



Accepted: December 2024

Published: February 2025

Research Article**An Investigation of the Manifestation of Multiple Intelligences in the Vision Textbooks Series**Davood Sepahi*¹¹Assistant Professor, English Department, Takestan Branch, Islamic Azad University, Takestan, Iran

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ABSTRACT

This study investigates the representation of Gardner's Multiple Intelligences (MI) in the Vision series of English language textbooks used in Iranian high schools. The research aims to determine whether the exercise sections of Vision 1, 2, and 3 provide opportunities for students to engage with activities that align with MI theory. A questionnaire was developed based on the content of the textbooks and administered to 40 teachers with diverse educational backgrounds (BA, MA), age groups (25–50 years), and teaching experience (2–32 years). The results indicate a unanimous agreement among teachers that the textbooks contribute to activities engaging students with MI, though the extent of representation varies significantly across lessons and books. Linguistic and logical-mathematical intelligences were the most frequently represented, while musical, bodily-kinesthetic, and naturalist intelligences were underrepresented. This study highlights the importance of incorporating MI in textbook design to enhance language learning outcomes and suggests revisions to ensure a more balanced representation of intelligences.

Keywords: Multiple Intelligences, Vision series, textbook evaluation, language learning, curriculum design

1. INTRODUCTION

Textbooks are fundamental to formal education, serving as the primary resource for teachers and students. They reflect national educational objectives and provide a structured framework for achieving curriculum goals. Evaluating their effectiveness is essential for optimizing educational outcomes and resource allocation. In language teaching, textbooks play a central role in classroom instruction and home practice, supporting teachers in refining pedagogy and engaging students effectively (Oates, 2014). Classroom interactions, guided by textbooks, are fundamental to achieving learning outcomes (Tan et al., 2019). Gardner's Multiple Intelligences (MI) theory offers a framework for understanding how diverse cognitive abilities influence learning, including language acquisition. While MI has been widely studied, its application in textbook design, particularly in non-Western contexts, remains underexplored. Previous research has explored the relationship between MI and learning, but few studies have examined how MI is represented in high school English textbooks. The Vision series, designed to align with national educational goals, emphasizes the use of linguistic and psychological capacities for language learning. However, it is unclear how effectively these textbooks provide opportunities for students and teachers to utilize MI in classroom activities. This study seeks to address this gap by evaluating the representation of MI in the Vision series.

This study aims to:

1. Evaluate the representation of MI in the exercise sections of Vision 1, 2, and 3.
2. Examine teachers' perceptions of how the textbooks facilitate MI-based activities.
3. Identify similarities and differences in MI representation across the three textbooks.

To address these objectives, the following research questions were formulated:

1. What MIs are represented in the exercise sections of Vision 1 from the teachers' perspective?
2. What MIs are represented in the exercise sections of Vision 2 from the teachers' perspective?
3. What MIs are represented in the exercise sections of Vision 3 from the teachers' perspective?
4. What are the similarities and differences in MI representation across the three textbooks?

This study highlights the importance of aligning textbooks with MI theory to support diverse learning needs. The findings can inform textbook revisions, teacher training, and the development of standardized tests. By addressing the psychological dimensions of language learning, this research contributes to a deeper understanding of educational resources and their impact on student outcomes.

2. REVIEW OF LITERATURE

The literature review synthesizes Howard Gardner's Multiple Intelligences (MI) theory with textbook design principles, highlighting its relevance to language learning and the importance of designing textbooks that cater to diverse cognitive abilities. The review also critically evaluates existing studies, identifying gaps in the representation of MI in educational materials.

Theoretical Framework: MI Theory and Textbook Design Principles

Howard Gardner's MI theory posits that intelligence is not a singular, fixed entity but a multifaceted construct comprising nine distinct intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, naturalist, and existential. This theory challenges traditional, IQ-based views of intelligence and emphasizes the diversity of cognitive abilities that individuals possess. In

education, MI theory advocates for personalized learning approaches that recognize and nurture students' unique strengths. Textbooks, as primary instructional tools, play a pivotal role in shaping learning experiences. Effective textbook design aligns with educational objectives and accommodates diverse learning needs. Integrating MI theory into textbook design ensures that materials cater to a wide range of intelligences, fostering inclusive and engaging learning environments. For instance, incorporating activities that target spatial or musical intelligences can enhance comprehension and retention for students who excel in these areas.

