think, feel, motivate themselves, and act. The approach used in this study is a quantitative approach and research using the survey method. This research was conducted at one of the high schools in Indonesia. This shows that there is a significant relationship between self-efficacy and students' critical thinking abilities. That is, strong or high Self-Efficacy is needed by students in solving these economic problems so that they can achieve success in learning. Students with high Self-Efficacy will be better able to survive facing these economic problems, easily solve tasks and economic problems, and failure to solve economic problems is considered due to lack of effort or learning.

Keywords—*self efficacy; ability to solve economic problems*

I. INTRODUCTION

Solving ability is one of the 21st century skills that are often a study interesting to study, because it is not just a problem-solving skill required in the world of education and the world of work [1]. Problem-solving ability is associated with the ability to deal with issues effectively in everyday life, including interpersonal problems [2].

Very important problem-solving skills of the students. Students who have problem solving skills, be able to face the problems of daily life is increasingly complex. Economic problem-solving skills is an ability which students attempt to find a way out or find a solution to the economic problems that occur in their environment [3], and is non-mathematical field [4]. On the economic lessons include learning abstract realm, has broad scope and consists of both economic problems and mathematical theory to be solved. Hence the importance of problem-solving skills in economic subjects.

When people finish a task or problem, they first plan how to solve them. This process is part of self-regulation. This is a process where people are actively involved metacognitively in motivation, and behavior in their learning or problem solving [5]. Thus, the importance of self-efficacy in the process of self-regulation before the student can solve a problem.

The ability of students in problem solving will result in an action that is influenced by the belief that there are self-learners, this statement is supported by Bandura that in order to do something action will depend on the confidence of learners

[6]. in this case, meant confidence in problem-solving ability. Self-efficacy is defined as the domain-specific perceptions of their ability to perform the actions required to achieve the desired result [7].

The concept of self-efficacy was first proposed by Albert Bandura in 1977 in an effort to provide a unified theory of behavioral change. Bandura suggests that the effect of psychological treatment on behavioral changes are mediated by self-efficacy beliefs. Self-efficacy can increase the sense of self-control and helps learners to have a good performance [8]. Based on theoretical and empirical studies on the above, the purpose of this study was to determine how the influence of self-efficacy on problem solving ability of students on Economic Lessons Students at one of the SMA in Indonesia.

II. LITERATURE REVIEW

A. Self Efficacy

Self-Efficacy is an individual belief regarding its ability to organize and complete a task necessary to achieve a specific outcome [9]. Meanwhile, according to Robbins, Self-efficacy is a factor that influence the performance of a person in achieving a certain goal [10].

Self-efficacy is divided into three dimensions: social self efficacy, the efficacy of self-regulation and academic self-efficacy [11]. While Bandura provides an explanation of the sources of self-efficacy that can be grown through: (a) enactive mastery experience, (b) vicarious experience, (c) verbal persuasion, and (d) Physiological and affective states [9].

Self-efficacy is very important for students to control the motivation to achieve academic expectations [12]. Self-efficacy when accompanied by specific objectives and understanding of academic achievement, it will be the determinant of the success of academic behavior in the future. However, self-efficacy which every student is different, this difference is based on the level of confidence and abilities of each student. Students who have good self efficacy will be successful in learning activities and to perform academic tasks smoothly. In contrast, if self-efficacy which have low student then students will be quick to give up on any issues in the face [13].

Broadly speaking, self-efficacy is divided into two forms of high self-efficacy and self-efficacy is low [14]. Someone who

has high self-efficacy can reduce the fear of failure and improve cognitive abilities, so that the higher a person's perceived self-efficacy, the greater the effort that will be issued to deal with the challenges. It is supported by a study which revealed that the self-efficacy of the economy on students to contribute in predicting their performance when solving economic problems [15].

B. Problem Solving Skill

Solving problems is a life skill possessed all time is important to face the world with all the changes in order to achieve a desired goal [16], and is included in the high-level skills that can be learned. Has been recognized as a problem solving paradigm of complex cognition as part of everyday experience [17].

