LEARN Journal: Language Education and Acquisition Research Network
ISSN: 2630-0672 (Print) | ISSN: 2672-9431 (Online)
Volume: 17, No: 1, January – June 2024

Language Institute, Thammasat University
https://so04.tci-tha.org/index.php/LEARN/indexd

The Theoretical Review and Practice of Multiple Intelligences in English Language Teaching

Mongkolchai Tiansoodeenon[a,*], Pragasit Sitthitikul[b]

[a] mongkolchai.t@rumail.ru.ac.th, Language Institute, Thammasat University, Thailand
[b] pragasit@gmail.com, Language Institute, Thammasat University, Thailand
*Corresponding author, mongkolchai.t@rumail.ru.ac.th

APA Citation:
Tiansoodeenona, M., & Sitthitikul, P. (2024). The theoretical review and practice of multiple intelligences in English language teaching. *LEARN Journal: Language Education and Acquisition Research Network*, *17*(1), 55-72.

Received
02/02/2023

Received in revised form
01/07/2023

Accepted
02/08/2023

ABSTRACT

Learner diversity has been identified as a barrier to language learning and teaching. The purpose of this article was to conduct an analysis of the implementation of Multiple Intelligences (MI) theory in the field of English language teaching. MI theory, as introduced by Howard Gardner (1983), offers a new concept of intelligence, one that has led to a profound questioning of what we call "intelligence". As a result, he proposed an alternative view of intelligence that can be incorporated into the range of abilities, as well as the existence of nine intelligences that are distinct from one another. Several studies have explored the incorporation of MI theory in the realm of language teaching since it provides instructors with a variety of teaching strategies and enhances their ability to design teaching methods to better meet learners' expectations. Moreover, it recommends multiple testing methods based on all the proposed intelligences to evaluate students' learning, as not all intelligences can be measured using standardized tests. To implement the theory into pedagogical practice, educators should be cautious when it comes to truly understanding the theory and also be prepared

to create a variety of teaching techniques in order to engage all intelligences.

Keywords: multiple intelligence theory, multiple intelligence-based instruction, English language teachers

Introduction

Thailand is one of a number of countries where improving the English abilities of its citizens is a primary concern. Even though Thailand has never been colonized directly, globalization and the growth of Asian communities have compelled the country to improve its English language skills (Suntornsawet, 2019). While English proficiency remains an issue at the national level in Thailand (Klommek & Saelee, 2019), Bruner et al. (2015) found that many Thai university students do not speak English well enough to take advantage of opportunities to become more international. Multiple studies suggest that the ineffectiveness of English language teaching (ELT) in Thailand is due to a number of factors. One of these is that it is believed that ELT in the Thai context is taught using conventional pedagogical practices (Suksawas, 2018). Moreover, several academic institutions in Thailand place students in one large classroom according to their academic specialism which may not be a means of encouraging their language proficiency (Cholsakorn & Piamsai, 2022). Promtara and Suwannarak (2018) say that one of the main concerns about teaching a foreign language in Thailand is the large class size, which does not take account of individual differences.

Additionally, it is considered that large class sizes impact both students and teachers for a variety of reasons. According to Watanapokakul (2016), a large number of students per class negatively impacts both the teaching and learning of languages. According to the research findings, a large number of students might make it time-consuming for teachers to assign practice projects or conduct classroom activities. Furthermore, it is difficult to provide feedback, particularly individual feedback, and teachers must employ a variety of instructional strategies in the classroom. Some teachers remark that they have trouble determining whether or not students comprehend the lesson and that they are unable to adapt their instructional strategies in such a way as to meet the needs of all students. Moreover, Pawlak (2019) believes that individual students process the language they are exposed to in different ways and respond differently to various educational possibilities. Sabiq (2023) revealed that individual differences in language proficiency among students can influence their attitudes and motivation, and therefore, when planning classroom activities, creating meaningful learning,

and providing students with a range of opportunities to learn a language, attitudes and motivation must be taken into account. Depending on these variables, good learning results may differ by learner (Dörnyei, 2006). Consequently, teachers must respect the diverse origins of their students and consider employing a variety of instructional strategies to help them acquire language skills. In light of this, this article addresses the extensive implementation of MI theory and provides an alternative strategy for tackling issues, notably those linked with learner diversity. The article opens with a definition and classification of MI. It then discusses MI theory and language instruction by providing an MI teaching framework created by a number of scholars and will conclude with an assessment and pedagogical implication of MI.

