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Validation of flourishing scale PERMA on prospective student educators

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ABSTRACT

This study aims to validate the growth scale in the context of educational students. This scale is based on Seligman's PERMA theory, which includes five dimensions: positive emotion, engagement, relationships, meaning, and achievement. The research method used a survey involving 305 students of the education study program aged 18–25 who were selected using the non-probability sampling method with the convenience sampling type. Data were analyzed using the Rasch Model to determine the nature of the psychometric development scale. The analysis showed a 36.1% unidimensionality, indicating a good ability to measure the development construct. As many as 35 of the 55 items were declared valid after item fit and demographic bias analysis. The reliability value is high, with a personal reliability coefficient of 0.87 and an item reliability coefficient of 0.99. Internal consistency is also strong, with a Cronbach's Alpha of 0.90. Wright Map analysis shows that the level of item difficulty is below the student's ability, so the scale is easy to apply. This study confirms that the growth scale is considered relevant to measure the growth of prospective educator students. Further development is recommended to respond to cross-cultural issues so that the scale makes more sense in the context of higher education.

Keywords: *education students, flourishing, instrument validation, mental health, PERMA*

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INTRODUCTION

Over the past few decades, research on happiness and well-being has focused on understanding why individuals feel happy and well-being. Two main perspectives, hedonic and eudaimonic well-being, are often discussed to gain a deeper understanding of these concepts. The hedonic perspective focuses on life satisfaction and the balance between positive and negative affect, while eudaimonic well-being encompasses meaningful social functioning and a sense of purpose in life (Diener et al., 2010; Ryff et al., 2001). The eudaimonic perspective also emphasizes the importance of self-actualization and positive relationships with the social environment (Ryff et al., 2001). There is no universal agreement on the difference between eudaimonic and hedonic well-being.

To some extent, eudaimonic well-being focuses on the attainment of pleasure and the avoidance of pain, while eudaimonic well-being focuses on the level of self-realization (R. M. Ryan & Deci, 2003). Nevertheless, many researchers agree that hedonic and eudaimonic well-being are important dimensions of well-being. These two perspectives complement each other in forming a more holistic concept of flourishing, including happiness and meaningfulness of life (Diener et al., 2010; Ryff & Singer, 2004). Flourishing is considered the pinnacle of well-being because it integrates positive emotions, engagement, supportive relationships, purpose in life, and achievement (Seligman, 2016). In a broader context, flourishing can also capture social and sustainability

dimensions, making it relevant to understanding collective well-being (Chen et al., 2022). Therefore, understanding flourishing as a combination of individual and social well-being is essential for efforts to improve the quality of life of society as a whole (Keyes et al., 2015).

The term flourishing was coined by Keyes, who developed three measurement domains, namely positive relationships, meaning or purpose, and self-acceptance or self-esteem (Corey Keyes, 2003). The word "flourish" comes from the Latin "flor", which means flower, and from the Indo-European "Bhlo", which means blooming or to bloom. Flourishing in everyday use is centred on successfully realizing one's potential (either spiritually, developmentally, or economically) and achieving or contributing significantly to society (Gokcen et al., 2012). According to Seligman, the goal of positive psychology related to the theory of well-being is to increase flourishing in one's life (Austin, 2017). Previous research on the PERMA flourishing scale construct shows this approach is very relevant in education. The PERMA model is used as an instrument to measure well-being holistically, covering the emotional, social, and meaningful dimensions of an individual's life (Khaw & Kern, 2014; Seligman, 2016). Individuals who can fulfil these five elements tend to have meaningful lives and enjoy optimal well-being (Slavin et al., 2014). Butler and Kern developed the PERMA Profiler as a flexible measurement tool validated in various populations, including college students (Khaw & Kern, 2014). In addition, empirical research shows that the PERMA Profiler flourishing scale can be applied to populations in Indonesia, with recommendations to adjust the content to suit the local cultural context. Flourishing is synonymous with high levels of mental well-being and symbolizes mental health (Huppert & So, 2009; Keyes, 2002; Ryff et al., 2001). Cross-sectional, longitudinal, and experimental studies have shown that high well-being is associated with a variety of positive outcomes, such as better learning, increased productivity and creativity, more harmonious interpersonal relationships, pro-social behaviour, and better health and life expectancy (Chida & Steptoe, 2008; Dolan et al., 2008; Huppert & So, 2009; Villieux et al., 2016). Individuals in a flourishing state view every life experience as meaningful, leading them towards achieving their life goals, having positive relationships with others, and making contributions to society (Huppert & So, 2009).