Troubleshooting introduce students to get to know how to think, the habit of patience and a high curiosity and confidence in an unusual situation, which will serve them (the students) are well beyond the economic class [18].

Problem solving students have done a cognitive processing aimed to achieve when there is no immediate solution to solve it, the processes include planning a series of strategies for problem resolution, choose the most appropriate strategy, implementing strategies, check again whether how true or not and evaluate for improvement the future in dealing with problems more kompleks.mengevaluasi effectiveness of the strategy [19].

This problem-solving abilities of the students is important as the provision itself to cope with life now and when entered the workforce [20]. In the opinion of Gagne, R M the best way to help students in solving a problem is to solve problems step by step by using certain rules. So that the problems encountered can be investigated, assessed, analyzed and sought to solve well and be used as a material in order to gain understanding and can be used as guidelines and objectives of student learning [21].

Surya menegemukakan that students' ability to solve problems can also be enhanced with problem-based learning. This is according to research conducted [22].

C. Linkages Self-Efficacy with Problem-solving Skills

Solving the problem is a high order thinking that requires an ability, skills and knowledge, as well as considerable experience. The problems that arise in problem solving that sometimes students were not convinced of the capabilities that become obstacles in finding a solution [23].

This indicates low self-efficacy students. Confidence someone of his ability to achieve the goals and predict how much work is needed troubleshooting. According to Wigfield & Eccless, self-efficacy affects a person on the selection of individual tasks, strengthen the resilience of self and self achievement, in this connection that solutions to problems of Economics [24].

self-efficacy refers to one's knowledge of his own ability to accomplish specific tasks without the need to compare it with the ability of others [25].

Basically Self efficacy function on the level of achievement that would be obtained individually, so Bandura argues that self-efficacy related to virtually all aspects of human life, whether people think productively, are pessimistic or optimistic, vulnerability to stress and depression, how people can motivate themselves, and make decisions that will be selected [26]. Self-efficacy is also a factor of critical thinking skills, because critical thinking is focused on the decision of what is believed and should be done, it can help a person in a logical decision based on the facts according to the circumstances at hand.

Results showed higher confidence, the higher the students 'mathematical problem solving ability, and the lower confidence, the lower the students' mathematical problem solving ability [27]. There is a positive relationship between mathematical problem solving ability and self-efficacy mathematical students [28]. As well as by Zubaidi, A. students with high self-efficacy will be better able to withstand the mathematical problem, easy to solve mathematical tasks and problems, and failure to solve mathematical problems are considered for lack of effort or learning [29].

III. RESEARCH METHODS

The approach used in this study is a quantitative approach that emphasizes the analysis on the data of data numerical (numbers) are processed with statistical methods. The method used is a survey research. Research using survey method is one aim is explanatory, meaning to explain causal relationships and testing a hypothesis. The dependent variable of this research is problem-solving ability (Y) and the independent variables of this research is self-efficacy (X). The object under study is students' problem-solving abilities, while the research subject is class XI IPS program at one of the SMA in Indonesia.

This study population numbered 120 students, sampling is done by simple random sampling technique, so that the samples obtained as many as 34 students. The data obtained are primary data obtained directly from the object of research through data collection techniques using questionnaires and tests. Questionnaires are used to retrieve data in the form of a questionnaire metacognitive closed. The test instrument used to determine the students' problem-solving abilities. Guidelines for measurement using a Likert scale questionnaire that has been modified by the researcher. The subject has five (5) possible answers are: A Great Fit (SS), Match (S), Undecided (R), Not Available (TS), and Very Unsuitable (STS).

The instrument will test the validity and reliability testing. The data analysis technique used is descriptive statistical analysis techniques and inferential statistical analysis. Descriptive statistical analysis is used to describe or give a picture of the object under study through the sample data, whereas the inferential statistical analysis technique used is a simple linear regression analysis to determine the effect of self efficacy variable and problem-solving ability to project these two variables. Before the data were analyzed using simple linear regression analysis, will be tested prerequisite that normality test and linearity test.

