



# Self-regulated Learning Technique on the Career Maturity of Students

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**Abstract.** The research aimed to identify the effectiveness of self-regulated learning techniques on the career maturity of Vocation High School 1 Cikarang Barat students. The research was an experimental study with a sample of 35 eleventh-grade students of Computer and Network Engineering Class A as the experimental group and 36 students of class B as the control group. The data collection method used was a scale and instruments adapted from Career Maturity Inventory Form C. The validity of the instrument utilized was construct validity. This validity test was carried out based on expert judgment and tested quantitatively using Product Moment with a criterion limit of 0.25. The reliability of the career maturity scale was tested using Alpha Cronbach and resulted in a coefficient of 0.751 which indicated high reliability. Data were analyzed using the paired t-test to determine differences in career maturity before treatment and after treatment in both the experimental and control groups. Meanwhile, an independent t-test was conducted to determine differences in career maturity between the experimental and control groups. Paired t-test analysis showed a significant increase in career maturity with a mean of 1.472 and a standard deviation of 4.246 in the control group ( $p = 0.045$ ). A significant increase was shown with a mean of 8.400 and a standard deviation of 3.829 in the experimental group ( $p < 0.001$ ). The independent t-test analysis of career maturity in both groups after treatment resulted in  $p < 0.001$  which indicated that career maturity differed significantly between the control and experimental groups after treatment (post-test).

**Keywords:** Self-Regulated Learning Technique · Career Maturity · Students

## 1 Introduction

The definition of self-regulated learning is an active and constructive process that students set the learning objective and then they try to monitor, regulate and control their cognition, motivation and attitude, guided and limited by conventional objective and feature in the environment [1]. Self-regulated learning is an implementation of general regulation model and self-regulation for the learning problem, especially academics learning that occurs in school or other contexts. In the 1990s, Boekaerts stated Self-regulated learning model is adaptable learning model with different purposes of self-regulation for learning process, (1) expanding someone's knowledge and skill, (2) maintaining someone's

commitment for learning activity, and (3) preventing threat and danger in themselves [2].

Benefit of self-regulated learning is that students can study according to their desire, hope and motivation. It is in accordance with the opinion Kusaeri and Mulhamah that the students can know themselves such as knowing their strength and weakness and knowing how to learn well for themselves through self-regulated learning [2]. However, the reality that is happening in the field at this time is that students are not doing self-regulated learning properly [3]. Meanwhile, the finding of Zain and Wahyuni at Panca Karya Tangerang Vocational School, it is in low category that makes students' learning performance decrease because there is no strategy set in students to study well [4]. However, reality in the field at the time is that students do not carry out self-regulated learning properly. It was proven from interview done by guidance counselor and observation, showing that the eleventh-grade students in Vocation High School 1 Cikarang Barat, total of 666, indicating the immaturity of career choice after graduating from school.

The result was in accordance with the opinion Juwitaningrum stating students' problem when they are in high school level is due to delay in the process of career guidance and counseling [5]. The delay in choosing career allows the emergence of doubt because they perceive that the major taken in further education seems inappropriate [6].

Savickas and Porfeli grouping the problem of determining career in four different models: (1) lack of attention to career, (2) lack of career control, (3) lack of curiosity and (4) lack of confidence [7]. The problem was experienced by students in Vocation High School 1 Cikarang Barat, based on early research done by the researcher in the students on Wednesday, April 1<sup>st</sup> 2020, through the interview by WhatsApp to 5 students related to the students' readiness after the students graduate from Vocation High School 1 Cikarang Barat with the result that the students have not been able to have objectives in their learning activity and initiative for controlling their thoughts and behaviors to have options of further education or career in the future that is early step in achieving the desired career goals.

Here is the meeting point why technique of self-regulated learning was chosen to enhance career maturity in students of Vocation High School 1 Cikarang Barat. Based on the discussion above, the researcher is interested to analyze how "Effectiveness of Self-Regulated Learning Technique on Career Maturity in Eleventh-Grade Students of Vocation High School 1 Cikarang Barat".

Although there have been researches also using technique of self-regulated learning and career maturity, this research type has never been conducted on high school or college students, especially in Vocation High School 1 Cikarang Barat. This research was different from previous research because there was no experimental or interventional research so that this research conducted was more complex than the previous research and it had objectives to test effectiveness of self-regulated learning technique on career maturity's variables in students of Vocation High School 1 Cikarang Barat who have never been previously researched.

## 2 Method

### 2.1 Research Type

This research used quantitative approach with experimental study. It used Non-equivalent Control Group Design or called quasi-experimental design. In this design, there were experimental group and the controlling group as comparison.

### 2.2 Time and Place of Research

This research conducted in Vocation High School 1 Cikarang Barat was located at Jl. Raya Teuku Umar No. 1 Gandasari, Cikarang Barat, Bekasi, Jawa Barat. This research was conducted in December – January, academic year of 2021/2022.

### 2.3 Research Subjects

Population in this research was all eleventh-grade students of Vocation High School 1 Cikarang Barat in academic year of 2021/2022. In Vocation High School 1 Cikarang Barat, there are 8 majors with 666 students. The sampling technique in this research was cluster sampling. From 8 majors of the eleventh-grade students in Vocation High School 1 Cikarang Barat, the researcher has chosen two classes, eleventh-grade students of Computer and Network Engineering Class A and Class B as experimental groups.

### 2.4 Procedure

This research used quasi experimental design with model of non-equivalent control group design. In this design, there were experimental group and the controlling group as comparison. In this research, there were three stages done, namely pre-experiment, experiment and post-experiment.

