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Factors Analysis Influence Self-Regulated Learning of FKIP Students at Universitas Muhammadiyah Makassar Post Covid-19 Pandemic

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Abstract

The aim of this research is to find the dominant factors that influence the Self Regulated Learning (SRL) of prospective teachers during the Covid-19 pandemic and map the level of SRL of prospective teachers in each aspect of SRL. The research method used is a quantitative descriptive method. The instrument used is a questionnaire regarding self-regulated learning. The aspects assessed in the self-regulated learning questionnaire consist of learning strategies, motivation, thinking, performance control and self-reflection. The distribution of the questionnaire was carried out from 3 to 17 May 2024 involving 68 prospective teacher students at one of the private campuses that organize teacher education programs in Makassar City. A total of 68 prospective teachers filled out the survey. Data analysis was carried out using Exploratory Factor Analysis (EFA) with the help of SPSS 23 software. The most dominant factor among the 5 factors is thinking. In this regard, prospective teachers in Makassar City should increase motivation factors, learning strategies, self-reflection and performance control in order to create good learning independence or SRL after the COVID-19 pandemic.

Keywords: *FKIP Students, Post pandemic, Self-regulated Learning*

Introduction

From a social cognitive viewpoint, academic success is regarded as an intricate interplay among personal skills, self-image, task evaluation, success expectations, cognitive approaches, self-management, gender, parenting methods, socioeconomic background, performance, and personal attitudes toward education. As stated by (Yulinawati, 2009), Numerous factors affect students' success in attaining accomplishments, such as intelligence, personality, the school setting, the home atmosphere, and learners' self-regulation in education. Zimmerman and Martinez Pons indicated that individuals with self-regulated learning (SRL) who trust in their capacity to master academic content will achieve greater success and learning outcomes compared to those who lack confidence in their skills. Personal endeavors to reach learning objectives by engaging and sustaining thoughts, feelings, and actions are known as SRL.

In the realm of education, it is frequently observed that many students prioritize entertainment over their studies, dedicating significant time to leisure activities. This is evident in the behavior of remaining awake late, strolling in shopping centers or squares, binge-watching television, being hooked on online gaming, and enjoying delaying tasks at work. When a student fails to manage his time effectively, he frequently squanders time on unproductive tasks, resulting in lost time. Neglected assignments and unfinished tasks can lead to failure or prevent a student from attaining success.

In accordance with this, technological advancement has started to infiltrate the realm of education. The realm of education has started to move away from traditional learning methods. The field of education is beginning to shift towards digital learning. Consequently, the learning process can now be conducted through engaging in different activities. At present, the learners involved in the educational process are students from generation Z. Teacher-focused instruction is no longer appropriate for this generation, making it essential to transition to a more learner-centered methodology, particularly for students with varied capabilities. (Viridi et al., 2017). Through the online learning, it is expected that students can develop their abilities in a better direction.

Not to be left behind, the Indonesian government also implemented the same thing "temporarily closing all schools and encouraging online lectures from home". Several months later, the government allowed the opening of schools and universities according to zones. However, the fact is that currently Learning from Home (BDR) is still an alternative option. Of course, BDR has an impact on students' cognitive and non-cognitive development, which directly affects the quality of education in Higher Education (PT) (Research and Education Agency, Ministry of Education and Culture, 2020).

A study looking at students' perceptions of online lectures shows a tendency towards face-to-face lectures, because online lectures are quite difficult to understand. Thus, in this time of crisis, students must have Self Regulated Learning (SRL), otherwise they will experience cognitive decline. The results of studies in recent years show that students who apply SRL have higher academic achievements compared to those who do not apply it. Academic achievement is reviewed from the IP score (Fasikhah & Fatimah, 2013). The role of SRL in lectures is very important, namely controlling academic stress. Someone who is not able to self-regulate will result in feelings of regret and disappointment, delayed work, wasted time and decreased performance (Alhadi & Supriyanto, 2017). However, many students fail to apply SRL, especially motivational strategies. Motivational strategies are one of the factors that shape SRL. Meanwhile, Retnawati stated that there are three components of SRL, namely thinking, performance control and self-reflection.

