**International Journal of Linguistics, Literature and Translation**
ISSN: 2617-0299 (Online); ISSN: 2708-0099 (Print)
DOI: 10.32996/ijllt
Journal Homepage: www.al-kindipublisher.com/index.php/ijllt

IJLLT
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

**| RESEARCH ARTICLE**

# Multiple Intelligences and Level of Mental Ability in Language Learning

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**| ABSTRACT**
Several research studies on Mental Ability found that students used multiple intelligences in language learning and in acquiring language skills to improve their proficiency. In this study, the researchers established the possess multiple intelligences of the 1st and 2nd year Civil Engineering students and their level of mental ability in language learning using a descriptive-correlational design. Furthermore, the researchers aimed to determine the relationship between multiple intelligences and level of mental ability in terms of language learning. The results of the study indicated that the 1st and 2nd Civil Engineering possess multiple intelligences. These are linguistic intelligence, spatial intelligence, logical intelligence, body kinesthetic intelligence, music intelligence, interpersonal intelligence, and intrapersonal intelligence. The study also found that the respondents are great at language learning.

**| KEYWORDS**
Civil Engineering students, level of Mental Ability, Language Learning

**| ARTICLE DOI:** 10.32996/ijllt.2022.5.4.5

## 1. Introduction

Mental ability is defined as the power to learn or retain knowledge; in law, the ability to understand the facts and significance of each individual behavior and capacity. According to Thurstone (1938), there are seven primary mental abilities. These are verbal comprehension, numerical ability, spatial relations, perceptual speed, word fluency, memory and reasoning. Different individuals possess these abilities, and each of them has his own different abilities.

In a study conducted at the University of Columbia, Canada (2007), intelligence is characterized as comprising a general factor common to all meaningful activity and specific factors that are unique to the different tasks used to measure intelligence. However, American psychologists found out that the concept of general intelligence is not very useful for predicting specific jobs or other life roles. L.L Thurstone administered a battery of 56 simple psychology tests to a large number of children in Chicago schools and applied factor analysis to determine the latent basic ability dimensions presented by these tests. He succeeded in showing that fewer than 10 latent constructs were required to explain most individual differences variance in his measures.

The importance of language is precisely the sorts of processes referred to by Jensen as being at the heart of the definition of intelligence, and he also asserts that intelligence is what intelligence tests measure. As stated by Oller (1972), the principles of induction and substitution have been proposed as the basis of language use as well as language learning.

For this reason, the researcher aims to conduct a study that focuses on the Mental Ability and Types of Intelligence in language learning. Kuzgun and Deryakulu (2004) stated that individual differences between people are measured by comparing scores on tests of these mental abilities. There are a number of individual differences that affect the performance and attitudes of learners during teaching and learning. The most common differences among learners are gender, age, intelligence, ability, interest, prior knowledge, learning style, motivation, self-control, self-efficacy, and epistemological beliefs.

Based on different articles about multiple intelligences and language learning, the researcher found out that there are numerous studies about this topic in different countries. But most of the studies about multiple intelligences and language learning is about how intelligence is used in acquiring language skills to improve language proficiency. What makes this study different from other related studies is that there is no study to this date about the relationship between the types of intelligence and level of mental ability.

Generally, the study aimed to determine the mental abilities and types of intelligence of the respondents. Specifically, it sought to:

1. Determine the respondents' level of mental ability in language learning.
2. Identify the type of intelligence that the respondents' possess in terms of language learning:
    a. Most dominant
    b. Least dominant
3. Determine if there is a significant relationship between the respondents' level of mental ability and the type of intelligences they possess in terms of language learning.

**2. Literature Review**

Ari and Deniz (2008) defined differences between the individual students as a personal differences for each student. Individual differences include factors such as physical characteristics (weight, height), intelligence, interest, perception, gender, ability, styles of learning, and traits of personality. Not every student learns the same way, but not every method attracts the same level of interest of each student.