Although people have sought well-being and the “good life” since ancient times, the benefits of measuring well-being, especially flourishing, have only recently been suggested (Bohlmeijer et al., 2015). The Flourishing Scale was first operationalized using the concept of a mental health continuum developed by Keyes (Keyes, 2002). Subsequently, Diener and colleagues introduced the Flourishing Scale (FS) to measure well-being, focusing on indicators such as happiness, mental health, and psychosocial functioning (Diener et al., 2010). Seligman later expanded this instrument to include the five elements of PERMA, namely Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment, as a basis for a more comprehensive measure of well-being (Seligman, 2016). The PERMA Flourishing Scale has been adapted and validated in various countries, such as Saudi Arabia (Lambert D’raven & Pasha-Zaidi, 2016), Portugal (Mendes et al., 2022), Indonesia (Vivekananda & Polii, 2022), China (Yang & Saad Mohd, 2021), Germany (Wammerl et al., 2019), Hong Kong (Lai et al., 2018), Russia (Didino et al., 2019), Malaysia (Shanmugam & Hidayat, 2022), Japan (Watanabe et al., 2018), Spain (Checa et al., 2018), Brazil (de Carvalho et al., 2023), Australia (J. Ryan et al., 2019), and Turkey (Eliüşük, 2018). These studies show that this measurement tool consistently reveals the concept of flourishing across cultures. In addition, the PERMA flourishing scale has also proven flexible to be adjusted to certain cultural contexts without losing its main structure.

Although the PERMA flourishing scale has been widely recognized in developing individual well-being, research on its application among education students is still limited. Most studies on the PERMA flourishing scale focus on general education or students without paying special attention to the unique characteristics of students who face unique academic and professional challenges (Przybylko et al., 2022). In addition, few studies have explored the influence of the PERMA flourishing scale on the development of teacher professional identity, which is an important aspect of education (Rachmawati & Lidyasari, 2023). The well-being of education students greatly contributes to the success of their learning and the development of their capacity as educators in the future (Nguyen, 2016). This study examines the empirical construct of flourishing in the context of education program students. It relates to how they interpret and experience positive well-being amidst academic demands and preparation to become educators. Although flourishing has been studied in college students (Fathi & Derakhshan, 2019), focusing on teaching students in Indonesia allows a deeper understanding of the factors influencing their flourishing. For example, there are high expectations of the role of teachers in Indonesia challenges in the education system, and local wisdom values that are expected to be internalized by prospective teachers (Kristiawan, 2015; Mulyasa, 2013). Thus, there is an urgent need to develop a PERMA flourishing scale appropriate to the characteristics and challenges typical of teaching students. It is important to provide a more accurate measurement tool that assesses their well-being and supports their capacity development as prospective educators.

METHOD

This study uses a cross-sectional survey approach because it intends to collect data in a certain period, allowing for the simultaneous analysis of the relationship between variables in different populations (Urbina, 2014). The PERMA flourishing scale is one of the psychological measurement instruments. Standardization of psychological measuring instruments is needed so that different scientists or researchers, even though working separately, can produce similar or at least equivalent results (Urbina, 2014). The stages of developing the PERMA flourishing scale include determining the operational construct, writing items, reviewing items, testing items through readability tests, selecting items, testing psychometric properties and finalizing the scale, which is described in the following explanation.

In this study, flourishing is defined as an optimal state of student well-being, consisting of five dimensions based on the PERMA model: Positive Emotion (feelings of happiness, gratitude, and optimism), Engagement (deep involvement in meaningful activities), Relationships (supportive and trusting social connections), Meaning (a sense of purpose and contribution), and Achievement (goal attainment that fosters confidence and self-worth).

