**Improving Self-Regulation in Online Distance Learning through Self-Efficacy and Creativity**

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Self-regulation in learning embodies students’ ability to exercise their own will or desire in ways that lead them to take ownership of their learning without the assistance of others; thus enabling them to navigate their own learning path, governing their own ideas and action toward effective learning, and fostering independent learning activities. This study taps into the improvement of self-regulated learning in online distance environment within the context of academic self-efficacy and creativity by measuring their effect on self-regulated learning. 125 online students of Non Basic Education at UPBJJ-UT Makassar (Open University of Makassar) in the academic year of 2018.2 responded to questionnaire items previously tested to meet the standards for validity and reliability. Dataset from the questionnaires fit into multiple linear regression to model the relationship between the variables. Major findings show a strong sense of self-efficacy, creativity and self-regulatory skills among the students; a positive and significant effect of self-efficacy and creativity on self-regulated learning both partially and simultaneously; and self-efficacy demonstrating predictor dominance in the regression model. An important implication of the study points to the practices whereby students, teachers and policy makers make themselves knowledgeable for all practical purposes of sustaining the improvement of self-regulated learning through self-efficacy and creativity.

*Keywords: self-efficacy, creativity and self-regulation*

1. **INTRODUCTION**

Independence in learning is an approach to learning characterized by one’s nature and ability to act on active learning driven to arrive at a specific competency and outcome at a level he desires and builds on knowledge and skills he has already pioneered (Mujiman, 2008). Ali and Asrori (2006) add to this view and claim that independence is in proportion to the reflective capacity of an internal force that drives the process of navigating toward selfhood and perfection. Independence in general is often associated with a unidimensional concept, assuming that when an adult has become capable of being independent in life, he can naturally facilitate governance processes specific for learning. Others view that independence grows as one is able to manipulate one’s own environment which nurtures the development of one’s independent living skills. Slameto (2010) also reflects on independent learning to emphasize the role of learning with little or no assistance.

Independent learning, or self-regulated learning, is the staple for online distance education at Universitas Terbuka (Open University). Self-regulation calls for students’ ability to take initiative for all stages of learning. It encompasses an instructional strategy that applies in both individual and collaborative learning that Universitas Terbuka provides in study groups and tutoring groups. The overall concept of self-regulated learning in many ways is defined by efficient learning capacities. In a specific context, these capacities manifest in the abilities of speed reading and reading comprehension. In general, students act on these capacities as they exert a great deal of self-discipline, initiative and motivation (Purwanto: 2008).

The perceptions of self-regulated learning also closely parallel with the goals of student creativity and self-efficacy. One’s sense of self-efficacy attributes to his belief in his ability to exercise control over his own level of functioning and events that affect his life. Self-efficacy plays a critical role to determine how an individual approaches his own thinking, motivation and behavior (Bandura in Jess Feist & Feist, 2010). Self-efficacy can build a strong foundational setting for creativity. In literal, creativity not only embodies the act of turning new ideas into reality but also characterizes the ability to create a new combination of evolutionary changes to existing processes. Slameto (2010) observes creativity in the outcome of learning processes in terms of cognitive skills, which can be managed and developed through teaching and learning experiences. Learning in this sense entails a set of individual effort to gain permanent behavioral changes as a whole as a result of interactional experiences with his surroundings.

Taking these perceptions into account, the whole notion that links creativity and learning centers on a distinctive landmark of three psychological attributes, i.e., self-adjustment with environment, appropriate learning modes and motivation. Though the tendency toward creativity is probably innate, the development of that trait attributes to the crux of individual potential and nurturing experience in learning processes in one’s environment to explore new ideas (Sumiar et.al :2017).

This study is a follow-up to a prior study of “The Effect of Motivation and Self-Regulated Learning on Student Achievement” (Sylvana and Alwi, 2016). In its statistical findings, the study frames motivation and self-regulated learning in a set of partial and simultaneous correlations and finds a positive effect on students’ capacities in governing learning achievement, giving evidence that changes in motivation and self-regulated learning would lead to changes in learning achievement. This study extends the area of interest that cultivates two factors affecting self-regulated learning, i.e., self-efficacy and learning creativity on the assumption that individual pursuit of self-regulated learning is predominantly influenced by the extent to which students can draw on self-efficacy and learning creativity.