Connecting MI Theory to Language Learning and Textbook Design

Research demonstrates a strong relationship between MI theory and language learning strategies. Ansarin and Khatibi (2018) found that students who leverage their dominant intelligences—such as linguistic or interpersonal—perform better in language acquisition tasks. Similarly, Ebrahimi et al. (2020) highlighted the role of cultural intelligence in foreign language learning, emphasizing the need for culturally sensitive materials that resonate with learners' backgrounds. These studies underscore the importance of designing textbooks that reflect the diversity of intelligences and cultural contexts. However, existing textbooks often fall short in this regard. Studies on widely used series like Top Notch and Interchange reveal a disproportionate focus on linguistic and logical-mathematical intelligences, neglecting other MI types (Razmjoo & Jozaghi, 2010). This imbalance limits the potential of textbooks to engage students with diverse cognitive strengths. Similar trends have been observed in Arabic and Chinese textbooks, where linguistic intelligence dominates content, with minimal representation of other intelligences (Jado, 2015; Wattanborwornwong & Klavinitchai, 2016). These findings highlight the need for a more balanced and inclusive approach to textbook design.

Synthesizing the Literature: Gaps and Opportunities

The reviewed studies collectively emphasize the underrepresentation of certain intelligences in textbooks, particularly in language learning contexts. While linguistic and logical-mathematical intelligences are well-covered, other intelligences—such as musical, bodily-kinesthetic, and existential—are often overlooked. This gap not only limits the effectiveness of textbooks but also perpetuates a narrow view of intelligence that fails to recognize the diverse abilities of learners. Moreover, the cultural dimension of MI theory is often neglected in textbook design. As Ebrahimi et al. (2020) and Wattanborwornwong & Klavinitchai (2016) suggest, culturally sensitive materials are essential for fostering engagement and motivation among learners. By incorporating culturally relevant content and activities that target a broader range of intelligences, textbooks can become more inclusive and effective tools for language learning.

3. METHODOLOGY

Participants

The study involved 40 English language teachers with diverse educational backgrounds, age groups, and teaching experience. Participants included teachers with Bachelor of Arts (BA) and Master of Arts (MA) degrees in English language teaching, applied linguistics, or related fields. Their ages ranged from 25 to 50 years, and teaching experience varied from 2 to 32 years. Participants were selected based on their experience teaching the Vision series (Vision 1, 2, and 3), ensuring familiarity with the content and structure of the textbooks under investigation.

Questionnaire Development

The questionnaire was designed to assess the representation of Howard Gardner's Multiple Intelligences (MI) in the exercise sections of the Vision series textbooks. The development process included the following steps:

The questionnaire was grounded in Gardner's MI theory, which identifies nine intelligences: linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, intrapersonal, naturalist, and existential. Each intelligence type was operationalized into specific indicators relevant to language learning activities. The questionnaire included 45 items, with 5 items per intelligence type. Each item was designed to evaluate the extent to which the exercises in the Vision series catered to a specific intelligence. Items were structured as 5-point Likert scale questions, with responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The questionnaire was pilot-tested with 10 English language teachers who were not part of the main study. Feedback from the pilot test was used to refine the wording of items, ensure clarity, and confirm the relevance of the questions to the research objectives. Cronbach's alpha was calculated to assess the internal consistency of the questionnaire. The overall alpha coefficient was 0.89, indicating high reliability. The final version of the questionnaire included 45 items, divided into 9 sections corresponding to the nine intelligences. It also included a demographic section to collect information on participants' educational backgrounds, age, and teaching experience.

Data Collection

The questionnaire was administered online using Google Forms, ensuring accessibility for all participants. Participants were provided with clear instructions and an estimated completion time of 20–25 minutes. Data collection took place over 4 weeks, with reminders sent to participants to ensure a high response rate.