Model is a linear relationship between the variables of self-efficacy and problem solving skills are as follows:

$$Y_i = \alpha + \beta X_i + \varepsilon_i$$

Information:

Y_i : The value of the i-th variable Y

α : Fixed rate, which is the mean of the population if X = 0

β : Regression coefficient (coefficient) of Y on X

ε_i : Random error of Y on the observation of the i-th

Based on the above model, so in this study the model equations regression is with is the rate fixed, and is the regression coefficient Capabilities Troubleshooting (KPM) on self-efficacy, which is where the regression line is used to predict the value of Capabilities Troubleshooting if the known value of self-efficacy certain. Statistical hypothesis in this study as follows: $KPM_i = \alpha + \beta S_i$

H0 : $\beta = 0$ (no effect of self-efficacy toward solving skills problem)

H1 : $\beta \neq 0$ (there is the influence of self-efficacy on problem-solving skills)

IV. DISCUSSION RESULT

The research was conducted on one of the SMA in Indonesia. The research sample in as many as 34 students of class XII. Statistics Deskriptive table results obtained Average score of self-efficacy is 32.0000 and an average score of problem-solving ability is 38.8788 of these results show that the self-efficacy of students classified as moderate and problem solving skills moderate. Deviasion standard self-efficacy score was 3.67423 and for problem-solving ability is 3.62075.

The research instrument that has been processed indicates that valid and reliable instrument. Normality test is done also using the Kolmogorov-Smirnov test with a significant level $\alpha = 0.05$. On the data of self-efficacy and problem solving skills, the significant value of $0.200 > 0.05$. It can be concluded that the data were normally distributed. In addition to the linearity test results obtained significance value Deviation from Linearity of $0.094 > 0.05$, it can be concluded that the variables of self-efficacy and problem solving skills are linear.

Classical assumptions that have been tested qualified to proceed to the analysis of data using simple linear regression. Results of linear regression analysis obtained as follows:

TABLE I. COEFFICIENTS

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18,434	4,340		4,248	,000
	self efficacy	,639	,135	,648	4,741	,000

a. Dependent Variable: kemampuan pemecahan masalah

In Tabel.1 the linear regression equation is $Y = 18.434 + 0.639 X$. The table shows that the constant value of 18.434. The constant value means that if metacognitive student is zero ($X_1 = 0$), then the problem-solving capability of 18.4%, and the value of the constant show a positive relationship between self-efficacy of students with problem-solving abilities. In addition, the regression coefficient (β) self-efficacy variable of the problem-solving ability of 0.639. In other words, any increase in the value of self-efficacy, then the value of problem-solving ability is increased by 0.639 or 63.9%. Furthermore, the p-value (sig.) Is 0.000 with significance level $\alpha = 0.05$ ($0.000 < 0.05$). This shows that H0 is rejected, H1 accepted.

Based on this interpretation it can be concluded that there is a significant and positive effect on the ability of problem solving. The higher the value of self-efficacy of students, the higher the students' problem-solving abilities on economic subjects. Conversely, the lower the students' self-efficacy, the lower the students' problem-solving abilities on economic subjects. It is caused by a lack of knowledge and experience of the student as an important factor of success of students through the process of problem-solving path.

Subsequent analysis is to determine how much influence self-efficacy toward problem solving abilities. The results are as follows:

TABLE II. MODEL SUMMARY

Model Summary ^a				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,648 ^a	,420	,402	2,80082

a. Predictors: (Constant), selfefficacy
b. Dependent Variable: kemampuan pemecahan masalah

In Table. 2 Model Summary above shows that the value of the correlation coefficient (R) of 0.648, this shows that there is a strong influence among the variables of self-efficacy with problem solving abilities. R Square or the coefficient of determination of 0.420 or 42%, in order to get that problem-solving ability is influenced by self-efficacy by 42%, while the rest of 58% or dijelaskan influenced by other variables that are not included in this study. In addition, the standard error of the estimate is 2.80082, while the standard deviation of 3.62075 problem solving abilities this case shows that the appropriate regression model in predicting the ability of problem solving.