Self-regulated learning is described through levels or degrees which include activeness in terms of metacognition, motivation and student behavior in the learning process. Students automatically start and try directly to acquire the desired knowledge and skills, rather than depending on teachers, parents or other people. In conclusion, self-regulated learning is a student's active and independent efforts in the learning process by monitoring, regulating and controlling cognition, motivation and behavior, which are oriented or directed towards learning goals. The self-regulated learning dimension encourages a person to develop the ability to self-regulate their learning well (Alhadi & Supriyanto, 2017). Self-regulated learning occurs when students manage their learning experience by employing suitable strategies, comprehending their responsibilities, enhancing their decision-making skills, and boosting their motivation to learn. The self-regulation of students' cognition, motivation, and behavior serves as a mediator in the relationship among individual, context, and even performance. The most basic aspects of self-regulated learning are focus on goals. When a person is able to develop self-regulation abilities optimally, the achievement of the goals that have been set can be achieved optimally. On the other hand, when a person is less able to develop self-regulation abilities within himself, then achieving the goals he has set cannot be achieved optimally. Ineffectiveness in self-regulation abilities can be caused by underdevelopment of one of the phases in the self-regulation process, especially in the forethought phase and ineffective performance control (Zimmerman, 1998 in Boekaerts, 2000).

As educational candidates (teachers), teaching students should have good SRL because later they will be examples for their students. It will also teach students a self-management

system. Based on this, researchers were initially interested in analyzing the factors that influenced the Self Regulated Learning (SRL) of prospective teachers at Unismuh Makassar during the COVID-19 pandemic. Unismuh Makassar is one of the private campuses in South Sulawesi which has thousands of teaching students. For this reason, this research will focus on Muhammadiyah University of Makassar.

Research Methods

Research Design

The type of research in this research is online survey research, which will describe the factors that influence the Self Regulated Learning (SRL) of Prospective Teachers at Unismuh Makassar During the COVID-19 Pandemic (Study Exploratory Factor Analysis).

Research Stages

The stages that will be carried out in this research are as follows: a. Collecting theories related to SRL. Researchers searched for literature related to SRL with the help of Google Scholar. The literature is then synthesized and produces aspects of SRL b. Developing a questionnaire Several previous studies presented aspects of SRL along with instruments to measure SRL. The researcher adapted, modified and added 6 items. The total number of items is 26 items which are adapted to online learning during the COVID-19 pandemic.

Content Validation

Validation of the questionnaire instrument was carried out by two experts who produced a valid instrument. The purpose of content validation is to determine the suitability of the test items with the criteria that have been determined based on the research objectives. There are several things that are studied by educational experts and practitioners, namely: alignment of aspects, indicators with statement items, language used and culture. The results of the expert review are in the form of an assessment of the suitability of items and indicators with the choice of using a Likert scale with the following scores, namely Very Inappropriate (STS)=1, Not Appropriate (TS)=2, Appropriate (S)=3, and Very Appropriate (SS= 4). Furthermore, the results of the quantitative assessment will be analyzed using the Aiken validity index, to see the validity of the instrument being developed. Furthermore, Retnawati, (2016) provides limitations by dividing the validity values into three categories, as Table 1.

Table 1. Validity Values

Aiken Index	Validity Values
<0,4	Low
0,4-0,8	Medium
>0,8	High

Based on the Table 1 results of content validation analysis using the Aiken formula, all items were valid. Twenty-six items have an Aiken index value of 0.67 to 1 or are in the medium to high category. Nine items are in the high category and 17 are in the medium category. The Aiken index value can be reviewed in the Appendix. The reliability value using Cronbach's alpha is 0.95 or the high category. Thus, the 26 questionnaire items can be used to conduct an SRL survey on prospective teacher students at Unismuh Makassar.

Data Collection

Data was collected through an online survey using a Google form which was distributed over two weeks, from 3 to 17 May 2024 via WhatsApp. A total of 68 FKIP students participated in the survey.

Data Analysis

Data analysis in this research is divided into 2, namely factor analysis using Exploratory Factor Analysis (EFA) and quantitative descriptive. EFA was carried out to look at the factors that influence the SRL of prospective teachers at Unismuh Makassar and review the dominant factors, while quantitative descriptive was to review student achievements in each aspect of SRL. Data from student responses were analyzed using factor analysis, namely Exploratory Factor Analysis (EFA) with the SPSS 23 program. The steps in analyzing began by testing the adequacy of the sample used in the analysis, namely by looking at the Chi-square value in the Bartlet or Kaiser-Meyer-Olkin test. measure of sampling adequacy.

