Multiple Intelligence Theory Activities in the Middle School English as a Second Language (ESL) Classroom and the Impact on Student Perception and Engagement

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Multiple Intelligence Theory Activities in the Middle School English as a Second Language (ESL) Classroom and the Impact on Student Perception and Engagement

Research Questions:

What are student perceptions of multiple intelligence theory activities in the Year 9 ESL classroom?

What is the impact of multiple intelligence activities on student engagement?

Allison M Horner
Action Research SPF 690: The Master’s Project

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Identification of a Researchable Problem:

Howard Gardner defined intelligence as the ability to solve problems in a particular cultural setting or community (as cited in Hanafin, 2014 p.129). Gardner developed Multiple Intelligence theory and discovered every individual is intelligent in different ways, in its most fundamental form. Gardner presents 7 different types of intelligence such as verbal-linguistic, visual-spatial, interpersonal, intrapersonal, musical-rhythmic, logical/mathematical, and body kinesthetic (as cited in Abenti et al., 2020 p.30). Gardner's discovery of multiple intelligences was profound because it marked a shift from classrooms driven by the course content and curriculum standards, to adapting lessons that consider the individual talents and intelligence of each child (Martin et al., 2018).

Previously, classrooms have been set up to reflect a rudimentary style of teaching and learning. Learners were required to attend class, memorize the lesson material and learn the new skills teachers disseminated to them throughout lessons in preparation for an assessment, usually in the form of an exam. This method of teaching has become outdated and irrelevant for students who are preparing to go out into a rapidly evolving society. Children now need to leave school with 21st-century skills such as critical thinking, collaboration, and technological literacy. Most traditional exams and courses do not cover these areas and certainly do not prepare students for this type of learning (Hanafin, 2014).

As an educator at an International School in the Middle East, I have the privilege of teaching a diverse group of students from over 10 countries in a daily 8th grade or Year 9 English as a Second Language class. Due to scheduling, I have had the same class of energetic students for the past 2 school years and as a result, have gotten to know them on a deeper level. In Years 7, 8, and 9, English is based on the Cambridge Lower Secondary English as a Second Language and prepares students to matriculate into IGCSE English as a Second Language in Year 10 with an exam at the end of Year 11 in preparation for A-level classes in Year 12 or University and beyond. In our school, often students are not at an adequate level in reading, writing, listening, or speaking for their corresponding year level. This problem is exacerbated as they get older and continue to fall farther and farther behind. In some extreme situations, they are at a Year 6 level in
reading for instance instead of Year 10 or 11 when they begin taking the IGCSE course. This presents an immense difficulty for the student as well as the teacher whose job it is to prepare them for the exam. Additionally, due to the COVID-19 pandemic, there have often been abrupt switches between blended learning, 100% online learning, and then back to traditional in-person class meeting times. This classroom format switch has further magnified the difficulties students face and make it difficult for them to stay engaged and motivated to learn.

I firmly believe that each student walks into the classroom with their own unique gifts and talents. It is up to the teacher to accommodate and bring out these strengths in each student. Over the past few years, I spent time with my students in different contexts such as after-school activities, awards ceremonies, field trips, etc. I have noticed some of my students are strong in English class while other students have strengths elsewhere. Some of my struggling students in English are among the higher achieving students in math and science for instance but are not as successful during English class. Furthermore, outside the academic realm, some of my students are very gifted musicians and athletes for example but those talents are not fostered in English class due to the focus primarily being on reading, writing, listening, and speaking the English language. As mentioned in Gardner’s theory, students learn in different ways and their intelligence is misjudged due to the fixed nature of education that is often encountered in the classroom (Abenti, 2020). Gardner's research provides an alternative to traditional methods by allowing teachers to adapt lesson skills and content to apply not only to students’ strengths and intelligence but also to provide them with the opportunity to fully develop their multiple intelligence, as Gardner calls it, in other aspects. Therefore, my research problem focused on how Gardner’s theory of Multiple Intelligences can impact the engagement of my students in the Year 9 ESL classroom and what my students perceive multiple intelligence activities to be.

