

# Optimization of Learning During Pandemic: The Correlation Analysis of Character Strengths and Self-regulated Learning

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## ABSTRACT

As the Covid-19 pandemic changes student methods in the learning process, students are asked to help themselves to regulate their studying process. One of the internal factors that could influence the positive experience in independent learning (self-regulated learning) is character strengths. This research aims to examine the relationship of Character strengths to Self-Regulated learning that could support the online learning process of high school students in Makassar city. This research was conducted using a Cross-Sectional Survey Design with the VIA Youth-96-character strengths scale and self-regulated learning scale as measurement tools. The sample in this research is 37 high school students who are currently studying online and live in Makassar (76% female, 24% Male; 73% from Public Schools, 27% from Private Schools). Bivariate Pearson' Correlation Analysis using Statistical Package for Social Sciences (SPSS) version 27 shows six characters strength significantly correlated with Self-Regulated Learning, that is Perseverance ( $R=.79, p < .001$ ), Love of learning ( $R= .70, p < .001$ ), Leadership ( $R= .70, p < .001$ ), Perspective ( $R= .61, p < .001$ ), Vitality ( $R= .57, p < .001$ ), and Curiosity ( $R= .52, p < .001$ ). Thus, those six characters strengths are assumed as essential internal factors that can increase students' Self-Regulated Learning. Based on that, it can be concluded that Perseverance, Love of learning, Leadership, Perspective, Vitality, and Curiosity can support high school students in Makassar City in designing self-regulated learning that can help them online learning processes during the pandemic.

**Keywords:** *character strengths, self-regulated learning, online class, high school student*

## 1. INTRODUCTION

The shift of the learning system that was originally offline to online caused by the COVID-19 pandemic established various impacts for students. Students are required to prepare facilities that support the online learning process, such as laptops and mobile phones, and internet access [1]. In addition to external demands, students must be more disciplined in collecting tasks with various deadlines given by teachers through online classroom facilities such as Google Classroom [2]. Students are also required to control the self-learning process that is no longer dependent on teachers [3]. To familiarize themselves

in following the changes in the learning process, students should have the ability to regulate themselves in following the online learning process, namely self-regulated learning.

Self-regulated learning is the ability of individuals to regulate cognition, metacognition, and motivation to plan, monitor, control, and evaluate themselves in conducting learning activities [4,5]. Self-regulated learning has an important role in the learning process because, with self-regulated learning, students can be focused on learning independence, such as compiling learning schedules, setting goals in learning, and independently looking for the information needed [6].

Self-regulated learning helps high school students improve motivation and academic achievement [7], to support the online learning process. So, it can be said that self-regulated learning is the ability of individuals to stimulate and motivate themselves to do independent learning by making plans, monitoring, controlling, and evaluating themselves.

Self-regulated learning impacts students in terms of learning achievement and student success in achieving their goals [8]. Lehmann, et.al. [21] explain that it is important for students to have self-regulated learning in following the online learning process, with a high level of student autonomy and a low teacher attendance rate [9]. However, many high school students have not been able to follow the online learning process optimally because they have low self-regulated learning [10].

One internal factor influencing positive self-learning experiences is character strengths [11]. Character strengths have different levels, so each individual has a unique character strengths profile [12]. According to Peterson and Seligman, there are 24 types of character strengths [13]. This present study explores and examines the correlation of character strengths with self-regulated learning. The relation of it might cover the relationship with a person's ability to obtain and understand information to live a good life, the individual's desire to achieve goals in an external and internal conflict, and the ability to control oneself. Thus, it can maximize the online learning process for high school students. This research is also to provide a gap knowledge understanding of self-regulated learning that is appropriate and can be applied by high school students to be able to control themselves under the online learning process during pandemic times.

## **2. METHOD**

### **2.1. Procedures and Samples**

The present study was conducted using a cross-sectional survey design using a quantitative approach. The data was collected thru an online questionnaire using a google online form that was shared directly with the participant for 1 week. The sampling method in this present study was purposive sampling, with the criteria of the respondent are high school students in Makassar city and attending online school.

A total of 100 high school students completed the online questionnaires. From the total 100 responses, only 37 were selected for the analysis since 63 responses did not meet the sample criteria, which is not the residence of Makassar City. The 37

respondents counted from 9 male students (24% of total respondents) and 28 female students (76% of total respondents) aged 15-19 years.

