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Exploring the Validity of the Moral Competency Inventory Instrument: An Analysis of Validation Methods from Multiple Studies

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Abstract

This study explores the validity of the Moral Competency Inventory (MCI) as a measurement instrument for moral intelligence applied across various cultural contexts. Based on a literature review of several studies, this research highlights the strengths, variations, and gaps in the validity of the MCI. Findings indicate that, in general, the MCI demonstrates good validity in terms of internal structure and content, with four main dimensions—integrity, responsibility, compassion, and forgiveness—that remain relatively stable across cultures. However, the adaptation of the MCI in different cultural contexts has led to variations in response processes and the influence of demographic factors such as age, gender, and cultural background. Additionally, some studies reveal inconsistencies in the MCI's convergent and discriminant validity, particularly in relation to local instruments measuring morality. These gaps underscore the need for further research on the social impact of using the MCI in diverse cultural settings. This study recommends cultural and linguistic adjustments in the future development of the MCI to enhance its validity as a universal tool for measuring moral intelligence.

Keywords: *moral intelligence, moral competency inventory, instrument validity*

Abstrak

Penelitian ini mengeksplorasi validitas Moral Competency Inventory (MCI) sebagai instrumen pengukuran kecerdasan moral yang diterapkan di berbagai konteks budaya. Berdasarkan tinjauan literatur terhadap sejumlah studi, penelitian ini menyoroti kekuatan, variasi, dan kesenjangan dalam validitas MCI. Temuan menunjukkan bahwa secara umum, MCI memiliki validitas yang baik dalam hal struktur internal dan isi, dengan empat dimensi utama yaitu integritas, tanggung jawab, belas kasih, dan pemaafan yang relatif stabil di berbagai budaya. Namun, adaptasi MCI dalam konteks budaya yang berbeda menghasilkan variasi pada proses respons dan pengaruh faktor demografis, seperti usia, jenis kelamin, dan latar belakang budaya. Selain itu, beberapa studi menunjukkan ketidakkonsistenan dalam validitas konvergen dan diskriminan MCI, terutama dalam hubungannya dengan instrumen lokal yang mengukur moralitas. Kesenjangan ini menunjukkan perlunya penelitian lebih lanjut terkait dampak sosial penggunaan MCI di berbagai budaya. Penelitian ini merekomendasikan penyesuaian budaya dan linguistik dalam pengembangan MCI di masa depan untuk meningkatkan validitas instrumen ini sebagai alat ukur kecerdasan moral yang universal.

Kata Kunci: *kecerdasan moral, moral competency inventory, validitas instrument*

Introduction

Moral intelligence is increasingly recognized as an important concept in various disciplines, including education, psychology, and decision-making (Bagchi et al., 2024). The concept encompasses the ability of humans to integrate ethical behavior with their cognitive and emotional abilities (Prasertsin et al., 2024). The relevance of moral intelligence is highly

visible in ethical decision-making and prosocial behavior that is essential for harmony in social and professional interactions. However, despite its broad impact, moral intelligence remains under-explored, especially regarding the instruments used to measure it (Bagchi et al., 2024). One of the most commonly used instruments to measure moral intelligence is the Moral Competency Inventory (MCI), developed by Lennick and Kiel to evaluate core moral competencies (Elagamy et al., 2024).

As an instrument that emphasizes the core dimensions of moral intelligence, the MCI offers a comprehensive evaluative approach through four main aspects, namely integrity, responsibility, compassion, and forgiveness (Martin & Austin, 2010). The MCI seeks to describe how individuals apply moral values in their daily behavior, as well as the extent to which they are able to maintain strong ethical principles across a variety of situations (Toprak & Karakus, 2018). With these characteristics, the MCI has been used extensively in various cross-cultural studies, allowing researchers to assess the diversity of the application of morality across different social and professional contexts (Letić & Lungulov, 2020). Its extensive use makes the MCI an important measurement tool for assessing the effectiveness of moral development and character education programs in various parts of the world.