The instrument designed using the Likert Scale format was chosen because this method is one of the most common approaches used in various studies in sociology, psychology, information systems, politics, and economics, and this scale is also one of the most popular and widely accepted measuring instruments in social science research (Taherdoost, 2019). A choice uses the Likert Scale with a semantic differential model with a range of answers from 0-5 (inappropriate inappropriate). This instrument consists of 55 items designed by considering aspects of readability, clarity, relevance to context, and avoiding elements of content knowledge and social bias or social expectations (Dosselle, 2005). Here are some examples of items that represent the five dimensions of flourishing.

Table 1
Example of item formulation

Dimention	No item	Statement
Positive Emotion	1	How important is it for you to feel happy when attending face-to-face lectures?
Engagement	22	How often do you take the initiative to look for book references for the courses you will be contracting?
Relationship	24	How often do your parents question your GPA?
Meaning	21	How often do you feel that final exams are meaningful in training your commitment as a student?
Accomplish-ment	5	How often do you achieve your independent task completion targets?

Rational validation was conducted by three experts with expertise in assessment, flourishing, and education to evaluate the clarity and appropriateness of the content of each item. In addition, a readability test was conducted involving five pre-service students from five different study programs to assess language clarity and behavioural content appropriateness. The validation results by experts and students showed that all 55 items were considered worthy of further testing. However, there were several minor revisions related to the composition of the wording, sentence length, and adjustment of the behavioural context.

This study involved 305 students of the education study program who were selected using the non-probability sampling method with the convenience sampling type.

Table 2
Sample Distribution

Faculty	F(x)
Faculty of Educational Sciences	157
Faculty of Technology & Vocational Education	24
Faculty of Sports and Health Education	22
Faculty of Economics and Business Education	20
Faculty of Social Science Education	14
Faculty of Arts and Design Education	8
Faculty of Mathematics and Natural Sciences Education	9
Faculty of Language and Literature Education	10
UPI Tasikmalaya Campus	19
UPI Sumedang Campus	12
UPI Serang Campus	10
Total	305

Convenience sampling was chosen because it is considered the most common and voluntary, considering the minimum number of participants estimated at five to ten times the number of items to be developed (Crocker, 2015). This study's participants were students in the emerging adulthood phase with an age range of 18-25 years. The selection of this age range is based on the consideration that emerging adulthood is a transitional stage from

adolescent development to adulthood (Arnett, 2000). The number of samples in this study has met the criteria required to ensure item calibration stability in the analysis using Rasch modelling (Linacre et al., 1994). At a confidence level of 95%, the stability of item calibration in the range of ±0.5 logit requires a sample size of between 64 and 144 respondents, with the ideal sample size being 100 participants (Linacre et al., 1994; Sumintono & Widhiarso, 2015).

The survey was conducted via a Google form submitted to the head of the study program, a student WhatsApp group, and flyers posted in each study program. After two weeks, the minimum sample size for the survey was not reached. Therefore, the questionnaire filling period was extended for an additional week. At the end of the extension period, as many as 305 eligible participants were finally reached, with details of 224 women and 81 men.

The main criteria in evaluating psychological measurement instruments are reliability, validity, level of ability, level of difficulty, and item suitability, which indicate the extent to which the instrument can produce accurate and reliable data. One approach to analyzing measurement instruments is through applying the Rasch Model, which offers in-depth analysis of various aspects such as unidimensionality, Wright's map, and item analysis that includes the level of difficulty and suitability of the items. The Rasch Model, which is implemented through software such as Winstep version 4.4.5, allows a more detailed evaluation of the match between items and respondents based on their abilities. This analysis provides information on the level of suitability of the rating scale and individual abilities, thus allowing a more comprehensive assessment of the quality of the instrument (Bond et al., 2020). This process also ensures that the instrument can measure the intended construct accurately and without bias, thereby increasing the validity and reliability of the results obtained.