Multiple Intelligences Theory (MI theory)

In general, the concept of intelligence has been accepted as the conventional psychometric view of intelligence, which equates intelligence to the capacity to correctly answer specific test items (Christison & Bassano, 2005). This traditional view of intelligence is somewhat static and does not change with age, training, or experience. In addition, IQ test results do not accurately predict performance and success in a profession after formal education (Jencks, 1977, as cited in Christison & Bassano, 2005). For this reason, Howard Gardner's Multiple Intelligences (MI) theory provides a pluralistic view of what we call "intelligences", which are always viewed as monolithic constructs with innate characteristics (Christison & Bassano, 2005). Gardner (1983) describes intelligence as a person's capacity to solve problems or fashion products in one or more cultural settings, rather than the traditional concept of intelligence. Gardner (2011) contends that educators must be aware of their students' intelligence profiles and the educational underpinnings of these profiles. If the majority of practitioners agree that "one size does not fit all" (Jones, 2017, p. 56) teachers should take advantage of every opportunity to address differences in how people learn languages.

In addition, Armstrong (2009) indicated that, apart from the explanation of the nine intelligences in the form of verbal, logical-mathematical, spatial, interpersonal, intrapersonal, natural, musical, bodily-kinesthetic, and existential intelligences and the support of the theory, there are four key points with regard to the MI model that are important to consider. First, each person possesses all intelligences. However, some people show strong intelligence in only two or three of these intelligences and are therefore in need of learning opportunities to enhance the others. Second, most people can develop their intelligence to demonstrate an adequate level of competency. Even though an individual may be born with a deficiency in

a given domain, Gardner suggests that everybody has the ability to develop all intelligences to a reasonable level of performance if they are given suitable encouragement, enrichment, or instruction (Armstrong, 2009). Third, different types of intelligence usually work together in complex ways. According to Gardner, these different forms of intelligence work collaboratively, and none of them stands alone (Christison & Bassano, 2005). Fourth, there are many ways to be intelligent within each category. There is no certain set of characteristics that an individual must have in order to determine that person's intelligence (Armstrong, 2009; Christison & Bassano, 2005).

Gardner (1983) also claims that the human brain is born with seven intelligences: 1) linguistic intelligence, which involves perception and the ability to use language in speaking and writing; 2) logical-mathematical intelligence, which involves problem-solving through logical reasoning and numerical abstraction; 3) musical intelligence, which is the ability to comprehend sound; 4) spatial intelligence, which is defined as the ability to evaluate, change, create, and transform visual and spatial images; and 5) bodily-kinesthetic intelligence, which is the ability to solve problems by using one's body. 6) Interpersonal intelligence entails comprehending and appreciating the feelings, opinions, and intentions of others. Self-awareness is required for interpersonal intelligence. Later, the concept of "natural intelligence", which entails recognizing natural environmental characteristics, was introduced. Finally, existential intelligence was added to the eight intelligences in 1999, and it is associated with the ability to determine how important concepts such as death are to the human condition.

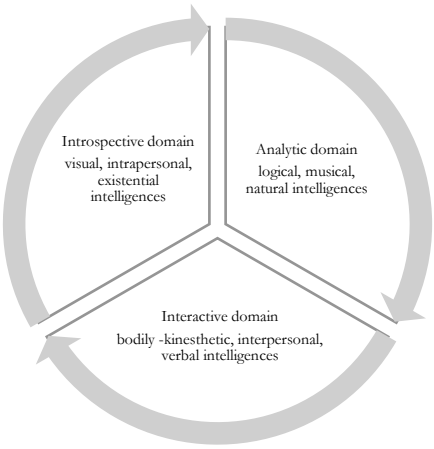
Classification of MI

Having an understanding of each of the characteristics of each intelligence is less significant than having an understanding of how they relate to one another (McKenzie, 2005). Another perspective on MI is that we can conceptualize all nine intelligences into three broad categories. The first category may be viewed as "object-related" forms of intelligence and includes spatial, logical-mathematical, bodily-kinesthetic, and natural intelligences. These four intelligences are governed and shaped by the objects that individuals experience in their environments. On the other hand, the verbal-linguistic, existential and musical intelligences are considered "object-free" intelligences because they are not shaped by the physical world. However, they depend on language and music systems. The third category is described as being "person-related", including interpersonal and intrapersonal intelligences, with each of them reflecting characteristics that balance each other (Campbell et al., 2003).

