ALIGNMENT BETWEEN 'LIFE' TEXTBOOK ACTIVITIES AND MULTIPLE INTELLIGENCE PROFILES OF VIETNAMESE UNIVERSITY STUDENTS

Phan Thi Hong Viet[1*]; Luu Quy Khuong[2]

[1]The University of Danang, Vietnam-Korea University of Information and Communication Technology

[2]The University of Danang, University of Foreign Language Studies

*Email: pthviet@vku.udn.vn

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Abstract: This study aims to identify the multiple intelligence (MI) profiles of EFL students at a Vietnamese university with Gardner's Multiple Intelligence Theory. It also analyzed MIs manifested in activities in *Life* textbook being used in English courses for university students to determine how well they align with the students' profiles. The study employed three main instruments: 1) an MI inventory addressed to 300 Vietnamese university students; 2) The menus of MI activities by Botelho (2003) for analyzing *Life* textbook; and 3) interviews with EFL teachers who are teaching English to those students. The findings revealed a mismatch between the informants' MI profiles and the dominant intelligences manifested in the textbook. The study found that intrapersonal intelligence was those informants' strongest intelligence, followed by logical-mathematical, and naturalistic intelligences. However, *Life* textbook heavily relies on verbal-linguistic intelligence, followed by logical-mathematical and intrapersonal intelligences. The study suggested enhancing the language competence of students by developing their MIs and supplementing activities designed from the MI theory perspective.

Keywords: Multiple intelligences, MI theory, *Life* textbook, EFL students, activities

1. Introduction

For many years, the multiple intelligence theory (MIT) has been applied to education in general and language teaching in particular. The integration of MIT into language teaching and learning incorporates the diversity of the learners in the classroom. Learners are increasingly seen as separate individuals with their own multiple intelligences (MIs), various learning preferences, styles, and methods. Obviously, MIs have great influence on ESL/EFL teaching and learning especially on English textbooks, indispensable tools for these two processes. It is said knowing the alignment between the textbook activities and learners' MI profile can help teachers' work in the classroom become more effective.

Studies on the integration of MIT into the fields of general education and language instruction have gained popularity, so far. However, there have been little research on textbooks in connection with MIT in Vietnam. This study attempts to investigate the demonstration of MIs in English textbooks and if they match the MI profiles of students. Hopefully, this research assists to raise MI awareness among students and teachers, as well as proposes some exercises for

teachers to adapt in classes to diversify their teaching activities with the eight types of intelligences and motivate students in their lessons. The study aims at seeking the answers to the three questions:

1. What are the MI profiles of freshmen at the University of Danang - Vietnam-Korea University of Information and Communication Technology (UD – VKU)?
2. What types of intelligences display in activities in Life textbook?
3. How are the multiple intelligences in activities in Life textbook aligned to the students' MI profiles?

2. Theoretical framework

2.1 Multiple Intelligences

MIT is a psychological and educational theory that Gardner (1983) developed and improved over time. He proposes that each person possesses varied degrees of distinct intelligences, resulting in a unique "cognitive MIs profile". According to MIT, a student who can calculate fairly well cannot be evaluated as being smarter generally than a student who has some difficulty with similar mathematics tasks. The second student may seem to be brighter in other ways, and can solve the same calculations better through a different learning style or method of handling similar math problems, or even excelling in another field other than logical thinking.

Regarding the nature of the aforementioned concept of students' similar types of intelligence, Campbell (2003) also stated that, while each individual learner may have all or most of the eight types of intelligence, the levels of each type of intelligence in their MI profiles differ among individuals. Such an argument has diverse outcomes depending on the intelligence categories of the learners.

Initially published in 1983 in Gardner's book, *Frames of Mind: The Theory of Multiple Intelligences*, MIT has been updated to the present day. The descriptions of intelligences are as follows.

Verbal-Linguistic Intelligence

This intelligence is the ability to use words to convey concepts in simple to complex forms in order to attain communication goals. It refers to the linguistic competence related to language skills as well as the connections between them. Lazear (1993) adds, "This intelligence is involved in any use of metaphors, similes, and analogies, and, of course, in learning proper grammar and syntax in speaking and writing" (p.15). Students with this intelligence are able to express themselves verbally, conduct conversations, make up narratives, and express their ideas for coherent and persuasive presentations. Poets, writers, teachers, politicians, lawyers, and storytellers are of this kind of intelligence.

Logical-Mathematical Intelligence

This intelligence involves the capacity to compute, recognize quantities, and solve mathematical difficulties. This intelligence lets students to perceive abstract concepts, develop critical thinking and argumentation abilities, and ponder and articulate their ideas using deductive and conductive approaches. And as Gardner (1999) states:

> Having a blend of linguistic and logical-mathematical intelligence is no doubt a blessing for students and for anyone else who must take tests regularly. Indeed, the fact that most psychologists and most other academics exhibit a reasonable amalgam of linguistic and logical intelligence made it almost inevitable that those faculties would dominate tests of intelligence (p. 42).