RESULTS AND DISCUSSION

From the perspective of the Rasch Model, a good measuring instrument must provide adequate evidence of validity and reliability. Validity can be seen from the scale's accuracy, unidimensionality, difficulty level, item suitability, and potential item bias. Meanwhile, reliability includes information about item reliability, respondent reliability, and the relationship between items and respondents. Item analysis was carried out using Winstep software version 4.4.8. The results of evaluating the psychometric properties of the pre-service teacher professional identity scale are explained as follows.

Scale Accuracy Analysis

The scale accuracy test was carried out to assess the suitability of the scale used and did not cause doubt for respondents in providing answers. The rating scale test is a validity analysis to verify whether the rating of choices used in the instrument confuses respondents (Sumintono & Widhiarso, 2015). The table below shows the results of the scale accuracy analysis on the original scale of 0-10 and the new scale of 0-5.

Table 3
Scale Accurancy Analysis

Scale	Observed Count	Observed Average	Andrich Treshold
0	598	-0.13	NONE
1	1146	-0.06	-0.90
2	1775	0.08	-0.41
3	3613	0.42	-0.37
4	5782	0.89	0.21
5	3861	1.33	1.48

The results of the rating scale accuracy test show that each scale shows an increase in the logit value on the average observation, starting from logit -0.13 for scale 0, increasing to logit -0.06 for scale 1, increasing to logit 0.08 for scale 2, increasing to logit 0.42 for scale 3, logit 0.89 for scale 4, and logit 0.64 for scale 5. These results also align with the Andrich Threshold measure, which shows a sequence starting from None, -0.90, -0.41, -0.37, 0.21, and 1.48, so the 0-5 rating scale for the Flourishing Scale can be used. In principle, the Andrich Threshold measure moves from NONE to negative and then to positive (26;27).

Unidimensionality Analysis

Unidimensionality analysis is used to evaluate the construct validity of the developed instrument (Sumintono & Widhiarso, 2015), namely the flourishing construct. As the measures explain, the minimum requirement for unidimensionality is 20% in raw variance. It is better if it is more than 40%, and more than 60% is special. The following are the results of the unidimensionality test.

	Eigenvalue	Observed	Expected
Total raw variance in observations =	86.1291	100.0%	100.0%
Raw variance explained by measures =	31.1291	36.1%	39.1%
Raw variance explained by persons =	6.2213	7.2%	7.8%
Raw Variance explained by items =	24.9079	28.9%	31.3%
Raw unexplained variance (total) =	55.0000	63.9% 100.0%	60.9%
Unexplned variance in 1st contrast =	6.4125	7.4% 11.7%	
Unexplned variance in 2nd contrast =	4.1762	4.8% 7.6%	
Unexplned variance in 3rd contrast =	3.0191	3.5% 5.5%	
Unexplned variance in 4th contrast =	2.8135	3.3% 5.1%	
Unexplned variance in 5th contrast =	2.4047	2.8% 4.4%	

Figure 1
Unidimensionality Analysis

The results of the unidimensionality test showed that the raw variance explained by the measure was 36.1%, which means that the PERMA flourishing scale instrument could measure the flourishing construct in prospective teacher students by 37.4%. In addition, the variance the instrument cannot explain should ideally be below 15% for the first contrast to the fifth one, namely 12.2%, 8.1%, 5.6%, 5.2%, and 4.3%. Thus, the instrument constructs correctly measure prospective teacher students' flourishing construct.

Content Validity Analysis

In the Rasch Model approach, invalid items are called misfits. Three criteria determine item fit based on Outfit MNSQ, ZSTD, and Pt-Measure Corr. Namely, the accepted values are:

1) value 0.5 < Outfit MNSQ < 1.5
2) value -2.0 < Outfit ZSTD < +2.0,
3) value 0.4 < Pt-Measure Corr < 0.85 (26; 27).

To determine an invalid item (misfit), the item must be misfit in all three criteria (Aziz, 2010). The following is a summary of misfit items in each dimension of the Flourishing Scale in all three criteria.