In addition, McKenzie (2005) shares another perspective in terms of categorizing all nine into three domains: analytical, introspective, and interactive. These domains function as organizers for understanding the relationship between each intelligence and how they work with one another.

Figure 1

Wheel of MI Domains



Note. From "Wheel of MI Domains," McKenzie. (2005, p.17)

Specifically, the analytic domain enhances students' ability to analyze information and knowledge. This domain includes logical-mathematical, musical, and naturalist intelligences. A component of the introspective domain is explicitly affective. This domain includes visual, existential, and intrapersonal intelligences, which require individuals to reflect on themselves, connect their emotions to their experiences and beliefs, and apply those connections to the interpretation of new information. Verbal-linguistic, interpersonal, and bodily-kinesthetic intelligences comprise the interactive domain. All of these concepts appear to be directly related to the notion that understanding results from social interaction (McKenzie, 2005).

MI and Language Teaching

As Gardner intended, the pluralistic view of mind, which realizes individual differences and separates facets of cognition, suggests that people have different cognitive strengths and weaknesses (Christison & Bassano, 2005). Thus, MI theory attempts to assure us that each student is gifted, and

they should be cultivated as soon as these strengths have been awakened (Campbell et al. 2003). Consequently, MI theory provides a conceptual context that makes sense of students' cognitive skills. In addition, they could benefit from the cognitive approach, enriched by teachers who attempt to enhance their learning memory, encourage the development of problem-solving skills, and promote higher-order thinking skills (Armstrong, 2009). Furthermore, it is not necessary to develop a course incorporating all nine intelligences or nine different approaches for students to be engaged under the MI theory framework (Armstrong, 2009; Christison & Bassano, 2005; McKenzie, 2005). In fact, the classroom material should give students access to different kinds of intelligence, and it's even more important that they interact with each other and obtain the opportunity to build their dormant intelligence when they're not performing well (Armstrong, 2009).

For this reason, it could be beneficial for educators to incorporate MI theory into their teaching pedagogy. In addition, Gardner does not promote the packaging of MI theory because it can be organized depending on the particular context (Christensen et al., 2011). As a result, a number of tools can be adapted to MI theory, which offers more variety when compared with traditional instruction. The summaries of possible teaching methods based on MI theory proposed by Armstrong (2009) and Campbell et al. (2003), including examples of teaching materials, sample educational movements, and an instructional menu to begin a lesson, can be found in Table 1.

Table 1

The summary of teaching according to MI theory

Intelligence	Example of teaching material	Sample educational movement	Instructional menu
1. Linguistic	Books, tape recorder, type writer	Critical literacy	Use narrative to..., hold a discussion, or conduct an interview on..., write a poem, a tale, a legend, a play, or an article about..., give a presentation on... produce a radio program, newsletter, or dictionary regarding…
2. Logical-mathematical	Calculators, math manipulatives,	Critical thinking	Create narrative problems, a strategy, and syllogisms to illustrate, translate... into

	science equipment, math games		a formula, build and test an experiment on, and use critical thinking skills to solve them. Develop a code for..., categorize facts about..., specify patterns or symmetry in...
3. Spatial	Graphs, maps, video, Lego sets, art materials, camera, picture literacy	Integrated arts instruction	Create a slide presentation, a film, or a photo book of... create a poster, a bulletin board, etc. memory system usage for learning, design architectural plans, color-code procedures... create a game, paint, sculpt, or construct something to illustrate... use technology to make…
4. Bodily-kinesthetic	Building tools, clay sports, equipment, manipulative, tactile learning resources	Hands-on learning	Role play; develop a series of moves to illustrate…, make a dance, a board game, or a floor game out of..., participate in a field excursion that…, design a simple ruse, a treasure hunt to..., design a model of... utilize tactile materials to..., utilize technology for play...
5. Musical	Tape recorder, tape collection, musical instruments	Orff Schulwerk	Give a presentation accompanied by music on, write song lyrics for..., explain in a rap or song..., define the rhythmic patterns relate the song's lyrics to utilize background music to facilitate studying..., produce a musical collage to represent..., utilize technology to make…
6. Interpersonal	Board games, party, supplies,	Cooperative learning	Hold a meeting to..., perform various perspectives on..., use social skills to learn

