# Validating the factor structure of school principals' transformational leadership scale in Vietnam

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## Article Info

## ABSTRACT

Recently, there has been a growing emphasis on investigating the factor structure of the transformational leadership style due to its significant impact on teachers' outcomes and school-related factors such as organizational citizenship behaviors, organizational commitment, work dedication, creativity, and school innovation. However, the existing literature reveals a lack of studies focusing on the dimensions of transformational leadership style in Vietnam. The present study, therefore, aims to validate the factor structure of the 20-item transformational leadership scale, derived from the 45-item multifactor leadership questionnaire (MLQ), which was translated into Vietnamese and administered to 375 high school teachers. The results of both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) confirmed the suitability of the original MLQ's five-factor structure of transformational leadership, which includes idealized influence attributed (IIa), idealized influence behavioral (IIb), inspirational motivation (IM), intellectual stimulation (IS), and individualized consideration (IC). The fit indices of the model ($\chi^2$/df=1.57, p=0.000, TLI=0.91, CFI=0.90, and RMSEA=0.067), and Cronbach's alpha values of all subfactors ($\alpha \geq 0.73$) were satisfactory. The findings recommend that high schools might utilize the MLQ in evaluating teachers' views of transformational leadership within the context of Vietnamese high school education to improve the leadership practices of principals.

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## 1. INTRODUCTION

Leadership can be defined as the process of influencing and guiding individuals or groups towards achieving common goals or objectives [1], [2]. It involves the ability to inspire, motivate, and direct others while also demonstrating effective decision-making and communication skills [3]. The job of school leaders is of utmost importance in ensuring the overall success and effectiveness of educational institutions. Their importance stems from their ability to influence and shape various aspects of the school environment, including student achievement, teacher morale, and the overall school climate [4], [5]. Effective school leaders directly influence student achievement by setting high expectations, establishing clear goals, and

implementing strategies to enhance teaching and learning [6], [7]. They provide instructional support, mentorship, and resources to develop teachers' instructional practices, fostering a culture of collaboration and continuous learning [8].

The hierarchical structure of the Soviet Union's post-World War II education model has influenced Vietnam's education system. School leaders in Vietnam hold dual authority, with bureaucratic power from the Ministry of Education and Training and political influence from the communist party. Unfortunately, the appointments of school leaders often prioritize political and cultural factors over their qualifications [9]. The strong influence of communist culture in Vietnam affects the decision-making style of school principals, emphasizing power distance and collectivism. All school members must follow their decisions, which carry significant weight. Leadership in Vietnam revolves around four main functions: exercising power, building relationships, making decisions, and resolving conflicts [7]. Additionally, respect for authority and hierarchy remains prevalent in contemporary Vietnamese society, with members deferring to seniors. A study by Hallinger *et al.* [10] highlights the distinct challenges faced by school leaders in Vietnam due to organizational, political, and socio-cultural factors, setting them apart from their counterparts in neighboring countries like Hong Kong, China, and Singapore.

In recent years, the concept of transformational leadership has emerged as a pivotal area of research due to its profound impact on various outcomes among teachers, including organizational commitment and job satisfaction [2]. Nevertheless, there is a scarcity of research that explores the factor structure of the transformational leadership style within Vietnamese high schools. It is critical for educational leaders and policymakers to understand the elements of the transformational leadership style in the Vietnamese educational system. Such insights could assist leaders in improving their leadership practices and ultimately benefit Vietnam's education system. This understanding can enhance educational leaders' knowledge in this area and pave the way for potential enhancements in leadership approaches that foster greater productivity within schools. Research on the factor structure of transformational leadership within Vietnamese high schools urgently demands attention to bridge the existing gap in understanding this vital leadership style within the Vietnamese educational context. This investigation not only improves our understanding of leadership dynamics in Vietnamese high schools but also lays the groundwork for cultivating a new generation of capable leader's adept at navigating the complexities of the world's educational landscape. This research endeavor's urgency serves as a significant step towards improving educational leadership practices and ultimately contributing to the advancement of the Vietnamese educational landscape. Therefore, the primary objective of this study is to assess the factor structure of the multifactor leadership questionnaire (MLQ), an existing instrument for measuring transformational leadership, within the Vietnamese educational setting. The findings of this study have the potential to enhance Vietnamese high school teachers' comprehension of transformational leadership and assist school leaders in effectively improving their leadership styles.

