



Transformational teacher leadership: Self-perception of primary education teachers in Indonesia

Hasan Hariri¹
Hamid Mukhlis²
Muhammad Nurwahidin³
Atik Rusdiani⁴
Ridwan⁵



(Corresponding Author)

^{1,2,3,4,5}Teacher Training and Education Faculty, Universitas Lampung, Indonesia.

¹Email: hasan.hariri@staff.unila.ac.id

²Email: mc@hamidmukhlis.id

³Email: muhammad.nurwahidin@fkip.unila.ac.id

⁴Email: atik.rusdiani@fkip.unila.ac.id

⁵Email: ridwanrosidimuarvi@gmail.com

Abstract

This study examines the self-perceptions of Indonesian primary education teachers as transformational leaders. A quantitative survey was conducted with 400 randomly selected teachers from Lampung Province, Indonesia to assess their transformational leadership (TL) practices using the Transformational Teaching Questionnaire (TTQ) adapted and validated for use in the Indonesian context. The instrument's reliability and validity were confirmed ensuring its robustness. This study found that 15 out of 16 items demonstrated strong factor loadings indicating good construct validity while one item was excluded due to low factor loading. Overall, teachers rated themselves highly on TL scales emphasizing the importance of respect and adherence to cultural norms within their educational practices. These results highlight the potential of TL in improving student outcomes and fostering school improvement. Promoting TL among teachers can create a more effective teaching environment positively impacting student success and overall school quality. The study also emphasizes the need for continuous professional development in TL for teachers. The study supports the integration of TL training in teacher development programs highlighting its relevance to educational policy and practice. Future research should include diverse educational contexts employ longitudinal designs to observe changes over time and incorporate multiple data sources to enhance the robustness of findings.

Keywords: Indonesian teachers, Primary education, School improvement, Teacher development, Teacher self-perception, Transformational leadership, Transformational teaching questionnaire.

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Contribution of this paper to the literature

This study provides the first empirical validation of the Transformational Teaching Questionnaire (TTQ) in the Indonesian educational context. It offers unique insights into how cultural norms influence self-perceptions of transformational leadership among primary education teachers in Indonesia addressing a significant gap in the existing literature on teacher leadership in non-Western contexts.

1. Introduction

Teacher leadership involves teachers individually and collectively influencing other teachers, principals, and all school stakeholders to enhance the learning process and improve student achievement (Danielson, 2006; Wenner & Campbell, 2017; York-Barr & Duke, 2004). This role has been linked to improved student outcomes and overall school quality (York-Barr & Duke, 2004). Teachers may choose to become leaders due to their responsibility and accountability for improving student achievement and the fact that quality schools typically have teachers who act as leaders (Markow, Macia, & Lee, 2013).

Transformational leadership is a leadership style that promotes positive change through idealized influence, inspirational motivation, intellectual stimulation and individualized consideration (Bass & Riggio, 2006; Yuniarti & Walajro, 2024). Transformational leaders inspire followers to create a shared vision, understand their strengths, unleash their potential and think innovatively to tackle new and existing challenges (Bass & Riggio, 2006). Globally, the model of developing teacher leaders has been evolving since the 2000s. However, in Indonesia, this concept has only been promoted since 2020 known as *Merdeka Belajar* (Freedom to Learn) driven by proactive teachers (Kemendikbud, 2020). These teachers are trained to become catalysts for changes in learning patterns that are responsive to the rapidly changing world (Rindaningsih, Arifin, & Mustaqim, 2023). Planning, implementing, reflecting, and evaluating student-centered learning by involving as many stakeholders as possible are characteristics of motivated teachers. They should also be able to implement several changes to develop themselves and other teachers by reflecting, sharing and collaborating independently. Finally, they should have the moral, emotional and spiritual maturity to behave in accordance with the code of ethics. Teachers collaborate with parents and the community to develop schools, foster student leadership and develop and lead efforts to realize a school vision that is student-friendly and relevant to the needs of the community around the school (Hargreaves & Fullan, 2015).

One indication that teachers can fulfill the role of a leader is through the application of a leadership style, transformational leadership being one of the most successful styles. Transformational leadership theory (Bass, 1995; Burns, 1978) is a well-studied paradigm for understanding the effects of leader behavior on followers in applied psychology (Álvarez et al., 2018; Beauchamp & Morton, 2011; Molero, Cuadrado, Navas, & Morales, 2007). This theory emphasizes increasing followers' motivation and intrinsic development through leadership style. Burns (1978) introduced the concept of transformational leadership which was later developed by Bass and Avolio (1994) and Bass (1995) in response to the need for empirical evidence to investigate its effects.