**Literature Review**

In the past, teachers fixated student success around memorization, and regurgitation of facts and prioritized the progression of student skill sets in the areas of literacy and numeracy with little to no opportunity for success for students who were not strong in
these areas. Howard Gardner’s theory of Multiple Intelligence presented revolutionary ideas that were different from this status quo in education. First published back in 1983, Gardner’s book *Frames of Mind: The Theory of Multiple Intelligences* detailed the 7 types of intelligence with 2 additional intelligences, naturalist and existential intelligence, recently published separately to make a total of 9 different types of intelligence (Gardner et al. 1983). The notion that humans are born with different gifts or intelligence was groundbreaking and was not something that was not previously acknowledged in the classroom. Extensive research has been done on the ideal school and education but has only created a fixed system with little room for exceptionalities. Xie & Lin (2010) believe each student should be respected as an individual and should have their natural intelligence cultivated with learning experiences and activities that promote growth and opportunities for them to identify their own strengths and weaknesses (Xie & Lin, 2010: pg 108 ). Bărbuleț (2014) agrees, and points out that all children possess their own gifts and that in itself should be the most important mission of schools; to offer positive personal development (Barbulet, 2010:pg 21). Despite Gardner’s discovery of intelligence, the configuration of lessons and curriculum in most schools today does not focus on the gifts of individuals but rather focuses on standards of the content and advancement to the next grade level (Martin et al., 2018). This review will investigate several academic research articles in the areas of multiple intelligence and how they can encourage student engagement and nurture student success in the ESL classroom.

**English as a Second Language and Multiple Intelligence**

In some classrooms today there are still few opportunities for students to simulate new skills or knowledge. As mentioned by Madkour & Mohamed (2016), in the context of the English as a Second Language classroom, students memorizing grammatical rules without improving communicative and social skills was found to hinder students’ progress in their achievement of language proficiency at the university level (Madkour & Mohamed, 2016). This study by Modkour & Mohamed (2016) went on to discover that, “when students became aware of their multiple intelligence profiles they managed to enhance their motivation and consequently their language skills” (p.103). In addition, Arulselvi (2018) notes that factors such as learning and cognitive styles,
self-confidence, inhibition, motivation, and aptitude have an important influence on the speed and ease of second language learning (Arulselvi, 2018 p.102). These studies show that student success in second language learning is much more convoluted than previously assumed and a variety of factors are at play. Creating lessons with multiple intelligence activities incorporated could potentially help students achieve success in the ESL classroom. Multiple intelligence at its core allows students to apply and practice newly learned concepts through application to one or more of their individual intelligence strength profiles and provides students the freedom to explore cross-curricular opportunities. An example of this would be applying grammar concepts to a musical intelligence activity such as the music of poetry. In instances like this, learning styles are varied to enhance self-confidence, inhibition, and aptitude for students whose strongest intelligence profile is not verbal-linguistic but perhaps logical-mathematical.

**Engagement**
The traditional idea of engagement in the classroom is that students are focused and engrossed in their lesson activity as directed by the teacher. However, the academic definition is much more in-depth and divides engagement into 3 categories. As described by Fredricks (2011) in a recent study done on measuring student engagement in upper elementary through high school, engagement has multiple dimensions including behavioral engagement, emotional engagement, and cognitive engagement (p. 9). Behavioral engagement refers to student participation in school-based activities including homework and assignments, effort, persistence, and adherence to classroom rules. Emotional engagement is in reference to students being able to express emotions safely in regard to school and being able to express interest, enjoyment, reporting fun and enjoyment, and feeling safe and supported in their learning from their teachers and parents. Finally, cognitive engagement is primarily aspects related to student strategies to remember, learn, and understand the material (Fredricks, et al., 2011). For the purpose of this action research, I will primarily be focused on engagement, specifically the ideas of behavioral and emotional engagement in classroom activities. Engagement is a common goal among practitioners for gauging
the success of student achievement through instruction. If students are engaged, the chances for learning increase. Measuring engagement through practitioner observation and triangulated by student feedback through surveys or interviews is necessary when determining student notions of multiple intelligence.

**The Benefits of Multiple Intelligence**

The importance of multiple intelligence approaches has been presented by numerous education practitioners in a search for the best edifying method of instruction. Many studies have found units that focus on problem-solving and critical thinking skills through multiple intelligence activities and allow students flexibility and choice in their assignments. According to Bărbuleţ (2014) students of the twenty-first century have little chance of success throughout their lifetime by solely becoming proficient in literacy and computations; in order to be successful, they will need to be real-world problem solvers who understand how to access and manipulate all kinds of information in incredibly flexible ways (p.33). Units and modules that include aspects of multiple intelligences that allow students to express themselves, strengthen their intelligence profiles, learn content, and improve twenty-first-century skills such as problem-solving have all been proven to help students be happier and more engaged with their studies (Bărbuleţ et al. 2014 p. 31).