Transformational leadership focuses on inspiring and motivating followers to achieve exceptional performance and personal growth [2], [11]. Leaders who adopt a transformational leadership approach aim to create positive change within their organizations by articulating a compelling vision, setting high expectations, and fostering a supportive and empowering environment [12], [13]. These behaviors transform employees, helping them to maximize their potential and achieve the highest level of performance in their work, thereby achieving organizational goals [1], [14]. Based on the behaviors of transformational leadership, Bass and Avolio [15] developed the MLQ, in which transformational leadership has been identified as having five components, including idealized influence attributed (IIa), idealized influence behavioral (IIb), inspirational motivation (IM), intellectual stimulation (IS), and individualized consideration (IC). IIa refers to how leaders are perceived and admired by their followers as role models and possess qualities that followers aspire to emulate [11], [13], [16]. IIb refers to the leader's actions and behaviors to set an example for their followers by modeling behaviors that are consistent with the values and ideas that they have articulated [5]. IM refers to the leader's ability to inspire and motivate followers by creating a compelling vision and fostering a sense of purpose and excitement about achieving shared goals [17], [18]. IS refers to the ability of the leader to foster creativity, innovation, and critical thinking among their followers [14]. IC refers to the leader's ability to attend to the individual needs, interests, and development of each follower to help them reach their full potential [4], [19], [20].

Until now, the MLQ has emerged as a highly promising tool for assessing the elusive construct of transformational leadership across various domains [21]–[24]. Within the scope of their investigations, the researchers carried out analyses to examine the structure of the MLQ and to evaluate both its reliability and validity in a variety of settings. Hemsworth *et al.* [22] conducted a study to examine the psychometric properties of the MLQ in the United States. The researchers focused on assessing the validity and reliability of the instrument in the context of public sector leadership. The exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) results showed that the MLQ had good psychometric properties when used with public sector executives. The factor analysis supported the existence of the five factors, providing

evidence for the construct validity of the instrument. Furthermore, the reliability analysis showed good internal consistency for the scales, indicating that the instrument reliably measured transformational leadership behaviors in the public sector. This study offers researchers and practitioners a validated tool for assessing transformational leadership behaviors in the public sector, enhancing our understanding of effective leadership in this domain.

Muenjohn and Armstrong [21] conducted a study to evaluate the structural validity of the MLQ in capturing the factors of transformational and transactional leadership. The researchers used a group of people from Australia and did statistical tests (EFA and CFA) to see how well the MLQ's factor structure fit. The results indicated that the MLQ demonstrated strong structural validity in capturing the leadership factors of transformational leadership. This study contributes to the understanding and validation of the MLQ as a reliable tool for assessing leadership styles. Rowold [23] conducted another study to assess the psychometric properties of the German translation of the MLQ. As part of the EFA and CFA analyses, factor analysis was used to look into the questionnaire's latent factor structure. Reliability and validity tests were also done. The findings of the study indicated that the German translation of the MLQ had satisfactory psychometric properties. The factor analysis supported the existence of the expected factors, and the reliability analysis showed good internal consistency for the scales. Additionally, the results indicated adequate construct validity, suggesting that the translated version of the MLQ accurately measured leadership styles in the German context. This study offers researchers and practitioners a validated instrument for assessing leadership styles in German-speaking settings, enhancing the understanding and utilization of the MLQ in this cultural context. Ugwu and Okojie [24] conducted a study to adapt the MLQ in Nigeria. Researchers evaluated the reliability and validity of the adapted MLQ through EFA and CFA analyses. The findings of the study indicated that the adapted MLQ had satisfactory reliability and validity for measuring leadership styles in Nigeria. The adapted questionnaire demonstrated good internal consistency and showed appropriate correlations with related constructs, supporting its reliability and construct validity. This study contributes to the literature by providing an adapted version of the MLQ that is suitable for assessing leadership styles in the Nigerian context.