As Spearman has stated, there has to be a specific underlying ability or force which has served as the basis for all our intellectual/mental functioning. He was convinced that g (g) was a kind of brain power or mental energy, and he believed that it was g's presence that made a person smart (Howe, 1997).

Nine different forms of intelligence are considered important according to Gardner's (2001) classification, each of which influences the basic language learning skills—developed in 1983, Gardner's Multiple Intelligence Theory (MIT) (Ahmed, 2012). The MIs theory has always been a controversial point of view in language learning, and the relationship has been viewed from many different points of view. At the time of Gardner's early genesis of MIT (1983), the father of MI theory, his definition of intelligence was the natural ability to adapt or create products valued in one or more environments; Nevertheless, Gardner has recently pruned and expanded his first definition of intelligence, improving it as a psychological ability that allows a learner the opportunity to access knowledge that can be enabled in culturally useful items (Zarei & Mohseni 2012).

The ability to successfully limit long-term memory searches is a crucial aspect of the role of working memory and, in their opinion, the connection between working memory and intelligence that underlie this capacity. While the language is somewhat different (e.g., attention management vs. stimulus control), and the focus is on using information instead of gaining it (Unsworth & Engle 2007)

Gardner (1999 ) argued in his theory of multiple intelligences that some intelligence had been respected in classrooms while others had not. Gardner (1983) argues that intelligence consists of multiple modules or types which are largely independent of each other and functionally separate. To briefly describe those intelligence (Barnard & Olivarez, 2007). In general, linguistic knowledge refers to the openness to spoken and written language, the capacity to learn languages, and the capacity to use language to achieve those goals.

Emotional stability makes language learning easier by improving young learners' imagination, humor and ingenuity. Furthermore, research shows that many learners cannot incorporate language learning competencies. Self-awareness fills the gap and lets teachers more effectively handle language teaching (Stevick, 1989).

According to Armstrong (1999), these different bits of intelligence reflect a pluralistic panorama of learners' individual differences; they are understood as the personal resources each individual possesses to make sense of the new information and to store it in such a way that it can be easily retrieved when it is needed for use. The various bits of intelligence are of equal value; none of them is considered superior to the others. They are present in all to some degree in their basic form, even though a person may usually be more talented in some than in others. Each of these frames is autonomous, subject to change, and workable. They communicate to help solve everyday problems.

Multiple intelligence theory as a possible answer to the having to learn language skills challenges to inspire students to develop their language competencies; Evidence from previous research (Branton, 2004; Chan, 2006; Cortright et al., 2015; Leimbach &

Maringka, 2010; Posner, 2004; Saricaoglu & Arikan, 2014; Shore, 2004 ) revealed the effective use of multi-intelligence theory as a new technique for English teaching. Gardner (1983) applied the theory of intelligence to also include such areas as artistic, visual-spatial, intrapersonal, and interpersonal awareness.

None of those bits of intelligence can be deemed superior to the others, according to Gardner. Different bits of intelligence are used as personal tools, and in some people, a person may be more talented than others (Mirzazadeh, 2012). In needed to achieve these criteria, Gardner selected eight talents: musical – rhythmic, visual-spatial, verbal-linguistic, logical-mathematical, physical – kinesthetic, interpersonal, intrapersonal, and naturalistic.

Responsibility for development in studying a language rests with the language student and his willingness to accept the advantage of every opportunity. Therefore, learner training to apply strategies is a task for English teachers. There's also a need to consider learners' approaches and teach them about their learning strategies to help them become more independent. Strategies are usually extended to language learners at various stages of language learning. Studies (e.g. Chamot & Kupper, 1989; Oxford & Crookall, 1989) have shown that using learning methods effectively also leads to more effective language learning.

The psychometric concept of mental abilities is a more conventional model for intellectual differences between individuals. Mental ability emphasizes the idea of abilities and tends to de-emphasize how an individual performs the information related to a particular task. The more complex models (e.g., Vernon, 1969; Cattell, 1971; Horn, 1976) can include hundreds of distinct mental abilities; While Jensen's (e.g., 1969, 1970) Level I and Level II model indicate two general types of skills. Level I ability is associative memory and needs very little stimulus transformation, and Level II ability is reasoning and requires greater stimulus transformation. Jensen also deals with the amount of information processing, but not with the ways of processing information.