	props for role-plays		about..., do a volunteer project for..., inform someone else about..., plan collectively rules or procedures for..., provide and receive feedback on..., apply one of your skills, accept a group position to achieve..., use technology to communicate with…
7. Intrapersonal	Self-checking materials, journals, materials for projects	Individualizing instruction	Hold a meeting so as to by "problem-solving out loud" with a partner, you can... enact differing viewpoints on, utilize social skills on purpose to get knowledge of…, perform volunteer work for..., inform another regarding..., deal with a local or international issue through..., use technology to interact with...
8. Naturalist	Plants, animals, naturalists' tools (ex. Binoculars), gardening tools	Ecological studies	Collect and organize the data. keep a diary of your observations regarding..., compare weather events to..., invent categories for..., describe how a plant or animal is similar to..., use binoculars, microscopes, magnifiers, and telescopes to attend an outdoor excursion to..., utilize technology to investigate...

Note. From "Summary of Eight Ways of Learning", Armstrong (2009, p.33) and "MI Instructional menus," Campbell et al. (2003, p. 253)

Different schools may implement MI theory differently. Gardner argues that it is irrelevant to try to demonstrate why one application of MI in a school would be correct and another would be incorrect, as long as both approaches can provide a sufficient explanation and prove appropriate for their context (Campbell et al., 2003). However, the MI theory recommends a set of principles that will help educators develop new curricula at a profound level. In fact, MI theory provides contextual clues that enable educators to address any skill, content area, theme, or learning objective in order to

develop at least eight methods for putting MI theory into practice (Armstrong, 2009). Armstrong concludes that the best way to develop a lesson plan in accordance with MI theory is to consider how an individual can translate learning material from one intelligence to another. How far can we transform a linguistic symbol system, such as the English language, not directly into other languages such as Spanish or French but by employing all eight intelligences, such as images, social interaction, and intrapersonal connection, as a means of translation?

To determine MI-based instruction, the MI teaching models from Armstrong (2009), Christison and Bassano (2005), and Palmberg (2011) were analyzed. Table 2 displays the synthesis of the MI teaching frameworks from different scholars' frameworks.

Table 2

Synthesis of MI Teaching Models

Steps of MI Teaching Model	Armstrong (2009)	Christison & Bassano (2005)	Palmberg (2011)
1. Familiarize yourself with the basic MI theory.		✓	✓
2. Check your own and students' MI profile			✓
3. Concentrate of a single objective.	✓		
4. Ask for key MI questions.	✓	✓	
5. List for all learning activities.	✓	✓	✓
6. Conduct a personal audit of your own teaching.		✓	✓
7. Consider the availability of learning materials.	✓		
8. Brainstorm all possible activities.	✓		
9. Choose the appropriate activities.	✓		✓
10. Arrange activities into sequence	✓		

11. Develop and implement the plan.	✓		✓
12. Develop assessment techniques that address the nine intelligences.		✓	

Note. From "Synthesis of MI Teaching Models," by Tiansoodeenon (2022, p89)

Table 2 displays a comparison of each MI teaching framework based on the different perspectives of Armstrong (2006), Christisen and Bassano (2005), and Palmberg (2011). Armstrong (2009) asserts that MI theory provides contextual clues that enable educators to address any skill, content area, theme, or learning objective in such a way as to develop at least eight strategies for attempting to put MI theory into practice. He proposed seven steps for designing a lesson plan based on MI. These are: 1) focusing on a single objective or topic; 2) investigating key MI questions; 3) considering the possibilities; 4) brainstorming; 5) selecting appropriate activities; 6) establishing a sequential plan; and 7) implementing the plan. Furthermore, Christisen and Bassano (2005) assert that the MI curriculum should include activities that encourage students to be prepared for life beyond the classroom and that there is a need to develop appropriate assessments that address all intelligences. Palmberg (2011) proposed that educators should familiarize themselves with the basic theory and determine their own MI profile by completing an MI inventory prior to designing activities based on the various forms of MI.