In a similar study considering interdisciplinary teaching in physical education classes, Martin, Bishop, Ciotto, and Gagnon (2018) also support the inclusion of twenty-first-century skills and also maintain the importance of including kinesthetic activities which help children engage in movement and have fun learning (p. 26). Further confirmation that student enjoyment is important in a study by Kutluca (2020) with the implementation of multiple intelligences in high school trigonometry lessons when lessons were catered towards students’ intelligence profile, it made an otherwise dry and difficult subject more engaging for students and helped them enjoy learning (Kutluca et al. 2020). Incorporating aspects of intelligence profiles into language lessons promotes student engagement, specifically emotional engagement as strong indications of student enjoyment and happiness have been observed.
The use of active learning that most multiple intelligence-based lessons provide, allows students opportunities to learn new concepts through demonstration. These activities make learning more fun, more memorable, and more applicable to real-life scenarios that students will encounter in the future.

**Conclusion**

Based on the studies and literature presented above, the notion of applying multiple intelligence strategies to lessons and assessments is a stimulating method for teachers when attempting to encourage interest and engagement in the Year 9 ESL classroom. Identifying students’ multiple intelligence profiles provide teachers a gateway to their individual gifts and talents and provide a space for students to cultivate the growth of all their intelligence skills. Therefore, it can be put forward that using multiple intelligence can have a significant impact in the ESL classroom.

**Methodology**

**Research Purpose**

The purpose of this research is to observe the impact of using multiple intelligence on student engagement with Year 9 ESL students. Within the past few years of teaching this class, I recognized the need for content that engages students’ language abilities based on their interests. In addition to this, my students in Year 9 come to class with a variety of gifts and strengths in areas unrelated to English that aren’t often covered or assessed in a traditional ESL classroom setting. Madkour & Mohamed, et al. (2016), for instance, mentioned the importance of using multiple intelligences to connect students’ everyday lives to learning by creating open and effective learning environments. (p. 95).

As an educator, it is important to try different instructional and didactic methods to engage my students in their learning. I am interested in finding out the impact that multiple intelligence has on student engagement in the classroom. In addition to this, I want to find out what are students’ perceptions of multiple intelligence activities in the ESL classroom.

**Action Research Questions**
- What are students’ perceptions of Multiple Intelligence theory activities in the Year 9 ESL classroom?
-- What is the impact of multiple intelligence activities on student engagement?

Data Collection Procedure
Students’ perceptions of multiple intelligence activities during English lessons and the impact of multiple intelligence on student engagement were explored through action research. I used primarily qualitative data. I collected data from students’ multiple intelligence strengths and student engagement during class time. I had 28 students that I surveyed during my Year 9 English as a Second Language class. There are 13 girls and 15 boys in the class. It is important to note that the Year 9 class is divided into 2 sections that meet 4 times a week for 55-minute lessons. Towards the end of my data collection period, the Ramadan holiday began which is a shorter class time of 40-minutes. Furthermore, I had 1 student who had a prolonged absence so my total number of students was 27.

First, I sent a letter requesting approval from my school’s administration to carry out research. (Appendix A) Upon approval, I sent a consent letter to the parents of the students participating so they are aware of the research and so they have an opportunity to not allow their child to participate in the study. (Appendix B) Finally, I gave my students background information on this action research. I began by explaining the research I did and the basic idea of multiple intelligence to my students. The next week, I observed the students engaging in a normal English lesson without multiple intelligence activities.

Next, I asked students to participate in a multiple intelligence questionnaire that determined which intelligence was their strongest and which one was their weakest. Based on the intelligence determined by their questionnaire, students worked with the intelligence that is their strongest throughout the study. As discussed by Bărbuleț (2014), it is important for students’ self-esteem to find their strengths and know how to
use them in addition to knowing their different intelligences so that they can have opportunities to develop them in the classroom (p. 24). If students are aware of their intelligence strengths then they can be applied to concepts we are learning in English. As an educator, this is beneficial for me to understand the whole child and develop each student’s strengths and weaknesses accordingly (Xie & Lin, 2010). Ideally, this should help them be more behaviorally and emotionally engaged in their learning. Furthermore, it should help them grasp difficult skills and concepts (Kutluca et al., 2020). In my experience working with young teenagers, they are often fixated on their own self-concept and are looking for ways to identify with a certain group or category. They are at a point in their development where finding who they are is very important. As a result, when we did this activity in class, they were very interested in finding out which profile they tested into as insight on their path of self-discovery.