As Norman said, the study section started by Allport and Odbert (1936) and continued by Cattell (1946) centered on the premise that words for all fundamental differences between people should have been established in natural languages like English. Thus, language study would include an overall model of personality characteristics. Recently, this idea was used as the basis for a far more thorough and detailed analysis of trait terms (Goldberg, 1981, 1982).

## 3. Methodology

### *3.1 Research Design*

This study utilized the descriptive-correlational design, which aimed to describe and establish the relationship between the respondents' mental abilities and the type of bits of intelligence in learning a language. Quantitative data were collected to measure the mental abilities of the respondents.

### *3.2 Data Gathering Procedure*

This study investigated the level of mental ability in language learning and the type of bits of intelligence of the first- and second-year students of the Bachelor of Science in Civil Engineering at a State University in the Philippines.

In administering the questionnaires, the researchers asked for approval and permission from authorities. Then, permission from the subject teacher and respondents' consent were also requested. The researchers then explained the background and relevance of the study for the respondents to understand and for them to answer the questionnaire correctly according to what they felt. Lastly, every respondent was given time to ask for clarifications about the study. The Multiple intelligences profiling questionnaire was administered first to determine their type of intelligence. The questionnaire has 28 items ranging from "5= strongly agree to "1= strongly disagree" to compute their MIPQ Factors. Then, they answered the Verbal Ability test questionnaire to determine the level of their mental ability in language learning, a 60-item test. The data collection process took approximately 20 to 30 minutes of the respondents' time.

### *3.3 Respondents of the Study*

The respondents of this study were the 1$^{st,}$ and 2$^{nd}$ year Bachelor of Science in Civil Engineering enrolled during the SY 2019-2020 in a State University in the Philippines.

### *3.4 Research Instrument*

This study used two questionnaires. These were the Verbal Ability test and Multiple Intelligences Profiling Questionnaire. The questionnaires consist of 60 and 28 items, respectively, to measure the level of their mental ability in language learning and their type of bits of intelligence in terms of language learning. The MIPQ measures seven dimensions of Gardner's MI theory : (1) Linguistic, (2) Logical-mathematical, (3) Musical, (4) Spatial, (5) Bodily-kinesthetic, (6) Interpersonal, and (7) Intrapersonal intelligence. The instrument consists of 28 items on a Likert scale from 1 (totally disagree) to 5 (totally agree). The psychometric properties of the dimensions were prevalidated in earlier studies (Tirri & Komulainen, 2002; Tirri, K., Komulainen, Nokelainen &

Tirri, H., 2002, 2003; Tirri, Nokelainen & Ubani, 2006; Tirri & Nokelainen, 2007). The total number of items was reduced from 70 to 28 items. The Verbal Ability test questionnaire was adopted from the Civil Service Exam reviewer.

### *3.5 Scales*

The study utilized of two scales; These were Multiple intelligences profiling scale and the Mental ability scale. The multiple intelligences profiling scale is a 5-point Likert scale. The scale 5 with a descriptive rating of strongly agree, 4 with a descriptive rating of agree, 3 having a descriptive rating of undecided, 2 with a descriptive rating of disagree, 1 with a descriptive rating of strongly disagree. The scale was used to guide the respondents on how they answered the questions in determining their possessed multiple intelligences. The mental ability scale is also a 5-point Likert scale. The scale was used to determine the remarks of the respondents. A poor remark was given to the respondents who got 1-12/ 60 points. 13-24/60 was given the not satisfactory remark. 25-36/60 was satisfactory. Respondents who got 37-78/60 was given very satisfactory remark. An excellent remark was given to respondents who got 49-60/60.