Table 1 overviews the number of recipients of Bidikmisi scholarships at UPBJJ-UT Makassar (Distance Learning Program Unit-Open University in Makassar) from 2012 to 2018. To date, 125 out of 320 recipients registered from 2015 to 2018 are eligible, actively-continuing students at UPBJJ-UT Makassar.

Table 1

The Number of Bidikmisi Recipients at UPBJJ-UT Makassar

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Class** | **Total** | **Program of Study** | **Location of Recipient** |
| 1 | 2012 | 24 | Bachelor Degree-Management | Makassar |
| 30 | Bachelor Degree-Accounting | Makassar |
| 2 | 2013 | 41 | Bachelor Degree-Management | Barru, Maros |
| 50 | Bachelor Degree-Accounting | Barru, Tana Toraja |
| 3 | 2014 | 25 | Bachelor Degree-Public Administration | Luwu Timur |
| 25 | Bachelor Degree-Accounting | Selayar |
| 4 | 2015 | 25 | Bachelor Degree-Management | Kabupaten Sinjai |
| 25 | Bachelor Degree-Accounting | Kabupaten Sidrap |
| 5 | 2016 | 25 | Bachelor Degree-Library Science | Kabupaten Bantaeng |
| 25 | Bachelor Degree-Management | Kota Makassar |
| 6 | 2018 | 25 | Bachelor Degree-Business Administration | Kota Makassar |
| **Total** | | **320** |  |  |

In accordance with the background information, the fundamental problems of this study concentrate on whether self-efficacy affects self-regulated learning, whether academic creativity affects self-regulated learning, and whether self-efficacy and academic creativity altogether affect the paths where students are able to regulate their own learning.

The objectives of the study are linked with the development of hypotheses used as the statements of the study provided in the later section to guide the scope, direction and depth of the research activities, i.e., observing the nature of self-regulated learning at UPBJJ-UT Makassar, establishing the impacts of self-efficacy and academic creativity on the development of self-regulated learning and settling on manageable recommendation to the strategic management of UPBJJ-UT Makassar in terms of enhancing the effectiveness and sustainable productivity of self-regulated learning among its students.

# LITERATURE REVIEW AND HYPHOTESIS DEVELOPMENT

* 1. **Self-Efficacy**

The concept of self-efficacy was first coined by Albert Bandura in Yufita & Budiarto (2006), which is a subset of Social Cognitive theory. Self-efficacy respresents one of self-aspects and self-knowledge elements that significantly affects one’s daily life. Each individual perceives self-efficacy to carry out action toward a specific goal and predict various events that come along with the goal. With self-efficacy, individuals approach a certain situation with assurance that they can have control over it and create positive outcomes. The overall notion of self-efficacy exemplies one’s belief in what he is capable of, particularly in meeting the challenges ahead, handling a task at hand, and arriving at a goal to achieve a desirable outcome in a certain situation.

**2.2 Dimensions of Self-Efficacy**

1. Level

The level of self-efficacy relates to how difficult an individual finds it to act on specific behavior. This level indicates the measurement of perceived self-efficacy for different degrees of performance in a task (e.g., low, moderate and high) regarding human capabilities, along with the limits, and the activity domains. This influences choices of behavior, activities and environmental settings. Individuals avoid making choices that they believe exceed their coping capabilities, but they assuredly undertake and perform those that they judge themselves capable of managing.

1. Strength

Strength refers to the amount of assurance and expectation an individual has about his ability to perform successfully at diverse levels of difficulty. High assurance and expectation exert sufficient effort despite challenges ahead that, if well executed, brings about desirable outcomes. Weak assurance and expectation, on the other hand, are likely to cease effort early, thus reducing the likelihood of success and ultimately failing. The measurement of self-efficacy usually focuses on the strength of self-efficacy expectation, although it will often incorporate the level of expectation; higher level of task performance leads to higher amount of expectation to accomplish more and persist longer at the task.