The validity of measurement instruments is an essential element in research as it is the basis for ensuring accurate and reliable results (Villasís-Keever et al., 2018). The process of instrument validation often involves different types of evidence, such as content validity, construct validity and criterion validity, all of which aim to support the proper interpretation of the scores generated by the instrument (Souza et al., 2017). According to recent standards, validity consists of different categories of evidence, such as content validity, internal structure, response processes, and relationships with other variables, all of which are designed to support meaningful interpretation of results (Reeves & Marbach-Ad, 2016). Research on the MCI has focused on the consistency of the factor structure in various cultural contexts, as well as the relevance of this instrument in measuring dimensions of morality such as integrity, responsibility, and compassion (Letić & Lungulov, 2020; Martin & Austin, 2010).

Previous research suggests that the MCI validation process often faces challenges when adapted into different languages and cultural contexts. For example, research by (Toprak & Karakus, 2018) adapting the MCI into Turkish found that although the structure of the four main dimensions could be maintained, some items in this instrument needed to be adjusted to increase relevance to the local culture. (Letić & Lungulov, 2020) also adapted the MCI for gifted students in Serbia and found that the factor structure of the MCI remained stable. However, they found significant variation in the integrity dimension, particularly among gifted students in different fields such as arts, sports, and mathematics, which suggests that this factor may be influenced by the context of different fields. The adaptation of the MCI into Persian by (Mohammadi et al., 2020) showed similar challenges, where the construct validity of the compassion and forgiveness components showed differences in their interaction with local cultural norms and values. These findings suggest that the factor structure of the MCI is not always consistent with the original theory and needs to be adjusted for the instrument to remain valid and relevant in different cultural contexts.

The validity of measurement instruments such as the Moral Competency Inventory (MCI) is of paramount importance to ensure that they can accurately and consistently measure moral intelligence in various contexts. Given that the MCI has been widely used in different countries and translated into several languages, there is a concern that validation results in one culture may not necessarily apply in another culture. Differences in values, norms and moral perceptions in each cultural context may affect how respondents understand and respond to items in the MCI, ultimately impacting the accuracy of measurement results. Therefore, an in-depth analysis of the validity of the MCI is important to determine the extent to which this instrument is able to provide valid results across various cultural contexts and ensure that the MCI remains relevant and reliable as a universal measure of moral intelligence.

This article aims to explore the various validation methods that have been applied in MCI-related research across different cultural contexts. By reviewing studies that have tested the validity of the MCI, this article hopes to provide an in-depth understanding of the challenges and opportunities in using the MCI as a cross-cultural measure of moral intelligence. This analysis is also expected to provide recommendations regarding the development and customization of the MCI instrument to make it more suitable for different populations, so that it can support moral intelligence research globally.

Methods

Research Design

This study uses a literature review method that aims to explore the validity of the MCI based on various previous studies. A literature review is defined as an investigative process that includes searching, identifying, reading, summarizing, compiling, analyzing, interpreting, and referencing previous studies. This structured approach ensures that the literature review remains scientific and presents arguments and evidence systematically (Chigbu et al., 2023). With this approach, the article is expected to compile and comprehensively analyze evidence for the validity of MCIs from various cultural contexts and populations.

Study Selection Criteria and Data Sources

A picture of the validity of relevant MCIs was obtained by screening studies based on the following criteria:

1. Research articles published between 2010 – 2024
2. Studies that focused on testing the validity of MCIs, including validity types such as content, construct, convergent, discriminant, and consequence of use validity.
3. Data sources are articles from Scopus and Sinta 1 or 2 indexed journals.
4. Data sources are obtained through searching articles in online journal databases indexed by Scopus or Sinta Class 1 and 2 with the keyword validity of the Moral Competency Inventory. Each article that fits the criteria will be further analyzed for exploration.