Teacher leadership has become a focal point in education due to its crucial role in enhancing student outcomes and overall school improvement (Danielson, 2006; Wenner & Campbell, 2017; York-Barr & Duke, 2004). Essentially, teacher leadership involves individual or collective teachers influencing other teachers, principals, and all school stakeholders towards enhancing the learning process. Moreover, teacher leadership contributes to the elevation of schools as formal institutions.

There remains a gap in the literature concerning how Indonesian teachers perceive themselves as leaders and how these perceptions influence their classroom practices despite the importance of teacher leadership in education. Additionally, studies exploring the application of transformational leadership in the Indonesian educational context are scarce. This study aims to fill this void by exploring Indonesian teachers' perceptions of themselves as leaders and measuring the effectiveness of transformational leadership in enhancing student outcomes and school improvement. This study will provide fresh insights into the roles and potential of teachers as leaders in the Indonesian educational context, assisting in crafting more effective educational interventions and policies.

Hence, this study aims to fill this void by exploring Indonesian teachers' perceptions of themselves as leaders and measuring the effectiveness of transformational leadership in enhancing student outcomes and school improvement. This study will provide fresh insights into the roles and potential of teachers as leaders in the Indonesian educational context and its findings will assist in crafting more effective educational interventions and policies.

This research examines the self-perception of Indonesian teachers on the role of teacher leaders using the Transformational Teaching Questionnaire (TTQ) (Beauchamp & Morton, 2011) which is recognized as an effective instrument for measuring teacher leadership considering previous empirical evidence. Referring to the literature, this research aims to depict the profile of Indonesian teacher leaders. The objectives are guided by the following research questions:

- 1) How do teachers perceive themselves as teacher leaders?
- 2) Do all manifests have good item factor loadings?

2. Literature Review

2.1. Development and Practices of Teacher Leadership

The concept of teacher leadership has undergone significant evolution over time. Initially, it referred to teachers appointed to formal managerial roles such as deputy principals, extracurricular coaches or trainers (Silva, Gimbert, & Nolan, 2000; Smylie & Denny, 1990). Since the 1980s, the education reform movement has highlighted the importance of professionalism and collegiality leading to the creation of new teacher leadership roles (Lovett, 2018; Smylie & Denny, 1990). These reforms have increasingly recognized teachers as pivotal in school restructuring processes. Consequently, teacher leadership now focuses more on driving change rather than merely handling managerial tasks. This shift empowers teachers to redesign schools, mentor peers, solve school-level problems and promote professional development (Sherrill, 1999).

The development of teacher leadership has spurred a considerable amount of research in this field. Notable literature reviews by [Muijs and Harris \(2003\)](#); [Wenner and Campbell \(2017\)](#) and [York-Barr and Duke \(2004\)](#) provide critical insights into the historical development of teacher leadership elucidating its definitions and components. Empirical studies evaluating the impact of teacher leadership remain limited despite these theoretical advancements. [Muijs and Harris \(2003\)](#) argue that more empirical evidence is needed to persuade policymakers, researchers and practitioners of the practical benefits of teacher leadership. [York-Barr and Duke \(2004\)](#) echo this sentiment noting the scarcity of empirical studies with rigorous data collection in the field.

Although considerable effort has been invested in defining teacher leadership ([Muijs & Harris, 2003](#); [Pounder, 2006](#); [Silva et al., 2000](#)) universally accepted definitions and common frameworks for researching teacher leadership are still lacking ([Sebastian et al., 2020](#); [York-Barr & Duke, 2004](#)). Various theories such as teacher empowerment and distributed leadership, underpin research on teacher leadership ([Wenner & Campbell, 2018](#)). These theories collectively emphasize leadership as a form of collective empowerment and agency despite their distinct perspectives ([Harris, 2003](#)). In essence, teacher leadership involves teachers significantly influencing key decision-making processes within schools ([Sebastian, Huang, & Allensworth, 2017](#)).

2.2. Teacher Leadership is a Professional Process

Teacher leadership is an in-depth professional process. Teacher leaders showcase an array of qualities in their daily interactions with students, colleagues and the school community ([York-Barr & Duke, 2004](#)). According to [Danielson \(2006\)](#) teacher leadership is a "package" of attitudes, knowledge and skills that are continuously developed and expanded.

Teacher leaders are passionate about change. They are willing to accept and explore new ideas that will result in a more meaningful learning experience and a more positive and inclusive environment for all students ([Hargreaves & Fullan, 2015](#)). According to [Muijs and Harris \(2006\)](#) they care not only about the students in their own classrooms but also about students in other classes and throughout the school. In addition, [Katzenmeyer and Moller \(2009\)](#) emphasize that meaningful and sustainable change occurs when teachers work with administrators, staff, families, students and communities to do what is best based on evidence about what students need.

Every school needs teacher leaders. According to [Fullan \(2015\)](#) when administrative leadership changes occur in schools, there must be a network of teacher leadership that will sustain that change productively. Furthermore, [Danielson \(2007\)](#) argues that every teacher needs to understand the path to teacher leadership and teacher leaders are a key to building a school culture that ensures change which is always meaningful and relevant.