The findings of the aforementioned studies provide substantial support for the original structure of the transformational leadership model. The internal consistency, reliability, and validity values obtained from the MLQ in these studies closely align with the values reported for the original MLQ. This consistency indicates that the instrument has maintained its psychometric properties across different cultural contexts and populations. The high internal consistency values suggest that the items within each subscale of the MLQ consistently measure the intended factors of transformational leadership. The reliability of the MLQ, as indicated by measures such as Cronbach's alpha, demonstrates the stability and consistency of responses over time and across different samples. The findings of these studies provide confidence in the instrument's ability to assess and evaluate transformational leadership behaviors in various settings.

The MLQ is an effective tool for evaluating transformational leadership in schools. However, previous studies have mainly focused on Western education settings, leaving a gap in the literature regarding the factor structure of the MLQ in the context of Vietnamese high schools. This research aims to address this gap by examining the psychometric features of the 20-item MLQ within the context of Vietnamese schools. Additionally, it seeks to ascertain if the same five factors identified in previous research also manifest among Vietnamese teachers. The findings will provide valuable insights for school principals to enhance leadership styles and create a more effective school environment. It is crucial to validate the factor structure of the MLQ in diverse educational settings, as cultural differences may influence the interpretation of transformational leadership concepts. To address this objective, the present study formulates the following main research hypothesis: The MLQ has five components of transformational leadership based on the perceptions of Vietnamese high school teachers.

## 2. RESEARCH METHOD

### 2.1. Research design

The present study used a quantitative methodology to investigate the factor structure of the MLQ within Vietnam's educational system, specifically targeting high school teachers. The MLQ was used as the primary instrument for data collection. The MLQ was translated and adapted into Vietnamese to ensure cultural relevance and linguistic accuracy, taking into account the specific context of the educational system in Vietnam. This step maintained the integrity of the instrument and ensured participants could understand and respond accurately. A pilot test was conducted with a small sample of high school teachers before the actual data collection to assess the clarity of the questionnaire, identify any ambiguities or confusing items, and refine the instrument accordingly. We strictly adhered to ethical guidelines regarding informed consent, voluntary participation, and response confidentiality throughout the data collection process. Participants were

provided with information about the study objectives, and their rights as participants. The MLQ was administered to the participants using paper-based questionnaires. Participants received clear instructions on how to accurately complete the questionnaire. Throughout the data collection phase, researchers implemented mechanisms for monitoring data collection progress and ensuring data quality. After data collection, thorough validation and cleaning procedures were conducted to identify and rectify any errors, inconsistencies, or outliers in the dataset.

## 2.2. Participants

The study utilized a convenience sampling method, selecting 387 teachers from 15 different high schools in An Giang Province, Mekong Delta Region, Vietnam. The sample size of the present study was determined using Krejcie and Morgan's formula [25], which provides guidelines for sample sizes based on population size for a 95% confidence level and a 5% margin of error. For a population of approximately 4,000 teachers, Krejcie and Morgan [25] recommend a sample size of about 351. Our sample size of 387 exceeds this recommendation, ensuring adequate representation and enhancing the reliability of our findings. The sample consisted of 195 female teachers (50.40%) and 192 male teachers (49.60%), indicating a relatively balanced gender representation. Among the participants, 191 (49%) hailed from urban areas, while 196 (51%) resided in suburban areas. This geographical diversity ensures representation from both urban and suburban contexts, enhancing the generalizability of the study findings to diverse educational settings within An Giang Province. The participants had an average teaching experience of 13.64 years (SD=2.45) and an average age of 38.27 years (SD=7.65). Researchers secured authorization from school administrations to recruit all 387 teachers from the 15 high schools, ensuring cooperation and access to the target population. We administered the MLQ to participants at the start of the second semester of the academic year to maintain consistency in data collection timing among teachers. All responses collected from the MLQ were kept anonymous to safeguard participant privacy and confidentiality. The study reported a response rate exceeding 97%, indicating a high level of participation and engagement among the sampled teachers. A high response rate enhances the representativeness of the sample and increases the likelihood of generalizing the study findings to the broader population of high school teachers in An Giang Province, Vietnam.