### **2.2. Measurement**

The measurements in this study were conducted using questionnaires consisting of 3 parts; namely, the first part contains questions related to demographics, the second part contains a scale that measures character strengths, and the last part contains a scale that measures self-regulated learning. In addition, there are three questions related to general knowledge in each section to filter out respondents who fill in the original.

*Character strengths* were measured using the Value-In-Action (VIA) Strength Classification System. The version of VIA that was used in this study was VIA-Youth that already been adapted into Bahasa by researchers. The VIA-Youth consist of 96 items that measure 24 characters from six core virtues with the Cronbach' alpha value above .60 on every character.

*The Self-Regulated Learning Scale* was used to measure students' self-regulated learning. The scale that was used in this study has already been adapted into Bahasa. The self-regulated learning scale consists of 54 items that measure three dimensions of self-regulated learning: forethought, performance/volitional control, and evaluation. In this study, the validity of the Self-Regulated Learning Scale measure showed a moderate correlation with Cronbach' Alpha value of 0.90.

### **2.3. Data Analysis**

The data from the online questionnaire are selected and cleaned using Microsoft excel, then analyzed using SPSS ver.27 for windows. The data analysis begins with descriptive analysis to examine the data dispersion and central tendency. The data was then analyzed with a multivariable correlation analysis of six-character strength and self-regulated learning. As the data was not normally distributed, the data were analyzed using Pearson' Correlation Analysis to find out character strength that significantly correlates with self-regulated learning of high school students in Makassar City.

**3. RESULT**

**Table 1.** Rank Analysis based on Mean

Rank	Character Strength	Mean
1	Spirituality	4.74
2	Hope	4.34
3	Judgment (Open-Mindedness)	4.32
4	Teamwork	4.26
5	Kindness	4.20
6	Love of Learning	4.14
7	Appreciation of Beauty	4.10
8	Bravery	4.04
9	Gratitude	3.98
10	Forgiveness	3.91
11	Perseverance	3.87
12	Fairness	3.84
13	Curiosity	3.84
14	Prudence	3.84
15	Honesty (Integrity)	3.76
16	Social Intelligence	3.70
17	Humility	3.68
18	Zest (Vitality)	3.52
19	Creativity	3.51
20	Humor	3.41
21	Leadership	3.40
22	Perspective	3.39
23	Self-Regulation	3.19
24	Love	3.10

*N=37; Mean=The average value of character strength*

Table 1. presents data on the character strengths of high school students in Makassar City based on the mean (N=37). As shown in table 1, the character strengths of high school students in Makassar City with the highest score based on mean is spirituality (M=4.74). Character strengths in high school students in Makassar City with the lowest score based on the mean are love (M=3.10).

**Table 2.** Pearson' Correlation Analysis

Character Strength	R	p-value
Perseverance	.798	< .001
Love of Learning	.708	< .001
Leadership	.702	< .001
Perspective	.619	< .001
Zest (Vitality)	.565	< .001
Curiosity	.524	< .001

Teamwork	.475	.003
Love	.455	.006
Prudence	.447	.006
Kindness	.443	.006
Bravery	.413	.011
Honesty (Integrity)	.392	.016
Social Intelligence	.376	.022
Appreciation of Beauty	.355	.031
Self-Regulation	.290	.810
Forgiveness	.243	.147
Spirituality	.204	.227
Humility	.116	.495
Humour	.087	.609
Fairness	-.416	.100
Judgment (Open-Mindedness)	-.426	.009
Creativity	-.538	< .001
Gratitude	-.666	< .001
Hope	-.303	.068

*N=37; R=Coefficient Correlation.*

Table 2. presents the correlation data between character strengths and self-regulated learning using Pearson Correlation Analysis shows six character strengths significantly correlated with Self-Regulated Learning, that is Perseverance (R=.79, p < .001), Love of learning (R= .70, p < .001), Leadership (R= .70, p < .001), Perspective (R= .61, p < .001), Vitality (R= .57, p < .001), and Curiosity (R= .52, p< .001).

**4. DISCUSSION**

This research aims to find out the character strengths that support self-regulated learning of high school students in Makassar city during the pandemic. This research involved 37 respondents who fit the research criteria, namely high school students domiciled in Makassar and were attending online school during the pandemic. This study showed that the six-character strengths with the highest correlation coefficient values were Perseverance, Love of learning, Leadership, Perspective, Vitality, and Curiosity.