## 4. Results

**Table 1a.**

*Computed Mean on the Multiple Intelligences in terms of Linguistic Intelligence*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 Writing is a natural way for me to express myself. | 3.76 | Agree |
| Q2 At School, studies in English or social studies were easier for me than mathematics, physics and chemistry. | 2.91 | Undecided |
| Q3 I have recently written something that I am especially proud of or for which I have received recognition. | 3.04 | Agree |
| Q4 Metaphors and vivid verbal expressions help me learn efficiently. | 3.54 | Agree |
| **Grand Mean** | **3.31** | **Agree** |

Table 1a indicated that the 1st and 2nd year Civil Engineering students possess linguistic intelligence and have a grand mean of 3.31.

Learners who are high in verbal-linguistic intelligence show the ability to communicate their feelings and understand other people through words (Gardner, 2000). Besides this, Armstrong (1994) believed they could use words and language comfortably and easily to express themselves creatively and use language to recall knowledge. The importance of words in studying foreign languages and second languages is also beyond doubt. One of the language skills essential for the fluent use of language is vocabulary competence (Nation, 1993).

**Table 1b.**

*Computed Mean on the Multiple Intelligences in terms of Logical Intelligence*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 At school, I was good at mathematics, physics or chemistry. | 3.37 | Agree |
| Q2 I can work with and solve complex problems. | 3.53 | Agree |
| Q3 Mental arithmetic is easy for me. | 3.40 | Agree |
| Q4 I am good at games and problem solving, which require logical thinking. | 3.75 | Agree |
| **Grand Mean** | **3.51** | **Agree** |

Table 1b has a computed grand mean of 3.51. This type of intelligence is possessed by the 1st and 2nd year Civil Engineering students with the descriptive rating of Agree.

Campbell et al. (1999) believed students with high logical-mathematical knowledge could see and understand the concepts and values behind causal and numerical processes. They can use both deductive and inductive reasoning and logic to evaluate and solve problems and enjoy manipulating numbers in puzzles, equations and formulas.

21

**Table 1c.**

*Computed Mean on the Multiple Intelligences in terms of Spatial Intelligence*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 At school, geometry and other subjects involving spatial perception were easier for me than solving equations. | 3.29 | Agree |
| Q2 It is easy for me to conceptualize complex and multi-dimensional patterns. | 3.24 | Agree |
| Q3 I can easily imagine how a landscape looks from a bird's eye view. | 3.53 | Agree |
| Q4 When I read, I form pictures or visual images in my mind. | 4.22 | Strongly Agree |
| **Grand Mean** | **3.57** | **Agree** |

Table 1c shows the respondents' answers to the questions in determining their spatial intelligence. The computed grand mean for spatial intelligence is 3.57, indicating that they possess spatial intelligence.

Spatial creations such as buildings rely largely on how designers handle and manage spatial problems in solving an architectural problem, a skill they can acquire in their long learning process. Not only did these architects create a precise virtual model of their development, but they communicated with it and manipulated it with physical behavior. Mind's eye has created an 'interactive' 3D interface for developers to control their designs with movements and actions quickly and easily. (Singh 1999; Athavankar 1997; 1999).

Architects and designers experience in 3D visualizations the act of spatial formation and know the joy associated with it. For several years now, the peculiar essence of their thought process has been the subject of design study.

**Table 1d.**

*Computed Mean on the Multiple Intelligences in terms of Body Kinesthetic*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 I am handy. | 3.65 | Agree |
| Q2 I can easily do something concrete with my hands (e.g. knitting and woodwork). | 3.38 | Agree |
| Q3 I am good at showing someone how to do something in practice. | 3.42 | Agree |
| Q4 I was good at handicrafts (e.g. woodwork; textiles) at school. | 3.11 | Agree |
| **Grand Mean** | **3.39** | **Agree** |

Table 1d indicated that the respondents' agreed to the profiling questionnaire of Body Kinesthetic Intelligence, indicating that they possess the said intelligence with a grand mean of 3.39.