Data Analysis Technique

In this study, manual thematic analysis techniques were used to explore the validity of the MCI. Based on the opinion of (Chigbu et al., 2023), the following are the steps of manual thematic analysis:

1. Deep reading and coding of each article to flag important information regarding the type of validity being tested and cross-cultural adaptation.
2. Grouping the information by organizing the results of validity tests into main themes, thus facilitating comparisons between studies.
3. Narrative synthesis to summarize key findings from each article in a structured manner to identify patterns, variations and gaps in MCI validity research across different cultural contexts.

Results and Discussion

Moral Competency Inventory

The Moral Competency Inventory (MCI), developed by Lennick and Kiel, is conceptually defined as a tool to measure an individual's moral intelligence, which is the ability to apply moral values in everyday life. The MCI focuses on 4 (four) main competencies in moral intelligence namely integrity, responsibility, compassion, and forgiveness. These four aspects are considered as the foundation in shaping one's moral character to make ethical decisions and act in accordance with universally accepted moral principles. This instrument is

designed to understand the extent to which individuals can practice ethical behavior in various contexts, such as education, leadership, and social relationships (Bagchi et al., 2024).

The MCI model consists of four dimensions of moral principles, namely integrity, responsibility, compassion, and forgiveness. The four dimensions are derived into ten indicators, namely (1) acting consistently with principles, values, and beliefs, (2) telling the truth, (3) defending what is right. (4) keeping promises, (5) taking responsibility for personal choices, (6) admitting mistakes and failures, (7) taking responsibility for serving others, (8) caring actively for others, (9) being able to forgive one's own mistakes, (10) being able to forgive the mistakes of others. These competencies are further elaborated into 40 statement items by Lennick & Kiel, (2011).

Table 1. Indicators of Lennick and Kiel's Moral Competency Inventory

Dimension	Indicator
Integrity	1. Acting consistenly with principles, values, and beliefs
	2. Telling the truth
	3. Stand up for what is right
	4. Keeping promises
Responsibility	5. Takes responsibility for personal choices
	6. Admitting mistakes and failures
	7. Takes responsibility to serve others
Compassion	8. Actively cares for others
Forgiveness	9. Able to forgive one’s own mistakes
	10. Able to forgive the mistakes of others

Sources of Instrument Validity

The validity of an instrument is very important to establish, because it ensures that the instrument can actually measure what it is intended to measure. Sources of instrument validity are derived from various forms of evidence that can be used to evaluate the validity of interpreting test scores for a particular use. These sources of evidence do not represent separate types of validity, but rather are part of the concept of validity as a whole. The ultimate goal is to ensure that all evidence collected supports the expected interpretation of the test score for a particular use. This approach emphasizes that for each proposed interpretation of a test score, support based on relevant validity evidence is needed to ensure its accuracy and reliability (American Educational Research Association et al., 2014). The following are sources of evidence of instrument validity:

1. Evidence Based on Test Content. This type of evidence refers to the extent to which the content of the test covers all aspects of the construct or domain to be measured. Through assessment by experts, it is checked whether each item in the test is truly representative of the concept in question, so that the results reflect the coverage of the construction comprehensively and accurately.
2. Evidence Based on Response Processes. This type of evidence assesses the cognitive or psychological processes that are expected to occur when participants answer test items. This evidence ensures that the participant's responses match the relevant processes for measuring the construct in question, so that the test results truly reflect the construct to be measured. This method may involve interviews or qualitative analysis of participants' responses to explore the thought processes used.
3. Evidence Based on Internal Structure. This type of evidence looks at whether the relationships between items in the test match the expected theoretical structure of the

construct being measured. Factor analysis is often used to check whether items in a test are related according to expected dimensions or factors, helping to ensure the internal structure matches the underlying theory.

