

VALIDITY AND RELIABILITY OF THE SELF-ESTEEM INSTRUMENT FOR UNIVERSITY LECTURERS

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Abstract— *This study aims to examine the validity and reliability of a self-esteem instrument developed for lecturers in private universities in Pekanbaru, Indonesia. The instrument was constructed based on Rosenberg's self-esteem theory, encompassing two dimensions: self-competence and self-liking. A quantitative approach was employed involving 350 lecturers from several private universities in Pekanbaru selected through a random sampling technique. Content validity was evaluated by two experts using Gregory's formula, while internal consistency reliability was analyzed using Cronbach's Alpha through SPSS version 25. The findings indicate that the instrument achieved a content validity index of 0.8125, categorized as high validity, and a Cronbach's Alpha coefficient of 0.756, indicating acceptable reliability. These results suggest that the instrument possesses adequate psychometric properties and can be used to assess lecturers' self-esteem within the context of private higher education institutions in Pekanbaru. The study contributes to the development of contextual psychological measurement tools for academic professionals.*

Keywords: *validity; reliability; self-esteem; lecturers; psychological instrument*

Abstrak— Penelitian ini bertujuan untuk menguji validitas dan reliabilitas instrumen harga diri yang dikembangkan untuk dosen pada perguruan tinggi swasta di Pekanbaru, Indonesia. Instrumen disusun berdasarkan teori harga diri Rosenberg yang mencakup dua dimensi utama, yaitu *self-competence* dan *self-liking*. Penelitian menggunakan pendekatan kuantitatif dengan melibatkan 350 dosen dari beberapa perguruan tinggi swasta di Pekanbaru yang dipilih melalui teknik random sampling. Validitas isi dievaluasi oleh dua orang ahli menggunakan formula Gregory, sedangkan reliabilitas konsistensi internal dianalisis menggunakan koefisien Cronbach's Alpha melalui SPSS versi 25. Hasil penelitian menunjukkan bahwa instrumen harga diri memperoleh indeks validitas isi sebesar 0,8125 yang termasuk dalam kategori tinggi, serta koefisien reliabilitas sebesar 0,756 yang menunjukkan tingkat reliabilitas yang dapat diterima. Temuan ini menunjukkan bahwa instrumen memiliki karakteristik psikometrik yang memadai dan dapat digunakan untuk mengukur harga diri dosen dalam konteks perguruan tinggi swasta di Pekanbaru. Penelitian ini berkontribusi terhadap pengembangan alat ukur psikologis yang kontekstual bagi profesi akademik.

Kata kunci: validitas; reliabilitas; harga diri; dosen; instrumen psikologi

Introduction

Rosenberg (1965) described self-esteem as an individual's evaluation of personal value and self-acceptance. It represents how individuals perceive their own value and competence in relation to their roles and environment. Self-esteem reflects not only personal satisfaction with oneself but also the degree of confidence individuals have in their capabilities. According to Tafarodi and Swann (1995), self-esteem consists of two major dimensions, namely self-liking and self-competence. self-liking the extent to which individuals feel a sense of self-worth and acceptance and self-competence the confidence one has in their abilities and effectiveness. Both dimensions are essential for understanding an individual's self-concept and functioning.

Self-esteem plays a crucial role in psychological adjustment, motivation, and performance across various life domains, including education and work (Kertechian & El-farr, 2025). In the higher education context, self-esteem among university lecturers is a critical factor influencing job satisfaction, teaching motivation, and academic engagement (Tomas & Poroto, 2023). Lecturers with high self-esteem tend to demonstrate greater resilience, stronger commitment to institutional goals, and higher academic productivity (Kuboni & Mawila-chauke, 2025). Conversely, lecturers with low self-esteem may experience burnout, anxiety, and a lack of professional confidence, which can hinder performance and collegial relationships.

A stable sense of self-esteem enables lecturers to handle academic pressure, criticism, and role ambiguity effectively (Arvapalli et al., 2012). In contrast, fluctuations in self-esteem can lead to decreased self-efficacy and a reduced sense of belonging in academic institutions. Research has shown that educators who maintain positive self-esteem report higher levels of professional satisfaction and well-being (Lavelle et al., 2024). Therefore, measuring self-esteem accurately among lecturers is vital to understanding their psychological health, performance, and professional development within higher education institutions.

Self-esteem also influences how lecturers interact with students, peers, and administrative systems. (Natour et al., 2021) emphasized that high self-esteem promotes persistence, creativity, and adaptive coping, while low self-esteem can foster avoidance and defensive behaviors. In academic settings, lecturers with healthy self-esteem are more likely to create supportive learning environments, engage in reflective teaching, and contribute positively to the academic community. Thus, the

assessment of self-esteem among lecturers has both psychological and organizational significance, contributing to broader institutional quality and effectiveness.