The success of incorporating MI theory into language teaching is evident from the substantial research that has been carried out. Sogutlu (2018) and Boonkongsaen et al. (2020) explored the effects of MI theory in terms of promoting learners' grammar knowledge and vocabulary. The findings revealed that learners' grammar knowledge and vocabulary increased after the intervention. Moreover, MI could also help promote learners' speaking skills, as can be seen from the studies of Salem (2013) and Boonma and Phaiboonnugulkij (2014). MI can also be incorporated with other instructional methods. Abbassi et al. (2018) investigated the effect of providing memory strategies based on the students' MI profiles on their vocabulary retention. The findings revealed a correlation between the MI profiles of the students and their vocabulary retention. For instance, it has been reported that there is a positive correlation between students with a high profile in linguistic, existential, and spatial intelligence and their vocabulary retention, as measured by MI scores and vocabulary test results.

Not only does the theory facilitate learners' improvement in terms of their language skills, but it also fosters technical autonomy, as can be seen from the study by Tiansoodeenon and Sitthitikul (2022). They investigated

the effects of MI theory on enhancing all language skills, including grammatical knowledge and learner autonomy, at the tertiary level by using the concept of the rotation of three different domains, including analytical, introspective, and interactive domains, to design MI-based activities. The findings indicated that the incorporation of MI-based instruction could enhance all language skills, promote a favorable perspective toward English language learning, and acquire additional learning methods with regard to learning the language. Moreover, Hanafin (2014) implemented the theory by promoting teachers' personnel development. The findings revealed that MI helped develop better memory and deeper understanding. In addition, the incorporation of MI theory into practice in the classroom not only facilitated learners excelling in learning and improving attitudes but also encouraged teachers to shift their paradigm of teaching by attempting to explore different methods that produced the best possible pedagogical outcomes (Hanafin, 2014).

MI Assessment

According to Armstrong (2009), there is no commercially available standardized test to assess students' MI. Campbell et al. (2003) assert that conventional assessment methods, such as letter grades or scores, provide insufficient information regarding student achievement. In light of this, Campbell et al. (2003) propose that multiple indicators and meaningful and relevant interventions could be used to replace traditional assessment methods. This is in line with Christisen and Bassano (2005). They concur that the ideal of assessment should not be limited to paper-and-pencil assessment; consequently, educators should employ multiple testing methods based on all intelligences to evaluate students, as not all standardized tests can be used in all cases. In addition, Armstrong (2009) asserts that a simple observation is the simplest way to evaluate students' MI. Therefore, teachers should consider maintaining a notebook, diary, or journal to record their own observations of students' tendencies (Armstrong, 2009).

Moreover, Armstrong (2009) suggested that teachers may make use of collected documents. Taking photographs, making voice recordings, and making video recordings when students display evidence of their MI may be useful because they are explicit evidence and can be kept for further reference. In addition, teachers can take advantage of school records since they can offer significant information about a student's MI, such as their grades over the years. Similarly, standardized test scores can sometimes reveal information about a student's intelligence, such as from an intelligence test that often focuses on linguistic, logical-mathematical, and spatial intelligences. Armstrong (2009) also suggested that educators use collected documents.

Furthermore, the concept of MI provides a system for assessing students' learning progress that does not overly rely on formal schooling or norm-referenced assessment but rather emphasizes authentic assessment. This is preferable because it enables students to demonstrate what they've learned in a setting similar to that in which they would be expected to perform if they were learning in the real world (Armstrong, 2009). Multiple instruments, metrics, and methodologies are utilized in authentic assessments. Not only is observation one of the tools, but the other tools listed below can also be utilized in a variety of ways to monitor students' progress (Armstrong, 2009).

1. Anecdotal record: Provide each student with a section of a journal to record academic and non-academic accomplishments, interactions with classmates and learning materials, and other pertinent information.
2. Work samples: Create a file for each student containing samples of their work in language arts, mathematics, or any other subject for which you are primarily accountable.
3. Audio files: Utilize audio files that represent their works, such as reading excerpts or singing.
4. Video: Record information that is difficult to document, such as role-playing or demonstrations, on video.
5. Photography: Make a photograph of completed activities and keep it as proof that students completed them.
6. Student journals: Encourage students to keep a personal, ongoing journal of their school life, which can include not only written entries but also diagrams, doodles, and drawings.
7. Student-kept charts: Students can maintain their own performance records in the form of charts or graphs, such as the number of books they've read or their progress toward their educational objectives.
8. Sociograms: Students produce a visual record of their interactions with other classmates by using symbols to indicate negative interactions, affiliations, and neutral contacts.
9. Informal assessments: Construct non-standardized assessments to reveal information about their abilities in specific domains. The emphasis is on gathering qualitative data that demonstrates the student's comprehension of the topic.
10. Informal use of standardized tests: Apply standardized tests to each student without adhering strictly to administrative guidelines. Promote a calm and serene environment, read them the instructions, and request clarification on their answers. In addition, give them opportunities to demonstrate their answers through pictures, three-dimensional constructions, music, or any other form of intelligence. Examine their responses and erroneous reasoning