## 2.3. Instrument

This study employed the 20-item MLQ [15] for data collection and translated it into Vietnamese. The validity and reliability of the translated MLQ were ensured through a rigorous translation process involving two bilingual professionals with teaching experience and two additional bilingual translators from diverse backgrounds for back translation, maintaining linguistic and conceptual fidelity to the original version. This rigorous method aligns with recommended practices for translating and adapting psychometric instruments, ensuring that the translated version accurately captures the intended constructs [26]. The MLQ's established validity and reliability in measuring transformational leadership across diverse contexts are extensively documented in various studies, confirming its robustness in different cultural settings. The scale consisted of 20 items, divided into five subscales, each containing four items. These subscales were IIa (e.g., "Acts in ways that build others"), IIb (e.g., "Talks about most important values and beliefs"), IM (e.g., "Articulates a compelling vision of the future"), IS (e.g., "Gets others to look at problems from many different angles"), and IC (e.g., "Spends time teaching and coaching"). Participants expressed their answers using a 5-point Likert scale, scoring options from 1 to 5 to represent the categories of strongly disagree (SD), disagree (D), undecided (U), agree (A), and strongly agree (SA), respectively. The MLQ was administered to a sample of 387 high school teachers. Teachers were instructed to complete the questionnaire within a designated time period of around 30 minutes. The structured administration of the MLQ within a 30-minute timeframe ensured consistent data collection conditions, which is critical for maintaining the instrument's reliability. In addition, the high response rate of over 97% also indicates strong participant engagement, further supporting the reliability of the study's findings.

## 2.4. Data analysis

Prior to conducting EFA and CFA to explore the factor structure of the MLQ, an inquiry was conducted to assess the internal consistency of its five components. At first, EFA was performed using principal-axis factoring with varimax rotation to investigate the possible factor structure of the scale. Several indicators, including the Kaiser-Meyer-Olkin (KMO) measure ($0.50<KMO<1$), Bartlett's test ($p<0.05$), factor loading $>0.50$, and eigenvalue $>1$, were used. Next, CFA was used to verify the underlying structural accuracy of the model. Standardized estimates and modification indices were employed to assess the adequacy of the model's fit to the data. The assessment of the model's fit also considered the Chi-square/degrees of freedom ratio ($X^2/df \leq 3$), the goodness of fit index ($GFI \geq 0.90$), comparative fit index ($CFI \geq 0.90$), Tucker-Lewis's index ($TLI \geq 0.90$), and root mean square error of approximation ($RMSEA \leq 0.08$). The study computed the Cronbach's alpha coefficient independently to assess the internal

consistency of both the MLQ as a whole and each of its five subscales. In addition, we examined the item-total correlation and correlation coefficient among the MLQ subscales.

# 3. RESULTS AND DISCUSSION

Cronbach's alpha coefficients were used to evaluate the internal consistency of the five components of the MLQ. Table 1 displays the means and standard deviations of the five factors, with values ranging from 3.06 (0.57) to 3.38 (0.61). These findings suggest the robust discriminant capacity of each item, as all correlated item-total correlation values for all items were greater than 0.35 [27].