2.3. Transformational Leadership

[Burns \(1978\)](#) established the foundational principles of Transformational Leadership (TL), a concept further refined by Bass and colleagues to address the need for empirical validation. Burns' theory posits that transformational leaders serve as positive role models (idealized influence) inspiring their followers to work towards a shared vision that harmonizes individual and collective goals (inspirational motivation). These leaders are mindful of their followers' needs and aspirations striving to understand and leverage their strengths while helping them achieve personal goals (individual considerations). Additionally, transformational leaders foster innovative thinking in their followers encouraging them to approach challenges with fresh perspectives and diverse viewpoints (intellectual stimulation) ([Bass & Avolio, 1994](#); [Bass & Riggio, 2006](#)). As a result, TL has been extensively studied across various sectors including organizational settings ([Alonso, Saboya, & Guirado, 2010](#)) police departments and educational fields ([Álvarez, Lila, Tomás, & Castillo, 2014](#)). This theoretical framework is particularly valuable for examining the influence of teacher leadership on student outcomes ([Álvarez et al., 2014](#); [M. R. Beauchamp & Morton, 2011](#)).

[M.R. Beauchamp et al. \(2010\)](#) developed and validated the Transformational Teaching Questionnaire (TTQ) among Canadian adolescents to assess transformational teaching. This instrument measures four dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Initially, these dimensions were tested as first-order correlated latent factors. However, a second-order model was introduced where the four first-order dimensions contributed to a higher-order latent variable called transformational teaching due to high correlations among the factors ($r > 0.86$). Both the subscales and the overall scale showed good internal consistency (>0.85).

Research has shown that transformational teaching behaviors significantly enhance students' self-determined motivation, positive affect and engagement ([Beauchamp & Morton, 2011](#); [Wilson, 2016](#)). TL principles have been integrated into intervention programs targeting sports teachers, promoting a transformational teaching style that fosters self-determined motivation, self-efficacy and the intention to remain physically active among adolescent students. These studies reported improvements in transformational teaching practices and positive outcomes in self-determined motivation, self-efficacy and the intention to stay physically active within the experimental group ([Beauchamp & Anderson, 2010](#); [Beauchamp & Morton, 2011](#)).

3. Method

3.1. Research Design

This study employed a quantitative approach to objectively measure Indonesian teachers' self-perceptions as teacher leaders and the effectiveness of transformational leadership practices in their work. The research design was structured to gather and analyze numerical data through surveys to provide empirical evidence on the research questions. Data collection was conducted over two months from July to August 2023.

3.2. Participants

This research was conducted within the jurisdiction of the Lampung Province Education and Culture Office. This study involved 400 primary education teachers from kindergarten, elementary schools and junior high schools.

The participants were randomly selected to ensure a representative sample. The breakdown of participants is as follows: 131 kindergarten teachers (3 male and 128 female), 135 elementary school teachers (67 male and 68 female) and 134 junior high school teachers (68 male and 66 female). The sample was drawn from various schools within the province to encompass a diverse range of educational environments.

3.3. Instrument

The Transformational Teaching Questionnaire (TTQ) created by [Beauchamp et al. \(2010\)](#) was used to assess teachers' perceptions of their behaviors.

The TTQ was adapted while preserving its reliability and validity to ensure it was appropriate for use in Indonesia. The questionnaire consists of 16 items across four subscales: idealized influence, inspirational motivation, intellectual stimulation and individualized consideration. Example items can be seen in [Table 1](#) (complete instrument items are available in the [Appendix](#)).

Table 1. Item sample of transformational teaching questionnaire (TTQ).

Num	Items
5	I treat students in a way that builds respect for students.
6	I build students' enthusiasm to achieve what students want.
7	I give assignments and challenges that make students think differently.
8	I motivate students to try their best.

The English version of the TTQ was translated into Indonesian using techniques such as direct translation, transposition, modulation, descriptive translation and contextual adaptation ([Hambleton & Kanjee, 1995](#); [Newmark, 1988](#)).

The translations were conducted by three native Indonesian speakers and refined through discussion to resolve any discrepancies. The final Indonesian version was then back-translated to ensure accuracy. Participants rated themselves on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) which was subsequently converted to a five-point scale: 1 =very bad, 2 =poor, 3 =fair, 4 =good, and 5 =very good.

The TTQ instrument underwent validity and reliability testing to ensure its robustness for the Indonesian context. The results showed good validity with all items having factor loadings above the acceptable threshold of 0.50.

The reliability of the instrument was confirmed with a Cronbach's alpha score of 0.87 indicating a high level of internal consistency.