by probing their errors. A test serves as a catalyst to spark a discussion about the subject matter.
11. Student interviews: Schedule time to periodically discuss with students their academic progress, interests, and goals, and file their responses.
12. Criterion-referenced assessments: Utilize evaluations that provide concrete evidence of their abilities and limitations.
13. Checklist: Develop an informal criterion-referenced assessment system for the essential classroom skills.
14. Classroom map: Draw a map of the classroom from a bird's-eye view to record any movement, activity, or interaction in different corners. In addition, the names of students participating in the activities can be noted on the map.
15. Calendar records: Request that students keep a daily log of their activities and collect them at the end of each month.

To effectively evaluate students during formative assessment, it is necessary to be a skilled observer. Therefore, teachers should be encouraged to practice effective observation techniques, as they have access to a variety of tools. However, individual preferences can vary based on a person's skill and experience. Importantly, teachers should not rely on a single method to draw conclusions due to the complexity of human behavior; therefore, utilizing a variety of available resources to gather information prior to drawing conclusions may be the most effective way to obtain accurate information about students' MI profiles.

MI theory broadens the scope of assessment by incorporating a vast array of relevant contexts in which students can demonstrate their competence in a specific domain. It is suggested that both the method of presentation and the response to a suitable context will be equally important in determining a student's level of competency. Clearly, if students learn best through visuals, they should only be exposed to words when learning new material. Consequently, they may be unable to demonstrate subject mastery due to exposure limitations. For this reason, Armstrong (2009) proposes sixty-four MI assessment contexts that connect the method of presentation and response in structuring assessment settings and the overall assessment, as shown in Table 3.

Table 3

Sixty-four MI Assessment Contexts

Activity/assessment	Linguistic activity	Logical-mathematical activity	Spatial activity	Musical activity	Bodily-kinesthetic activity	Interpersonal activity	Intrapersonal activity	Natural activity
Linguistic assessment	Read a book then respond in writing	Examine a statistical graph and then compose a response	Watch a film and then submit a written response.	After listening to some music, write a response.	Attend a field trip and then compose a response	Play a cooperative game followed by composing a response.	Consider a personal experience, then compose a response.	Observe nature, then compose a reaction
Logical – mathematical Assessment	After reading a book, formulate a hypothesis.	Analyze a statistical graph, then formulate a hypothesis	Watch a film and then formulate a hypothesis	After listening to a piece of music, formulate a hypothesis.	After a field trip, formulate a hypothesis.	Play a cooperative game, then formulate a theory.	Consider a personal experience, then formulate a theory	Observe nature, then formulate a theory
Spatial assessment	After reading a book, make a drawing.	Examine a statistical graph, then make a drawing.	Watch a film and then make a drawing.	After listening to music, draw a picture.	Field trip followed by drawing a picture	After playing a cooperative game, draw a picture.	Consider a personal experience, and then make a drawing.	Observe nature, then make a drawing.
Bodily – kinesthetic assessment	After reading a book, construct a model.	Analyze a statistical graph, then construct a model.	Watch a film and then construct a model.	After listening to a piece of music, construct a model.	Go on a field trip and then construct a model.	Play a cooperative game and then construct a model.	Consider a personal experience, then construct a model.	Observe nature and then construct a model.
Musical assessment	After reading a book, compose a song.	Analyze a statistical chart and compose a song.	Watch a film then compose a song.	After listening to a piece of music, compose a song	Go on a field trip and then compose a song	Play cooperative game, and then compose a song	Consider personal experience, then compose a song	Observe nature and then compose a song
Interpersonal assessment	After reading a book, then discuss it with a friend.	Analyze a statistical graph and discuss it with a friend.	Watch a film then discuss it with a friend.	After listening to a piece of music, discuss it with a friend.	Go on a field trip and then discuss it with a friend.	Play cooperative game, and then discuss it with a friend	Consider personal experience, then discuss it with a friend.	Observe nature and then discuss it with a friend.
Intrapersonal assessment	Read a text, then formulate your own response.	Analyze a statistical graph and formulate your own response	Watch a film, then formulate your own response.	After listening to a piece of music, formulate your own response.	Go on a field trip and then formulate your own response.	Play cooperative game, and then formulate your own response.	Consider personal experience, then formulate your own response.	Observe nature and then formulate your own response.