4. Evidence Based on Relations to Other Variables. This type of evidence evaluates the relationship of test scores to relevant external variables. This evidence includes convergent and discriminant validity. Convergent validity indicates strong correlations with other instruments measuring similar constructs, while discriminant validity indicates low correlations with instruments measuring different constructs. It also includes predictive and concurrent validity to verify how well a test score predicts or correlates with a specific external outcome for which it is critiqued.
5. Evidence Based on Consequences of Testing. This type of evidence considers the impact of test use, both intended and unintended. It looks at whether the use of the test is fit for purpose and takes into account any social or ethical impacts that may arise. With this evidence, tests are not only evaluated for technical accuracy, but also for the impact they have on individuals and society.

Research Related to MCI Validity

A number of studies have been conducted to examine the validity of the MCI as an instrument used in measuring moral intelligence. The validity of the MCI is an important topic because this instrument aims to evaluate moral aspects such as integrity, responsibility, compassion, and forgiveness. In order for the results obtained from the MCI to be reliable and relevant, strong validity evidence is needed in various cultural contexts and populations. Several previous studies have evaluated the validity of the MCI through various approaches. The following table summarizes and describes some of the key studies that have addressed the validity of MCIs and the resulting findings:

Table 2. Objectives, Validity Types, and Conclusions of Past Research on MCIs

No.	Article Title	Research purposes	Types of Validity Tested	Testing Methods	Conclusion
1	Moral Competency Inventory Validation Content, Construct, Convergent, and Discriminant	Evaluating the content, construct, convergent, and discriminant validity of the MCI	Content validity, construct, convergent, discriminant	Factor analysis, correlation	MCI requires further development.
2	Teachers' Moral Intelligence: A Scale Adaptation into Turkish and Preliminary Evidence	Adapting the MCI into Turkish and evaluating its construct validity	Construct validity	EFA and CFA	MCI is valid in the context of teachers in Türkiye.

No.	Article Title	Research purposes	Types of Validity Tested	Testing Methods	Conclusion
3	Study of Moral Intelligence of Adolescents in Bali	Measuring the moral intelligence of Indonesian adolescents with an Islamic educational background in Bali	Validity of correlation between items	Pearson Product Moment Correlation	MCI is valid and reliable for Indonesian adolescents based on religious education.
4	Exploring the Moral Competencies in Serbian Gifted Students	Adapting MCI for Serbian gifted students and evaluating construct validity	Construct validity	Factor analysis	MCI can be used on gifted students in Serbia.
5	Investigation of Moral Intelligence's Predictive Components in Iranian Students	Investigating the predictive components of moral intelligence in Iranian college students.	Construct validity	Regression analysis	MCI is valid among Iranian students.
6	Convergent and Discriminant Validity of the Bafadal's Leadership Morality Questionnaire	Evaluating the convergent and discriminant validity of the BLMQ with the MCI and MFQ	Convergent, discriminant validity	Correlation	The BLMQ and MCI measure different aspects of morality.

1. Research conducted by Martin & Austin, (2010) evaluated the validity of the MCI through various approaches, namely content, construct, convergent, and discriminant validity. The results showed that although the MCI had adequate content validity, its factor structure was not fully consistent with the initial theory proposed by Lennick and Kiel, with only eight of the ten factors emerging stably. In addition, convergent and discriminant validity tests found significant but insufficiently strong correlations between the MCI and measures of integrity and responsibility. The study also revealed differences in MCI scores by gender, raising questions regarding the universality of the MCI. In conclusion, this study suggests that the MCI requires further development to achieve the expected validity in measuring moral intelligence.
2. Research conducted by Toprak & Karakus, (2018) evaluated the validity evidence of the MCI in the context of Turkish language and culture through construct validity testing using exploratory factor analysis and confirmatory factor analysis. The results of factor analysis show that the structure of the four-dimensional model of the MCI, namely integrity, responsibility, compassion, and forgiveness, is confirmed in the Turkish version, supporting the construct validity of this instrument. This study also tested the reliability of the MCI by showing adequate coefficients on each dimension, strengthening the validity evidence of this instrument in measuring the moral

intelligence of teachers in Turkey. In addition, regression analysis revealed that demographic variables such as gender and age affect MCI scores, with female and older teachers tending to score higher on some dimensions.