Of the six-character strength, Love of learning might be the fittest character for high school students that hold an online class. Love of learning is a character strength that describes how high school students engage in new information and skills in

general and the interest of well-developed individuals in a particular piece of content. High school students who have a general nature like to learn will be positively motivated to acquire new skills or knowledge to build the skills and knowledge they already possess. Krapp & Fink states that individuals with the love of learning characters typically experience positive feelings in the process of acquiring skills, satisfying curiosity, building on existing knowledge, and learning something completely new [13].

To obtain a deeper discussion about the correlation between character strength and self-regulated learning, it can be reviewed through theoretical explanations. Peterson and Seligman [13] explain that character strength is a positive trait possessed by an individual that refers to internal processes. Character strength can be generated, trained, and developed in individuals. Character strength owned by high school students in Makassar City who are participating in online learning encourages students to respond more positively to the dynamics that occur during the online learning process because the positive traits of character strength can help in the achievement of happiness.

Character strengths are related to a person's well-being, such as life satisfaction, happiness, better health, the ability not to be prone to stress, the ability to solve a problem, success, and longevity [14]. Character strengths have a significant relationship with high levels of well-being and well-being positively correlated with life satisfaction [14]. Therefore, character strengths are formulated to create a good life for oneself and others [15].

Character strengths have a positive relationship with five indicators of happiness, namely positive affection, engagement, quality relationships, meaningfulness, and goal achievement [15]. Martinez-Marti & Ruch [15] argue that character strengths can help a person predict the level of resilience to support the adaptation process in difficult situations. In addition, according to Douglas & Duffy [15], optimized character strengths can develop satisfaction in a person's life. Individuals and organizations can benefit from making the best use of character strengths because character strengths are the same as personality, which tends to be stable all the time [15].

Peterson and Seligman [13] state that individuals can achieve deep emotional well-being and satisfaction if individuals can understand character strength by developing the potential or strength they have in everyday life. Character strength has a

positive relationship with the well-being development of individuals. In everyday life, a positive relationship between these two things is very important for the individual because it refers to the full control of the individual self for growth and self-development to achieve the goal independently so that the appearance of well-being and self-appreciation [16]. Emotional support, appreciation, information, service, material support, and support from the social environment that individuals receive from everyday life can develop character strength that exists in individuals and can help solve problems [17].

Being a human with character and strength is an important part of life. Therefore, educational institutions have an important role in training and developing the character and strength possessed by students [17]. Park, Peterson, & Seligman [22] explain that strength of character has to do with student popularity. Character strengths not only make students happier, healthier, and socially connected but rather help students achieve better grades at work.

There is a strong relationship between several dimensions of character strengths to student behavior in the classroom that affects student success in school [18]. Based on research conducted by Senowarsito [19] showed that character building in educational programs has a great influence on the decline of self-destructive behavior, increasing the ability to do planning by establishing effective solutions to a problem, improving self-image, increasing the ability to adapt in the environment, improvement in acquiring knowledge, to improve behavior in the classroom. The education path is a preventive vehicle that is considered quite capable of being used as a facility for developing student character because, through education, new generations will be formed better [20].

Based on Prasetyo & Ratnaningsih [16], character development in students needs to be applied in education. Students need to be facilitated to be able to interpret every action that has been done, understand the power they have, and do things that have a big impact on themselves. The strengths that students can possess are the material of character education to enable the formation of broader knowledge and skills.

## **5. CONCLUSION**

This research was conducted to find out the picture of self-regulated learning of high school students in Makassar City who follow online learning and to find out the relationship of character strengths

with self-regulated learning that helps high school students in Makassar City in following the online learning process optimally. This study showed that character strengths have a relationship with the self-regulated learning of high school students in Makassar City during the online learning process. So that high school students in Makassar city should be able to develop character strengths to be able to compile and determine self-regulated learning that fits them during the online learning process.

### **AUTHORS' CONTRIBUTIONS**

All authors have conceived the idea of the research's topic and designed the analysis. All authors are collected data, contributed analysis tools, performed the analysis, and elaborated discussion results. All authors discussed the result and contributed to the final manuscript.

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