Visual-Spatial Intelligence

This intelligence is about the capacity to think in three dimensions, including creativity and spatial reasoning, the utilization of images and graphic abilities, and the creation of meaningful material for language presentations based on photos or 11 real objects. Students with this intelligence are usually very interested in working with visual assistance or prefer using real items to enhance their speech expressions.

Musical-Rhythmic Intelligence

This intelligence involves the capacity to perceive melodies, tunes, and rhythms, which enables a learner to identify, produce, and modify music. Students possessing this intelligence are able to play musical instruments, compose songs, and love music. They are adept at mimicking tunes and melodies, understanding sounds, and fast memorizing song lyrics. As opposed to working silently with words, musically gifted kids typically prefer to hear or repeat them loudly. As students practice or complete their oral language activities, the accompanying music helps them stay more focused. It is not a requirement that the student can sing or play an instrument well, but he/she should be sensitive to music, tunes, rhythms, or beats.

Bodily-Kinesthetic Intelligence

This intelligence is related the ability to communicate with others through the use of one's body in a variety of ways, such as gestures or facial expressions. This intelligence exists and is actively developed among students who are interested in sports, dancing, or acting. To complete tasks and express ideas for interaction and communication, the body and mind collaborate. Touching or directly feeling the items is the best way for these students to learn.

Interpersonal Intelligence

This intelligence involves the ability to interact with others successfully through verbal and nonverbal communication, teamwork, and collaboration. With this kind of intellect, students learn best via activities that include interaction and cooperation. They also like cooperative learning. Students with interpersonal intelligence should be given the chance to participate in group work discussions and exchange ideas with their classmates.

Intrapersonal Intelligence

This intelligence refers to the ability to listen to oneself, to comprehend one's own thoughts and feelings, to create strategies for oral products and speaking activities using these understandings. Students of this MI typically prefer to work independently. However, in order for students to obtain support from their classmates or professors, there are occasionally needs for specific face-to-face academic discussions. Though they are motivated by thought-provoking ideas and are capable of offering a distinct perspective, introverted students do not exhibit much enthusiasm or drive in group or class discussions.

Naturalistic Intelligence

This intelligence involves a person's capacity for identifying, differentiating, and categorizing objects in the natural environment. The capacity to distinguish and comprehend clearly the distinctions between living things, as well as the eagerness to learn about natural laws and principles, are all examples of this intelligence.

In brief, from the presentation of categories of human MIs, it should be noticed that: (1) Despite the fact that we all possess eight intelligences, we are all distinctive since the strength of each intelligence varies, and that is why each person has a particular intelligence profile. (2) The intelligences can work together smoothly or separately. (3) Education can be improved if materials and learning activities are adapted based on the students' intelligence profiles.

2.2 The textbook *Life*

Life is a fun English learning book series with 6 levels for adults designed and produced by National Geographic Learning, the United Kingdom, whose authors are John Hughes, Helen Stephenson, and Paul Dummett. Based on National Geographic content, *Life* turns students' learning into an amazing journey filled with irresistible visuals. The content in the book is very vivid and relatable because it is taken from real life stories all over the world, giving learners the opportunity to explore the cultures of many countries while learning English. Since 2015, *Life* has been chosen as an English textbook for about 26 universities in Vietnam.

There are 12 units in *Life* (A1-A2 2nd edition) for the A1-A2 levels. The six main sections of each unit are clearly identified, and at the end of each unit there is a section for review and memory practice. Typically, the sections contain several activities for learners to practise grammar, vocabulary, pronunciation and language skills. Additionally, there is an attached online workbook for students' self-study at home.

2.3 MI – based activities in English textbooks

Armstrong (2000) suggested that the benefit of using MI-based activities was that students were likely to have common interests and connect with each other in a more motivating environment. Language teachers should assign their students to work in MI – centered activities in accordance with their MI profiles produced at the start of the training program, or alternatively, in the middle of the teaching and learning process, when the students have a better understanding of the structures of their MI profile. Hoerr (2002) stated:

> Using MI-based activities allows teachers to provide students with diversified opportunities to mobilize their experiences to perform classroom activities in which they can engage with the material individually rather than acquire it passively and mechanically out of real-life contexts. (p.89)

According to Botelho (2003), MI-based activities displayed in textbook can be categorized as follows:

Verbal/Linguistic: riddles, worksheets, note taking, discussions, listening to lectures**,** word play games, listening to talking books**,** reading books, storytelling**,** journal keeping**,** debates**,** memorizing**,** writing

Logical/Mathematical: science demonstrations and experiments**,** logic puzzles and games**,** problem solving, story problems with numbers**,** logical/sequential presentation of subject matter, logical argumentation.

