

ADAPTATION AND VALIDATION OF THE INVENTORY OF TEACHER-STUDENT RELATIONSHIPS (IT-SR) INDONESIAN VERSION

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Abstract

Understanding teacher–student relationships is important, as these interactions contribute to students’ academic and socio-emotional development. However, validated instruments to assess these relationships in the Indonesian context remain limited. The purpose of this study was to adapt (Murray & Zvoch, 2011) the Inventory of Teacher–Student Relationship (IT-SR) into Indonesian and assess its validity and reliability among junior high school students. The adaptation process involved obtaining permission from the original developer, translation, expert review, and a readability test with 10 students. The main data were collected from 172 students at SMP Negeri 72 Bandung and analyzed using Confirmatory Factor Analysis (CFA). The results showed that the modified model demonstrated a good fit (CFI = 0.994, TLI = 0.992, RMSEA = 0.032, SRMR = 0.077). Three items were excluded due to low factor loadings, resulting in a final 14-item instrument. Reliability analysis showed a Cronbach’s alpha of 0.828. The novelty of this study lies in providing the first empirical validation of the Indonesian version of the IT-SR while identifying culturally sensitive items that may not fully reflect teacher–student relationships in Indonesia. The findings contribute to the cross-cultural adaptation literature and provide a valid and reliable instrument that can be used by researchers, educators, and school counselors to assess teacher–student relationships among Indonesian adolescents.

Keywords: instrument adaptation, teacher-student relationship, CFA



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INTRODUCTION

Adolescence is a crucial developmental stage characterized by rapid emotional, social, and cognitive changes, particularly during the junior high school years. During this phase, individuals begin to develop a sense of self and expand their social networks beyond the family, such as their contact with school teachers (Engels et al., 2021). In educational settings, students' motivation to learn, mental health, and academic success are strongly influenced by the strength of their interactions with teachers (Ria & Eliasa, 2024).

Prior research indicates that when students have a positive relationship with their teacher, they tend to show higher levels of engagement, better emotional regulation, and character development (Ria & Eliasa, 2024). In contrast, negative relationships may lead to feelings of alienation, decreased learning motivation, and increased behavioral problems in school (Engels et al., 2021). This relationship becomes particularly important during adolescence, as teachers can serve as significant figures who provide a sense of security and social support outside the family environment (Pham et al., 2022). Furthermore, positive teacher–student relationships have been found to enhance academic achievement, encourage students to engage in challenging academic activities, and promote more adaptive behaviors in school settings (Li et al., 2022).

In addition to influencing academic achievement, the quality of teacher–student relationships also plays an important role in supporting students' psychological well-being. Findings from Chamizo-Nieto et al. (2021) suggest that students who perceive their relationships with teachers as positive are more likely to experience higher levels of flourishing as well as improved academic functioning. Similarly, Purwandari & Khoirunnisa (2023) found that better interaction quality between teachers and students is associated with higher student engagement and stronger academic self-efficacy.

Engels et al. (2021) explain the significance of emotional relationships between educators and learners as a key element influencing adolescent academic performance and student engagement. Students are more likely to exhibit improved academic performance over time and acquire higher intrinsic motivation when they have a good perception of their connections with teachers. In this way, relationships between teachers and students may serve as a safeguard factor that promotes social and intellectual growth in educational environments.

The quality of students' relationships with teachers in school is directly linked to the behavioral, cognitive, and emotional components of student participation in the classroom (Pham et al., 2022). Three primary characteristics may be used to characterize this relationship: alienation, trust, and communication. These factors affect students' motivation to engage in educational activities and their sense of belonging to their school. Students are more likely to participate fully in academic assignments when they have open communication and confidence in their interactions with teachers. Students who experience alienation or distance from their teachers, on the other hand, typically exhibit lower levels of participation.

Several instruments have been developed to assess the quality of relationship between teachers and students. The Inventory of Teacher–Student Relationships (IT-SR), created by Murray & Zvoch (2011) is one of the most widely used tools. This scale evaluates three main aspects: alienation, communication, and trust. It is based on the Inventory of Parent and Peer Attachment, which was first presented by (Armsden & Greenberg, 1987). The IT-SR is seen to be especially suitable for studies involving teenage participants since it emphasizes students' own impressions of their interactions with teachers (Pham et al., 2022).