3. Research conducted by Winurini, (2019) evaluated the validity of the MCI adapted in Indonesian with the aim of measuring the moral intelligence of adolescents who have an Islamic educational background in Bali. Validity was tested through the correlation of item scores with total scores using the Pearson Correlation Product Moment formula. Results showed that all items in the MCI were valid at the 0.05 significance level, with a coefficient alpha of 0.894, indicating high reliability. The results of this study indicate that the MCI is a valid and reliable instrument for measuring moral intelligence in the context of Indonesian adolescents with a faith-based educational background.
4. Research conducted by Letić & Lungulov, (2020) evaluated the construct validity of the MCI adapted into Serbian with a sample of gifted students in various fields such as music, visual arts, sports, and mathematics. Through factor analysis, the results showed that the four-factor structure of the MCI model of integrity, responsibility, compassion, and forgiveness was confirmed and consistent with the theory proposed by Lennick and Kiel. In addition, this study found that gifted students in different fields showed differences on the integrity dimension, with gifted students in sports having the highest scores compared to music, math, and visual arts. Reliability tests also showed adequate values on each factor, supporting the use of the MCI as a valid and reliable instrument for measuring the moral competence of gifted students in Serbia.
5. Research conducted by Mohammadi et al., (2020) used the MCI adapted into Persian to measure the moral intelligence of students at Shahid Beheshti University, Iran. Construct validity was tested by regression analysis to determine the effect of each component of moral intelligence, namely integrity, responsibility, compassion, and forgiveness, in predicting moral intelligence. The results showed that the responsibility component was the strongest predictor, followed by forgiveness, integrity, and compassion. These findings support the construct validity of the MCI in the context of university students, with adequate reliability coefficients for each component. This study concludes that the MCI is a valid and reliable instrument for evaluating moral intelligence in the context of higher education in Iran.
6. Research conducted by Bafadal et al., (2024) aimed to develop and test the convergent and discriminant validity of Bafadal's Leadership Morality Questionnaire (BLMQ) in the primary education environment in Indonesia. Convergent validity was evaluated by measuring the correlation between BLMQ and other morality instruments, such as Moral Foundations Questionnaire (MFQ) and Moral Competency Inventory (MCI). The results showed that the BLMQ had a significant positive correlation with the MFQ, indicating the existence of convergent validity. However, the correlation between the BLMQ and MCI was not significant, suggesting the possibility that these two instruments measure different aspects of morality.

Patterns of MCI Validity

Research on the Moral Competency Inventory (MCI) shows a pattern of consistency in terms of content validity and internal structure, although there is some variation in results between studies. Based on the studies of Toprak & Karakus, (2018) in Turkey and Letić & Lungulov, (2020) in Serbia, the structure of the MCI's four main factors (integrity,

responsibility, compassion, and forgiveness) is generally stable and in line with Lennick & Kiel's grounded theory in various cultural contexts. These findings provide evidence that the MCI has a strong basis of validity in its internal structure, i.e. the fit between the items in the instrument and the theoretical model of moral intelligence being measured.

However, Martin & Austin's (2010) study found inconsistencies in the factor structure of the MCI, where only eight of the ten factors proved stable. This suggests potential weaknesses in the MCI construct structure when applied outside the context of origin. This finding indicates that some aspects of morality may not be fully covered by the MCI instrument, leading to variations in construct stability. Therefore, although the MCI shows a pattern of stability in some cultural contexts, the mixed results in certain studies indicate the need for further testing to ensure the stability of the construct structure across different cultural groups.