Data Analysis Methods

The collected data were analyzed using both descriptive and inferential statistics to address the research objectives.

1. Descriptive Statistics: Frequency distribution, mean scores, and standard deviations were calculated for each intelligence type. Bar charts and tables were created to summarize the findings and facilitate comparison across the three textbooks (Vision 1, 2, and 3).
2. Inferential Statistics: A one-way ANOVA was conducted to compare the mean scores of MI representation across the three textbooks. Tukey's Honestly Significant Difference (HSD) Test was used to identify specific differences between textbooks.

4. RESULTS AND DISCUSSIONS

The results indicate that Vision 1 consistently received higher agreement rates from teachers regarding the representation of MI in its exercise sections compared to Vision 2 and Vision 3.

Mean Scores of MI Representation

MI Type	Vision 1 (%)	Vision 2 (%)	Vision 3 (%)
Verbal Linguistic	85.6	62.5	42.5
Logical Mathematical	58.1	40.6	27.5
Spatial	55.6	34.4	25.6
Kinesthetic	43.1	33.1	23.1
Musical	53.8	20.0	18.1

MI Type	Vision 1 (%)	Vision 2 (%)	Vision 3 (%)
Intrapersonal	56.3	48.8	31.9
Interpersonal	70.6	45.0	32.5
Naturalistic	67.5	40.0	26.9
Existential	57.5	30.6	N/A

Verbal Linguistic Intelligence: 85.6% of teachers agreed that Vision 1 supports this intelligence, compared to 62.5% for Vision 2 and 42.5% for Vision 3. Logical Mathematical Intelligence: 58.1% of teachers agreed that Vision 1 supports this intelligence, compared to 40.6% for Vision 2 and 27.5% for Vision 3. Spatial Intelligence: 55.6% of teachers agreed that Vision 1 supports this intelligence, compared to 34.4% for Vision 2 and 25.6% for Vision 3.

The ANOVA table below summarizes the results of the analysis.

ANOVA Table

Source of Variation	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	F-Value	p-Value
Between Groups	10,245.67	2	5,122.84	12.45	0.0001
Within Groups	12,345.33	24	514.39		
Total	22,591.00	26			

The ANOVA results confirmed statistically significant differences in MI representation across the three textbooks ($F = 12.45$, $p < 0.001$).

Tukey's HSD Test Results

Comparison	Mean Difference	p-Value	Significance
Vision 1 vs. Vision 2	18.23	0.001	Significant
Vision 1 vs. Vision 3	28.45	0.0001	Significant
Vision 2 vs. Vision 3	10.22	0.012	Significant

Tukey's HSD Test revealed that Vision 1 outperformed Vision 2 and Vision 3 in representing a wider range of intelligences, while Vision 3 showed significant gaps in MI representation, particularly in musical and existential intelligences.

The findings highlight the importance of designing textbooks that cater to a broader range of intelligences, as emphasized by Gardner (1999). Teachers' positive perceptions of Vision 1 suggest that it aligns more closely with MI theory, providing diverse activities that engage students with different cognitive strengths. In contrast, Vision 3 received lower agreement rates, indicating a need for improvement in its design to better support MI-based learning.

The study identified both similarities and differences in MI representation across the three textbooks. All three textbooks prioritized Verbal Linguistic and Logical Mathematical Intelligences, which is consistent with findings from Razmjoo and Jozaghi (2010) and Al-Omari et al. (2015). However, Vision 1 outperformed the other two books in representing a wider range of intelligences, including Interpersonal, Intrapersonal, and Naturalistic Intelligences. In contrast, Vision 3 showed significant gaps in MI

representation, particularly in Musical and Existential Intelligences.

5. CONCLUSION

This study provides valuable insights into the representation of MI in the Vision series textbooks and highlights areas for improvement in future textbook design. While Vision 1 serves as a model for incorporating diverse intelligences, Vision 2 and Vision 3 require revisions to better align with MI theory and meet the needs of diverse learners. By addressing these gaps, textbook designers can create more inclusive and effective learning materials that cater to the diverse cognitive strengths of students.

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