To measure self-esteem, researchers commonly employ the Rosenberg Self-Esteem Scale (RSES), one of the most widely used psychometric tools in psychology (Li et al., 2015). However, instrument adaptation is necessary to ensure cultural and contextual relevance (Yao & Mcwha-hermann, 2025). The items in the RSES were originally developed in Western contexts, emphasizing individualistic perspectives of self-worth. In contrast, Indonesian lecturers often operate within a collectivist culture, where professional identity and self-perception are influenced by social recognition, institutional support, and community belonging. Therefore, adapting and validating a self-esteem instrument tailored to the cultural and professional characteristics of Indonesian lecturers is essential for obtaining accurate and meaningful assessments.

The development of such an instrument requires rigorous psychometric testing to ensure both validity and reliability. According to Loustau et al. (2025), validity indicates how accurately an instrument measures the intended construct, whereas reliability reflects the consistency of measurement results across administrations. Among the various forms of validity, content validity plays a key role during the early stages of instrument development, as it evaluates how well the items represent the conceptual definition of the construct (Backfisch et al., 2025). Expert judgment is often employed to determine the degree of item relevance and comprehensiveness. Reliability, on the other hand, is most often evaluated through internal consistency using Cronbach's Alpha (Farzad et al., 2025).

Recent psychometric studies have reinforced the importance of localized validation when measuring psychological constructs among educators. For instance, (Okeke & Ramaila, 2025) emphasized that contextual validation enhances both accuracy and practical application in higher education settings. Similarly, (Bin-Nashwan et al., 2023) that reliable self-esteem measurement contributes to understanding the relationship between self-concept and academic productivity among lecturers. Therefore, the establishment of valid and reliable self-esteem instruments is crucial for advancing both psychological research and institutional management.

Based on these considerations, the present study aims to examine the validity and reliability of a self-esteem instrument developed specifically for university lecturers in Indonesia. The validation process focuses on content validity through expert assessment

using Gregory's formula and reliability testing using Cronbach's Alpha. Establishing a psychometrically sound instrument will not only facilitate accurate measurement of lecturers' self-esteem but also provide a valuable diagnostic tool for educational institutions seeking to enhance lecturer well-being and professional performance.

Methods

Participant

The population of this study consisted of university lecturers employed at several private higher education institutions in Pekanbaru, Riau Province, Indonesia. Participants were selected using a random sampling technique. The final sample comprised 350 lecturers with diverse demographic and professional characteristics, including gender, academic rank, educational background, and teaching experience. Specifically, the participants included both male and female lecturers holding academic positions ranging from assistant lecturer to associate professor. Most participants held master's and doctoral degrees and had varying lengths of teaching experience, ranging from early-career to senior lecturers. This diversity was intended to provide a broader representation of lecturers within private higher education institutions in Pekanbaru.

Procedure

The study employed a self-esteem questionnaire constructed based on Rosenberg's (1965) theory of self-esteem and further adapted from the self-esteem model proposed by Tafarodi and Swann (1995) which divides self-esteem into two main dimensions, namely self-competence and self-liking. The self-competence dimension refers to a person's belief in their ability to perform professional tasks effectively, while self-liking reflects feelings of self-worth and personal acceptance. The instrument initially consisted of 16 positive items arranged on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Sunarsih et al., 2020). During the validation process, three items were removed because they did not meet the required validity criteria based on expert judgment and item analysis. Consequently, the final version of the instrument consisted of 13 items that demonstrated acceptable validity and

reliability. Item retention was determined based on the relevance, clarity, and consistency of each item in measuring the construct of self-esteem.

The self-esteem instrument used in this research is a modification of Rosenberg’s scale that has been adapted to the context of higher education lecturers. The modification maintains the theoretical construct of the original instrument but changes the statement structure to fit the lecturer’s professional characteristics. The modified instrument is then reviewed and revalidated by experts. The number of items in the instrument includes indicators of self-competence, such as feeling capable and satisfied with one’s own ability, and indicators of self-liking, such as feeling positive about oneself, feeling valuable, and feeling able to perform tasks as well as others. The detailed instrument blueprint is presented in Table 1.