### 2.5 Technique and Instrument of Data Collection

**Item Development Process.** After making the question plan from dimensions of Career Maturity Inventory (CMI) Form C which were total of 24 items, it determined the scoring instrument of Career Maturity Inventory (CMI) Form C with the number of 24 items and “Agree” and “Disagree” options. Next, the researcher used Instrument and conducted the adaptation with two stages namely translation based on instrument developed by Savickas, Mark and Porfeli in 2011 entitled Career Maturity Inventory (CMI) Form C [7]. The instrument is in English so that the measuring tool is easily understood by students, the researcher carried out Translation into Indonesian. Then, it was done by content and readability tests through expert judgments. The instrument was tested by two validators, Diana Septi Purnama, M.Pd., Ph.D. and Dra. Yulia Ayriza, M.Si., Ph.D.

**Instrument Trial.** Based on analysis result of validity test, career maturity consisted of 24 items and they were tested on 85 subjects on November 9<sup>th</sup>–16<sup>th</sup>, 2021, resulting in 18 approved items and 6 null items. Since the researcher used the adaptation instrument

based on Career Maturity Inventory (CMI) Form C, the researcher did not increase or decrease item total and change the test structure, because one of the objectives and principles in adapting the measuring tool, it could be done cross-cultural studies with the equivalent measuring tool and it allowed data collection effort becoming the same with cross country studies to avoid selection bias. It is also confirmed by Beaton, Bombardier, Guillemin and Ferraz [8].

Based on the result of reliability test in table above, Cronbach's alpha coefficient was 0.751 with interpretative predicate. The result stated that CMI-Form C version of adaptation result into Indonesian, feasible to be used as data collector instrument of career maturity in this research.

**Prerequisite Test of Data Analysis.** In conducting prerequisite test of data analysis, the researcher carried out normality and homogeneity tests.

**Hypothesis Test.** The formula used to calculate independent t-test was to test different average of the two independent groups with the help of calculation SPSS 20.0 for Windows.

### 3 Findings and Discussion

#### 3.1 Pre-test

**The Controlling Group.** The controlling group's career maturity was still in medium category of 61% with 22 students.

**Experimental Group.** Experimental group's career maturity was in medium category of 63% with 22 students, it is similar with the controlling group.

#### 3.2 Treatment Implementation

Treatment implementation in this research was carried out in 4 meetings with time allocation of 45 min in each meeting.

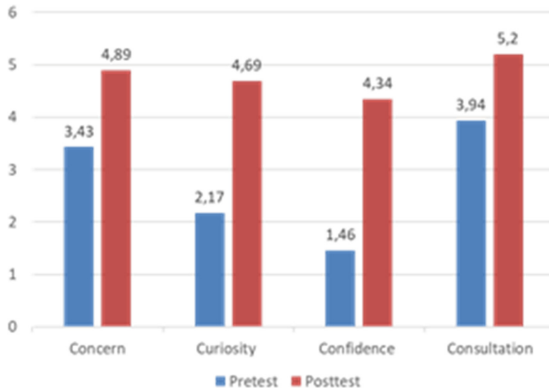
Phases of self-regulated learning technique in this research are as follows:

**Phase of Thinking and Planning.** In this planning phase, students are expected to find important activities and make plan including strategy planning of learning style that will be related to career planning to be achieved.

**Phase of Monitoring Performance.** In this phase, students understand awareness of their own thinking including awareness of encouragement effect, awareness of time and needs for assistance and awareness of achieving goal.

**Phase of Control.** In this phase, students have chosen further study with intended major or known where to work after graduated from school so that the students can control timing and effort towards various academic tasks, class atmosphere and structure.

**Phase of Control.** In this phase, students review result of career decision that will be undertaken. The students also evaluate themselves to prepare the next plan. Reflection phase is carried out during cycle process of self-regulated learning so that the students are suggested to put reflection as strategy or skill that run on other strategies.



**Fig. 1.** Chart of Difference in Dimensions of Career Maturity on Pre.test and Post.test in Experimental Group.

### 3.3 Post-test

**The Controlling Group.** The controlling group’s career maturity was still in medium category of 69% with 25 students.

**Experimental Group.** It was very different with post-test of the controlling group that was not given treatment, based on the data, it can be concluded that post-test of experimental group was in high category of 97% with 34 students. After knowing the difference of pre-test and post-test data and then the data was separated on each dimension in order to know effectiveness of self-regulated learning on each dimension (Fig. 1).

**Testing the Hypothesis.** The result of T-test on pretest and post-test in The Controlling Group, there was significant difference with value 0.045, the result of T-test on pretest and post-test in Experimental Group, there was significant difference with value 0.00.

The provision of treatment with technique of self-regulated learning is effective because this treatment has 4 phases in its implementation namely thinking, planning and activation, after that, monitoring, control, the last is reaction and reflection or evaluation. The phases or stages are effective towards self-concept improvement that is previously immature because the self-regulated learning is a technique focused on giving responsibility to students.

## 4 Conclusion

Based on research result and discussion, it is concluded that technique of self-regulated learning is effective towards career maturity in eleventh-grade students of Vocation High School 1 Cikarang Barat. It is proven through significant result of hypothesis test with  $p = 0.00$  ( $0.000 < 0.05$ ). Indah, Suwatra and Margunayasa stated that students’ critical thinking skill who take part in self-regulated learning (SRL) are higher than students who take part in conventional learning [9]. This finding is in line with the current

research. Based on the research have been done, the researcher proposes some suggestion for further researchers and Guidance and Counseling students who need to develop research on effectiveness of self-regulated learning technique towards other variables, in addition to career maturity, counselors and guidance counselors are expected to practice increasing the understanding of career guidance so that they can apply technique of self-regulated learning to enhance students' career maturity.

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