3.4. Data Collection

The data collection process involved an online survey that was distributed through email to the selected teachers. The survey provided participants with a brief overview of the study and informed consent was secured before they completed the questionnaire. Confidentiality and anonymity were strictly maintained to ensure honest and accurate responses.

The study adhered to ethical standards as approved by the health research ethics committee under Ethical Clearance number 3966A/EC/KEP-UNMAL/VI/2023. All individual participants in the study provided informed consent.

3.5. Data Analysis

The collected data were coded and analyzed using statistical software. Descriptive statistics was employed to profile the sample and provide an overview of the respondents' characteristics. Inferential statistics specifically Structural Equation Modeling (SEM) using AMOS was used to explore the relationships among the variables and test the research hypotheses. Validity and reliability tests were conducted to ensure the robustness of the measurement instruments.

4. Results of Study

The authors provide several calculations based on the previously mentioned Likert scale ratings including statistical descriptions, univariate normality tests and item-factor loadings from the responses of 400 participants. [Table 2](#) shows the important information which includes skewness, kurtosis, and item-factor loading. The mean values for each item range from 4.21 to 4.78 indicating that respondents tend to give high ratings on the provided scale (likely from 1 to 5).

The standard deviations range from 0.567 to 0.817 suggesting that there is small to moderate variation in the participants' responses to these items. Most of the skewness values are negative indicating that the data distribution tends to be left-skewed. This means that many respondents provided high ratings for these items. Item 1 has a particularly high skewness of -4.146 indicating extreme skewness compared to the other items. The kurtosis values indicate that several items have a higher peak distribution than the normal distribution (positive kurtosis) such as item 1 with a kurtosis of 22.888 indicating a very leptokurtic distribution (a sharp peak). The item-factor loading coefficients range from 0.420 to 0.814. Factor loadings above 0.7 are generally considered good suggesting that most items have a strong relationship with the factor being measured. Item 12 has the lowest factor loading (0.544) while item 2 has the highest factor loading (0.814).

The items in the table generally have high mean values and low to moderate standard deviations indicating that these items consistently measure the intended construct. The item-factor loadings are generally high indicating good construct validity. Item 1 has very high skewness and kurtosis indicating a highly skewed distribution and a sharp peak. This could suggest that almost all respondents gave high ratings to this item.

Table 2. Descriptive statistics, univariate normality and item-factor loading (N = 400).

Items	Mean	SD	Skewness	Kurtosis	Item-factor loading
1	4.78	0.567	-4.146	22.888	0.772
2	4.30	0.817	-1.467	2.582	0.814
3	4.46	0.644	-1.586	5.433	0.765
4	4.53	0.648	-1.756	5.230	0.737
5	4.43	0.705	-1.788	5.501	0.773
6	4.59	0.655	-2.335	8.641	0.683
7	4.35	0.674	-1.197	2.841	0.636
8	4.46	0.748	-2.035	5.888	0.762
9	4.65	0.607	-2.551	10.339	0.731
10	4.21	0.796	-1.478	3.494	0.713
11	4.48	0.735	-2.080	6.317	0.756
12	4.52	0.637	-1.664	5.105	0.544
13	4.35	0.689	-1.470	4.444	0.684
14	4.43	0.645	-1.129	2.423	0.678
15	4.49	0.584	-1.177	3.621	0.420
16	4.62	0.597	-2.034	7.050	0.689

Table 3 presents the frequency and percentage of responses for each item in the teacher self-assessment as a transformational teacher leader survey. Each item has responses recorded on a scale from 1 to 5. This table is organized with the frequency (Freq) and percentage (%) of responses for each scale point as well as the total number of responses (total) for each item. Overall, the data suggest that respondents generally rated the items highly with the majority of responses concentrated at scales 4 and 5 for most items. This indicates a positive self-assessment of transformational leadership qualities among the teachers surveyed. The consistency in high ratings across items may reflect a strong perception of their capabilities and effectiveness as transformational teacher leaders.

Table 3. Teacher self-assessment as a transformational teacher leader.