Table 1. Instrument Blueprint of Self-Esteem

Aspect	Indicator	Item Number	Number of Items
Self-Competence	Feeling capable and skilled	1, 2, 3	3
	Feeling satisfied with one’s own abilities	4, 5, 6	3
Self-Liking	Feeling positive about one’s personal qualities	7, 8, 9	3
	Feeling valued and worthy as an individual	10, 11	2
	Feeling able to do what others can do	12, 13, 14, 15, 16	5
Total			16 items

The research process involves revising the instrument items and validating them through expert judgment. Two experts in psychology and human resource management evaluate the content of each item to determine its relevance to the self-esteem construct. The validation results are analyzed using the Gregory formula, as follows:

$$V_i = \frac{D}{(A+B+C+D)}$$

Information:

A = the number of items the two experts rate as “not relevant”

B = the number of items rated “relevant” by the first expert but “not relevant” by the second expert

C = the number of items rated “not relevant” by the first expert but “relevant” by the second expert

D = the number of items rated “relevant” by both experts

The content validity criteria were interpreted based on Gregory’s content validity classification. The classification for this content validity are very high validity (0.80–1.00), high validity (0.60–0.79), moderate validity (0.40–0.59), low validity (0.20–0.39), and very low validity (0.00–0.19) (Gregory, 2015).

Based on the results of expert evaluation, 13 items were assessed as relevant by both experts, while three items received different assessments. The validity coefficient obtained was 0.8125, which falls within the very high validity category. This result indicates that the instrument items are highly representative of the theoretical construct of self-esteem among university lecturers.

Data Analysis

The next step is the reliability testing of the instrument. Reliability shows the level of consistency of the instrument in measuring the same construct (Professionals & Factor, 2025). The analysis is carried out using Cronbach's Alpha technique through the SPSS version 25 software. According to Nunnally, a reliability coefficient above 0.70 is considered acceptable.

The analysis results show that the Cronbach’s Alpha value obtained is 0.756, indicating that the self-esteem instrument is in the acceptable reliability category. This means that all items measure the same construct consistently. Other calculations are carried out to determine the Standard Error of Measurement (SEM) using the following equation:

$$SEM = SD_x \sqrt{1 - \text{reliability coefficient}}$$

Information:

SEM = Standard Error of Measurement

SD_x = Standard Deviation

r_{xx} = Reliability Coefficient

Next, to obtain the confidence interval value for the actual score, the following equation is used:

$$x - z_c \cdot SEM \leq T \leq + z_c \cdot SEM$$

Information:

x = Observation Score

z_c = Critical Value of Standard Deviation

T = True Score

Based on the results of validity and reliability testing, the self-esteem instrument developed for lecturers can be declared valid and reliable to measure the self-esteem level of lecturers in higher education.

Result

The data analysis consisted of two stages: the content validity test and the reliability analysis of the self-esteem instrument for university lecturers. The content validity was examined using Gregory's formula, while reliability was determined through Cronbach's Alpha coefficient using SPSS version 25.

The content validity test involved two expert reviewers who assessed the clarity, representativeness, and theoretical relevance of each statement. The calculation results were as follows:

$$V_i = \frac{D}{(A+B+C+D)}$$

Information:

A = 0 B = 2 C = 1 D = 13

$$V_i = \frac{13}{(0+2+1+13)} = 0.8125$$

Based on the result above, the content validity index (V_i) of 0.8125 indicates that the instrument has high validity. According to Gregory (2010), coefficients above 0.80 demonstrate strong agreement among experts and reflect that the items adequately represent the construct being measured. Thus, the self-esteem scale is theoretically consistent with the dimensions proposed by Rosenberg (1965), which include self-competence and self-liking.

The expert evaluation confirmed that 13 items were strongly representative, while three were less relevant and therefore refined during the revision process. The final version used for testing included 13 valid items.

Reliability analysis was then conducted to evaluate internal consistency. The reliability test results are presented in the following tables 2.

Table 2. The Reliability Test Result

N	%
Valid	350
Excluded	0
Total	350

All 350 lecturer responses were analyzed, with no missing data, indicating a complete dataset for reliability testing.

Table 3. Cronbach's Alpha

Cronbach's Alpha	N of Items
0.756	13

The Cronbach's Alpha coefficient of 0.756 shows that the instrument possesses acceptable internal consistency by Nunnally, 1978. This value suggests that the 13 items consistently measure the construct of self-esteem among lecturers.

Table 4. Item-Total Statistics

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1	0.445	0.734
X2	0.433	0.736
X3	0.452	0.735
X4	0.467	0.730
X5	0.209	0.759
X6	0.536	0.725
X7	0.300	0.749

X8	0.199	0.768
X9	0.360	0.743
X10	0.327	0.748
X11	0.487	0.730
X12	0.480	0.730
X13	0.392	0.739

As presented in Table 4, all corrected item-total correlations exceed 0.19, indicating that each item correlates positively with the total score. Items X6 and X11 demonstrate the strongest correlations, suggesting these statements are particularly robust indicators of self-esteem. The “Cronbach’s Alpha if item deleted” values range between 0.725 and 0.768, confirming that no item significantly reduces the overall reliability of the scale.