Although the IT-SR has demonstrated good validity and reliability across various international contexts (Pham et al., 2022), an empirically validated Indonesian version is not yet available. Cultural differences, such as strong social hierarchies and norms of politeness in Indonesia, may influence how students perceive and interpret their relationships with teachers. This highlights the need for a culturally appropriate adaptation of the IT-SR within the Indonesian context.

Cross-cultural adaptation of psychological instruments involves not only linguistic translation but also conceptual and cultural equivalence. To ensure this equivalence, the present study follows the International Test Commission (2017) which outline essential steps including planning, translation, confirmation, administration, interpretation, and documentation to ensure cross-cultural validity (Hernández et al., 2020).

This study aims to adapt and validate the Indonesian version of the IT-SR using CFA in light of these factors. Specifically, it seeks to validate the IT-SR's three-factor structure communication, trust, and alienation in the context of Indonesian culture. The findings of this study are expected to contribute to the development of a valid and reliable instrument for assessing teacher–student relationships, as well as to enrich research in educational psychology in Indonesia.

RESEARCH METHOD

This study applied a quantitative design aimed at adapting the Inventory of Teacher–Student Relationships (IT-SR) into the Indonesian context. The main objective was to evaluate the construct validity of the adapt instrument using Confirmatory Factor Analysis (CFA). The participants were 172 junior high school students from SMP Negeri 72 Bandung. The sample consisted of an equal proportion of male and female students (86 each), reflecting a balanced gender composition. Age distribution showed that most participants were between 13 and 15 years old. Specifically, 10 students were aged 12, 50 were 13, 70 were 14, 40 were 15, and one student each was aged 16 and 17.

Table 1. Demographic Profile of Respondents

Demographic Profile	Description	Frequency
Gender	Male	86
	Female	86
	Age	12
	13	50
	14	70
	15	40
	16	1
	17	1
Total		172

The process of adapting the instrument was guided by the International Test Commission (2017). In the first stage, formal approval was obtained from the original developer of the IT-SR. The second stage involved forward translation, in which the original English version was translated into Indonesian by two qualified bilingual translators with a background in psychology and proficiency in English. The translated versions were then compared and synthesized into a single version.

The third stage was back translation, conducted by two different translators who were not involved in the previous stage. This step aimed to ensure that the Indonesian version retained the same meaning as the original English instrument. Both translators also had a background in psychology and demonstrated English proficiency (TOEFL score > 500). The results of the back translation were then compared with the original instrument to identify any inconsistencies or conceptual inaccuracies.

The fourth stage was expert review. The back-translated version was evaluated by five experts in educational psychology, developmental psychology, and psychometrics. This process aimed to assess conceptual equivalence, cultural relevance, and clarity of each item. After revisions based on expert feedback, the fifth stage involved a readability test using a cognitive interview technique with ten junior high school students to assess their understanding and

interpretation of each item. Susanto et al. (2023) stated that cognitive interviews are useful for identifying how respondents process, interpret, and respond to questionnaire items, allowing researchers to detect potential issues such as ambiguous meanings, unclear wording, or inappropriate contextualization.

Feedback from the readability test was used to refine the wording of the items before administering the instrument to the main sample. The sixth stage involved the main data collection, which was conducted through the distribution of the final version of the IT-SR questionnaire to 172 students at SMP Negeri 72 Bandung. The data collection process was carried out directly at the school.

The Inventory of Teacher–Student Relationships (IT-SR), which was first developed by Murray & Zvoch (2011) was adapted for the Indonesian language and cultural context in order to assess the quality of teacher–student relationships. Three aspects of teacher–student interactions are evaluated by the IT-SR: alienation, trust, and communication. While trust indicates a feeling of emotional intimacy and trust in the relationship, communication relates to students’ judgments of responsive and open interactions with their teachers. Alienation, on the other hand, describes how students’ feelings of disconnection from their teachers. 17 items on a four-point Likert scale, from 1 (never) to 4 (always), make up the original IT-SR.

Confirmatory Factor Analysis (CFA), a statistical technique to assess the fit between the measurement model and the proposed factor structure, was employed as the data analysis method in this study (Hair et al., 2019). The study used CFA to assess if empirical data gathered from junior high school students in Indonesia validated the IT-SR’s three-factor structure. Additionally, factor loadings were used to evaluate item adequacy. JASP software was used for all analyses (version 0.19.3.0).