1. Generality

Generality measures the extent to which individual expectation is generalized across realms of activities and situations, i.e., a sense of self-efficacy that prevails across all situations and domains of functioning. In this sense, individual belief in his ability is examined within one particular activity, and across various activities.

1. **Creativity in Learning**
2. Definition of Creativity

Baron in Satiadarma and Waruwu (2003) regards creativity as the ability to create something new. The elements of newness do not necessarily embody a new concept or idea but also look at a new relation or a combination of existing concepts and ideas. Munandar in Sukmadinata (2004) refers the construct of creativity to a notion of abilities that: a) create a new combination based on existing data or information, b) are based on available data or information that embrace the potential to find solutions to a problem with the emphasis on quality, usefulness and diverseness, and c) reflect on the aspects of fluency, flexibility, originality and elaboration at the core of thinking. Supriadi in Rachmawati (2010) defines creativity as one’s ability to conceive new ideas and work that relatively differ from what already exists.

1. Definition of Learning

Slameto (2003) explains that learning is a set of effort that leads to relatively permanent changes in behavior resulting from interactional experiences with environment. Purwanto (2003) outlines essential aspects that describe a learning process: maturity, self-adjustment or adaptation, memorization, active recall, understanding, thinking and exercising. The behavioral changes resulting from learning are associated with practice and experience leading to relatively permanent changes.

1. Creativity in Learning

Nurturing creativity in learning is a vital component in human experience. It involves a set of practice but is not necessarily constrained by time and place. Slameto (2010) claims that “Creativity is a learning outcome through cognitive skills and is, therefore, practicable and achievable throughout teaching and learning processes.” The whole notion that links creativity and learning centers on a distinctive landmark of three psychological attributes, i.e., self-adjustment with environment, appropriate learning modes and motivation. Though the tendency toward creativity is probably innate, the development of that trait attributes to the crux of individual potential and nurturing experience in learning processes in one’s environment to explore new ideas.

1. Indicators of Creativity in Learning

Hamzah (2010) classifies six indicators that students employ to assess their sense of creative learning:

* + - 1. Inquisitiveness
      2. Questioning skills
      3. Problem-solving skills
      4. Spontaneity and confidence when it comes to giving feedback
      5. Independence
      6. Determination to try new experiences

1. **Self-Regulated Learning**

Self-regulation is one of the most important determinants of individual personality. Individuals are bound to encounter obstacles and predicaments in every stage of their life. At such time, individuals who are able to take ownership of personal action have realistic perspectives to gradually increase determination and capacity to grapple with obstacles and come at a solution without excessively relying on others.

In relation to learning, the core tenet of self-regulation lies on students’ ability to act on their own will and desire without control by and assistance of others. In this regard, self-regulation enables students to take full charge of their learning structure to set about independent learning for effective outcomes.

Thoha in Rianawati (2014) acknowledges the key traits in self-regulated learning:

1. Critical, creative, and innovative thinking
2. The ability of not being concerned about others’ opinions
3. The ability to cope with problems
4. In-depth problem-solving skills
5. Independent troubleshooting skills
6. High self-esteem to avoid feeling inferior to others
7. Hard work through perseverance and discipline
8. Responsibility for one’s action and consequence

When these traits are well nurtured, students can settle on practical and powerful strategies for cultivating self-regulatory skills across their learning paths and, thus, demonstrate permanent changes in their learning behavior. Self-regulated students eventually know how to be self-reliant and embrace responsibility for doing the work of learning and accomplishing it well.

Chabib Thoha in Rokim (2012) taps into the factors affecting self-regulation based on two directions:

a. Internal direction, i.e.,

- age of maturity

- sex,

- and child intelligence that contributes to child’s self-regulatory ability

b. External direction

- Modern and advanced culture and society alongside complex life demands are likely to bind individuals into a society of independent agents as opposed to a more traditional society that lacks standards for life progress and improvement.

- Family-related aspects that encompass educational activities in family, child-nurturing skills, parental roles in children assessment and parental ways of living affect how children foster their own sense of independence.

- Education system at schools which is disassociated from the emerging concept of democratic education where a culture of indoctrination prevails will hinder students’ adolescent development phases.