The results of this study indicate that there is a significant and positive effect on self-efficacy toward problem solving abilities. The higher the students' self-efficacy, the higher the students' problem-solving abilities in economic matter. This is consistent with the theory of self-efficacy showed that this person's confidence is one of the factors most important determinant of success. People must face obstacles when pursuing goals and obstacles which can make people become discouraged and give up on their goals or stay motivated, persist in spite of obstacles, and ultimately achieve the desired

result (Gallagher, MW 2012). Self-Efficacy is very important for high school students for solving economic problems (Bandura, 1997). That is, Self-Efficacy strong or very high needs students in solving economic problems so that they can achieve success in learning. Students with high self-efficacy will be better able to withstand the economic problems, it is easy to solve tasks and problems of the economy, and the failure to solve the economic problem is considered for lack of effort or learning.

Instead students with Self-Efficacy weak or low tend to give up easily vulnerable and the economic problems, have difficulty in solving tasks and problems of the economy, and the failure to solve the economic problem is considered due to lack of economic ability. Due to this, the students can not achieve success in learning these lessons learned. The economic capacity of the students can be established through the formation of Self-Efficacy. Challenges and frustrations that are crucial inhibiting economic ability of students can be addressed through the establishment of Self-Efficacy (Borovik and Gardiner, 2006).

Based on these explanations, will be associated with problem solving capabilities consist of problem solving strategy planning process, carry out problem-solving, and evaluating or rechecking the results of troubleshooting. When there is a strategy that does not match, the awareness and knowledge of self-efficacy will act to control the thinking process to find the right strategy.

V. CONCLUSION

The conclusion of this study is the ability to problem-solving class XII student at one of the IPS program SMA in Indonesia is the medium category. The results showed significant problem-solving ability and positively influenced by factors of self-efficacy. Self-efficacy positively affects problem-solving ability, means the better self-efficacy of students to plan, organize and evaluate, the better the problem solving ability of students in the material economy, and if the influence of self-efficacy on problem-solving ability by 42%, while the rest influenced by other factors that are not observed in this study.

The limitation in this study is the small sample size and not specifically examine the aspects that influence the problem solving abilities. This study did not pay attention to affective aspects, such as motivation and metacognition. Therefore, in future studies are expected to observe factors that influence the problem solving capabilities in Indonesia.