This result indicates that the instrument items are homogeneous and effectively measure a single construct. According to DeVellis, 2017, a Cronbach’s Alpha between 0.70 and 0.80 is adequate for early-stage scale development, suggesting the instrument can be confidently used in similar academic settings.

The findings align with prior research by Ahmeti (Ahmeti & Stankovska, 2023), who reported similar reliability coefficients ($\alpha = 0.74$) for self-esteem measures among higher education staff. Furthermore, García-P. et al. (2025) found that self-esteem scales incorporating balanced positive and competence-based statements tend to demonstrate stable internal consistency among university populations. These findings support the psychometric soundness of the instrument developed in this study.

Discussion

The findings of this study provide empirical evidence supporting the validity and reliability of a self-esteem measurement instrument tailored to the professional context of university lecturers in private higher education institutions in Pekanbaru, Indonesia. The high content validity index (0.8125) reflects substantial expert agreement that the instrument adequately represents the theoretical construct of self-esteem. Consistent with Rosenberg’s (1965) conceptualization, self-esteem is understood as a multidimensional construct encompassing both self-competence (belief in one’s abilities) and self-liking (affective self-regard).

The achieved reliability coefficient ($\alpha = 0.756$) demonstrates satisfactory internal consistency, indicating that all items coherently measure a unified construct. This result aligns with psychometric standards established for psychological measurement tools, where α values between 0.70–0.80 are considered acceptable for early instrument development (Saengpanya et al., 2025).

Recent studies reinforce the importance of reliable and context-specific self-esteem measurement within higher education. Similarly, Xu et al., (2025) highlighted that self-esteem among academic staff mediates the relationship between perceived institutional support and work performance, underscoring its role as a psychological resource in universities.

The process of adapting and validating Rosenberg's scale for the Indonesian higher education context contributes to the growing body of research emphasizing cultural and contextual adaptation in psychometric assessment. Cross-cultural validation ensures that measurement tools capture not only the universal aspects of self-esteem but also culturally specific expressions of competence and self-worth. In this study, the modification of item wording to reflect lecturers' professional identity (e.g., teaching effectiveness, academic recognition, and collegial respect) enhanced the instrument's contextual fit.

Moreover, the results align with recent psychometric validation efforts in the education sector. Liu et al., (2025) found that teacher self-esteem instruments incorporating both affective and competence-based dimensions showed greater predictive power for teacher well-being and burnout prevention.

The reliability findings ($\alpha = 0.756$) also indicate that while the instrument performs well for early implementation, further refinement may enhance its precision. Future research should consider conducting confirmatory factor analysis (CFA) and item response theory (IRT) testing to examine the factor structure more rigorously, as recommended by Lazarides et al., (2025) This would help ensure that the two-factor model (self-competence and self-liking) remains empirically distinct while maintaining strong interrelations.

In practical terms, the validated instrument offers significant utility for organizational diagnosis and employee well-being programs in higher education. By providing a reliable measure of self-esteem, universities can identify lecturers with low self-perception and develop targeted interventions to improve their psychological

resilience, motivation, and job satisfaction. As Wang & Zhang, (2025) argue, fostering academic staff's self-esteem can enhance both individual performance and institutional effectiveness, supporting sustainable academic excellence.

Conclusion

Based on the results of the data analysis, it can be concluded that the self-esteem instrument developed for university lecturers demonstrates strong psychometric properties. The content validity index of 0.8125 indicates that the instrument has high representativeness and theoretical relevance, meaning that the items effectively measure the core aspects of self-esteem as defined by the constructs of self-competence and self-liking. Furthermore, the Cronbach's Alpha coefficient of 0.756 confirms that the instrument has acceptable internal consistency and can reliably assess the self-esteem of lecturers across different academic backgrounds.

The development of this instrument provides an important contribution to the field of higher education and psychological measurement. It emphasizes the importance of using culturally adapted and professionally relevant tools when measuring psychological constructs such as self-esteem. Instruments that are not adjusted to the characteristics of their target population such as professional context, language, and cultural expectations may yield biased or inaccurate results. Therefore, the adaptation and revalidation process carried out in this study is essential to ensure both conceptual and contextual accuracy.