- Social system that overemphasizes the hierarchy of social stratification influences negative attitude toward the potential of adolescents to engage in community activities. Discouraging youth participation to become an active member of the community is ultimately counterproductive to child independence.

Building self-regulatory abilities is a task individuals, particularly children, must accomplish in order to grow, and the aforementioned aspects underpin the extent to which students can take on independent behavior and thinking in their learning tracjectories.

**RESEARCH HYPOTHESIS**

On the basis of the background of the problem, study objectives and literature reviews, a set of testable hypotheses is formulated as follows:

1. Self-efficacy significantly affects self-regulated learning.
2. Creativity significantly affects self-regulated learning.
3. Self-efficacy and creativity altogether have a significant effect on self-regulated learning.

**3.** **METHODS**

* 1. **Research Design**

The study frames the analysis of factors affecting self-regulated learning in a quantitative descriptive design, where two independent variables are examined; i.e., Self-Efficacy (X1) using the indicators of 1) Level, 2) Generality and 3) Strength; and Creativity using the indicators of 1) Inquisitiveness, 2) Questioning skills, 3) Problem-solving skills, 4) Spontaneity and confidence when it comes to giving feedback, 5) Independence, and 6) Determination to try new experiences. The indicators to define self-regulated learning as the dependent variable encompass 1) Critical, creative, and innovative thinking, 2) The ability of not being concerned about others’ opinions, 3) The ability to cope with problems, 4) In-depth problem-solving skills, 5) Independent troubleshooting skills, and 6) High self-esteem to avoid feeling inferior to others.

**3.2 Participants**

The study identifies the population of the recipients of Bidikmisi from 2015 to 2018 at UPBJJ-UT Makassar. Given the narrow sampling frame, sampling is determined based on saturation point and census, where the entire population data is treated as samples (Sugiyono, 2014), which deal with 125 student recipients of Bidikmisi.

## 3.3 Instrument

Collecting the quantitative data involves questionnaires using a typical 5-point Likert scale, ranging from 1 denoting “strongly disagree” to 5 denoting “strongly agree”.

## Data Analysis

To draw upon plausible results based on the construct being measured, test validity and reliability are run to reduce the likelihood of error. Once these tests are completed, multiple linear regression analysis is set out to tap into the factors affecting self-regulated learning. Multiple linear regression analysis is a tool by which two or more variables are examined in relation to one dependent variable (Ghozali, 2011: 77). The formulation of regression model ideal for data analysis is:

**Y1 = α + β1X1 + β2X2 + ϵ1 ............... (1)**

Where:

Y=Self-regulated learning

X1 =Self-efficacy

X2 = Creativity

β 1  = Regression coefficient of self-efficacy

β 2 = Regression coefficient of creativity

α = Constant

ϵ1 = Error term

## 3.5. Validity and Reliability

Table 2 presents the results of test validity and reliability.

Table 2

Test Validity of Self-Efficacy (X1)

|  |  |  |  |
| --- | --- | --- | --- |
| Instrument | rcal | rtable | Description |
| Item\_1 | 0,836 | 0.1776 | Valid |
| Item\_2 | 0,742 | 0.1776 | Valid |
| Item\_3 | 0,436 | 0.1776 | Valid |
| Item\_4 | 0,836 | 0.1776 | Valid |
| Item\_5 | 0,742 | 0.1776 | Valid |

(Source: primary data processed in 2019)

Table 3

Test Validity of Creativity (X2)

|  |  |  |  |
| --- | --- | --- | --- |
| Instrument | rcal | rtable | Description |
| Item\_1 | 0,599 | 0.1776 | Valid |
| Item\_2 | 0,677 | 0.1776 | Valid |
| Item\_3 | 0,412 | 0.1776 | valid |
| Item\_4 | 0,697 | 0.1776 | Valid |
| Item\_5 | 0,763 | 0.1776 | Valid |
| Item\_6 | 0,640 | 0.1776 | Valid |
| Item\_7 | 0,569 | 0.1776 | Valid |
| Item\_8 | 0,619 | 0.1776 | Valid |
| Item \_9 | 0,684 | 0.1776 | Valid |

(Source: primary data processed in 2019)