Kinesthetic intelligence is the ability to use one's body to express oneself and solve a problem (Larsen- Freeman, 2000).

**Table 1e.**

*Computed Mean on the Multiple Intelligences in terms of Music Intelligence*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 After hearing a tune once or twice, I am able to sing or whistle it quite accurately. | 3.13 | Agree |
| Q2 When listening to music, I am able to pick out individual instruments and recognize melodies. | 3.03 | Agree |
| Q3 I can easily keep the rhythm when drumming a melody. | 3.22 | Agree |
| Q4 I notice immediately if a melody is out of tune. | 3.37 | Agree |
| **Grand Mean** | **3.19** | **Agree** |

Table 1e indicated that the respondents have the potential of musical ability with a grand mean of 3.19 with a descriptive rating of Agree.

According to Susan (2000), Musical Intelligence is more than a natural skill and should logically require some evaluation or progress measurement for quality and accountability purposes. Howe and Sloboda (1997) stated the definition of musical achievement through 'gifts', and 'talents' is consistent with the determinist view that abilities are primarily inherited. In actual probability, although it is true that individual biological differences play an important role in human development, explaining musical achievement in terms of 'gifts' and 'talents' alone or specifically denies the many diverse and potentially important environmental conditions that affect production.

**Table 1f.**

*Computed Mean on the Multiple Intelligences in terms of Interpersonal*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 Even in a strange company, I can easily find someone to talk to. | 3.17 | Agree |
| Q2 I get along easily with different types of people. | 3.24 | Agree |
| Q3 I make contact easily with other people. | 3.22 | Agree |
| Q4 In negotiations and group work, I am able to support the group to find a consensus. | 3.55 | Agree |
| **Grand Mean** | **3.29** | **Agree** |

Table 1f has a grand mean of 3.29, indicating that the respondents possess interpersonal intelligence wherein they have the ability to communicate with others effectively.

Interpersonal intelligence is the system that "turns out to other people" (Gardner, 1985, p. 239) or, as paraphrased by Sternberg (1990, p. 265), "is involved in understanding and acting on the understanding of others. The central capacity of this program, as well as the subject of this paper, "is the ability to note and differentiate between other people and, in particular, between their moods, temperaments, motives and intentions."

**Table 1g.**
*Computed Mean on the Multiple Intelligences in terms of Intrapersonal Intelligence*

| Items | Mean | Descriptive Rating |
|---|---|---|
| Q1 I am able to analyze my own motives and ways of action. | 3.94 | Agree |
| Q2 I often think about my own feelings and sentiments and seek reasons for them. | 3.98 | Agree |
| Q3 I regularly spend time reflecting on the important issues of life. | 3.91 | Agree |
| Q4 I like to read psychological or philosophical literature to increase my self-knowledge. | 3.19 | Agree |
| **Grand Mean** | **3.75** | **Agree** |

Table 1g indicated the computed grand mean of intrapersonal intelligence, which is 3.75. The said intelligence is possessed by the respondents.

Gardner (1983,1993a, 1993b) described intrapersonal intelligence as a capacity to self-reflection. Gardner further noted that this capacity could culminate in a mature sense of self and inner wisdom through continuous development.

**Table 2.**
*Summary Computed Mean on the Multiple Intelligences Most to least Dominant*

| Items | Mean | Dominant | Descriptive Rating |
|---|---|---|---|
| intrapersonal | 3.92 | 1 | Agree |
| spatial | 3.71 | 2 | Agree |
| logical | 3.63 | 3 | Agree |
| Body Kinesthetic | 3.52 | 4 | Agree |
| interpersonal | 3.42 | 5 | Agree |
| linguistics | 3.40 | 6 | Agree |
| music | 3.33 | 7 | Agree |
| **Grand Mean** | **3.56** | | **Agree** |