This action research was incorporated into an English unit dealing with argumentative writing. The learning objectives for this unit were for students to understand the detail of an argument in extended texts, and recognize inconsistencies in an argument in reading and listening. In the areas of writing and speaking, students needed to know how to develop coherent arguments supported by necessary reasons, examples, and evidence and explain and justify their point of view on a range of general and curricular topics. This was a topic in English that students were not familiar with. Students experienced difficulty coming up with coherent evidence to properly support their claims. Therefore a lot of time was spent on reading, analyzing, and annotating argumentative texts. I chose these lessons to incorporate multiple intelligence activities in hopes that students would have the opportunity to approach a difficult concept through their intelligence strength.

I chose to have students participating in multiple intelligence activities simultaneously through centers. Centers are typically in different areas of a classroom and students work in small groups or individually on small activities purposely created to reinforce a lesson topic or skill. Students were assigned to a center based on the outcome of the multiple intelligence questionnaire. As the facilitator, my role was to assist with any questions they had about their activities. In addition to this, I was also taking
observational notes on their engagement during the multiple intelligence center activities.

For the purpose of this research, engagement is defined as students who are focused and engrossed in their lesson activity as directed by the teacher (Fredricks, et al., 2011). A more in-depth understanding of engagement was needed to look out for during observations. Therefore, I focused on behavioral engagement and emotional engagement which are defined by participation and positive reactions, respectively (Fredricks, et al., 2011).

Finally, students were asked to complete the Multiple Intelligence Feedback survey using Google Forms. The questions asked students to reflect on their own engagement during the activity centers and how they perceived the lesson.

**Instruments**
In order to determine students' perceptions of multiple intelligence in a Year 9 ELS classroom and how those activities impact student engagement, I used preliminary observation of my students for engagement, a multiple intelligence questionnaire, anecdotal notes, and a multiple intelligence observational checklist about students in class. The intent of the use of a variety of data contributed to the plausibility of this action research.

**Multiple Intelligence Questionnaire**
For the multiple intelligence questionnaire, I used a validated survey that has been used previously in a study focused on identifying multiple intelligences to enhance engagement and language proficiency. This form is from Dr. Terry Armstrong and was found on the webpage Literacy.net (Appendix C). The purpose of this questionnaire is to determine which intelligence is the strongest for the participant based on a variety of questions regarding their interest in the 9 intelligence areas; language, math, spatial, musical, social, self, bodily-kinesthetic, and nature. It is important to note that this questionnaire refers to some intelligence categories in different terms for example ‘self’
instead of intrapersonal, and ‘math’ instead of logical-mathematical. Students will be rating statements on the Likert scale from 1 to 5 with 5 indicating a statement that describes you exactly and 1 indicating a statement that does not describe you at all. In the middle, 4 represents a statement that describes you pretty well, 3 describes you somewhat and 2 describes you very little. Statements will be chosen based on the ones that best describe the individual. For example, some of the questions will be as follows, “I consider myself an athlete.”, “I enjoy learning new words”, “I have wide and varied musical interests” “I enjoy my pets” etc. The intelligence strength is determined by how many points are scored.

**Multiple Intelligence Checklist**

My intelligence checklist was a simple statement grouped by each intelligence. The checklist was derived from one that was used in a study by Bărbuleț (2014), on multiple intelligences in the ESL classroom. A sample is included in Appendix E. The statements were, “writes better than average for age”, “enjoys work or playing with numbers”, “daydreams a lot” to represent spatial intelligence, and “moves, twitches, taps, or fidgets while seated for a long time in one spot” as an example of bodily-kinesthetic intelligence. I used this checklist when observing students engaging in the group research project with and without multiple intelligences. The specificity of each qualifier was helpful for me to keep in mind when observing students in the intelligence context. This is reliable because they are succinct statements detailing characteristics of students but basic enough to easily identify while in the middle of observing. This was useful to corroborate student responses in the post-research survey.