Table 4

Test Validity of Self-Regulated Learning (Y)

|  |  |  |  |
| --- | --- | --- | --- |
| Instrument | rcal | rtable | Description |
| Item\_1 | 0,591 | 0.1776 | Valid |
| Item\_2 | 0,599 | 0.1776 | Valid |
| Item\_3 | 0,591 | 0.1776 | valid |
| Item\_4 | 0,363 | 0.1776 | Valid |
| Item\_5 | 0,557 | 0.1776 | Valid |
| Item\_6 | 0,550 | 0.1776 | Valid |
| Item\_7 | 0,602 | 0.1776 | Valid |
| Item\_8 | 0,527 | 0.1776 | Valid |
| Item 9 | 0,450 | 0.1776 | Valid |
| Item 10 | 0,522 | 0.1776 | Valid |
| Item 11 | 0,511 | 0.1776 | Valid |

(Source: primary data processed in 2019)

Table 5

Test Reliability

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Cronbach’s Alpha | Limit | Description |
| Self-Efficacy | 0,761 | 0.70 | Reliable |
| Creativity | 0,810 | 0.70 | Reliable |
| Self-Regulated Learning | 0,745 | 0.70 | Reliable |

(Source: primary data processed in 2019)

The measure in the tables shows that all indicators fulfil the acceptable standards of validity and reliability, thus providing a sufficient condition for a valid and reliable data instrument.

1. **DATA ANALYSIS**
   1. **Classical Assumption Test**

Classical assumption test is run to identify the relation between variables, including normality test, multicollinearity test, heteroscedascity test and autocorrelation test.

1. Normality Test

Normality test sees whether the residuals are normally distributed. Testing if a variable follows a given distribution in the population can be based on the output of One-Sample Kolmogorov-Smirnov, which generates more detailed statistics. This procedure specifically assumes whether the regression equation meets the standard of normality. Significance value in Kolmogorov-Smirnov test greater than 0,05 indicates the normality in the regression equation, as shown in the table. With a significance value > 0,05, the data set fits the normal distribution. Histogram can also be used to prove a normal distribution.

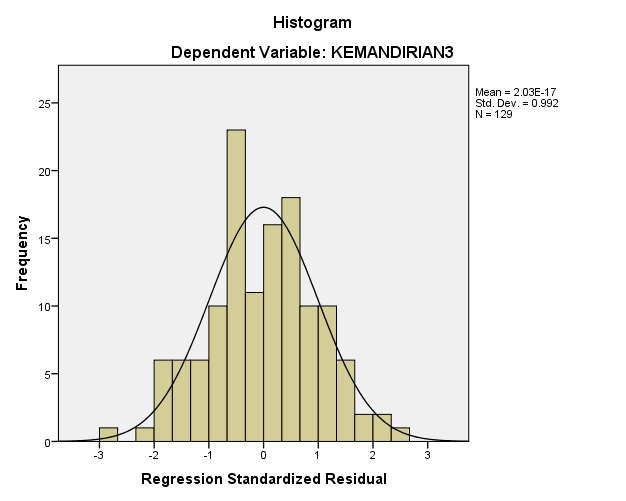
Based on the histogram graphic and simple statistical test, the significance level in Kolmogorov-Smirnov is 0,956 (above 0,05) which is significant for the confidence level and, thus, indicates a normally-distributed data set.

Table 6.

|  |  |  |
| --- | --- | --- |
| **One-Sample Kolmogorov-Smirnov Test** | | |
|  | | Unstandardized Residual |
| N | | 129 |
| Normal Parametersa,b | Mean | .0000000 |
| Std. Deviation | 3.82418601 |
| Most Extreme Differences | Absolute | .045 |
| Positive | .045 |
| Negative | -.040 |
| Kolmogorov-Smirnov Z | | .512 |
| Asymp. Sig. (2-tailed) | | .956 |
| a. Test distribution is Normal. | | |
| b. Calculated from data. | | |

The graphical representation of normal distribution is shown in the following histogram plot where no skew to left or right can be seen. The plot confirms the output of the graphic histogram.