Spatial/Visual: maps, mind maps, illustrations**,** graphs, tables**,** using charts and grids**,** videos, using graphic organizers, slides and movies**,** using art, photos**,** imaginative storytelling**,** painting/picture/collage**,** telescopes/microscopes**,** visual awareness activities**,** drawings.

Bodily/Kinesthetic: hands-on activities, role-plays**,** field trips, mime, creative movement, body language, cooperative group rotation, classroom aerobics, cooking and other "mess" activities.

Musical: singing**,** songs, jazz chants**,** music appreciation, playing recorded music**,** playing live music, student made instruments, background music.

Interpersonal: pair work**,** peer teaching, board games**,** group brainstorming**,** group problem solving, project work, work cooperatively.

Intrapersonal: activities with a self-evaluation component, interest centers**,** options for homework, personal journal keeping**,** checklist, inventories**,** individualized projects, doing things by yourself.

Naturalist: activities of recognizing and classifying plants, minerals, animals, and all variety of flora and fauna.

Gardner (1983) claims that MI activities facilitate intelligence types while encouraging and developing underdeveloped ones. Gardner's MI theory gives numerous options for instructors to promote learners' intelligences by examining their teaching methods according to multiple intelligences to have a better understanding of the advantages of MI Theory in TESL/TEFL. Additionally, recognizing common classroom activities and categorizing them in terms of different intelligences is thought to assist teachers in knowing which activities react to which intelligence types, allowing them to adapt to learners' intelligence profiles.

2.4 Previous studies related to MI and textbooks

The integration of MIT in the content of school textbooks has been the subject of many researchers. According to Botelho (2003), the exercises in the textbook primarily address the verbal/linguistic, intrapersonal, spatial/visual, and interpersonal intelligences. Additionally, Latha (2012) saw that there is a negative correlation between students' progress in science and the inclusion of spatial intelligence. Ebadi *et al.* (2015) noted that the most commonly mentioned forms of intelligence in the textbooks they looked at were the verbal/linguistic and spatial/visual forms. Musical, Body/Kinesthetic, and Natural forms of intelligence were the less prevalent ones that were covered in the textbooks. In addition, Al Seyabi *et al.* (2016) also provided an examination of the MI profiles of the grade 12 English textbooks. The findings of the study indicated a mismatch between the sampled students' intelligence profiles and the prevailing intelligences described in the textbooks.

Furthermore, Omer (2017) discovered an imbalance in the distribution of intelligences in the North Star: "Reading and Writing" and "Listening and Speaking" books for level one, with verbal/linguistics as the most dominant intelligence, followed by intrapersonal, interpersonal,

spatial/visual, logical/mathematical, and bodily-kinesthetic intelligences. Al-Qatawneh *et al.* evaluated the seventh-grade Arabic textbook in 2021. The research found that the verbal/linguistic, visual/spatial, and interpersonal intelligences were most frequently represented in the Arabic-language textbook's texts, exercises, and activities. Finally, in accordance with the concept of multiple intelligences, Al Maharma (2021) investigated the exercises in the English series of Action Pack textbooks. He stated that the three textbooks tended to place the greatest emphasis on language and spatial intelligences. Besides, it was discovered that the types of intelligences were not found in the targeted textbooks in the same way.

In Vietnam, Lê Phạm Hoài Hương and Lê Thị Tuyết Hạnh (2014) analyzed Gardner's Multiple Intelligences theory, with a focus on "Linguistic Intelligence". Their article also provided activities for teaching and acquiring vocabulary in and out of the classroom based on the concepts of the Multiple Intelligences. Yen and Hanh (2015) looked into how the MIT was used in EFL lessons at Vinh University and indicated that MI courses might assist students to advance their comprehension of word spelling but not word meaning. Besides, Don's (2015) study concluded that MI activities embedded in English speaking classes had a considerable impact on improving the students' English speaking skills. Regarding *Life* textbook, Chi *et al.*, (2018) evaluated *Life*, the General English course books at levels 1/6 - 3/6 (A1 - B1 in CEFR), which have been used for teaching and learning EFT with non-English major students at University of Foreign Languages and International Studies, Hue University. They stated that *Life* series are completely suitable to be chosen for teaching and learning General English courses for the merits they bring to students and teachers. However, they have not been analyzed based on MIT so far.

3. Research methodology

The study employed the mixed method for surveying MI profiles of students. Because both qualitative and quantitative methods have merits and demerits, using only one approach may result in insufficient or limited data.

