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Research Article

Adaptation Of the Growth Mindset Scale into Indonesian Language and Culture

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Abstract

This study aims to adapt a growth mindset measurement tool into Indonesian language and culture and test its validity and reliability. The adaptation process followed the International Test Commission guidelines. Respondents were 310 people aged 18–25 years old spread across various regions of Indonesia. The results of Confirmatory Factor Analysis (CFA) showed a good fit of the measurement model (RMSEA = 0.062; CFI = 0.948; TLI = 0.928; SRMR = 0.040). Eight items in the scale were declared valid (Aiken's V > 0.72) and reliable with a McDonald's Omega value of 0.774. These findings indicate that the adapted measurement tool is suitable for measuring growth mindset in young adults in Indonesia. This instrument can be used in assessments, research, and psychological interventions aimed at increasing resilience and motivation in facing the challenges of early adult development.

Keywords: Early Adulthood, Growth Mindset, Reliability

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INTRODUCTION

In the 21st century, everyone faces increasingly different challenges compared to previous generations. Today, individuals face increasingly complex life challenges, such as increasing workplace pressure, rapid social change, the loss of loved ones, and rapid technological advancements. All of these factors can significantly impact mental health and lead to spikes in stress, anxiety, and depression. In these circumstances, maintaining and

strengthening mental health is crucial for individuals to better cope with life's various pressures.

According to the WHO (2013), mental health is a state in which an individual is able to understand their own capacities, cope effectively with life's pressures, work effectively, and make a positive contribution to their environment. Based on a national survey conducted by the Indonesia-National Adolescent Mental Health Survey (I-NAMHS) in 2022, it was found that approximately one in three Indonesian adolescents (34.9%), equivalent to nearly 15.5 million people, experienced mental health problems in the past year. Furthermore, one in twenty adolescents (5.5%), or approximately 2.45 million adolescents, were diagnosed with a type of mental disorder during the same period. However, only 2.6% of adolescents experiencing mental health problems sought help or counseling for emotional and behavioral issues in the past 12 months (Feigin, 2022; J. Liu, 2022; CY Wang, 2023).

If an individual has a mental disorder, it will disrupt their daily activities. Therefore, one way to help individuals cope with life is to adopt a growth mindset. Dweck and Yeager (2019) state that individuals have the capacity to develop, known as a growth mindset.(Bateman, 2023; Hatamizadeh, 2022; H. Liu, 2023)A growth mindset encourages individuals to develop healthy and adaptive ways of coping and tolerating anxiety, frustration, and disappointment, as well as developing resilience (Schroder, 2021). A growth mindset can make individuals more resilient and persistent in the face of challenges or difficulties because they are more likely to focus on effort-oriented strategies in their efforts to achieve their goals.

Individuals with a growth mindset are better able to cope with stress and symptoms of psychological illness. For example, when adolescents experience family stress, a growth mindset can alleviate stress and reduce the protective effects of externalizing behavior.(Cayubit, 2022; Lu, 2022; Rusticus, 2023). Much research on growth mindset has been conducted outside Indonesia. One study showed differences in mindset outcomes between men and women. Men tend to demonstrate passion and grit, meaning they exert more energy and willpower in pursuits and have strong interests. Meanwhile, women show a stronger relationship between grit and a growth mindset.

In Indonesia, research has begun in recent years, including examining the effectiveness of growth mindset training for high school students. The results indicate positive changes after students participated in two growth mindset training sessions. Students felt motivated to plan and achieve their future goals because they believed that the process and effort were more important than talent and intelligence alone.(Guo, 2022; Vergara-Rodríguez, 2022; Zauskova, 2022)Heslin et al. (2021) stated that individual talents can be developed over time as long as the individual is willing to make the effort to develop their potential and talents.

Previous research on growth mindset was conducted using the Mindset measurement tool designed by Sembiring (2017), which was then piloted on 145 students from the Faculty of Psychology at Maranatha Christian University aged 18-20. However, Midkiff et al. (2018) showed that the measurement tool developed solely from a student sample produced inaccurate constructs.

