The profile of students’ self-regulated learning at vocational high school

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Abstract. Self-regulated learning is a power in the individual through the individualization process. Self-regulated learning will occur when the student is active to control himself from everything done, plan something, evaluate, and deeply reflect what he has experienced. This study aims to determine the profile of students’ self-regulated learning in SMK Giripuro, Sumpiuh, Banyumas Regency. This study is a qualitative research with questionnaire and interview methods. This study used triangulation method technique to obtain from the questionnaire and interview to get valid data. The subjects in this study are three 10th Grade students who have different self-regulated learning in SMK Giripuro Sumpiuh. The results showed that the high self-regulated learning student has characteristics: 1) independent of others, 2) believe in their abilities, 3) awareness in learning, and 4) be able to reflect on their learning. Medium self-regulated learning student has characteristics: 1) independent of others, 2) believe in their abilities, 3) awareness in learning, and 4) do not reflect on learning. Low self-regulated learning student has characteristics: 1) dependent on others, 2) do not believe in their abilities, 3) lack awareness of learning, and 4) do not reflect on learning.

1. Introduction
Learning outcomes are influenced by several factors, these factors are divided into two, namely internal factors and external factors [1]. Internal factors are factors that come from within the self that includes motivation, interest in learning, and learning independence, while for learning facilities and learning environment is an external factor.

Self-regulated learning is an attitude that individuals have to learn with their own initiative in an effort to internalize knowledge without dependent or get direct guidance from others [2]. Students who have self-regulated learning will continue to build a willingness to understand what is learned without relying on the help of others even if what is learned is difficult material.

Learning mathematics is a process to understand problems to solve problems related to the material being studied. Students who have high self-regulated learning will strive to understand the material to the fullest by utilizing more than one learning resource that can be used so that what has not been understood well can be understood.

Self-regulated learning has emerged as an important new construct in education. The concept has been embraced by policy makers, teachers, educators, and parents [3]. Self-regulated learning can be
seen in student learning habits in every day as well as how students plan and learn. Higher student self-regulated learning is needed in improving mathematics learning achievement because it gives effect to the creation of spirit in students to learn.

Self-regulated learning is moderately positive correlated with academic achievement [4]. Achievement is one of the important factors in determining students’ graduation. Students with higher achievement certainly have higher self-regulated learning. Conversely, students with lower learning achievement have lower self-regulated learning.

Self-regulated learning is recognized as an important predictor of student academic motivation and achievement [5]. Student achievement will have an effect on success, students who have good learning achievement have big chance to succeed. Students with good learning achievement will have the ability to utilize learning resources independently. Thus students with a good learning independence will have a good learning achievement as well.

The revised 2013 curriculum expects students to have learning independence so that students can construct knowledge that has been learned, thus the learning material will be remembered for the longest time by each student. Proven that self-regulated learning has a central role in life, including in learning and learning achievement in school [6].

All high schools have used the 2013 curriculum so students can improve their skills without help from others. Self-regulated learning of senior high school students are different with vocational high school students, at the level of vocational high school students, assume that the math, in particular, is not much needed at work, but with learning mathematics, students will be able to think logically and systematically.

With the policy that the Vocational High School is required to use the curriculum 2013, the students’ self-regulated learning is required to develop so that each student is able to develop his ability without the help of others. Therefore, this study will discuss the profile of students’ self-regulated learning at Vocational High School.

2. Theoretical Background
Self-regulated learning is learning the process that has been done without any help [7]. Without any help from the other, the students can explore all their potential, so what is learned becomes more meaningful and remembered. Finding out the problem by yourself, it will make students more responsible for their decisions that have related to the learning process. In addition, the student will have the ability to execute the decisions that have been taken.

Self-regulated learning is an important attitude that every student must have to be independent. At school, independence is very important, this attitude is required by each student to make them discipline and blame for their decisions. Self-regulated is learning at your own way, own responsibility, and successful learning [8]. Student with self-regulated learning will affect in their achievements, whether or not successful in learning is determined by themselves.

Early theories about self-regulated learning used the real of learning process as a primary goal in self-regulation and focus on the description strategies of metacognitive that must be possessed by students, so they do not have abstraction in learning process [9]. In addition, students with good self-regulated do not depend on another student, so they must develop their metacognitive ability in learning process.

The goal of the students’ self-sufficiency is that students can self-organize to enable them to achieve high levels, enjoy learning, and develop life-long learning skills [10]. The existence of student self-regulated learning will trigger more positive impact in students’ life.

The step of the activities on student self-reliance are designing, monitoring, evaluating, and reflecting [11]. Designing student’s learning step can be analyzing tasks, establishing learning goals, and designing learning strategies. Monitoring students step can be asking themselves questions about the strategies used are effective, students can focus on learning, and strategies used well. The step of evaluating, the student can check how the strategy used is well done, the learning outcomes achieved,
and the strategies used are in accordance with the tasks obtained. Reflecting students step can be interpreting each stage that is from step one into the fourth step.

The students who can learn from their selves have special characteristics. The characteristics possessed by students who have self-regulated learning are 1) students are independent of others, 2) believe in their own ability, 3) willing to conduct their own learning activities, 3) responsible for what is done, 4) can plan to learn, 5) evaluate learning, and 6) reflect on learning activities [12].

The indicators of students having self-regulated learning in this study are 1) independent of others, 2) believe in their ability, 3) have awareness in learning, and 4) can reflect on learning.