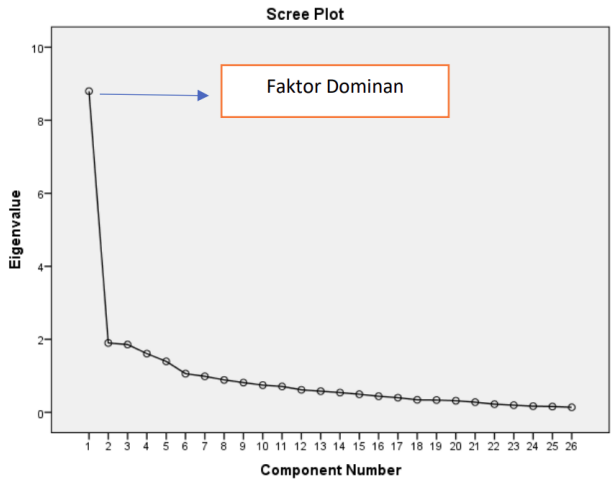
Results and Discussions

A total of 68 FKIP students took part in the SRL online survey. The major that took part in the survey the most was Educational Technology (31%) and the least was PKN (6%). The ages of respondents were in the range of 18-25 years and were dominated by participants aged 19 years. Most of the respondents were female (70.4%). Based on the sample adequacy analysis by reviewing the KMO value of 0.835 (>0.05) and Barlett's significance value of 0.000 (0.5. The anti-image correlation value of item 23 is 0.365 and item 24 is 0.328. Furthermore, based on the results of the rotated component matrix it can be The naming of the factors is determined. Factors that can be taken are factors that have a loading of > 0.3. In the table it can be seen that there are 5 factors, these factors are called: Factor 1= Learning Strategy, Factor 2= Motivation, Factor 3= Thinking, Factor 4= Performance Control, and Factor 5= Self-Reflection. Factor verification is presented in the rotated component matrix. Thus, there are 5 factors that influence the SRL of prospective teacher students at Unismuh Makassar.

The dominant factor is determined by looking at the eigenvalue or scree flot (Retnawati, 2016:48). If a line in the scree plot image is steep, it shows that the next dominant factor in factor 2 is starting to slope or level off. This shows that in measuring the SRL of prospective teachers at Unismuh Makassar there is 1 dominant factor. For more details, see Figure 1. In the total variance explainet value, it can be seen that this factor can contribute a variance of 33,830 with an eigenvalue of 8,796. In the discussion of dominant factors, it was mentioned that there is one dominant factor, namely occupying the first column in the rotated component matrix table. This factor is learning strategy. Thus, the learning strategy aspect is the dominant aspect that influences the Self Regulated Learning (SRL) of Prospective Teachers at UNISMUH Makassar during the COVID-19 pandemic (Study Exploratory Factor Analysis).

Gambar 1

Scree Flot SRL mahasiswa calon guru di Unismuh Makassar



The factors analyzed in this research are aspects of motivation, thinking, learning strategies, performance control and self-reflection as developed by Wolters et. al. (2003). Indicators included in the motivation factor are learning goals and self-efficacy. Then the indicators for the thinking aspect are task analysis and self-confidence. Indicators of the third aspect, learning strategies, are repetition and critical thinking. Indicators in the performance control aspect are self-control and sufficient observation. Lastly, the aspect of self-reflection, the indicators are self-consideration and self-reaction. The percentages of the five self-regulated learning ability factors mentioned above are presented in Table 2.

Table 2 Percentage of student achievements in the SRL aspect

SRL Aspect	Percentages
Motivation	74
Thinking	75
Learning Strategi	74
Performance Control	74
Self Reflection	65

A. Motivation

Motivation is an important internal factor that can influence a person's academic achievement. According to Bandura (1986), motivation is a person's assessment of his ability to organize the actions needed to complete the task at hand. Motivation in self-regulated learning pertains to students' capacity to employ SRL techniques like self-monitoring, self-assessment, goal formulation and strategizing, self-rewarding, belief in their skills, and self-assurance. Zimmerman and colleagues noted that motivation for self-regulated learning was positively associated with motivation. When an individual possesses strong motivation, their self-regulated learning (SRL) is also elevated. Conversely, a person with low motivation will likewise exhibit low self-regulated learning (SRL). In accordance with the opinion of Stone, Schunk & Swartz (in Cobb, 2003) which states that self-regulated learning is influenced by three main factors, namely self-efficacy, motivation and individual goals.