In addition, Cronbach's alpha values of all subscales ($\alpha$=0.84 for IIa, $\alpha$=0.73 for IIb, $\alpha$=0.80 for IM, $\alpha$=0.75 for ISS, and $\alpha$=0.79 for IC) were satisfactory [28]. The item-total correlations and internal consistency of the five subscales were also similar to the findings of recent studies [15], [24], [27]–[29]. The MLQ and five subscales had high correlations, ranging from 0.46 to 0.64, indicating that the MLQ had good convergent validity. The correlation coefficients between the five subscales exhibited moderate positive values, ranging from 0.10 to 0.27. This finding supports that these subscales are distinct from one another and provides validation for the original five-factor structure of the MLQ as applied to Vietnamese teachers.

Table 1. Descriptive data

| | No. Of items | M | SD | $\alpha$ | MLQ | IIa | IIb | IM | IS | IC |
|---|---|---|---|---|---|---|---|---|---|---|
| MLQ | 20 | 3.29 | 0.55 | 0.81 | 1 | 0.57** | 0.59** | 0.55** | 0.64** | 0.46** |
| IIa | 4 | 3.31 | 0.57 | 0.84 | | 1 | 0.19** | 0.21** | 0.24** | 0.15* |
| IIb | 4 | 3.06 | 0.57 | 0.73 | | | 1 | 0.20** | 0.25** | 0.18** |
| IM | 4 | 3.23 | 0.59 | 0.80 | | | | 1 | 0.27** | 0.10* |
| IS | 4 | 3.38 | 0.61 | 0.75 | | | | | 1 | 0.24** |
| IC | 4 | 3.34 | 0.58 | 0.79 | | | | | | 1 |

Note. N=387, *p<0.05, and **p<0.01.
MLQ=multifactor leadership questionnaire; IIa=idealized influence attributed, IIb=idealized influence behavioral, IM=inspirational motivation, IS=intellectual stimulation, IC=individualized consideration.

Table 2 presents a summary of the EFA analyses for the school-level environment questionnaire (SLEQ). The present study used principal-axis factoring and varimax rotation to explore the 20-item scale's possible factor structure through EFA. The suitability of the factor analysis was supported by the KMO measure (KMO=0.83) and Bartlett's test of sphericity ($\chi 2$ (190)=2249.01, p<0.000) [30]. The findings showed a five-factor solution that explained 55.56% of the total variance and had eigenvalues greater than one. The factor loadings ranged from 0.69 to 0.78, indicating substantial associations. Nearly all items were loaded onto their respective original five subscales. Factor 1, IIa, was composed of four items, each exhibiting factor loadings spanning from 0.66 to 0.77. Factor 2, IIb, consisted of four items, each demonstrating factor loadings within the range of 0.72 to 0.78. Factor 3, IM, encompassed four items, all showing factor loadings ranging from 0.72 to 0.78. Factor 4, IS, consisted of four items, each exhibiting factor loadings ranging from 0.66 to 0.78. Factor 5, IC, comprised four items with factor loadings ranging from 0.69 to 0.72. Figure 1 displays the fitted model of the MLQ. The CFA findings for the 20 items confirmed the same five-factor structure of the MLQ as initially proposed by Bass and Avolio [15]. The model exhibited favorable fit indices: $\chi 2$=252.7, df=160, $\chi 2$/df=1.57, p=0.000, TLI=0.91, CFI=0.90, and RMSEA=0.067 [31]–[34]. The standardized estimates, representing factor loadings, for all five subscales fell within the range of 0.66 to 0.78. These results suggest a strong fit between the model and the data, demonstrating that the five-factor structure effectively accounts for the concept of transformational leadership.