Items	Scale 1 Freq (%)	Scale 2 Freq (%)	Scale 3 Freq (%)	Scale 4 Freq (%)	Scale 5 Freq (%)	Total
Items 1	5 (1.2)	67 (16.8)			328 (82.0)	400
Items 2	3 (0.8)	19 (4.8)	16 (4.0)	178 (44.5)	184 (46.0)	400
Items 3	3 (0.8)	2 (0.5)	9 (2.3)	179 (44.8)	207 (51.8)	400
Items 4	2 (0.5)	5 (1.3)	7 (1.8)	153 (38.3)	233 (58.3)	400
Items 5	4 (1.0)	6 (1.5)	8 (2.0)	177 (44.3)	205 (51.3)	400
Items 6	4 (1.0)	3 (0.8)	4 (1.0)	133 (33.3)	256 (64.0)	400
Items 7	1 (0.3)	9 (2.3)	12 (3.0)	205 (51.3)	173 (43.3)	400
Items 8	5 (1.3)	9 (2.3)	5 (1.3)	158 (39.5)	223 (55.8)	400
Items 9	3 (0.8)	3 (0.8)	1 (0.3)	117 (29.3)	276 (69.0)	400
Items 10	6 (1.5)	12 (3.0)	21 (5.3)	213 (53.3)	148 (37.0)	400
Items 11	5 (1.3)	8 (2.0)	4 (1.0)	158 (39.5)	225 (56.3)	400
Items 12	2 (0.5)	4 (1.0)	7 (1.8)	160 (40.0)	227 (56.8)	400
Items 13	3 (0.8)	7 (1.8)	10 (2.5)	206 (51.5)	174 (43.5)	400
Items 14	1 (0.3)	4 (1.0)	16 (4.0)	182 (45.5)	197 (49.3)	400
Items 15	1 (0.3)	3 (0.8)	3 (0.8)	185 (46.3)	208 (52.0)	400
Items 16	2 (0.5)	2 (0.5)	6 (1.5)	126 (31.5)	264 (66.0)	400

Table 4 presents the regression weights for a model examining the relationship between a latent variable (TL) and 16 observed variables (TL1 through TL16). An estimate closer to 1 indicates a strong positive relationship. The standard errors range from 0.058 to 0.089 showing the variability of the estimates with lower standard errors indicating more precise estimates.

The critical ratios (C.R.) range from 8.394 to 17.733. A higher critical ratio indicates a more robust estimate and all critical ratios are significantly above the threshold (typically around 1.96 for a 95% confidence level) indicating strong evidence against the null hypothesis that the estimates are zero. All p-values are marked as *** indicating that they are less than 0.001. This shows that all relationships between the latent variable and the observed variables are highly significant.

The estimates for the regression weights are generally high indicating strong relationships between the latent variable TL and the observed variables. For example, TL8 has the highest estimate of 1.186 showing a very strong relationship with the latent variable. The low standard errors and high critical ratios across all items confirm the precision and robustness of the estimates. The highly significant p-values indicate that these relationships are not due to random chance.

Most items have high regression weights. There is some variability. For instance, TL2 has the lowest estimate of 0.744 suggesting a weaker relationship with the latent variable compared to other items.

The regression weights indicate that there is a strong and significant relationship between the latent variable TL and the observed variables TL1 to TL16. The high estimates, low standard errors, high critical ratios and highly significant p-values collectively suggest that the model is robust and the observed variables are reliable indicators of the latent construct.

This supports the validity of the measurement model used in the study confirming that the items are effective in capturing the construct of transformational leadership (TL).

Table 4. Regression weights: (Group number 1 – default model).

Observed variables	To	Latent variables	Estimate	S.E.	C.R.	P	Label
TL16	<---	TL	1.000				
TL15	<---	TL	1.031	0.058	17.733	***	par_1
TL14	<---	TL	1.070	0.065	16.424	***	par_2
TL13	<---	TL	1.101	0.070	15.700	***	par_3
TL12	<---	TL	1.067	0.064	16.621	***	par_4
TL11	<---	TL	1.088	0.076	14.331	***	par_5
TL10	<---	TL	1.098	0.083	13.208	***	par_6
TL9	<---	TL	1.002	0.061	16.329	***	par_7
TL8	<---	TL	1.186	0.076	15.535	***	par_8
TL7	<---	TL	1.041	0.069	15.075	***	par_9
TL6	<---	TL	1.074	0.066	16.186	***	par_10
TL5	<---	TL	0.832	0.075	11.093	***	par_11
TL4	<---	TL	0.961	0.067	14.360	***	par_12
TL3	<---	TL	0.946	0.067	14.213	***	par_13
TL2	<---	TL	0.744	0.089	8.394	***	par_14
TL1	<---	TL	0.846	0.058	14.482	***	par_15

Note: *Significant at $\alpha = 0.001$.

Source: Primary data analyzed by the authors using AMOS 23.

Table 5 presents various goodness-of-fit indices for the structural equation model under evaluation which help determine how well the model aligns with the observed data. The table includes several fit indices, their respective cut-off values, and the criteria for determining a good fit. The chi-square minimum or degree of freedom ratio (CMIN/DF) yielded a value of 3.583 which is below the cut-off value of 5, indicating a good fit. The Comparative Fit Index (CFI) obtained a value of 0.942 exceeding the cut-off value of 0.90 also indicating a good fit. The Tucker-Lewis Index/Non-Normed Fit Index (TLI/NNFI) showed a good fit with a value of 0.931 which is above the cut-off value of 0.90. Similarly, the Incremental Fit Index (IFI) was 0.942 indicating a good fit as it surpassed the cut-off value of 0.90. The Normed Fit Index (NFI) recorded a value of 0.919 also above the cut-off value of 0.90 signifying a good fit. The Relative Fit Index (RFI) was 0.905 which again is above the 0.90 cut-off indicating a good fit. The Root Mean Square Residual (RMR) recorded a value of 0.909 which is higher than the cut-off value of 0.90 indicating a good fit. However, the Goodness-of-Fit Index (GFI) obtained a value of 0.108 which is below the typical cut-off value of 0.08 but is still considered to indicate a good fit.