3.1 Participants

The background of the participants is described in Table 1 below:

Table 1. The profile of the participants

Intended users	**Students**	**Teachers**
Nationality	Vietnamese	Vietnamese
Age	18-22	40-49
Gender	Female: 150; Male: 150	Female: 3; Male: 1
Major	Faculty of Digital Economics & E-Commerce: 100 Faculty of Computer Science: 100 Faculty of Computer Engineering & Electronics: 100	English Linguistic: 4
Academic level	Elementary	Advanced

3.2 Samples

In accordance with the design of the study, the samples of the study are MI profiles of 300 freshmen at UD - VKU in the academic year 2022-2023. Besides, 677 activities of 12 units in *Life* textbook were analyzed based on MI checklists.

3.3 Data collection and analysis

The current study used three instruments: (1) a student MI inventory, (2) the menus of MI activities designed by Botelho (2003), and (3) interviews.

(1) Student MI inventory: A multiple intelligence inventory – originally developed by McKenzie (1999) – was adapted to identify students' MI profiles to answer the research question number 1 and 3. Moreover, in order to ensure that all the items would be well understood by the participants, Vietnamese version of the questionnaire was used. However, a few modifications in language use were made after consulting with lecturers who edited the Vietnamese version of the survey. The survey was conducted in Google form and translated into Vietnamese for students to deeply understand questionnaires in the survey.

(2) The menus of MI activities by Botelho (2003): In order to find out the answer for the research question number 2 and 3, the authors categorized *Life* textbook activities into eight types of intelligences using the menus of Botelho (2003) as a guide. The menus list examples of possible instructional objectives that belong to the eight intelligences and thus aid categorization of the activities. Review and memory booster of each unit were not included in the data.

(3) Interviews: Interviews for the teacher participants were conducted in this study. Four teachers were interviewed to ensure the reliability of the result of the research question number 3. Also, they could give some suggestions for some activities accompanied using textbook activities to engage students into their English lessons.

After collecting the data, the following steps were conducted:

- Qualitatively and quantitatively describing the data collected.

- Compare the predominant and less common MIs displayed in activities in *Life* textbooks and students' MI profiles.

The analysis of the textbook, as previously mentioned, was based on Botelho's (2003) list of activities. The list was taken into highest consideration to illustrate which intelligences were displayed in them and the percentage of each intelligence occurring on *Life* textbook.

Data analysis identified the participants' general MIs and whether activities in the textbooks matched their MI profiles or not. The investigator used the the SPSS software to analyze the data by performing a descriptive analysis, including a frequency calculation, average, standard deviation (SD), and one way anova.

4. Findings and Discussion

4.1 Students' MI profiles

The modified MI inventory was used with the participants, as mentioned in the preceding part. The major goal of using this MI survey was to investigate the students' MI profiles, which revealed both their strongest and weakest intelligences. The mean and standard deviation for each intelligence were then determined.

The findings regarding the statistics on students' MI profiles are presented in Table 2. As shown in Table 2, since the mean of the students' responses to the IntraI questions is the highest, 8.42, it appears that their MI profile is dominated by the IntraI. With a mean of 6.96, LMI is the

students' second strongest MI. Ranking third with 6.67 is BKI. SVI comes in the fourth place, with a mean of 6.33, VLI is ranked fifth with 5.75. InterI and MuI rank seventh and eighth with 5.44 and 5.32 respectively.

Table 2. The students' MI profile

No.	MI Types	Code	Mean	Std. Deviation
1	Intrapersonal Intelligence	IntraI	8.4233	1.60188
2	Logical-Mathematical Intelligence	LMI	6.9633	1.56316
3	Naturalistic Intelligence	NI	6.7067	1.50383
4	Bodily-Kinesthetic Intelligence	BKI	6.6700	1.79960
5	Spatial-Visual Intelligence	SVI	6.3367	2.35410
6	Verbal-Linguistic Intelligence	VLI	5.7467	1.95326
7	Interpersonal Intelligence	InterI	5.4400	1.98987
8	Musical Intelligence	MuI	5.3200	1.81712

In terms of standard deviation, the expected normal standard deviation (out of 10) for this scale of data is 1.72. Based on the standard deviation values of the eight intelligences shown in Table 2, the standard deviation of seven intelligences is within normal variance. However, that of SVI (2.35) is much more different.

The comparison of IntraI and InterI reveals that students choose working alone and reflecting on their own rather than collaborating in groups. As a result, freshmen at UD – VKU tend to prefer intrapersonal activities that entail self-reflection, goal setting, and carrying out an assessment of one's own learning, feelings, and life. LMI in Table 2, which comes in second on students' lists of intelligences, indicates that students often use this kind of intelligence. The reason might be because of the fact that UD – VKU is a university, which specialized in computer science, engineering technology and electronics, and digital economics and e-commerce, which required to develop LMI.