Table 4.
Misfit Items Summary Based on Item Fit Order

Item Fit Criteria	Item Misfit					
	P	N	E	R	M	A
0.5 < Outfit MNSQ < 1.5	-	~~3, 22, 40~~	~~2~~	~~18, 24~~	-	~~23~~
-2.0 < Outfit ZSTD < +2.0	10, 20, 26, 44, 48	~~3~~, 6, 13, 16, ~~22~~, ~~40~~, 52	~~2~~, 4, 9, 15, 19, 36, 38	7, 14, ~~18~~, ~~24~~, 28, 45,47, 50	12, 21, 29, 35, 37, 42, 54	5, 17, ~~23~~, 27, 33, 34, 51
0.4 < Pt-Measure Corr < 0.85	1	~~3~~, 6, 11, 13, 16, ~~22~~, 31, ~~40~~, 52	~~2~~, 4, 15, 19	~~18, 24~~	12, 54	~~23~~, 55
Total item misfit	0 item	3 item	1 item	2 item	0 item	1 item

The crossed-out item numbers are items that do not fit all three criteria. Validity analysis obtained seven misfit (invalid) items, namely items number 3, 22, and 40 on the Negative Emotion (N) indicator, items number 18 and 24 on the Relationship (R) indicator, and item number 23 on the Accomplishment (A) indicator.

Item Bias Analysis

Item bias analysis was conducted based on respondent demographics, namely gender and semester—the differential item functioning (DIF) analysis results based on gender found 15 biased items. Biased items are indicated by a probability value of less than 5% (prob <0.05). The following table shows items that are biased by gender with a probability of less than 5%.

The following graph shows biased items based on gender visualized with a large distance at the three points for each PERMA flourishing scale item.

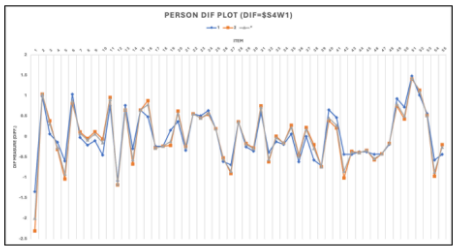

Figure 2
Item Bias Analysis

Based on the five stages of instrument testing, seven misfit items were found, 15 gender bias items, and 3-semester bias items, so the total valid items are 35 items, which can be used to measure flourishing in prospective teacher students. Overall, there are 63.36% valid items, namely 35 valid items out of 55 items compiled.

Reliability Analysis

Cronbach Alpha value of 0.90 (very good); and (4) the Flourishing Scale was able to break the sample very well into four groups of respondents seen from the person separation value of 2.59 and obtained the H value as a strata separator of 3.78 (rounded up to 4 groups of respondents), and consisted of 14 levels of difficulty of instrument items based on item separation of 10.01, obtained the H value as a strata separator of 13.68 (rounded up to 14 levels of item difficulty).

Wright Map Analysis (Person-Item Map)

The ability of prospective teacher students are spread in the range of -0.37 logit to +2.23 logit, with a mean of +0.70 logit, above the average logit item of 0.00. This means that the average ability of prospective teacher students is above the average difficulty level of standard Flourishing scale items. Meanwhile, the item difficulty level is spread from -2.00 logit to +1.43 logit, with a mean of 0.00. The average level of standard item difficulty is below the average ability level of prospective teacher students. Thus, the Flourishing Scale items are easily approved by prospective teacher students. The following is a visualization of the Wright Maps variable.