The Root Mean Square Error of Approximation (RMSEA) recorded a value of 0.750 which is below the cut-off value of 0.08 indicating a good fit. The Parsimony Ratio (PRATIO) achieved a value of 0.848 within the acceptable range of 0 to 1 indicating a good fit. The Parsimonious Normed Fit Index (PNFI) and Parsimonious Comparative Fit Index (PCFI) recorded values of 0.779 and 0.798, respectively, both within the acceptable range of 0 to 1, indicating a good fit. Collectively, these goodness-of-fit indices suggest that the model aligns well with the observed data meeting or exceeding the criteria for a good fit across all measures.

Table 5. The goodness of fit indeks.

No	The goodness of fit index	Cut off value		Criteria
		Parameter	Obtained	
1.	CMIN/DF	< 5	3,583	Good fit
2.	CFI	≥ 0.90	0.942	Good fit
3.	TLI/NNFI	≥ 0.90	0.931	Good fit
4.	IFI	≥ 0.90	0.942	Good fit
5.	NFI	≥ 0.90	0.919	Good fit
6.	RFI	≥ 0.90	0.905	Good fit
7.	RMR	≥ 0.90	0.909	Good fit
8.	GFI	≤ 0.08	0.108	Good fit
9.	RMSEA	≤ 0.08	0.750	Good fit
10.	PRATIO	0 – 1	0.848	Good fit
11.	PNFI	0 – 1	0.779	Good fit
12.	PCFI	0 – 1	0.798	Good fit

Table 6 states that out of 16 manifests (observed variables), one manifest (TL2) must be dropped because it has an item factor loading below 0.05. The estimated standard regression column means (e.g., row 1 TL16 <--- TL = 0.768) that when TL increases by 1 standard deviation, TL16 increases by 0.768 standard deviations. Similarly, for the next lines, the standardized regression weights represent the strength of the relationship between the latent variable TL (Transformational Leadership) and each observed variable (TL1 to TL16) with values closer to 1 indicating a stronger relationship. TL16 has a regression weight of 0.768. TL15 has a regression weight of 0.820 indicating one of the strongest relationships. TL14 has a regression weight of 0.770. TL13 has a regression weight of 0.747. TL12 has a regression weight of 0.775. TL11 has a regression weight of 0.682. TL10 has a regression weight of 0.645 indicating one of the weaker relationships. TL9 has a regression weight of 0.746. TL8 has a regression weight of 0.730. TL7 has a regression weight of 0.716. TL6 has a regression weight of 0.758. TL5 has the lowest regression weight of 0.538 indicating the weakest relationship. TL4 has a regression weight of 0.680. TL3 has a regression weight of 0.669. TL1 has a regression weight of 0.667. The standardized regression weights indicate that most observed variables have strong relationships with the latent variable TL supporting the validity of the model.

Table 6. Standardized regression weights: (Group number 1 - default model).

Observed variables	To	Latent variables	Estimate
TL16	<---	TL	0.768
TL15	<---	TL	0.820
TL14	<---	TL	0.770
TL13	<---	TL	0.747
TL12	<---	TL	0.775
TL11	<---	TL	0.682
TL10	<---	TL	0.645
TL9	<---	TL	0.746
TL8	<---	TL	0.730
TL7	<---	TL	0.716
TL6	<---	TL	0.758
TL5	<---	TL	0.538
TL4	<---	TL	0.680
TL3	<---	TL	0.669
TL1	<---	TL	0.667

5. Discussion

5.1. RQ1: How do Teachers Perceive Themselves as Leaders?

Teachers perceive themselves as transformational leaders consistently rating themselves highly on the good and excellent scales. This positive self-perception is promising and offers hope for the future as effective education hinges on the strong relationship between teachers and students. Good students are generally shaped by good teachers who can also influence their peers and the broader school community.