Variation in MCI Validity

The MCI exhibits significant variation in its application, especially when adapted to different languages and cultures. One form of variation is found in response process-based validity, which evaluates whether the way respondents understand and answer items in the MCI is appropriate to their cultural context. Research by Toprak & Karakus, (2018) in Turkey and Letić & Lungulov, (2020) in Serbia showed that although the basic structure of the MCI was acceptable in those contexts, socio-cultural background as well as demographic factors such as gender and age influenced respondents' responses to items in this instrument. For example, in Turkey, female and older teachers showed higher scores on some dimensions of the MCI, while in Serbia, students gifted in sports recorded higher levels of integrity than students gifted in music or visual arts.

These variations indicate that certain cultural contexts and demographic factors may influence the interpretation of MCI results. This relates to the principle of validity based on relationships with other variables, which emphasizes that measurement instruments should show consistency in results when applied to different population groups that have different characteristics. As such, these variations highlight the importance of cross-cultural adaptation and context adjustment in the use of the MCI in order for the instrument to more accurately reflect the complexities of morality in diverse local cultures.

MCI Validity Gaps

Several gaps in the validity of the MCI have been identified, primarily related to the consistency of convergent validity, response processes, and the impact of using the instrument across different cultures. In Bafadal et al.'s (2024) study, for example, it was found that the correlation between the MCI and a local morality instrument, the Bafadal's Leadership Morality Questionnaire (BLMQ), was not significant. This suggests that the MCI and BLMQ may be measuring different aspects of morality, raising concerns regarding the convergent validity of the MCI in specific cultural contexts. This is an important issue in validity based on relationships with other variables, which requires instruments to show appropriate correlations with other instruments measuring similar constructs. This gap indicates that the MCI may need to be further customized to encompass a more contextualized variety of moral values that are more relevant to a particular culture or society.

In addition, in-depth studies of validity based on response processes on the MCI are limited. In some cultures, such as Indonesia and Iran, local norms and values may influence how individuals respond to MCI items. For example, in the context of religious education in Indonesia, perceptions of morality influenced by religious values may affect respondents' understanding of moral competencies such as compassion and forgiveness. The absence of an in-depth study of this response process reveals a gap in understanding how respondents from different cultural backgrounds interpret the moral constructs measured by the MCI.

Finally, there is a gap in validity based on the consequences of test use. No studies have explored the social or ethical implications of using the MCI outside its culture of origin. The validity principle in the standards emphasizes that measurement instruments should be evaluated not only for technical accuracy but also for their potential impacts on individuals and society. This gap needs to be addressed urgently to avoid bias or inappropriate interpretation of results when MCI instruments are used in cultures different from those in which they were developed.

Conclusion

This study provides an in-depth overview of the validity of the MCI in a cross-cultural context, highlighting the strengths, variations, and gaps in this instrument. Overall, the MCI demonstrates adequate validity in terms of internal structure and content, allowing for the measurement of basic moral competencies, such as integrity, responsibility, compassion, and forgiveness, across a variety of population groups. This is reflected in the results of several studies that show consistency in the four-factor structure of the MCI across cultures.

However, adaptation of the MCI to different cultural contexts results in variations, especially with regard to response processes and the influence of demographic factors such as age, gender, and cultural background. These variations confirm that cultural and linguistic adaptation are important components to ensure the relevance of the MCI to different populations. Several studies have also shown that respondents may interpret and respond to MCI items differently depending on the cultural values present in each context.

In addition, this study revealed several gaps in the validity of the MCI, especially in terms of convergent and discriminant validity when used in conjunction with other morality instruments. The MCI showed inconsistent correlations with local instruments, indicating that the aspects of morality measured by the MCI may differ from those considered important in a particular culture. The lack of in-depth studies on the impact of using the MCI in diverse social contexts also highlights the need for further research on the validity based on the consequences of use of the instrument.

Therefore, it is recommended that further development of the MCI include adapting items to be more relevant to specific cultural contexts. Future research should also consider validity based on response processes and consequences of use to improve accurate interpretation of results across cultures. By considering these recommendations, the MCI can be developed into a more universal instrument for measuring moral intelligence, capable of providing valid and reliable results across global contexts.

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