Various versions of measuring tools for assessing growth mindset have been available and published. Initially,(T. Liu, 2022; Shang, 2023; J. Xu, 2022)developed a scale called the "Implicit Theory of Intelligence," which later evolved into the Growth Mindset Scale. All items in the Growth Mindset Scale demonstrated reliability and validity values that met established standards. However, based on more in-depth psychometric testing, growth mindset should be measured as a separate construct from fixed mindset.(Deng, 2022; H. Liu, 2022; Traue, 2022). Sigmundsson and Haga (2024) constructed a Mindset measurement tool that was created separately and published in 2024. The respondents in this study were aged 16-85 years, totaling 723 participants.

This growth mindset measurement tool is suitable for use during the transition from adolescence to early adulthood. It allows educators and parents to provide appropriate interventions to monitor adolescents' readiness to face adult responsibilities and provide appropriate support for developing a growth mindset (Ramadhani, 2024). It can also help with coping with life changes, academic challenges, and developing a positive identity.(Alvarez, 2022; Sun, 2022; Zidi, 2023)If growth mindset measurement tools were available in Indonesia, they could be used in assessments or research related to growth mindset, with guaranteed validity and reliability. This is important because measurement plays a crucial role in psychological research. Without standardized psychological measurement tools, errors can occur, particularly in hypothesis testing.(Alemayehu, 2023; Iqbal, 2022; Quadir, 2022).

Research related to the development of measurement tools requires specialized studies to ensure they can become valid standards. Therefore, researchers took the initiative to adapt the growth mindset measurement instrument into Indonesian. This study aims to test the psychometric properties of the Indonesian version of the growth mindset measurement tool by demonstrating validity based on its internal structure using Confirmatory Factor Analysis.(Schneider, 2022; Shi, 2022; Zhang, 2022), in order to determine the most appropriate measurement model. It is hoped that the findings of this study will contribute to the development of research, particularly in the 18–25 age group. The transition period from adolescence to early adulthood is a major concern because at this stage, individuals are more vulnerable to mental health problems related to anxiety and uncertainty about the future, such as careers, relationships, and social life.

Various studies have shown that the application of psychological theories is not always universally applicable in every region. Psychological theories are often associated with cultural limitations, local values, and validity that are not always widely applicable. These limitations mean that a psychological theory may be less relevant when applied in different regions or cultural settings. Therefore, it is crucial to adapt measurement tools to avoid cultural bias and use valid data.(Barrett, 2023; Wannapiroon, 2022; Weerakoon, 2022).

Mindset is defined as a pattern of thinking or perspective used by a person to understand and assess the world around them. This mindset is a self-belief that falls on the spectrum between a growth mindset and a fixed mindset. According to Dweck and Leggett (1988), a fixed mindset is the view that an individual's qualities are fixed and unchanging, while a growth mindset believes that a person's basic qualities can be improved through effort and dedication. Conversely, individuals with a fixed mindset believe that intelligence, talent, and character are traits that are predetermined at birth and cannot be changed. Those with a growth mindset believe that potential can be developed by facing increasingly difficult challenges.

People with a growth mindset believe that failure is not the end, but rather a sign to increase their efforts and seek better methods for the next time. They are less likely to give up or judge themselves negatively when they don't reach their goals, as they emphasize the importance of the learning process and hard work rather than focusing solely on the end result. A growth mindset emphasizes that abilities can be developed through practice, and that success is not just about demonstrating ability without difficulty, but also about persevering in the face of difficult challenges. Furthermore, individuals with this mindset view failure as an opportunity to learn and grow.(Miao, 2022; Turk, 2022; J. Wang, 2022).