Setting and planning the goal is the first step in achieving the goals. Plans to order priorities, as well as managing time to complete tasks is the next steps. (Zimmerman, 1990). Establishing goals and planning involves a student's proactive approach to identifying learning objectives and organizing time and activities to achieve those objectives (Hariseno, 2012). FKIP Unismuh Makassar students have high goal setting and planning abilities with a percentage of 74%. Setting goals in learning is the first step in the process of creating self-regulated learning in a person as explained by (Wolters et al., 2006). The capacity to establish learning objectives and strategies is a crucial foundational skill for a self-regulated learner. The key element of the indicator is effectively managing time when finishing tasks. This external factor impacts self-regulated learning in students, as self-regulated learning is shaped not just by individual processes but also by environmental and behavioral influences in a reciprocal relationship (Zimmerman, 1989).

This facet can encourage students to develop disciplined behaviors, as self-discipline or willpower (self-will) serves as a crucial element that can affect self-regulated learning (Woolfolk, 2008). Borkowski and Thorp (1996) asserted that numerous researchers concur that the fundamental element of self-regulated learning is concentrating on objectives. Self-regulated learning involves a student's proactive and autonomous initiative in overseeing, managing, and directing their cognition, motivation, and behavior aimed at achieving learning

objectives (Kurniawan, 2013). Therefore, students need to establish a specific goal in order to effectively work on enhancing the self-regulated learning skills inherent in them.

B. Cognitive

Searching for information or seeking knowledge involves an effort to acquire information based on the task at hand from various reference sources (Zimmerman, 1990). Searching for information is also a student's proactive effort to find valuable or beneficial data from non-social sources while completing assignments. The table above indicates that students of FKIP Unismuh Makassar possess an information-seeking ability of 75%, making it the most prominent indicator or skill. This is due to students utilizing different applications to discover learning materials. Relating to a person's capability to identify environmental resources, Zimmerman (in Smith, 2002) employs the term 'resourcefulness,' which denotes the skill to manage the surrounding physical environment by minimizing distractions that hinder learning, while effectively seeking out and utilizing references, along with the necessary skills to comprehend what is being learned.

C. Learning Strategies

Practicing and memorizing represents a student's own effort to retain the content by going over or reviewing it multiple times until it can be recalled or memorized, either with peers or while studying independently (Zimmerman, 1990). Table 2 indicates that students from FKIP Unismuh Makassar possess rehearsing and memorizing skills at a rate of 74%. The primary feature of practicing and memorizing skills in this indicator is retaining information via self-study.

Organizing and transforming involves the effort to restructure received material and rewrite it for better comprehension (Zimmerman, 1990). Table 2 indicates that students of FKIP Unismuh Makassar possess organizing and transforming skills at a percentage of 70.59%. This indicator is among the most prominent indicators observed in FKIP students following their use of various applications and learning resources, with the primary focus being the organization of content acquired from multiple applications (74%). Students with self-regulated learning can be identified by their behaviors, which manifest through actions that contribute to reaching their academic objectives.

Students exhibiting high levels of self-regulated learning are typically those who have become familiar with repetition, elaboration, and organization throughout their learning journey. In addition to frequently reorganizing material gathered from different applications and learning resources, another factor that reflects organizing and transforming skills is rephrasing content acquired from various applications and learning sources. Rephrasing and condensing key elements of study material is a cognitive method to enhance brain function, enabling effective thinking and learning absorption (Wolters et al., 2006).

D. Self-Evaluation

Self-regulated learning is a personal learning journey conducted autonomously and organized through a sequence of learning tasks aligned with set objectives. Once the objectives are met, it proceeds with assessing the outcomes to enable corrections and enhancements for optimal results. (Setyanto, 2014). Zimmerman (1999) states that Students employing self-regulated learning techniques are aware of their performance outcomes. The fundamental element of self-regulated learning is the emphasis on objectives, making evaluation the most effective method to reach the goal.

Self-assessment is a process aimed at assessing the quality of tasks or the advancement of tasks and learning that have been completed (Zimmerman, 1990). Self-assessment is likewise a student's proactive approach in assessing advancement or reflecting on the endeavors

or outcomes of efforts applied in completing an academic task. This skill of assessment is crucial for students to cultivate self-regulated learning, as it can foster self-initiative to be more meticulous during the learning journey, enabling students to manage their cognition effectively. During the learning process, an individual engaging in self-regulated learning can establish learning objectives, and actively monitor, regulate, and manage their cognition, motivation, and behavior to achieve the set goals. (Valle et al., 2008). Table 2 shows that FKIP Unismuh Makassar students have quite low self-evaluation abilities, even being the aspect with the lowest percentage, namely 65%.

Conclusions

The thinking factor is the most dominant self-regulated learning factor among FKIP students at Muhammadiyah University of Makassar with a percentage of 75%. Finally, task analysis and self-confidence are the two dominant self-regulated learning abilities in FKIP students.

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