RESULTS AND DISCUSSION

The adaptation process began with forward–backward translation conducted by four translators (two with a psychology background and two without). The results of the forward translation indicated that most items retained their original meaning. During the backward translation stage, the English versions showed a high level of consistency with the original items. Therefore, only minor revisions were made to improve the naturalness of wording within the Indonesian cultural context. Overall, the final translation resulted in 17 items with good semantic equivalence between the original and translated versions, while still reflecting the three constructs of communication, trust, and alienation proposed in the IT-SR.

The next stage involved an expert review conducted by five experts in developmental psychology, educational psychology, and psychometrics. Quantitative evaluation using the I-CVI showed that most items demonstrated acceptable content validity, with values ranging from 0.40 to 1.00. Some items, such as Item 2 (0.6) and Item 5 (0.4), had I-CVI values below the cut-off of 1.00; however, these items were retained due to their conceptual importance and were revised based on expert feedback. Qualitative evaluation resulted in several revisions, particularly for items considered ambiguous or less representative of the construct, including adjustments to better reflect teacher–student interactions. In total, nine out of the seventeen items were revised to improve clarity and conceptual alignment (Items 2, 5, 6, 7, 8, 11, 12, 14, and 16), while the remaining items were retained without changes.

A readability test was then conducted with 10 junior high school students to ensure linguistic appropriateness and comprehension. The results of the Flesch Reading Ease (FRE) analysis indicated that all items fell into the “very difficult” category. However, since FRE is more suitable for English and does not account for the morphological complexity of the Indonesian language, these results were not used as the sole basis for evaluation. Instead, students’ subjective ratings showed that all items received readability scores ranging from 3.0 to 3.9 on a 4-point scale, indicating that they were easy to understand. Cognitive interviews further

revealed that most items were well understood, although some suggestions were made to simplify wording perceived as too abstract, such as replacing “mencurahkan isi hati” with “curhat” and “berinteraksi” with “berbicara.” These findings led to minor revisions to ensure that all items were more natural and appropriate for Indonesian adolescents.

Table 2. Model Fit of The Inventory of Teacher-Student Relationship

Fit Index	Value	
	Before	After
Comparative fit index (CFI)	0.923	0.994
Tucker-Lewis Index (TLI)	0.909	0.992
Root mean square error of approximation (RMSEA)	0.098	0.032
Standardized root mean square residual (SRMR)	0.116	0.077

Table 3. Factor Loadings

Factor	Item	Std. estimate	Std. Error	p
Communication	Item 4	0.354	0.040	< .001
	Item 8	0.684	0.037	< .001
	Item 17	0.499	0.039	< .001
	Item 11	0.883	0.039	< .001
	Item 12	0.674	0.036	< .001
	Item 10	0.476	0.038	< .001
Trust	Item 1	0.653	0.039	< .001
	Item 2	0.689	0.040	< .001
	Item 3	0.702	0.036	< .001
	Item 7	0.604	0.038	< .001
	Item 13	0.724	0.039	< .001
Alienation	Item 5	0.420	0.068	< .001
	Item 14	0.666	0.061	< .001
	Item 16	0.704	0.064	< .001
Factor	Item	Std. estimate	Std. Error	p

Confirmatory Factor Analysis (CFA) was carried out using JASP version 0.19.3.0 to assess the construct validity of the Indonesian version of the IT-SR. Several widely used indices, such as the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), were used to assess the model’s fit. When SRMR is less than 0.08, RMSEA is 0.06 or less, and CFI and TLI values are at least 0.90, a model is typically regarded as having an adequate (Hu & Bentler, 1999). The results indicated CFI = 0.923 and TLI = 0.909, which met the recommended criteria. However, the RMSEA (0.098) and SRMR (0.116) values were above the acceptable thresholds, suggesting that the model required further refinement. To enhance model fit, modifications were made based on residual covariances until optimal fit was achieved.