In addition to the two most popular student intelligences (IntraI and LMI), BKI comes third and SVI rates fourth. Furthermore, VLI does not appear to be relevant to students' interests. Although this may imply that students are less interested in languages or language acquisition, language remains the primary means of expressing and transferring the other intelligences.

It is interesting to note that Ibragimova (2011) discovered parallel findings in terms of student MI profiles. In his research, the IntraI came out on top, with MuI, VLI, and InterI coming in last. In Ibragimova's study, students' LMI came in second, which is similar to its place in the current study.

Regarding comparison conducted among the three faculties of UD – VKU (Faculty of Digital Economics & E-Commerce, Faculty of Computer Science, and Faculty of Computer Engineering & Electronics), there is a substantial variance in verbal - linguistic and personal intelligences, as seen in Table 3. Faculty of Electronics & E-Commerce occupies the largest average score of all the three kinds of intelligences (VLI, IntraI and InterI with Sig. = .000, .003, .006 respectively). This result shows that most of students in Faculty of Electronics & E-commerce are flexible in working individually and in teams. Moreover, their ability to express themselves verbally, conduct conversations, make up narratives, and express their ideas for coherent and persuasive presentations is better than the ones in the other faculties.

Also, NI with sig. = .034 and MuI with sig.= .010 shows a little difference among three faculties. The other three types of intelligences do state the dissimilarity among the three faculties because sig >= .005.

Table 3. Differences between faculties regarding MIT

No.	MI Types	Faculty	Mean	Sig.
1	Naturalistic Intelligence	Faculty of Digital Economics & E-Commerce	6.8400	.043
		Faculty of Computer Science	6.8800	
		Faculty of Computer Engineering & Electronics	6.4000	
		Total	6.7067	
2	Musical Intelligence	Faculty of Digital Economics & E-Commerce	5.7500	.010
		Faculty of Computer Science	5.0000	
		Faculty of Computer Engineering & Electronics	5.2100	
		Total	5.3200	
3	Logical-Mathematical Intelligence	Faculty of Digital Economics & E-Commerce	7.0900	.529
		Faculty of Computer Science	6.8400	
		Faculty of Computer Engineering & Electronics	6.9600	
		Total	6.9633	
4	Interpersonal Intelligence	Faculty of Digital Economics & E-Commerce	5.9600	.006
		Faculty of Computer Science	5.1900	
		Faculty of Computer Engineering & Electronics	5.1700	
		Total	5.4400	
5	Bodily-Kinesthetic Intelligence	Faculty of Digital Economics & E-Commerce	6.7500	.595
		Faculty of Computer Science	6.5200	
		Faculty of Computer Engineering & Electronics	6.7400	
		Total	6.6700	
6	Verbal-Linguistic Intelligence	Faculty of Digital Economics & E-Commerce	6.3800	.000
		Faculty of Computer Science	5.2400	
		Faculty of Computer Engineering & Electronics	5.6200	
		Total	5.7467	
7	Intrapersonal Intelligence	Faculty of Digital Economics & E-Commerce	8.8400	.003
		Faculty of Computer Science	8.3500	
		Faculty of Computer Engineering & Electronics	8.0800	
		Total	8.4233	
8	Spatial-Visual Intelligence	Faculty of Digital Economics & E-Commerce	6.3800	.964
		Faculty of Computer Science	6.2900	
		Faculty of Computer Engineering & Electronics	6.3400	

As for the qualitative data collected from interviews with 4 teacher informants, all of them consider MIT essential in their teaching. Teacher number 2 said:

> *MIT is very important in teaching and learning strategies. It enables us to see the uniqueness and learning styles of each student. Having awareness of this, we can conduct different activities in the classroom to help students develop their abilities and language skills.* [T2]

Regarding application of MIT in English classes, 50% of the teacher informants reported applying MIT in all lessons; meanwhile, 25% of them said that they had applied it but not all the time. Conversely, 25% of the informants reported that they had just used activities in textbooks because of the limited time, overload of work, resource shortage and narrow classrooms, they could not create other MI – based activities.