Naturalis assessment	After reading a book, conduct an ecology project.	Analyze a statistical graph and conduct an ecology project.	Watch a film, then conduct an ecology project.	After listening to a piece of music, then conduct an ecology project.	Go on a field trip and then conduct an ecology project.	Play cooperative game, and then conduct an ecology project.	Consider personal experience, then conduct an ecology project.	Observe nature and then conduct an ecology project.

Note. From "64 MI Assessment Context" by Armstrong (2009, pp. 152-153)

For instance, teachers can challenge students with high linguistic intelligence to read a book and then submit written responses. In addition, there is room for variation within each of the 64 MI assessments' represented combinations. For instance, the experience of students who prefer to "go on a field trip and build a model" will vary depending on the location of the field trip, the mediating knowledge imparted during the trip, and the manner in which the model is built. Consequently, these factors would provide variety in a variety of contexts. Nonetheless, this evaluation suggests requiring students to engage in assessment experiences that involve a passport to numerous input and output methods (Armstrong, 2009).

Pedagogical Implications

MI theory could be embedded with teaching pedagogy to create an effective teaching method. However, all educators are reminded that they must comprehend the theory before adapting their teaching pedagogy. In other words, requiring students to run around and presuming that they will exercise their bodily-kinesthetic intelligence constitute incorrect assumptions. This is because the ultimate goal of the theory is to promote problem-solving. In addition, educators should also be prepared with a variety of teaching techniques in order to engage all intelligences. The greater a teacher's repertoire of instructional strategies, the greater their ability to engage students. In addition, some MI-related tasks can be time-consuming. Teachers should therefore not only design the lesson plan but also market themselves as facilitators and gamekeepers in order to reach a broader range of students. They are also required to be good listeners and willing to take learners' feedback. Finally, MI-based activities should encourage students to evaluate the strategic consequences of educational activities and promote their preferred learning styles, as student feedback is essential.

Conclusion

It is evident that this article provides a comprehensive understanding of the concept of MI theory and how to incorporate it into language teaching

pedagogy. Gardner divides the extensive range of human abilities into nine broad categories, or "intelligences". It provides educators with a variety of learning resources to which they can refer when deciding on MI-based activities that best respond to individual learning differences. Furthermore, it attempts to provide them with a MI-teaching framework that can meet learners' expectations by offering a variety of learning activities that respond to individual intelligences and how to assess them. It would be recommended that future studies explore the relationship between the dominant types of intelligences of educators' intelligences that possibly influence teaching method and learners' achievement since several studies focus heavily on learners; however, the influence of educators' intelligences as it relates to their teaching method may not have been sufficiently explored.

About the Authors

Mongkolchai Tiansoodeenon: A full-time lecturer at the Faculty of Liberal Arts at Rajamangala University of Technology Thanyaburi. His areas of interest involve teaching methodology, life-long learning, and English material development.

Pragasit Sitthitikul: An Associate Professor of the Language Institute, Thammasat University, Thailand. He earned a doctorate in Language and Literacy Studies, with a concentration in second-language reading processes, at the University of Illinois at Urbana-Champaign, USA. His areas of interest include Second Language Literacy, Cognitive and Sociocultural Factors in Second Language Learning, and Intercultural Issues in Second Language Learning.

References

Abbassi, A., Hassaskhah, J., & Tahriri, A. (2018). The effect of teaching memory strategies on Iranian EFL learner's vocabulary retention in terms of learners' multiple intelligences. *International Journal of Education and Literacy Studies*, *6*(2), 1-9.

Armstrong, T. (2009). *Multiple intelligence in the classroom (3rd Ed.)*. ASCD.

Boonkongsaen, N., Nakaved, P., & Pranarach, M. (2020). The link between Thai EFL students' multiple intelligences and use of vocabulary learning strategies. *Journal of Studies in the English Language*, *15*(2), 130-153.