In addition, an evaluation of factor loading values was conducted. Items with loading values below the minimum threshold (0.30) were considered for removal due to their low contribution to the latent variable (Brown & Moore, 2012). At this stage, three items showing factor loading values below 0.3 such as Item 9 (0.262), Item 15 (0.181), and Item 6 (0.228) were excluded from the model. Apart from statistical considerations, the low factor loadings on some items were likely influenced by the cultural context of teacher–student relationships in Indonesia. The three items eventually removed from the model were Item 9 “Saya membicarakan masalah dan kesulitan saya kepada guru” (I talk about my problems and difficulties to the teacher), Item 15 “Saya mengandalkan guru ketika ingin curhat” (I rely on the teacher when I want to share my feelings), and Item 6 “Guru saya jarang menyadari ketika saya merasa kesal” (My teacher rarely notices when I feel upset).

The CFA results after model modification and item removal showed a substantial improvement in model fit. With CFI = 0.994, TLI = 0.992, RMSEA = 0.032, and SRMR = 0.077,

the final model proved to be a well-fitting model, as seen in Table 2. These results show that the data strongly supported the three-factor structure of the Indonesian version of the IT-SR, which is communication, trust, and alienation. Factor loading values in the final model varied from 0.354 to 0.883, indicating that the majority of items are capable of accurately representing the construct. Next, reliability tests were conducted to examine the internal consistency of the Indonesian IT-SR instrument. The results showed a Cronbach's alpha value of 0.828, indicating good internal consistency. This value exceeds the commonly recommended threshold of 0.70 for early-stage research and 0.80 for established psychological instruments (Hair et al., 2019). Therefore, the adapted instrument demonstrates adequate reliability and is suitable for measuring teacher–student relationships among junior high school students in Indonesia.

This study aimed to adapt *The Inventory of Teacher–Student Relationships (IT-SR)* into the Indonesian version. This instrument measures three aspects namely communication, trust, and alienation which reflect the quality of communication, emotional warmth and trust, as well as students' sense of alienation in their relationships with teachers. The adaptation process demonstrated that the Indonesian version of the instrument possesses good internal consistency and adequate construct validity. The stages of translation, expert review, and readability testing with junior high school students ensured that the instrument items were clearly understood and culturally appropriate. Several items were revised to simplify the language, making it more natural and relevant to students' experiences in Indonesian school settings.

Construct validity assessed through CFA indicated that the three-factor structure of the IT-SR such as Communication, Trust, and Alienation was supported in the context of Indonesian junior high school students. Acceptable model fit indices suggest that the relationships among items are consistent with the theoretical model proposed by Murray & Zvoch (2011). However, despite the validation of the overall structure, several items needed to be removed due to low factor loadings and wording that was less appropriate for the cultural context. The excluded items were Item 9 “Saya membicarakan masalah dan kesulitan saya kepada guru” (I talk about my problems and difficulties to the teacher), Item 15 “Saya mengandalkan guru ketika ingin curhat” (I rely on the teacher when I want to share my feelings”), and Item 6 “Guru saya jarang menyadari ketika saya merasa kesal” (My teacher rarely notices when I feel upset). Conceptually, this decision aligns with existing literature indicating that Indonesian culture is characterized by high power distance, which tends to shape teacher–student relationships as more formal and hierarchical. As a result, students may feel hesitant to share personal problems or express emotions directly to teachers (Hotifah et al., 2022).

Overall, the results indicate that the Indonesian version of the IT-SR, consisting of 14 final items, demonstrates adequate validity and reliability for assessing the quality of teacher–student relationships in junior high school students in Indonesia. This instrument can be utilized for further research as well as practical applications, while also providing a strong foundation for understanding the emotional and interactional dynamics between teachers and students within the Indonesian cultural context.

CONCLUSION

In conclusion, the adapted 14-item Indonesian version of the IT-SR demonstrates good validity and reliability. Modifications to the model based on CFA outcomes improved the instrument's ability to represent the three aspects of teacher–student relationships, namely communication, trust, and alienation. Most items showed significant factor loadings above the minimum threshold, indicating that adequately represent the intended constructs. Based on these findings, the Indonesian version of the IT-SR can be used to assess the quality of teacher–student relationships among junior high school students in Indonesia. Future studies are encouraged to test the instrument in more diverse school settings and to explore potential cultural differences across regions.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Investigation; Writing – original draft; Writing – review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation; Formal Analysis

Author 4: Methodology; Supervision; Writing – review and editing.

Author 5: Supervision; Validation; Writing – review and editing.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest

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