Table 2 indicates the computed mean of most to least multiple intelligences of 1st and 2nd year Civil Engineering students. The three most dominant intelligence are intrapersonal, spatial and logical. The intrapersonal intelligence has a mean of 3.92, making it the 1st most dominant intelligence of the respondents with a descriptive rating Agree. The 2nd most dominant intelligence is spatial intelligence, with a mean of 3.71, and the 3rd most dominant intelligence has a mean of 3.63, is logical-mathematical intelligence. The 4th dominant intelligence is Body Kinesthetic intelligence, with a descriptive mean of 3.52 with a descriptive rating of Agree. The three least dominant are interpersonal, linguistics and music. The 5th intelligence is interpersonal and has a mean of 3.42. Linguistic intelligence is the 6th intelligence with a mean of 3.40. The 7th and last intelligence with a mean of 3.33 is music intelligence. The civil engineering students' most dominant intelligence, which is intrapersonal, spatial and logical, is used in their course. The three most dominant intelligence are important to civil engineering students. First, the intrapersonal intelligence, who is self-aware and involved in the process of changing behavior in relation to their situation. One's own ability to deal with change in the workplace. Second, the spatial intelligence, as it is used in designing a building or a landscape. The ability to interpret and create visual images as they understand the relationship between images and meanings and between space and effect. The third is the logical-mathematical intelligence that analyzes problems and can perform a mental mathematical calculation that creates a process to measure something as it is used to make floor plans. The least three dominant bits of intelligence of civil engineering students are interpersonal, linguistics and music.

According to Deveci T., & Nunn R. (2018), intrapersonal communication gives engineers the foundation on which they base their judgments. It supports their communication with other engineers and the public they serve. Effective use of intrapersonal communication also facilitates the process in which they engage in learning beyond their formal training. These skills lend themselves to critical thinking and problem-solving.

According to Hsi & Linn (1997), the relationship between spatial reasoning ability and success in mathematics or engineering. Although researchers have found that performance on spatial tests predicts success in mathematics and workplace problem-solving, others show little correlation between success in engineering and spatial aptitude. Nonetheless, students who get training and experience in solving spatial reasoning problems make rapid progress in improving their spatial reasoning and visualization skills.

**Table 3**.
*Level of Mental Ability in Language Learning*

| | **Frequency (n=186)** | **Percentage (100%)** |
|---|---|---|
| poor | 1 | .5 |
| not satisfactory | 8 | 4.3 |
| satisfactory | 67 | 36.0 |
| very satisfactory | 107 | 57.5 |
| excellent | 3 | 1.6 |

Table 3 shows the result of the level of mental ability of 1st and 2nd year Civil Engineering in terms of language learning. 0.5 % of the respondents got a descriptive equivalent of "poor", while 4.3% is "not satisfactory". The "satisfactory" level comprised 36.0% of the population, and 57.5 % were "very satisfactory". 1.6 % got an "excellent" level. The result indicated that the human brain is capable of acquiring different bits of intelligence and that it is not focused on someone's dominant intelligence. The respondents' dominant multiple intelligence does not affect the least dominant intelligence indicating that the respondents still have capabilities to their least dominant intelligence, such as linguistic intelligence. The mental ability level of the respondents shows that among 186 respondents, 3 of them were Excellent in language and 107 of the respondents were very satisfactory, while 67 of them got a satisfactory mark. However, 8 of the respondents were not satisfactory, and 1 of them is poor when it comes to language learning. Table 2 shows that the linguistic intelligence of the civil engineering students is 6th out of 7. It is the second least intelligence among the respondents. However, table 3 shows that 57.5 % are very satisfactory, indicating that more than half of the respondents are great at language. 3 of the respondents got excellent remarks indicating that they are good when it comes to linguistic intelligence.

In a study that was mentioned at the University of Firat, Turkey (2007), knowledge of a foreign language has always been of value in the field of engineering. As Riemer (2002) pointed out, language and communication skills are recognized as essential elements in modern engineering education, including English as a foreign language as it has become an international language.