According to Dweck (2006), there are four main components in the concept of growth mindset: a) the belief that a person's intelligence, talents, and character can continue to develop. Individuals believe that their potential, such as intellectual abilities, talents, and personal traits, can change and be improved through consistent effort; b) the view that facing challenges, difficulties, and failures is an important part of the self-development process. Individuals

realize that the journey to success is often marked by obstacles and failures, which are considered learning experiences; c) the belief that effort and hard work are crucial to achieving success. Individuals strive persistently and believe that their hard work will produce positive results, and are able to avoid negative thoughts related to failure; d) the belief that criticism and input from others are useful forms of feedback for self-improvement. Individuals view criticism as an opportunity to learn and correct mistakes in order to achieve success.(Aghapour, 2023; Z. Xu, 2023; Yu, 2022).

Adapting a measurement instrument involves a series of processes that go beyond translation to preparing the instrument to suit the new language and culture. This process begins with assessing the suitability of the instrument's construct, continues with the translation stage, and ends with empirical testing to ensure the psychometric characteristics of the adapted instrument (Hambleton et al., 2005). There are three main stages in adapting a measurement instrument: understanding the socio-cultural context in which the instrument will be used, translating the original instrument into the target language, taking into account the local socio-cultural environment, and producing a measurement instrument in the new language that has the same psychometric characteristics as the original version.

According to the American Educational Research Association et al. (2014), validity refers to the level of evidence and theory supporting the interpretation of test results in the context of their use. Validity can also be defined as the accuracy in describing the aspects being measured and the accuracy in understanding even the slightest differences in scores that arise from the test. Proof of validity is needed to assess how accurate the statements given to respondents in the questionnaire are (Azwar, 2018). According to the American Educational Research Association et al. (2014), there are five types of validity evidence that must be obtained for a measurement instrument to be considered valid, namely: (1) evidence related to test content, (2) evidence related to the response process, (3) evidence of internal structure, (4) evidence of relationships with other variables, and (5) evidence of the consequences of using the test. The consistency of scores obtained by subjects tested with the same instrument or equivalent instruments under different conditions is an important indicator of this validity.(Qiao, 2023; Sauer, 2022; Talukdar, 2022).

Azwar stated that reliability refers to the stability of a measurement instrument in research, where a high reliability value indicates that the measuring instrument is reliable. The core concept of reliability is the level of confidence in the measurement results obtained. Two methods often used to test reliability are Cronbach's Alpha and McDonald's Omega. McDonald's Omega is presented as an alternative that attempts to overcome the limitations of Cronbach's Alpha by providing more flexibility, because it is able to account for specific variance in each item as well as differences in factor loadings, so that reliability assessments become more accurate.

RESEARCH METHOD

This research uses quantitative methods as explained by(Christensen, 2007)namely a systematic and objective scientific approach to collecting and analyzing numerical data in order to collect and analyze relationships between variables statistically.This research uses the method as describedthrough stages:forward translation, synthesis, backward translation, expert judgment, readability test, data collection from respondents aged 18–25 years, and validity analysis usingConfirmatory Factor Analysis (CFA)AndMcDonald's Omegafor reliability.

The variable examined in this study is growth mindset. Growth mindset refers to the belief that abilities can be developed through practice, and that success is determined not only

by an individual's apparent, effortless ability but also by the ability to persist in completing challenging tasks.

Demographic Description by Gender and Age

Characteristics	Frequency	Percent
Gender		
Woman	224	72.2%
Man	86	27.7%
Total	310	100%
Age		
18-19	27	8.71%
20-21	116	37.4%
22-23	125	40.3%
24-25	42	13.5%
Total	310	100%

RESULTS AND DISCUSSION

First, the researcher requested permission directly from Hermundur Signmundsson, the scale developer, via email. After obtaining permission to adapt the growth mindset measurement tool, the next step was to translate it into Indonesian. The original version of the growth mindset measurement tool was translated by two psychologists residing in Indonesia with a TOEFL score of at least 500. Synthesis was conducted to unify the final results of the two independent translations, following discussions with the researcher. The forward versions from each translator were combined into a final translation, which was given to a linguist for the backward process, conducted by a translator who had lived in Australia during his master's studies.

Validity Based on Test Content

The content validity test in this study used Aiken's V formula. Validity assessment used a 5% significance level with a minimum criterion of 0.72. All analyzed growth mindset items were declared to have passed the test. Thus, 8 items were declared valid and can be used in further analysis.