Figure 1. Histogram of Normal Distribution



1. Multicollinearity Test

Multicollinearity occurs when independent variables in a multiple linear regression model are highly correlated. If there is a lot of multicollinearity, it can cause potential problems in the interpretation of data analysis. The variance in Variance Inflation Factor (VIF) and tolerance value are used to identify whether multicollinearity exists. VIF of < 10 and tolerance of > 0,1 suggest no critical levels of multicollinearity.

Table 7. Results of Multicollinearity

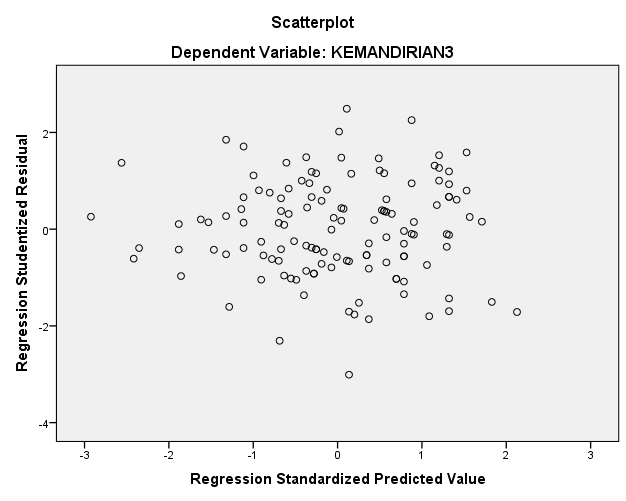
|  |  |  |  |
| --- | --- | --- | --- |
| **Coefficientsa** | | | |
| Model | | Collinearity Statistics | |
| Tolerance | VIF |
| 1 | (Constant) |  |  |
| EFFICACY1 | ,912 | 1,097 |
| CREATIVITY2 | ,912 | 1,097 |
| a. Dependent Variable: SELF-REGULATION3 | | | | |

The table shows VIF less than 10 and tolerance greater than 0,10, indicating that multicollinearity does not affect the given variables.

1. Heteroscedasticity Test

The last assumption of multiple linear regression is heteroscedasticity. A scatterplot of residuals is a good way for checking heteroscedasticity. When there is no clear pattern in the distribution, and the points are spread above and below number 0 and Y on the axis, the data set is not heteroscedastic.

Figure 2. Scatterplot of Heteroscedasticity



The scatterplot is seen to randomly spread and scatter both above and below axis 0 and Y, indicating no heteroscedasticity in the regression model. The regression model is, accordingly, a good fit for predicting self-regulated learning based on the input of independent variables (self-efficacy and creativity).

1. **Hypothesis Testing**

Three types of hypothesis tests can be carried out for multiple linear regression model to see the strength of relations between variables.

* 1. **Multiple Linear Regression Analysis**

Table 8 shows the results of hypothesis testing using multiple linear regression analysis.

Table 8. Hypothesis Testing

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Model Summaryb** | | | | |
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .540a | .291 | .280 | 3.85442 |
| a. Predictors: (Constant), Creativity, Self-Efficacy | | | | |
| b. Dependent Variable: Self-Regulation | | | | |

The adjusted R squared is 0,280, indicating that 28,0% of the variance in self-regulated learning is explained by self-efficacy. The remaining 72% accounts for other influences not included in the model.

* 1. **Partial Regression (T Test)**

T test identifies the partial correlation that represents the linear relationship between variables after excluding the effect of one or more independent factors. In this scenario, t test detects the effect of independent variables individually on the dependent variable.

Table 9. Results of T-Test

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| B | Std. error | Beta |
| (Constant) | 19.822 | 3.686 |  | 5.377 | .000 |
| Self-Efficacy | .288 | .145 | .156 | 1.991 | .049 |
| Creativity | .511 | .085 | .472 | 6.013 | .000 |
|  |  |  |  |  |  |

(Source: primary data processed in 2019)

Data set in the table can be formulated in the following multiple regression equation alongside the interpretation:

**Y = 19,822 + 0,288 Self-Efficacy + 0,511 Creativity +e**

1. Constant of 19,822 indicates that if all independent variables (self-efficacy and creativity) are set to zero, the expected value of self-regulated learning will be 19,822.
2. Regression coefficient of self-efficacy (X1) is 0,288, indicating that each one-unit change in self-efficacy results in a 0,288-increase in self-regulated learning on the assumption that X2 is held constant.
3. Regression coefficient of creativity (X2) is 0,511, indicating that each one-unit change in creativity results in a 0,511-increase in self-regulated learning on the assumption that X1 is held constant.