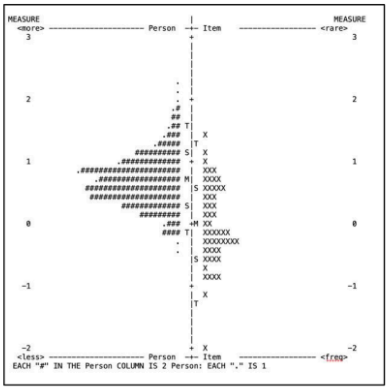

Figure 3
Person Item Bias Map

The purpose of this study was to adapt the development of the PERMA flourishing scale developed by Seligman according to the characteristics and challenges typical of students majoring in education. The PERMA flourishing scale is considered a universal concept in positive psychology that can measure important aspects of human well-being (Chen et al., 2022; Rule et al., 2024; Schotanus-Dijkstra et al., 2016; Seligman, 2016). PERMA has been widely used in international studies, especially to measure well-being among students and college students (Butler & Kern, 2016; Carmona-Halty et al., 2022; Romano, 2020). However, applying this instrument to a wider or different population requires additional adjustment and validation to ensure that this instrument is relevant in various cultural and social contexts (Butler & Kern, 2016; Fosha et al., 2024; Hone et al., 2015; Rando et al., 2023). Using the Rasch Model in this study showed that the instrument developed had adequate ability to measure the construct of flourishing in college students, with a unidimensionality value of 36.1%. This indicates that the PERMA dimensions measured are interrelated and reflect a complete concept of well-being. According to a study by Calderón Garrido et al. (2019), a unidimensionality value above 20% can be considered adequate for psychometric validity.

Furthermore, the instrument's validity is also supported by the implications of the measurement results for decisions taken in the educational context, such as improving the learning process of prospective teachers. In the analysis process, Winsteps software was used to estimate the unidimensional model, providing empirical validity that strengthens the application of this instrument in various higher education contexts (Chen et al., 2022; Santini et al., 2020; B. D. Wright & Linacre, 1994). Therefore, the unidimensionality achieved confirms the consistency of the measurement of flourishing in students and validates the relevance and effectiveness of the PERMA dimensions in the higher education environment. The content and construct validity of the PERMA flourishing scale instrument were ensured through evaluation by experts in psychology and education, which ensured that the items used were relevant and represented the constructs being measured. This expert assessment supports the

findings of a study by Kashdan et al. (2020), which emphasized the importance of constructing representation appropriate to the respondents' cultural and social context. In addition, item fit analysis using the Outfit MNSQ and Outfit ZSTD criteria revealed that seven items needed to be revised due to misfits to improve the instrument's accuracy in measuring flourishing. This aligns with previous research showing that misfit items can reduce the instrument's accuracy and cause bias in measurement results (Eckes et al., 2021).

Thus, revision of these misfit items is essential to ensure that the instrument can be used validly and reliably in the context of education students in Indonesia. This instrument also shows strong content validity. This validity is tested through expert judgment that assesses the relevance and representativeness of the items to the five PERMA components. In line with the guidelines (Bond et al., 2020) and the AERA and APA theories, high content validity indicates that this instrument truly measures the desired construct, not other external factors. Emphasis The is placed on the importance of ensuring that the items in an instrument represent the domain of the measured construct. With support from experts, this instrument was revised from 55 items to 35 items, where each item focuses on the real conditions experienced by students, thereby strengthening the relationship between the items and the PERMA construct and increasing accuracy in measuring student well-being. The reliability analysis of the PERMA flourishing scale instrument showed very good results, with Cronbach's Alpha reaching 0.90, indicating high internal consistency and can be relied on to measure student flourishing (George & Mallery, 2024). A high Cronbach's Alpha coefficient indicates that the items in the instrument consistently measure the same construct (Tavakol et al., 2011). The person reliability value of 0.87 indicates that respondents provided consistent answers.

In contrast, the item reliability of 0.99 indicates that the items in the instrument have strong internal consistency, which is the purpose of the measurement flourishing construct. This aligns with previous research by Varga et al. (2025), which also showed that instruments with high reliability, both at the person and item levels, can provide stable and accurate results in the context of psychological well-being. This indicates that this instrument produces consistent and reliable measurements by high-reliability standards for psychological instruments (Clark & Watson, 2019).

In addition, the grouping of respondents and items based on difficulty level (separation) indicates that this instrument is sensitive enough to distinguish individual levels of flourishing and can measure various levels of distress, as explained by Wright & Stone (1979) in their Rasch theory, which emphasizes the importance of level separation to ensure measurement accuracy. Thus, these reliable results support using this instrument as a valid and consistent tool to assess student flourishing in various contexts.

This instrument has been shown to have good validity and reliability in measuring flourishing in education students, considering potential demographic biases such as gender and semester level (Embretson, 2021). However, a more in-depth bias analysis is needed for more heterogeneous populations, considering that responses to well-being instruments can be influenced by socioeconomic factors, educational background, and culture (Bader et al., 2021). Therefore, applications outside of higher education require adaptation and revalidation to ensure accuracy and prevent measurement bias (P. R. Wright & Pascoe, 2015).