As for the preference of students on classroom activities, teacher informant number 1 said:

> *Most of students at VKU like tasks with self-evaluation, independent study, project work, especially, students belong to Faculty of Computer Science, and Faculty of Computer Engineering & Electronics. Students majoring in Digital Economics & E-Commerce enjoy both interpersonal and intrapersonal activities. Besides, they keen on BKI – based activities such as role-plays, hands-on activities, arts forms, movement, classroom game, and so on.* [T1]

Other informants also responded IntraI and LMI, BKI and SVI were predominant among students when they observed students in their classrooms. Teacher informant number 3 concluded that:

> *Students at UD – VKU tend to have strength on logical-mathematical intelligence. They are good at logical activities such as: crossword game, ordering, matching, classifying, solving problems and determining causes and effects.* [T3]

With regard to less preferred activities, all of the informants recognized that students did not like listening activities. Students found it boring to listen to records of dialogues, they enjoyed watching videos instead. When being asked about students' interaction in the class, teacher informant number 4 said:

> *Students in Faculty of Computer Science, and Faculty of Computer Engineering & Electronics are worse at interpersonal activities. They feel lazy to work in pairs or groups than those who in Faculty of Digital Economics & E-Commerce. Interestingly, female students are more confident to express themselves in front of class than male students.* [T4]

In summary, each student has his/her own MI profile. Nevertheless, most of students at UD – VKU are strong at IntraI, LMI, NI, BKI and SVI. Also, these intelligences are necessary for those who are majored in information technology, computer engineering and electronics, and digital economics and e-commerce. Especially, students in the faculty of digital economics and e-commerce are the best at interpersonal activities of those in the other faculties. The research also presented that there were statistically significant differences in VLI and in IntraI regarding specialization variable. This illustrated the differences in MI profiles among the three faculties.

4.2 Textbook multiple intelligence profile

4.2.1 Life textbook MI profile

As previously mentioned, the research objectives were to illustrate the textbook intelligence profile. 677 activities from *Life* textbook were examined in order to discover the intelligences in each activity. (See Table 4 for detailed information).

The *Life* textbook profile is chiefly an emergence of three intelligences: VLI, LMI, and IntraI. The percentage of these intelligences was found higher than 60% of the activities in the textbooks studied. Other intelligences were lower than 30% of the activities.

Table 4. Number of activities per intelligence and percentage of occurrence

No.	MI Types	Number of activities	%
1	Verbal-Linguistic Intelligence	677	100
2	Intrapersonal Intelligence	503	74.3
3	Logical-Mathematical Intelligence	416	61,45
4	Spatial-Visual Intelligence	190	28.06
5	Interpersonal Intelligence	185	27.33
6	Naturalistic Intelligence	0	0
7	Musical Intelligence	0	0
8	Bodily-Kinesthetic Intelligence	0	0

4.2.2 Predominant Intelligences

As can be observed from Table 4, the most prominent intelligence in *Life* textbook examined in this study is VLI with the percentage of 100%, followed by IntraI, and LMI with 74.3% and 61.45% respectively. VLI appears in all of the activities in the books. The amount of VLI was predicted because skills like speaking, listening, reading, and writing are always covered in language textbooks (particularly integrated skills books). Because the majority of the activities requires problem solving, answering questions, and so on, LMI was present in 61.45% of the activities.

Activities involves IntraI accounts 74.3%. Numerous tasks demand that students work alone, including grammar exercises, answering questions, reading, speaking in front of the class, etc. For instance, while working on grammar problems, students typically begin by working alone before comparing their solutions and checking the keys in pairs or groups. Writing assignments and grammar drills were given as solitary tasks.

According to 75% of teacher informants who have been using *Life* textbook, the emphasis in textbook is primarily on linguistic intelligence which is parallel to the findings of textbook analysis. Only 25% of teacher informants claimed that the activities in the textbook addressed different intelligences because it had a variety of tasks such as linguistic, individual and group work tasks, and visuals.

4.2.3 Less Common Intelligences

Less frequent intelligences in the textbook analysis are SVI and InterI. Less than 30% of the activities in *Life* textbooks included these types of intelligences. Tables, graphs, and other visual manner are also rare in activities. In the textbook, InterI presents in 27.33% of the tasks. Less frequent activities like pair and group work might not give present student more opportunity to develop their InterI. The IntraI and InterI should be combined in many of the tasks in the textbook under analysis.

Last but not least, the percentage of NI, MuI and BKI is 0%. This implies that there are no activities related to natural environment and music. Students do not have chances to get close to the nature or immerse themselves in music. In addition, activities in *Life* textbook do not encourage student's body and mind work together to complete tasks and express ideas for interaction and communication. Classes seem to be boring if teachers do not apply any other activities apart from those in the textbook because students do not do any movements during periods.