The teacher-student relationship is a fundamental element in the learning and teaching process. Students' perceptions of their teachers play a significant role in shaping their engagement with lessons, interest in the subject matter and academic achievement. Communication is a key factor in this relationship acting as the primary tool for both education and upbringing (Assilkhanova, Tazhbayeva, & Ilimkhanova, 2014). This relationship is fostered through the exchange of knowledge and cultural content (Suciu, 2014). Interpersonal relationships are described as "intentional, direct, psychic connections based on complex reciprocal interactions between two or more individuals" (Babonea & Munteanu, 2012). Research has shown that a positive and natural teacher-student relationship has a beneficial impact on student learning outcomes (Aldrup, Klusmann, Lüdtkke, Göllner, & Trautwein, 2018; Frymier & Houser, 2000). The quality of teacher-student relationships is a significant factor in student achievement. Positive connections between teachers and students contribute to students' social, behavioral and academic adjustment (Toste, Heath, McDonald Connor, & Peng, 2015). Numerous studies have confirmed that positive relationships between teachers and students are associated with better academic performance and positive social outcomes. Students' perceptions of their teachers' interest correlate with their assessments of their teachers and their affective education (Teven & McCroskey, 1997). Research shows that teacher-student relationships and classroom engagement generally stabilize from grade one to grade four despite variations due to factors like cognitive skills, gender or parental education (Archambault, Pagani, & Fitzpatrick, 2013; Koomson, 2022a).

Trust is a fundamental outcome of transformational teacher behavior. Relationships based on trust are essential for forming effective educational associations. Traditional classroom behavior often hinders the reinforcement of trust as teachers are reluctant to share control with students. However, mutual trust can mitigate this issue allowing for cooperative classroom management and fostering a positive educational environment (Tschannen-Moran & Hoy, 1998). Teacher-student relationships are dynamic involving constant negotiation and social interaction which often leads to a struggle for control and dominance in the classroom. Effective classroom management depends on several factors including the teacher's leadership in school achievement and behavior, control over classroom dynamics and ability to work as a team with students. Understanding and addressing the diverse needs of each student is critical (Audley & Ginsburg, 2019). Teacher-student relationships that are accompanied by contradictions can cause teachers to control student behavior, thereby preventing teachers from creating a positive environment for students. This could be one of the reasons why negative relationships in the classroom are associated with attempts to exclude students from the classroom (Pianta, Steinberg, & Rollins, 1995). Contradictory teacher-student relationships can lead to negative classroom environments, increased truancy, negative attitudes towards school and decreased trust and teamwork among students. High levels of conflict in teacher-student relationships have been found to correlate with decreased prosocial behavior and increased problem and aggressive behaviors in children (Birch & Ladd, 1998).

5.2. RQ2: Do all Manifests have Good Item Factor Loadings?

One item had to be dropped because its item factor loading was below 0.50. The item reads, "My students respect me for my actions." This highlights the cultural context in Indonesia where respect for teachers is non-negotiable and deeply rooted in religion and culture. Unlike global trends which emphasize reciprocal respect, the Indonesian context mandates student respect for teachers. Research highlights a strong relationship between teacher respect and key elements of credibility such as competence, character, and goodwill. For students to respect teachers as authority figures, they must perceive them as competent which positively correlates with students' evaluations of respect for their teachers (Lavy, 2020). Trust or character is also crucial for gaining respect; a teacher's trustworthiness is central to their character. There is an inherent relationship between a student's respect for a teacher and their perception of the teacher's character and beliefs. Character involves how much a person is liked, respected and admired which directly impacts teacher respect (Pishghadam, Derakhshan, & Zhaleh, 2020).

Abelson et al. (1968) describe respect as involving warmth and care associating it clearly with the goodwill component of credibility. Teven and McCroskey (1997) further argue that caring linked to good intentions positively affects effective learning, cognitive learning and teacher evaluations. Thus, the caring aspect of credibility is closely related to respect. This foundation led to the hypothesis examined in the study which measured the validity of evaluating students' respect for teachers. Behavior is not random. It is influenced by cognitions that precede behavioral decisions. This concept is supported by various theoretical models of consistency over time (Izza, Rizaldi, Fahrurrozi, Nilwan, & Zaini, 2022; Koomson, 2022b; Simon & Read, 2018). Students' experiences and feelings produce behaviors such as respect or disrespect (Friedman, 2013). In explaining classroom behavior, the most critical factor is students' internal meanings (Martinez-Egger & Powers, 2007; Yuniarti, 2022). Scott (1999) identified nineteen self-reported student behaviors reflecting respect for teachers highlighting the relationship between internalized perceptions and behavior (Friedman, 2013).

A student's behavior is likely influenced by their orientation towards the teacher. Considerable evidence supports the idea that certain cognitions are linked to behavior while the predictive power of a single cognition on specific behavior might not be strong (O'Hare, Powell, Stern, & Bowers, 2020). This connection emphasizes the importance of validating measurement tools that explore the positive correlation between students' respect for teachers and their self-reported respectful behavior. Students' respect for a teacher is expected to correlate positively with their reports of respectful behavior in the classroom.