The findings of the current study, which confirmed a five-factor structure for the MLQ within Vietnamese high schools, align with transformational leadership theory. Transformational leadership theory posits that effective leadership involves influencing followers to achieve common goals through inspiration, motivation, and IC. The five factors identified in the MLQ correspond to key dimensions of transformational leadership, indicating that this theoretical framework is relevant in the Vietnamese educational context. The present study builds upon existing literature by confirming the five-factor structure of transformational leadership from the MLQ, aligning with prior research conducted in diverse cultural contexts [30], [35], [36]. This consistency underscores the robustness and cross-cultural applicability of the MLQ as a reliable measure of leadership behavior. Previous studies have replicated the factor structure, adding to the cumulative body of knowledge on leadership assessment and validating the MLQ's utility in diverse cultural and organizational settings. The current study confirms the five-factor structure of the MLQ, which adds to the growing body of research supporting its validity and reliability. This study reinforces trust in the MLQ as a reliable tool for evaluating transformational leadership behaviors by replicating findings from prior research. The consistency

of the MLQ's factor structure across various countries underscores its robustness and ability to transcend cultural boundaries. This finding indicates that cultural differences do not significantly influence the underlying dimensions of transformational leadership behaviors, as measured by the MLQ. Rather, they appear to capture universal aspects of effective leadership, making the MLQ a valuable tool for leadership assessment in global contexts. The fact that the same factors emerge consistently across different settings suggests that the MLQ is applicable across a wide range of organizational environments. This validation is crucial for organizations operating in multicultural settings or seeking to implement leadership development programs on a global scale. The MLQ offers a detailed framework for evaluating transformational leadership effectiveness. This insight can inform leadership development initiatives and help organizations cultivate the behaviors and qualities associated with effective leadership.

In addition, the MLQ demonstrated reliable predictive validity and convergent validity, and the intercorrelations among the five subscales were well-suited for the group of teachers in Vietnam. These findings suggest that transformational leadership can be consistently observed and measured across diverse cultural settings, supporting its universal nature [11], [13], [17], [27], [34]–[37]. The conceptual framework developed by Bass and Avolio [15] provides a comprehensive and robust foundation for understanding transformational leadership. The fact that the MLQ structure in the Vietnamese context closely aligns with this framework indicates that the core dimensions and behaviors of transformational leadership are consistent and relevant across different countries and educational settings. The MLQ is a well-established and widely used instrument for assessing transformational leadership.

Table 2. EFA of the MLQ

| | Items | Mean | SD | Factor loading | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | IIa | IIb | IM | IS | IC |
| 10 | Instills pride in others (IIa4) | 3.31 | 0.68 | 0.77 | | | | |
| 18 | Goes beyond self-interest for the good of the group (IIa1) | 3.33 | 0.75 | 0.74 | | | | |
| 21 | Acts in ways that builds others (IIa3) | 3.35 | 0.70 | 0.68 | | | | |
| 25 | Displays a sense of power and confidence (IIa2) | 3.29 | 0.74 | 0.66 | | | | |
| 6 | Talks about most important values and beliefs (IIb3) | 2.70 | 0.66 | | 0.78 | | | |
| 14 | Specifies the importance of having a strong sense of purpose (IIb4) | 2.82 | 0.68 | | 0.77 | | | |
| 23 | Considers the moral and ethical consequences of decisions (IIb1) | 3.34 | 0.70 | | 0.75 | | | |
| 34 | Emphasizes the importance of having a collective sense of mission (IIb2) | 3.35 | 0.75 | | 0.72 | | | |
| 9 | Talks optimistically about the future (IM4) | 3.37 | 0.76 | | | 0.78 | | |
| 13 | Talks enthusiastically about what needs to be accomplished (IM1) | 2.87 | 0.71 | | | 0.76 | | |
| 26 | Articulates a compelling vision of the future (IM3) | 3.30 | 0.70 | | | 0.74 | | |
| 36 | Expresses confidence that goals will be achieved (IM2) | 3.41 | 0.68 | | | 0.72 | | |
| 2 | Re-examines critical assumptions for appropriateness (IS1) | 3.41 | 0.77 | | | | 0.78 | |
| 8 | Seeks differing perspectives when solving problems (IS4) | 3.38 | 0.72 | | | | 0.77 | |
| 30 | Gets others look at problems from many different angles (IS3) | 3.36 | 0.74 | | | | 0.77 | |
| 32 | Suggests new ways of looking at how to complete assignments (IS2) | 3.33 | 0.70 | | | | 0.66 | |
| 15 | Spends time teaching and coaching (IC4) | 3.38 | 0.74 | | | | | 0.72 |
| 19 | Treats others as an individual rather than just as a member of a group (IC2) | 3.36 | 0.74 | | | | | 0.72 |
| 29 | Considers an individual as having different needs, abilities, and aspirations from others (IC1) | 3.23 | 0.77 | | | | | 0.71 |
| 31 | Helps others to develop their strengths (IC3) | 3.42 | 0.67 | | | | | 0.69 |
| | Eigenvalue | | | 4.90 | 2.39 | 2.12 | 2.05 | 1.84 |
| | Cum (%) | | | 22.35 | 32.09 | 40.58 | 48.54 | 55.58 |