In addition, research shows that simple scales such as 0-5 can improve item readability and clarity, especially in online surveys involving respondents with heterogeneous backgrounds (Sumintono & Widhiarso, 2015). From a psychometric analysis perspective, scale simplification also improves the unordered Andrich Threshold on a large scale, which is an obstacle in analyzing scale validity using the Rasch Model (Bond et al., 2020). Smaller scales produce a more consistent data structure, making analyzing and interpreting the results easier (Menold & Bogner, 2016). In addition, the flexibility of small scales such as 0-5 is very relevant in populations that tend to provide extreme responses on a large scale without reducing the sensitivity of the measurement to variations in respondent responses. Therefore, using 0-5 is considered effective in maintaining the validity, reliability, and interpretation of research results in various contexts.

Overall, this instrument has the potential to be an effective framework for measuring flourishing. However, expanding its use beyond the Indonesian student population requires further validation to ensure reliability and validity across contexts and populations (Benson & Scales, 2009). This instrument could be expanded with appropriate adjustments to support well-being across population groups. The research on the development of the flourishing instrument among students at the Indonesian University of Education (UPI) is consistent with the main theories of flourishing, especially Martin Seligman's PERMA theory (Seligman, 2016). The PERMA theory defines well-being as a multidimensional condition that includes positive emotions, engagement, relationships, meaning, and achievement. In this study, the PERMA dimensions were adapted to students' academic and social contexts, such as lectures, group assignments, and extracurricular activities. This shows the instrument's suitability to the theory and sensitivity to the context of Indonesian higher education. This study also underscores that flourishing encompasses eudaimonic well-being, emphasising meaning and purpose in life, not just hedonic happiness (Sharma-Brymer & Brymer, 2020) This instrument measures aspects of engagement and meaning, which are important in students' learning experiences. The PERMA flourishing scale can provide a comprehensive assessment of students' flourishing development that can be implemented in guidance and counselling services. Research shows that interventions focusing on increasing flourishing can improve students' academic outcomes

and emotional well-being (Miller et al., 2020). Counsellors can use the results of the flourishing measurement to identify areas where students need additional support, such as increasing engagement in academic activities or developing positive social relationships (Zulfa & Prastuti, 2020). In addition, psychological well-being and optimal experiences are important resources that can help individuals develop a fulfilling life (Bakracheva, 2020).

CONCLUSION

This study successfully validated a PERMA-based flourishing scale tailored to the characteristics and contextual challenges of education students in Indonesia. The Rasch model analysis confirmed that the instrument demonstrates strong psychometric properties, including acceptable unidimensionality (36.1%), high internal consistency (Cronbach's Alpha = 0.90), and excellent person and item reliability indices (0.87 and 0.99, respectively). Of the 55 items initially developed, 35 items were retained after rigorous item fit and bias analysis, making the scale both efficient and effective in measuring the flourishing construct. The Wright Map results indicated that the scale items were relatively easy for respondents, suggesting its usability in higher education contexts.

Despite these strengths, the study identified areas for improvement, such as enhancing the sensitivity of the Negative Emotion dimension and considering cultural adaptation to reflect collectivist values more adequately. Therefore, while the current scale version provides a robust tool for assessing flourishing among prospective educators, future research should focus on cross-cultural validation and refinement to ensure broader applicability. This instrument holds promise for supporting guidance and counselling interventions aimed at enhancing student well-being and professional growth in educational settings.

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Included here to comply with formal academic writing guidelines.

AUTHOR CONTRIBUTION STATEMENT

NAN, IL, IS, TIP, SNA, DH, and SY were involved in developing the study's conceptual framework and methodological approach. NAN and SNA carried out the data collection. Data analysis and interpretation were conducted by NAN, IL, and IS. The initial draft of the manuscript was prepared by NAN, IS, and TIP. All authors have reviewed, edited, and approved the final manuscript for submission.

CONFLICT OF INTEREST

The authors declare that this publication involves no conflicts of interest.

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