Table 2. Statistical Values of Growth Mindset Measurement Tools

	Item	M	Elementary School	*Skew*	*Kurt*	V	FL
1	I understand that with effort, I can improve my skills and knowledge.	4.54	0.56	-0.77	-0.42	0.86	0.35
2	I can influence and change my general self-development	4.13	0.63	-0.27	0.06	0.77	0.42

3	I can change my skills and knowledge through Practice	4.45	0.58	-0.50	-0.67	0.72	0.53
4	I love facing challenges and trying new things.	3.99	0.84	-0.58	-0.68	0.88	0.53
5	I understand that learning is my goal	4.02	0.75	-0.41	-0.17	0.72	0.69
6	Effort makes me stronger	4.37	0.65	-0.70	0.05	0.88	0.63
7	I want to spend my time developing my skills and knowledge.	4.23	0.69	-0.47	-0.41	0.83	0.60
8	I am confident in the skills and potential that I have.	4.21	0.79	-0.77	0.04	0.94	0.55

Description. M =mean; SD = standard deviation; Skew = skewness; Kurt = Kurtosis; V = V coefficient; FL = standardized factor loading

This table shows the statistical description of the eight items in the growth mindset measurement tool that has been adapted into Indonesian Language and Culture. The statistics analyzed include the average value (mean), standard deviation, skewness, kurtosis, content validity (Aiken's V), and factor loading (FL) of each item. The mean value (M) for each item ranged from 3.99 to 4.54, with the highest value in item 1 (“I understand that with effort, I can improve my skills and knowledge”) at M = 4.54, indicating that most respondents strongly agreed with the statement. The lowest mean value was in item 4 (“I like facing challenges and trying new things”) at M = 3.99, which is still in the high category.

The standard deviation (SD) values ranged from 0.56 to 0.84, indicating that the distribution of respondents' answers was relatively homogeneous. The item with the largest distribution of responses was item 4 (SD = 0.84), while the most homogeneous item was item 1 (SD = 0.56). The skewness values for all items ranged from -0.27 to -0.77. A negative skewness value indicates that the data distribution is skewed to the right, meaning that most respondents gave answers in the higher categories. The items with the highest skewness (most skewed to the right) were items 1 and 8 (skew = -0.77), while the closest to a symmetrical distribution was item 2 (skew = -0.27). Meanwhile, the kurtosis value is in the range of -0.68 to 0.06, which indicates that the data has a distribution form that is close to normal. There is no kurtosis value that exceeds the limit of ±2, so it can be said that the distribution of answers from all items does not experience extreme deviations.

To test the content validity, Aiken's V analysis was used, with the values obtained ranging from 0.72 to 0.94. All items exceeded the recommended minimum value of 0.72, meaning that all items were content-valid according to expert assessment. The item with the highest content validity value was item 8 (V = 0.94), and the lowest (but still valid) values were found in items 3 and 5 (V = 0.72).

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is used to test the extent to which the measured variables fit a predetermined factor structure (Hair et al., 2014). In CFA, Goodness of Fit analysis aims to indicate the level of feasibility and accuracy of the overall model. In this study, several Goodness of Fit indicators were used. The indicators measure the fit of the model to the data: X2 (311) = 488.677 $p < 0.001$; RMSEA = 0.062; CFI = 0.948; TLI = 0.928; SRMR = 0.044, as can be seen in Table 3.