MLQ=multifactor leadership questionnaire; IIa=idealized influence attributed, IIb=idealized influence behavioral, IM=inspirational motivation, IS=intellectual stimulation, IC=individualized consideration.

The items of the MLQ capture the specific dimensions and behaviors outlined in the conceptual framework. This study reinforces the generalizability and strength of the transformational leadership paradigm by replicating the findings of previous studies conducted in different countries. The close alignment between the MLQ structure and the conceptual framework suggests that organizations and educational institutions in Vietnam can effectively utilize the MLQ as a tool for assessing and developing

transformational leadership qualities in their leaders. This consistency across countries facilitates the exchange of knowledge and best practices in leadership development, ultimately benefiting organizational and educational effectiveness. Furthermore, the present study delves into the intricacies of transformational leadership, shedding light on its multidimensional nature. Previous research has raised concerns about the discriminant validity of transformational leadership dimensions, pointing out that they tend to show high correlations and not make any unique contributions [37], [38]. However, the results of this study show a different picture. Through careful analysis of the five MLQ subscales, the study discovered that each subcategory effectively encapsulates unique facets of the transformational leadership paradigm. This revelation underscores the complexity inherent in transformational leadership, refuting the notion of its monolithic representation [39], [40]. Rather, it emerges as a nuanced construct composed of various dimensions, each with its own role and significance within the broader leadership landscape. By recognizing and delineating these distinct aspects, our study contributes to a deeper understanding of transformational leadership, paving the way for more nuanced theories and practical applications in organizational settings.
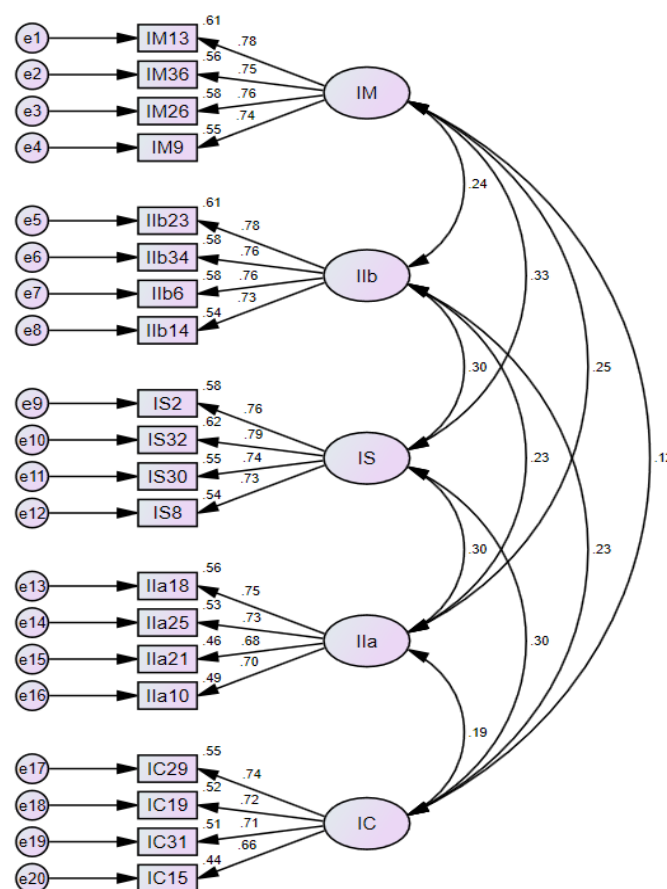