When being asked about less common intelligences, all of the teachers thought that there are rare naturalistic, musical and bodily-kinesthetic activities in the textbook. This guaranteed the reliability of the textbook analysis findings. Teacher informant number 3 confessed:

> *I'm not happy with Life textbook because the activities don't help them develop all their abilities and skills. Some activities are too easy for students to learn, which don't engage students in class. Therefore, it takes me much time to adapt activities on the basis of MIT to cater all students' intelligences by having students act out, draw, play games, do role play or bringing songs to class, and I find them interested in these activities.* [T3]

4.3 The alignment between textbook activities and students' MI profiles

When the data from students' MI profiles were compared with those from MI profiles of *Life* textbook, the following results were discovered.

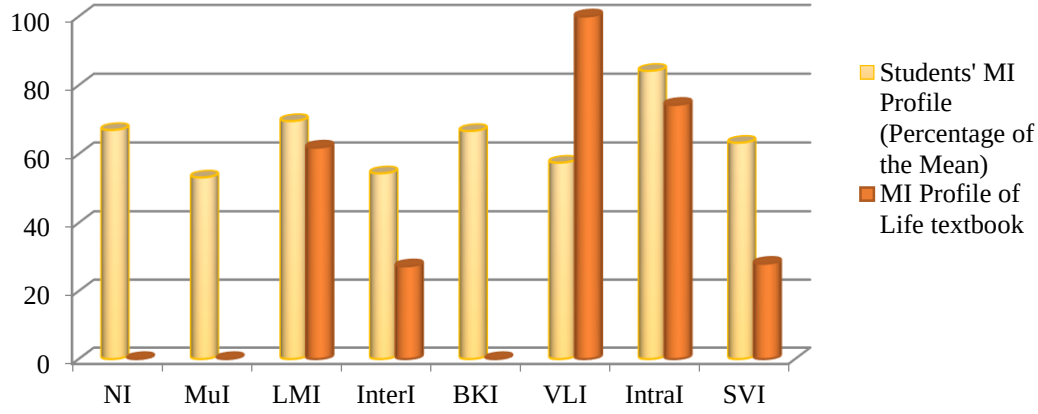


Figure 1. Students' MI Profile versus MI Profile of *Life* textbook

As seen in Figure 1, there is a significant misalignment between the MI profiles of students and textbooks. To begin, VLI is the most common intelligence in *Life* textbook, accounting for 100% of the total. VLI, on the other hand, ranked the sixth in students' MI profile. Similarly, IntraI is ranked second in textbook MI profiles with a mean percentage of 76%, but it is ranked first in student MI profiles. Regarding LMI, there is comparatively less misalignment because it ranked third in *Life* textbook MI profile, whereas, it ranked second in students' MI profile. Conversely, despite their absence from the textbook activities, NLI, MuI and BKI rank third, fourth and eighth in the MI profile of students. This misalignment is clearly indicated in the following part.

4.3.1 Misalignment in the intrapersonal, logical-mathematical, naturalistic intelligences and bodily-kinesthetic intelligence

As previously indicated, the students' profile places the IntraI, LMI, NI and BKI first, second, third and fourth whereas the textbook profile places them second, third, sixth and seventh respectively. Given this, the tasks and activities do not introduce NI and BKI. As a result, more genuinely naturalistic assignments are required in order to increase the percentage of naturalistic information in the textbook both quantitatively and qualitatively. The students' favorite intelligences are these types of intelligences. However, they are not given as much attention in

the textbook, particularly the NI and BKI which are not represented in the exercises at all. It might be said that *Life* textbook is taught to students without much consideration from the teachers for their students' learning preferences.

4.3.2 Misalignment in the spatial-visual intelligence, verbal-linguistic intelligence, interpersonal intelligence and musical intelligences

VLI, SVI, InterI and MuI are the least dominant group among eight intelligences with 57.4%, 63.3%, 54.4% and 53.2% respectively in students' MI profiles, whereas, they rank first, fourth, fifth and seventh in MI profile of *Life* textbook. All activities and tasks in *Life* textbook present VLI, nevertheless, it is not predominant in students' MI profile. Besides, the lack of musical activities in textbooks could be attributed to students' age; there is a greater presence of music in elementary classrooms (Mills, 2001) compared to post-basic education because students are expected to be more focused on their academic goals. Lazear (2014), on the other hand, emphasizes the significance of MuI in the learning process by stating that the greatest is probably the consciousness altering effect of music and rhythm on the brain. Because of this misalignment, students may feel boring if teachers just use activities in *Life* textbook. Therefore, it is essential to adapt interesting activities and even supplementary materials in English classes to address various types of intelligences, which helps teachers to engage more students in their lessons and consequently, students' English competences will be enhanced.