3. Methods
This study is a qualitative research with strategy of study case that aims to find the profile of student's independence in accordance with the development of a new curriculum that requires students to have self-regulated learning, so the material that learned can be understood well and remembered.

3.1. Participants
The subjects of this study are three students who have different self-regulated learning in SMK Giripuro Sumpiuh. Sampling in this research used purposive sampling technique. The researchers choose three students who have different level of self-regulated learning they are student with high self-regulated, student with medium self-regulated, and students who have low self-regulated learning and each student has good communication.

3.2. Data Collection
The data collection techniques in this study are questionnaires and interviews. The indicators of self-regulated learning students’ questioner are 1) independent of others, 2) believe in own ability, 3) have awareness in learning, and 4) can reflect on their learning.

Independent of others means students can choose learning strategies that are used independently, complete the tasks assigned to the teacher according to their abilities, and can add knowledge by using other references. Believing in the own ability means that the students dare to express opinions to others, have the confidence to achieve learning objectives, and can complete the task independently even though the task is quite difficult.

Students have learning awareness means spurring themselves to always be passionate about learning, able to focus attention in classroom learning activities, and change the time of delayed learning of mathematics. While, can reflect on their learning means that their learning activities will have a positive impact on them, to look at the increase or decrease in learning outcomes, and always try to improve their learning outcomes when there is decrease.

The questions that used an interview with students are 1) how the strategies learning is used, 2) how to do the tasks obtained, 3) how if there are differences of opinion with friends in completing the task, 4) how to reflect on learning. The questions are used in the interview to check whether the subjects have filled the questionnaire are in accordance with the actual situation so that obtained the valid data.

3.3. Data Analysis
The data analyzing technique in this study is done by describing or explaining the data that have been collected through interview and filling questionnaire. This study used triangulation method technique to obtain from the questionnaire and interview to get valid data.

4. Results
4.1. Subjects with High Self-Regulated Learning
Based on the data analysis of answering questionnaires and interviews obtained that the subjects belong to high self-regulated learning category have a good strategy in learning, that is by listening to the music at the same time in learning activities, completing task that obtained by using their ability
possessed without asking for help to other people, learned by using various sources, for example from books or using other media such as internet.

The subjects who have high self-regulated learning have a target achievement of learning and what they get, it will be in accordance with the targets. It will also always motivate them to keep getting the best of what they were done, when there is a difference of opinion with another subject in high self-regulated learning will be able to defend his belief and be able to convey it to others.

The subjects with high self-regulated learning can replace the time of study that postpones in accordance with what has been agreed with their selves, the subject is always focused on learning and observe the increase and decrease in learning results then will follow up what is obtained, therefore the results of learning will always be good. So that, subjects with high learning attitudes are able to reflect on their learning.

4.2. Subjects with Medium Self-Regulated Learning

From the analyzing data of questionnaire answers and interviews, it was found that subjects with medium self-regulated learning can choose the learning strategies that used in doing the tasks that done without help from others and learn by using more than one references.

The subjects have confidence with the results to be obtained but sometimes the results that have got are not in accordance with the targeted, when there are differences of opinion with other subjects with the medium of self-regulated learning are able to express what their beliefs are, and complete the tasks have maximally got with their ability.

The subjects are able to focus themselves on learning, especially learning mathematics, the subject will replace the study time is delayed on another occasion based on their commitments, and they can motivate themselves in learning.

They do not depend on others, belief in their abilities, have a consciousness in learning, but the subject does not have the belief that learning at this time will have a positive impact on the change of life, the change in learning outcomes is not important to him, whether or not the results obtained do not matter because the most important for them the subject have been learned.

4.3. Subjects with Low Self-Regulated Learning

Based on the data analysis of answering questionnaires and interviews, subjects with low levels of self-regulated learning always rely on others in their learning activities, subjects unable to determine learning strategies that used, learn under the control of others, and have no other reference in learning, they got material from the notes it obtained when the teacher gave an explanation in class.

They rely on answers from others when they get a job because they do not have confidence in their abilities. Therefore, they always ask for help from another friend, and when there is a difference of opinion, they cannot express their opinion.

Subjects with low self-regulated learning at the time of learning often ask for permission to leave the class for many reasons, they do not try to do a good learning plan, not focusing on learning, and never changing learning time at a particular time.

The achievements are always bad, but it does not make them change his habits to learn well, they never pay close attention to his learning results, for him the learning activities do not demand and never change in their life.

5. Discussion and conclusion

Self-regulated learning is an important attitude that every student should have to be independent of others. At school, the self-regulation is also very important attitude is required by each student. Therefore, students able to discipline their selves and have a responsibility towards what they have chosen.

Students self-regulated are the power of individual through the process of individualization. The self-regulation learning will come true when the students are active to control him selves from
everything doing, planning something, evaluating, and following up more deeply into what they have experienced.

The Profile of students' self-regulated learning at SMK Giripuro Sumpiuh as follows.
a. Students with high self-regulated learning have characteristics independent of others, believe in their abilities, have awareness in learning, and are able to reflect on their learning.
b. Students with medium self-regulated learning have characteristics that are independent of others, believe in their abilities, have awareness in learning, and are unable to reflect on their learning.
c. Students with low self-regulated learning have characteristics dependent on others, do not believe in their abilities, have no awareness of learning, and are unable to reflect on their learning.

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