**Table 4.**
*Significant Relationship between the Respondents' Mental Ability and Type of Intelligence they possess in terms of Language Learning*

| **Items** | **r-Value** | **p-Value** |
|---|---|---|
| linguistics | 0.07 | 0.30 $^{ns}$ |
| logical | -0.04 | 0.51 $^{ns}$ |
| spatial | -0.07 | 0.29 $^{ns}$ |
| Body Kinesthetic | -0.10 | 0.16 $^{ns}$ |
| intrapersonal | 0.09 | 0.17 $^{ns}$ |
| music | -0.12 | 0.05 $^{s}$ |
| interpersonal | -0.16 | 0.02 $^{s}$ |

Table 4 shows the significant relationship between the respondents' mental ability and the type of intelligence they possess in terms of language learning. There are five not significant and two significant relationships. The linguistic intelligence is not significant to the mental ability of the respondents, with a p-value of 0.30. Logical intelligence has a p-value of 0.51, which is also not significant; spatial intelligence has a 0.29 p-value making it not significant. Music intelligence is significant, having a p-value of 0.05 and interpersonal intelligence has a p-value of 0.02 making these variables have a significant relationship with the respondent's mental ability in terms of language learning. Lastly, the intrapersonal intelligence is not significant, having a p-value of 0.17. The result shows that 2 out of 7 intelligence was significant to the respondents' mental ability in terms of language learning.

Table 2 shows that music intelligence is the least ranked intelligence of the respondents while interpersonal is the 5th ranked intelligence of the respondents. This significant intelligence was not the most dominant intelligence used by the respondents, as proven in the result of this study. However, this intelligence improved the language learning of the respondents. Through music and interpersonal intelligence, the respondents' mental ability in language learning resulted that more than half of them are very satisfactory and the 2nd mark was satisfactorily followed by three of the respondents who had an excellent mark and only 1 of them got a poor mark.

Fonseca-Mora and García (2010) stated that music is one of the most frequently used resources in foreign language classes since music is a powerful and beneficial language learning instrument. Children usually love to play music, sing and imitate. Adult learners, in their free time, prefer to listen to foreign language songs because they feel this will improve their language learning skills.

They appreciate such activities because they are fun and thus reduce language anxiety which is often caused by an inability to correctly understand and speak the target language. The learning of a new language will benefit from the structural and motivational properties of music in songs because, as many researchers confirm, these musical practices help to improve auditory perception (Slevc & Miyake, 2006) and help phonological memory and metacognitive awareness.

Interpersonal wisdom has had a stronger relationship with the success of the students (Behjat, 2012). Interpersonal intelligence has also been linked to vocabulary learning. Hajebi et al. (2003) studied vocabulary learning for students and their interaction with interpersonal intelligence. Findings showed that students in language learning increased their vocabulary achievement.

## 5. Conclusion

This study shows that the 1st and 2nd year Civil Engineering students possess multiple intelligences. The multiple intelligences they possess come from most dominant to least dominant. Results showed that the respondents' most dominant intelligence is used in relation to their course. However, the least dominant multiple intelligences are not affected by their most dominant bits of intelligence. This study also shows that the students also excel in their least dominant bits of intelligence.

The other result is that music intelligence and interpersonal intelligence improve the respondents' level of mental ability in terms of language learning. The result shows that despite having the spatial and logical bits of intelligence as their most dominant multiple intelligences, the respondents still excel in language learning through music and interpersonal bits of intelligence.

Based on the results of the study, the researchers recommend that multiple intelligences profiling should be included in the entrance examination. Students who do not know what course to choose can take the profiling questionnaire to identify their most to least bits of intelligence that can help them determine the course they would excel in; the University should provide different venues where students can improve their ability to use English language, students should not stick to the skill they only know, and teachers should determine and understand students' different bits of intelligence that may help them device appropriate teaching approaches and strategies. Furthermore, since this research focuses only on 1st and 2nd year Civil Engineering students, future research studies may focus on larger groups and may include other courses in the university.

**Funding:** This research received no external funding.
**Conflicts of Interest:** The authors declare no conflict of interest.

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