5. Conclusions and recommendations

In conclusion, in this study, after investigating the alignment between MI profile of students and that of *Life* textbook, it can be concluded that there was a misalignment between the students' MI profiles, and MI profile of *Life* textbook. This can be interpreted as a lack of balance in the activities of the textbooks in terms of the types of intelligences addressed. Similarly, when the results of textbook analysis were compared to the results of the MI survey, textbook activities did not address the students' MI profiles. In other words, the findings of the study indicated that there were discrepancies between the MI profiles of students and textbooks. The most dominant intelligence type among students was intrapersonal intelligence, whereas linguistic intelligence was discovered to be the most dominant intelligence type among textbooks. In terms of MI profile of textbooks, Botelho (2003), Latha (2012), Omer (2017) and Al Maharma (2021) also indicated the same findings that VLI was addressed the most frequently in activities in textbooks. However, the order of the other intelligences (from the highest to the lowest points) is different from each other. In terms of students' MI profiles, Abdelkarim *et al.* (2018) conducted a research on 113 college students and the findings showed that IntraI is the strongest in students' MI profiles, which is similar to the case in this study. Nevertheless, the other intelligences are not in the same order. Interestingly, the current study's findings contrast those of Modirkhamene and Azhiri (2012), who discovered that students' popular intelligences were interpersonal, musical, and naturalist kinds. As mentioned, the findings of the study showed that MI profile of textbook activities do not align to the students' MI profiles. This is one of the most difficulties in many educational systems since learners have diverse intelligences that are rarely addressed in classes. As a result, the findings of this study might have practical implications for instructors and educators, as well as theoretical implications for future research.

The findings from the MI misalignment may also serve as motivation for teachers to explore different types of intelligences in their classrooms and adapt their lesson plans to reach more students; and support students in realizing their potential and learning foreign language in the most efficient ways. Teachers believe that MI theory is important and that it has a positive impact on their teaching and students' learning. It is suggested that ELT teachers use the data obtained in this study to expand their awareness of students' multiple intelligence types in relation to the MI profiles of the textbooks and classroom activities that they use in teaching in order to help learners better develop and improve their English language skills and abilities. Considering MIT when developing materials for students may improve learning and teaching processes, encourage students, and increase their interest and motivation. Furthermore, teachers and administrators in UD – VKU could make some changes to materials or syllabus design to address individual differences. Teachers can design lessons to promote students' MIs using the MI – based activities presented in this study. Furthermore, this study not only informs educational experts about the degree of incorporation of the MIT in textbooks but also is an addition to the educational literature on the inclusion of MIT in textbooks through texts, activities, and evaluation exercises.

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SỰ TƯƠNG QUAN GIỮA CÁC HOẠT ĐỘNG TRONG GIÁO TRÌNH *'LIFE'* VÀ HỒ SƠ ĐA TRÍ TUỆ CỦA SINH VIÊN ĐẠI HỌC VIỆT NAM

Tóm tắt: Từ nhiều năm nay, thuyết đa trí tuệ đã được ứng dụng vào giáo dục nói chung và dạy học ngoại ngữ nói riêng. Nghiên cứu này nhằm mục đích xác định hồ sơ đa trí tuệ (MI) của sinh viên học ngoại ngữ tại một trường đại học ở Việt Nam bằng cách sử dụng lý thuyết Đa trí tuệ của Gardner. Nó cũng nghiên cứu phân tích về các hoạt động thể hiện đa trí tuệ trong sách giáo khoa *Life*, một cuốn sách được sử dụng trong các khóa học tiếng Anh dành cho sinh viên đại học để xác định độ tương quan với hồ sơ đa trí tuệ của sinh viên. Nghiên cứu sử dụng ba công cụ chính: 1) bản khảo sát đa trí tuệ dành cho 300 sinh viên đại học Việt Nam; 2) bảng hoạt động đa trí tuệ của Botehol 2003; và 3) phỏng vấn các giáo viên tiếng Anh đang giảng dạy các em sinh viên đó. Các kết quả nghiên cứu chỉ ra rằng có sự không tương quan giữa hồ sơ đa trí tuệ của người học và trí thông minh vượt trội được mô tả trong sách giáo khoa. Nghiên cứu cho thấy trí tuệ nội tâm là trí tuệ chiếm ưu thế nhất của sinh viên, tiếp theo là trí tuệ tư duy-toán học và trí tuệ thiên nhiên. Tuy nhiên, sách giáo khoa *Life* chủ yếu dựa vào trí tuệ ngôn ngữ, tiếp theo là trí tuệ tư duy-toán học và nội tâm. Nghiên cứu chỉ ra rằng để nâng cao năng lực ngôn ngữ của người học thông qua việc phát triển đa trí tuệ, cần bổ sung các hoạt động bổ trợ được thiết kế theo quan điểm của lý thuyết đa trí tuệ.

Từ khóa: Đa trí tuệ, lý thuyết đa trí tuệ, giáo trình *Life*, sự tương quan, hoạt động