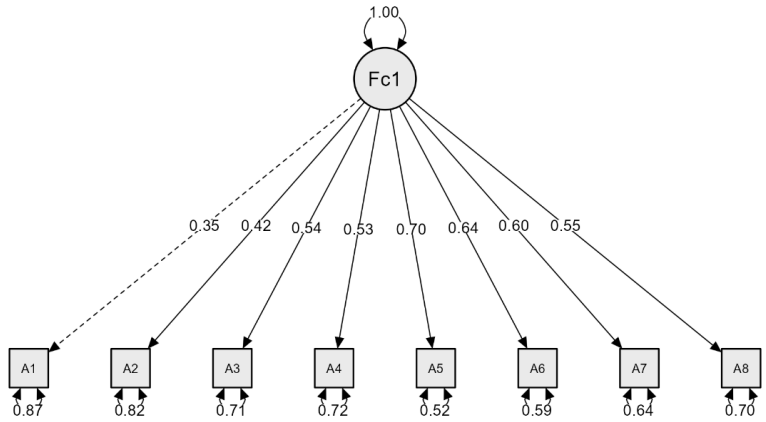
Table 3. *Goodness of Fit*

Fit indices

Index	Value	
Root mean square error of approximation (RMSEA)	0.062	Fit
Comparative Fit Index (CFI)	0.948	Accepted
Tucker-Lewis Index (TLI)	0.928	Accepted
Standardized root mean square		

The growth mindset measurement model in this study can be categorized as overall fit because all Goodness of Fit indicators meet the commonly used model feasibility criteria (Hair et al., 2014; Hu & Bentler, 1999). The growth mindset model can be seen in Figure 1. In addition, the CFA results also confirmed that the growth mindset scale structure consists of one factor (unidimensional), meaning that all items consistently measure one construct. Finally,The factor loading (FL) results from the Confirmatory Factor Analysis (CFA) analysis show that all items have a significant contribution to the growth mindset construct, with factor loading values ranging from 0.35 to 0.69. The highest value is found in item 5 (FL = 0.69), while the lowest value is found in item 1 (FL = 0.35). All factor loading values exceed the minimum threshold of 0.30 (Hair et al., 2014), so all items can be declared construct valid and suitable for use.

Figure 1. *Measurement Model of Growth Mindset Measurement Tool into Indonesian Language and Culture*



The measurement model in this study consists of one latent factor (Fc1) that represents the growth mindset construct and consists of eight indicators (A1–A8). The plot model is visualized in the form of a path diagram as shown in the figure above. Each indicator has a factor loading value that shows how strong the relationship is with the growth mindset latent factor. Based on these results, all indicators have factor loading values above the recommended minimum limit (≥ 0.30), so it can be concluded that all items contribute significantly to the

growth mindset construct. The highest value is found in item A5 (0.70), while the lowest value is found in item A1 (0.35).

All indicators also showed acceptable error variance, indicating that a significant portion of the variance in each indicator can be explained by the latent factor. Overall, this model plot indicates that the single-factor structure of the growth mindset measurement tool has adequate fit and can be used in the Indonesian cultural context.(Nature, 2022; Barrot, 2022; X. Wang, 2022).

The reliability test used McDonald's Omega, which is considered more accurate and less biased than other estimation methods, provides reliability values for each specific factor or dimension. According to McDonald's Omega, the value is in the range of 0-1, where the closer to 1, the higher the reliability. The results show a reliability value of 0.774, which is above the minimum threshold of 0.70. This indicates that the growth mindset measurement tool in the Indonesian version is reliable and can be relied upon to measure the intended construct in the 18–25 age group.

CONCLUSION

This study successfully adapted the growth mindset measurement tool from Sigmundsson and Haga (2024) into Indonesian language and culture, involving forward-backward translation, expert judgment, readability testing, and analysis using Confirmatory Factor Analysis (CFA) and McDonald's Omega reliability. The analysis results indicate that the eight items in this measurement tool scale can be declared valid and reliable for measuring growth mindset in individuals aged 18–25 years in Indonesia.

The results of this study strengthen the cross-cultural validity of the growth mindset construct and demonstrate that beliefs about the ability to develop through effort and learning are universal, yet require contextual adaptation to suit Indonesian cultural characteristics. This contributes to the development of psychometrics in the Indonesian language and cultural context.

This adapted measurement tool can be used by researchers, educators, counselors, and psychology practitioners as an assessment tool to identify growth mindset levels in early adulthood, particularly in the context of higher education and self-development. The use of this measurement tool can help design more targeted psychological interventions to increase resilience, motivation, and readiness to face the challenges of the transition to adulthood.

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