Figure 1. The best fit model of the MLQ

## 4. CONCLUSION

This study represents the first validation of the MLQ's transformational leadership assessment with teachers in Vietnam. The findings confirm that the five-factor model of the MLQ, comprising IIa, IIb, IM, IS, and IC, is applicable in the Vietnamese educational context. While research on the MLQ in various settings is sparse, this study highlights the robust internal consistency of the 20 MLQ items within the Vietnamese context. The results suggest that Vietnamese teachers share cultural practices, beliefs, and educational values, supporting the use of the MLQ to evaluate transformational leadership in Vietnam and enhance the scale's generalizability. The study reveals that the surveyed teachers exemplify all five dimensions of transformational leadership. The findings affirm the reliability and validity of the MLQ scale and its subscales when applied to the surveyed population of Vietnamese teachers. The current research represents a significant step forward and offers a potentially more effective and comprehensive survey tool for assessing,

training, and developing leadership styles, which can benefit organizational practitioners and contribute to national development. Given the increasing need for integration and interdependence in 21st-century organizations, proactive leadership that encompasses intellectually stimulating, inspirational, and charismatic styles is essential. Therefore, the adaptation of this instrument is expected to generate interest not only for further studies and theories on leadership behavior in Vietnam but also as a valuable tool for organizational practitioners and stakeholders involved in leadership skills development.

The MLQ's consistent factor structure has significant implications for leadership development and training initiatives in Vietnamese high schools. School administrators and educational policymakers can utilize the MLQ as a dependable instrument to evaluate and improve leadership effectiveness among teachers. By honing in on the specific dimensions of transformational leadership delineated in the MLQ, including fostering trust and collaboration through idealized influence, instilling vision and enthusiasm via IM, promoting critical thinking and innovation through IS, and delivering personalized support through IC, educational leaders can foster a positive school environment conducive to both student achievement and teacher contentment. Through targeted efforts informed by the MLQ framework, schools can nurture a cadre of proficient leaders who inspire, motivate, and empower others, thereby contributing to the overall enhancement of the educational landscape. This study helps us learn more about how leadership works in Vietnamese high schools. Future research could look into the link between leadership behavior, as measured by the MLQ, and a number of outcomes, such as teacher job satisfaction, student academic performance, and the efficiency of the organization. Additionally, longitudinal studies could investigate how changes in leadership behavior over time impact school culture and climate. Furthermore, qualitative inquiries could provide deeper insights into the contextual factors influencing leadership practices and effectiveness within the Vietnamese educational system.

Although the study effectively delineated the five-factor model of transformational leadership from the MLQ, it is imperative to acknowledge its specific limitations. Firstly, future research endeavors should adopt randomized sampling techniques to mitigate potential biases and enhance the generalizability of findings. Randomized sampling diminishes the likelihood of selection bias and enhances the precision of extrapolating findings to the broader population by ensuring each member has an equitable opportunity for selection. Secondly, there is a recommendation for future studies to explore the possibility of expanding the scope of research to encompass a wider range of educational levels, including primary and secondary schools. This expanded scope not only enriches the breadth of knowledge but also facilitates the identification of nuanced differences and similarities in transformational leadership dynamics across various educational levels.

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