From a managerial and practical perspective, this validated self-esteem instrument can be applied in assessing lecturers' self-perceptions, which are closely linked to performance, motivation, and well-being within academic institutions. Understanding self-esteem levels can help university leaders and human resource departments develop targeted interventions to enhance academic engagement and job satisfaction among faculty members.

This study has several limitations that should be acknowledged. First, the participants were limited to lecturers from private universities in Pekanbaru, which may restrict the generalizability of the findings to broader higher education contexts in Indonesia. Second, the study primarily focused on content validity and internal

consistency reliability; therefore, additional psychometric evaluations such as construct validity, factor analysis, and test–retest reliability are still needed.

For future research, it is recommended that the instrument be tested on more diverse populations, including lecturers from public universities and different regions of Indonesia, in order to further examine its stability and generalizability. Future studies are also encouraged to explore the relationship between self-esteem and other psychological variables, such as self-efficacy, job satisfaction, and organizational commitment, to better understand the role of self-esteem in academic and professional settings.

Although this research focuses specifically on university lecturers, the results suggest that the adapted self-esteem scale has potential for use in other educational and organizational contexts. However, any application beyond the lecturer population should be preceded by further validation and reliability testing to ensure the instrument's suitability for different professional groups.

Limitations and Suggestions

This study has several limitations that should be acknowledged. First, the content validation involved only two experts, which may limit the generalizability of the instrument's content adequacy. Second, the reliability test was conducted on a limited sample of lecturers from several private universities in Pekanbaru, potentially restricting the representativeness of the findings. Third, no further statistical analysis such as Confirmatory Factor Analysis (CFA) was conducted to confirm the construct validity.

Based on these limitations, further investigation involving lecturers from wider institutional backgrounds is necessary to strengthen the external validity of the instrument.

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Final Version of the Self-Esteem Instrument for University Lecturers

The final version of the self-esteem instrument consisted of 13 valid items representing two dimensions of self-esteem adapted from Rosenberg's theory and the model proposed by Tafarodi and Swann, namely self-competence and self-liking. Three items from the initial 16-item version (items 14, 15, and 16) were removed during the expert validation process because they were categorized as less relevant. The final blueprint of the instrument is presented in Table 5.

Table 5. Final Blueprint of the Self-Esteem Instrument for University Lecturers

Dimension	Indicator	Item No.	Statement
Self-Competence	Merasa memiliki kemampuan yang baik	1	Saya merasa mampu mencapai tujuan kerja yang saya harapkan sebagai dosen.
Self-Competence	Merasa memiliki kemampuan yang baik	2	Dengan kemampuan yang saya miliki, saya yakin dapat mencapai tujuan karier akademik yang saya harapkan.
Self-Competence	Merasa memiliki kemampuan yang baik	3	Saya merasa mampu menjalankan tugas dan tanggung jawab saya sebagai dosen dengan baik.
Self-Competence	Merasa puas dengan kemampuan sendiri	4	Saya merasa puas dengan kemampuan yang saya miliki sebagai dosen.
Self-Competence	Merasa puas dengan kemampuan sendiri	5	Meskipun hasil kerja yang saya peroleh belum sempurna, saya tetap menghargai kemampuan yang saya miliki.
Self-Competence	Merasa puas dengan kemampuan sendiri	6	Saya merasa percaya diri terhadap kemampuan akademik dan profesional yang saya miliki.
Self-Liking	Merasa memiliki sejumlah kualitas diri yang positif	7	Saya merasa memiliki kualitas diri yang positif sebagai seorang dosen.
Self-Liking	Merasa memiliki sejumlah kualitas diri yang positif	8	Saya mampu menjaga sikap positif ketika menghadapi tekanan pekerjaan.
Self-Liking	Merasa memiliki sejumlah kualitas diri yang positif	9	Saya merasa mampu menghadapi berbagai permasalahan dalam pekerjaan saya sebagai dosen.
Self-Liking	Merasa diri sebagai orang yang berharga	10	Saya merasa usaha dan kerja keras yang saya lakukan layak untuk dihargai.
Self-Liking	Merasa diri sebagai orang yang berharga	11	Saya bangga terhadap diri saya sebagai seorang dosen.
Self-Liking	Merasa mampu melakukan hal yang orang lain lakukan	12	Saya merasa mampu melaksanakan tugas dosen sebagaimana dosen lainnya.
Self-Liking	Merasa mampu melakukan hal yang orang lain lakukan	13	Saya merasa memiliki kemampuan yang setara dengan rekan dosen lainnya.

Note: Items 14, 15, and 16 were excluded during the expert validation process because they did not meet the required content validity criteria.

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