The results of hypothesis testing (H1 and H2) are interpreted as follows:

1. Self-efficacy and self-regulated learning (H1)

Tcal of self-efficacy is 1,991 >, and ttable at α = 0,05 and df = 129 is 1,656 at a significance level of 0,049 (less than 0,05). Accordingly, H1, that self-efficacy significantly affect self-regulated learning, is statistically confirmed.

1. Creativity and self-regulated learning (H2)

Tcal of creativity is 6,013 >, and ttable at α = 0,05 and df = 129 is 1,656 at a significance level of 0,000 (less than 0,05). Accordingly, H2, that creativity significantly affect self-regulated learning, is statistically confirmed.

* 1. **Simultaneous Regression (F Test)**

Unlike t test, f test measures the extent to which the independent variables altogether affect the dependent variable as Table 10 below shows.

Table 10. Results of F-Test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ANOVAa** | | | | | | |
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 769.999 | 2 | 385.000 | 25.915 | .000b |
| Residual | 1871.923 | 126 | 14.857 |  |  |
| Total | 2641.922 | 128 |  |  |  |
| a. Dependent Variable: Self-Regulated Learning | | | | | | |
| b. Predictors: (Constant), Creativity, Self-Efficacy | | | | | | |

The effect of self-efficacy and creativity on self-regulated learning generates Fcal of 25,915 at a significance of 0,000 (< 5%) and Ftable of 3,07. With Fcal exceeding Ftable, the simultaneous effect of self-efficacy and creativity is significant in self-regulated learning. Hypothesis 3 is therefore confirmed and accepted.

1. **DISCUSSION**
   1. **The effect of self-efficacy on self-regulated learning**

The direction of hypothesis 1 confirms that self-efficacy plays a key role in assisting students to nurture their self-regulatory skills. Perceived self-efficacy determines how well students become self-regulated and contributes to the whole concept of self-regulated learning. As significant relationship between students’ ability to take on self-efficacy and their desire to learn autonomously for academic success is revealed, their participation in activities that improve a sense of self-efficacy can increase their self-regulated learning disposition.

**6.2 The effect of creativity on self-regulated learning**

A significant relationship is also revealed between creativity and self-regulated learning, providing a way of understanding that creativity is associated with the development of capacities, skills and other areas of self-regulated learning settings. Taking this into account, students need educational platforms to allow them to organize their own learning, diagnose their own learning needs while recognizing their own competences and self-evaluating learning outcomes.

1. **CONCLUSION & SUGGESTION**

The statistical findings present evidence of the context of self-efficacy and creativity that contributes to the setting of self-regulated learning with the following conclusions at the end of the study:

1. The extent to which self-efficacy has a positive and significant effect on self-regulated learning indicates the respondents in general are aware of the concept and nature of self-efficacy in an educational sense with respect to educational aspirations toward self-regulated learning.
2. In a similar sense, examining the positive and significant relationship between creativity and self-regulated learning reflects on the understanding that the process navigating toward creative learning, i.e., the embodiment of new learning strategies and the implementation of new methods, tools and content, benefits students’ potential to fully embrace self-regulated learning.

The study has explicit goals to promote the uptake of self-efficacy and creative practices across self-regulated learning landscapes. This needs substantial suggestions for the effectiveness of large-scale studies and system-wide policies in the future.

1. The understanding of the discourses and evidence templates in this study may become a foundational basis of future studies to observe self-regulated learning in a more detailed and representative manner.
2. The study has an explicit emphasis on the abilities among students of UPBJJ-UT Makassar to explore the dynamics of self-efficacy and creativity within the context of self-regulated learning.
3. An emphasis is also given to decision- and policy-making process which requires teachers and instructors of UPBJJ-UT Makassar to assimilate self-efficacy and creativity into students’ established day-to-day self-regulated routines.