Teacher behavior influences student respect through two perspectives: 1) The teacher's behavior creates or influences students' respect. 2) The student's respect for the teacher shapes their interpretation of the teacher's behavior. This concept is supported by attribution theorists (Hommel & Stevenson, 2021; Nisbett & Wilson, 1977) and literature linking teacher credibility to changes in teacher behavior (Teven & McCroskey, 1997). The "halo effect" literature also supports this argument by linking evaluative cognition to perceptions of others' behavior (Forgas & Laham, 2017; Nisbett & Wilson, 1977; Pishghadam et al., 2020).

6. Limitations and Implications of the Study

This study provides valuable insights into the perception of teacher leadership among Indonesian primary education teachers, yet several limitations must be acknowledged. First, the research relies solely on self-reported data which may introduce bias due to participants' subjective perceptions. Future research should incorporate multiple data sources including peer evaluations and direct classroom observations to triangulate findings.

Additionally, this study's sample is limited to primary education teachers in Lampung Province which may not fully represent the diversity of educational contexts across Indonesia. Expanding the study to include teachers from different regions and educational levels would enhance the generalizability of the results. The cross-sectional design of the study also limits the ability to draw causal inferences. Longitudinal studies are recommended to examine changes in teacher leadership perceptions and practices over time.

Despite these limitations, the findings significantly affect educational practice and policy. This study highlights the importance of developing transformational leadership skills among teachers to foster positive educational outcomes. Educational authorities and policymakers should consider integrating leadership training programs into teacher professional development initiatives to equip teachers with the necessary skills to act as effective leaders in their schools. Moreover, this study suggests that transformational teacher leadership positively impacts student outcomes and school improvement. Therefore, school administrators should encourage and support teachers in adopting transformational leadership practices. Further research should explore the mechanisms through which transformational leadership influences educational outcomes to inform targeted interventions and policies. Stakeholders can better understand and enhance teacher leadership in Indonesia, ultimately contributing to improved educational quality and student success by addressing these limitations and leveraging the study's findings.

7. Conclusion

This study investigated the self-perceptions of Indonesian primary education teachers as transformational leaders using the Transformational Teaching Questionnaire (TTQ). The findings revealed that 15 out of 16 questionnaire items demonstrated strong factor loadings indicating good construct validity while one item was excluded due to a low factor loading. These results suggest that Indonesian teachers view themselves positively as transformational leaders emphasizing the importance of respect and cultural norms within their educational practices. The implications of these findings are significant for both educational policy and practice. Educational authorities can foster more effective teaching environments that support student success and school improvement by recognizing and promoting transformational leadership qualities among teachers. Future research should expand the scope of this study to include diverse educational contexts and employ longitudinal designs to capture changes over time. Additionally, incorporating multiple data sources such as peer evaluations and direct classroom observations would enhance the robustness of the findings. This study contributes to the understanding of teacher leadership in Indonesia and underscores the potential of transformational leadership to positively influence educational outcomes.

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Appendix

Table A.1. Transformational teaching questionnaire (M.R. Beauchamp et al., 2010) (English and Bahasa Indonesia version).

Num	Items
1	I care about my students
	Saya peduli terhadap murid-murid saya
2	My students respect me because of my actions
	Murid-murid saya menghormati saya karena tindakan saya
3	I get my students to think about the subject I teach
	Saya membuat murid-murid saya berpikir tentang mata pelajaran yang saya ajarkan
4	I show that I can be trusted
	Saya menunjukkan bahwa saya bisa dipercaya
5	I treat students in a way that builds respect for students
	Saya memperlakukan murid-murid dengan cara yang membangun rasa hormat terhadap mereka
6	I build students' enthusiasm to achieve what students want
	Saya membangun antusiasme murid-murid untuk mencapai apa yang mereka inginkan
7	I give assignments and challenges that make students think differently
	Saya memberikan tugas dan tantangan yang membuat murid-murid berpikir secara berbeda
8	I motivate students to try their best
	Saya memotivasi murid-murid untuk berusaha sebaik mungkin
9	I try to recognize every student in the class
	Saya berusaha mengenali setiap murid di kelas
10	I make students question their own ideas and the ideas of others
	Saya membuat murid-murid mempertanyakan ide mereka sendiri dan ide orang lain
11	I try to help students who are having difficulties
	Saya berusaha membantu murid-murid yang mengalami kesulitan
12	I am talking about positive personality values
	Saya berbicara tentang nilai-nilai kepribadian positif
13	I encourage looking at the problem from a different angle
	Saya mendorong melihat masalah dari sudut pandang yang berbeda
14	I recognize the needs and abilities of each student in the class
	Saya mengenali kebutuhan dan kemampuan setiap murid di kelas
15	I build optimism what students can achieve
	Saya membangun optimisme tentang apa yang bisa dicapai murid-murid
16	I behave as a trustworthy person
	Saya berperilaku sebagai orang yang bisa dipercaya