Boonma, M., & Phaiboonnugulkij, M. (2014). Why is an application of multiple intelligences theory important for language learning and teaching speaking ability? *Advances in Language and Literary Studies*, *5*(5), 162-168.

Bruner, D. A., Sinwongsuwat, K., & Radic-Bojanic, B. (2015). EFL oral communication teaching practices: A close look at university teachers and A2 students' perspectives in Thailand and a critical eye from Serbia. *English Language Teaching*, *8*(1), 11-20.

Campbell, L., Campbell, B., & Dickinson, D. (2003). *Teaching and learning through multiple intelligences (3rd Ed.*). Pearson Education Inc.

Cholsakorn, P., & Piamsai, C. (2022). The effects of differentiated reading instruction on reading comprehension and self-efficacy of Thai undergraduate students. *Kasetsart Journal of Social Sciences, 43*(3), 715-720.

Christison, M. A., & Bassano, S. (2005). *Multiple intelligences and language learning: A guidebook of theory, activities, inventories, and resources*. Alta Book Center Publishers.

Christensen, M. C., Horn, B. M., & Johnson, W. C. (2011). *Disrupting class how disruptive innovation will change the way the world learns*. McGrow Hill.

Dörnyei, Z. (2006). Individual differences in second language acquisition. *AILA review*, *19*(1), 42-68.

Gardner, H. (1983). *Frames of mind: The theory of Multiple intelligences*. Basic Books.

Gardner, H. (2011). *Frames of mind: The theory of Multiple intelligences (3rd ed.)*. Basic Books.

Hanafin, J. (2014). Multiple intelligences theory, action research, and teacher professional development: the Irish MI project. *Australian Journal of Teacher Education*, *39*(4), 126-141.

Jones, E. (2017) One size fits all? Multiple intelligences and legal education, *The Law Teacher*, *51*(1), 56-68. https://doi.org/10.1080/03069400.2015.1082238

Klommek, J., & Saelee, S. (2019). Selected factors influencing nursing students' self-perception of English communication skills, Asia-Pacific international university, Thailand. *Development and Society, 20*(1), 60-68.

McKenzie, W. (2005). *Multiple intelligences and instructional technology (2nd Ed)*. International Society for Technology in Education.

Palmberg R. (2011). *Multiple intelligences revisited.* https://www.englishclub.com/download/PDF/EnglishClub-Multiple-Intelligences-Revisited.pdf

Pawlak, M. (2019). How teachers deal with individual differences in the language classroom: results of a study. *Neofilologs, 52*(1), 179-195.

Promtara, N., & Suwannarak, K. (2018). Thai students and teachers' perceptions of learning and teaching English through the communicative language teaching approach. *NIDA Journal of Language and Communication*, *23*(33), 23-42.

Sabiq, A. H. A. (2023). Investigating individual differences, school locality, and management on Indonesian students' attitudes and motivation in EFL learning. *LEARN Journal: Language Education and Acquisition Research Network*, *16*(1), 726-752.

Salem, A. A. (2013). The impact of multiple intelligences-based instruction on developing speaking skills of the pre-service teachers of English. *English Language Teaching*, *6*(9), 53-66.

Sogutlu, E. (2018, September 14-15). *Multiple intelligences and foreign language learning: Possible relationship.* Proceedings of the 3rd International Conference on New Findings in Humanities and Social Sciences, Brussels, Belgium. http://www.doi.org/10.33422/3hsconf.2018.09.01

Suksawas, W. (2018). The study of the genre-based approach and EFL students journalism writing. *International Journal of Business and Society, 19*(S2), 235-248.

Suntornsawet, J. (2019). Problematic phonological features of foreign accented English pronunciation as threats to international intelligibility: Thai EIL pronunciation core. *Journal of English as an International Language*, *14*(2), 72-93.

Tiansoodeenon, M. (2022). *Effects of multiple intelligences-based instruction on English language achievement and learner autonomy of Thai tertiary students.* [Unpublished doctoral dissertation]. Thammasat University.

Tiansoodeenon, M., & Sitthitikul, P. (2022). Effects of multiple intelligences-based instruction on English achievement and learner autonomy of Thai tertiary students, *The Journal of AsiaTEFL*, *19*(4), 1250-1266.

Watanapokakul, S. (2016). The perceptions and experiences of English teachers regarding large EFL classes. *LEARN Journal: Language Education and Acquisition Research Network*, *9*(2), 199-219.