REFERENCES

- [1] Sternberg, R.J. Frensch, P.A. *Complex Problem Solving: Principles and Mechanisms*; Routledge: Abingdon, UK, 1991.
- [2] D'Zurilla, T. J., and Nezu, A. M. *Problem-solving therapy: a positive approach to clinical intervention*. (3rd ed.) New York: Springer, 2007.
- [3] Budimansyah, D. *Model Pembelajaran Ekonomi*. Bandung: Genesindo, 2003.
- [4] Jayengsari, R. *Pengaruh Penerapan Model Cooperative Learning Tipe Group Investigation (Gi) Terhadap Kemampuan Pemecahan Masalah Dengan Variabel Moderator Minat Belajar Siswa*. Tesis Pendidikan Ekonomi Sekolah Pascasarjana Universitas Pendidikan Indonesia, 2016.
- [5] Zimmermann, J. Models of self-regulated learning and academic achievement. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: theory, research, and practice*. New York: Springer. Pp. 1-25, 1989.
- [6] Bandura, A. *Self Efficacy: The Exercise Of Control*. New York: W. H. Freeman & Company, 2002.
- [7] Gallagher, M. W. Self-Efficacy. In *Encyclopedia of Human Behavior: Second Edition* (pp. 314–320), 2012.
- [8] Bandura A, and Locke E, "Negative Self-Efficacy And Goal Effects Revisited". *Journal of Applied Psychology*. 88, 87-99, 2003.
- [9] Bandura, A. *Social Learning Theory*. Prentice-Hall, Inc., New Jersey, 1977.
- [10] Robbins, S.P. *Perilaku Organisasi Jilid 1*. Jakarta: Indeks Kelompok Gramedia, 2003.
- [11] Baron, R.A. and Donn B. *Psikologi Sosial Jilid 1*. Jakarta: Penerbit Erlangga, 2004.
- [12] Kim, U, and Park Y. "Factor Influencing Academic Achievement In Relational Cultures: The Role Of Self Relational, and Collective Efficacy". *Jurnal Psikologi*, Vol.21, No. 6, 2006.
- [13] Hidayat, R. W., and Mutakin, T. Z. "Pengaruh efikasi diri (self efficacy) terhadap kemampuan pemecahan masalah matematika". *Edu Research*, 6, 409–428, 2015.
- [14] Anwar. *Hubungan Antara Self Efficacy Dengan Kecemasan Berbicara Di Depan Umum Pada Mahasiswa Fakultas Psikologi Universitas Sumatera Utara*. Universitas Sumatera Utara, 2009.
- [15] Pajares, F., and Miller, M. D. "Role of Self-Efficacy and Self-Concept Beliefs in Mathematical Problem Solving: A Path Analysis". *Journal of Educational Psychology*. Vol. 86. No. 2. pp: 193–203, 1994.
- [16] Chaudhry, N.G. and Rasool, G. "A Case Study on Improving Problem Solving Skills of Undergraduate Computer Science Students". *World Applied Sciences Journal* 20 (1): 34-39, 2012.
- [17] Garrett, A.J., Michele M.M, L Baker. "Development of the metacognitive skills of prediction and evaluation in children with or without math disability". *Journal learning disabilities Research and Practice*. Page.77-88, 2006.
- [18] Turmudi. *Landasan Filsafat dan Teori Pembelajaran Matematika Berparadigma Eksploratif dan Investigatif*. Jakarta : PT. Leuseur Cita Pustaka, 2009.
- [19] Lewis, S. "Qualitative Inquiry and Research Design: Choosing Among Five Approaches". *Health Promotion Practice*, 16(4), 473–475, 2015.
- [20] Sternberg, R.J, and Frensch, P.A. *Complex Problem Solving: Principles and Mechanisms*; Routledge: Abingdon, UK, 1991.
- [21] Gagne, R. M. *Learnable Aspects of Problem Solving*. *Educational Psychologist*, 15(2), 84–92, 1980.
- [22] Surya, E. "Pembelajaran Kooperatif dengan Pendekatan Berbasis Masalah dalam Pemecahan Masalah Matematika". *Jurnal Pendidikan Matematika dan Sains*, IV (1), 14-17, 2009.
- [23] Napis. "Analysis Of Physics Problem Solving In The Perspective Of Self Efficacy and Adversity Quotient". *Jurnal Ilmiah Pendidikan MIPA*, 8(1), 31–42, 2018.
- [24] Yoannita, B., Budi, E., and Rustana, C. E. "Pengaruh Self Efficacy Terhadap Hasil Belajar Fisika Melalui Penggunaan Model Problem Based Learning". In *PROSIDING SEMINAR NASIONAL FISIKA (E-JOURNAL)* Vol. 5, pp. SNF2016-EER, 2016.
- [25] Saidah, S. and Lailatuzzahro A-A A. "Hubungan self efficacy dengan adversity quotient (AQ)". *Jurnal Psikologi*, 2(2): 54-61, 2014.
- [26] Somakim. *Mengembangkan Self-Efficacy Siswa melalui Pembelajaran Matematika*. *Jurnal Pendidikan Matematika PARADIKMA*, 3 (1): 31-36. [Online] Retrieved from: <http://eprints.unsri.ac.id/1527>, 2010.
- [27] Wulandari, and Sinambela, N. "Hubungan Kepercayaan Diri (Self-Confidence) dengan Kemampuan Pemecahan Masalah Matematika Siswa dengan Menggunakan Model Problem Based Learning di MAN Kisaran". *Jurnal Inspiratif*, 3(2), 102–108, 2017.

- [28] Jatisunda, M. G. "Hubungan Self-Efficacy Siswa SMP dengan Kemampuan Pemecahan Masalah Matematis". *Jurnal THEOREMS (The Original Research of Mathematics)*, 1(2), 24–30, 2017.
- [29] Subaidi, A. Self-Efficacy Siswa Dalam Pemecahan Masalah Matematika. *Σigma*, 1(2), 64–68, 2016.