**Post-Research Survey**

The survey I used was based on 2 other surveys. The first one was used by Macias, F. A. D. (2013) in his study which focused on the development of multiple intelligence in primary students through interest centers. The second one was from Fredricks, et al., (2011) in their study on measuring student engagement in upper elementary classes to high school.
The survey questions are meant to be easy to understand yet unbiased to promote authentic ideas from students. My aim was to gauge student perceptions about the use of multiple intelligence theory activities in the Year 9 ESL classroom. It was also for me to analyze student interpretations of their own engagement during the lessons. Furthermore, it is to provide another form of data to enhance the reliability of this action research. I used a combination of questions about multiple intelligence as well as the 2 different types of engagements I am focusing on for the purposes of this action research project; behavioral and emotional engagement. My questions were a mix of multiple-choice and open-ended.

The survey questions were as follows:

1. Which MI centers did you work in?
2. In general, I rate my engagement in MI centers as…
3. What did you do in your MI center?
4. What did you like most about these activities?
5. Would you like to do these activities again?
6. How much of the lesson do you feel you understand now as a result of doing these activities?
7. What activities would you like to try if we were to do these centers again?
8. I usually work hard and try my best in English class.
9. I usually complete my assignments on time.
10. I enjoy English class.
11. I feel comfortable asking my teacher for help when I don't understand.

**Anecdotal Notes and Reflective Notes**

Throughout this study anecdotal notes were taken to observe student engagement in particular but also student behaviors, interactions, and responses before implementation and during the course of multiple intelligence activities. I used a note-taking template from Efron, S. Ravid, R. (2020) a sample is provided in Appendix D. These notes detailed the activity and its purpose. After the lesson, I reflected on my observations and considered questions such as, what would I reconsider if I did this lesson again? What were some of the problems? What went well? Furthermore, I
reflected on my own attitudes, expectations, and bias toward the lesson. I thought it was also important to reflect on the characteristics students displayed and how they aligned with their multiple intelligence grouping or presumed grouping. Finally, I reflected on the engagement of my students and any improvements I could make to make the lesson more engaging. A combination of anecdotal notes and reflective notes were beneficial in this situation because jotting down the ideas while they are happening and then reflecting later allowed me to revisit the lesson after my students had left the classroom and allowed me more time to focus and reflect.

**Project Timeline**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get administrative approval for action research</td>
<td>Week 1</td>
</tr>
<tr>
<td>Get parent approval for student participation in action research</td>
<td>Week 1</td>
</tr>
<tr>
<td>Explain to students the background of my research and begin teaching the argumentative unit.</td>
<td>Week 1</td>
</tr>
<tr>
<td>Observe student engagement in non-multiple intelligence activities using anecdotal notes and the multiple intelligence checklist</td>
<td>Week 2</td>
</tr>
<tr>
<td>Give students multiple intelligence questionnaire to identify their intelligence strengths</td>
<td>Week 2</td>
</tr>
<tr>
<td>Analyze student multiple intelligence data and assign students to particular intelligence group</td>
<td>Week 2</td>
</tr>
<tr>
<td>Commence unit on argumentative writing</td>
<td>Week 3</td>
</tr>
<tr>
<td>Incorporate classroom activity centers based on the multiple intelligence with adaptations for each students’ intelligence</td>
<td>Week 3 and 4</td>
</tr>
</tbody>
</table>
The guiding questions of this action research were:

1. What are students’ perceptions of Multiple Intelligence theory activities in the Year 9 ESL classroom?
2. What is the impact of multiple intelligence activities on student engagement?

Preliminary Observations of Student Engagement using anecdotal notes
The pre-research observations were conducted during English lessons over a few days when students were working on researching various debate topics in preparation for an in-class discussion. These activities did not include aspects of multiple intelligence. The purpose of this assignment was for students to gain experience working with non-fiction reading and writing.

For the first part of my observations, I focused on engagement during lessons. My observations indicated that 3 groups were present in the class all of which showed different characteristics. In the interest of precision, I will refer to them as groups 1, 2, and 3. Group 1 showed characteristics of behavioral engagement and effort such as making eye contact with me or their peers at their table, and head nodding to indicate they understood. These students also exhibited behaviors of emotional engagement such as laughing and talking with peers and asking questions based on the material presented. Group 2 exhibited a medium level of engagement by completing tasks and
asking some questions, particularly to peers about the subject at hand. As a whole, this group was occasionally distracted by other students but could easily refocus. Finally, group 3 exhibited low behavioral and emotional engagement. These students were not participating in the task at hand and were often noted speaking to their peers about other topics. In addition to this, they were not taking the assignment seriously. Upon reflection, their inability to put effort into class activities could be caused by a lack of interest, difficulty, or just distraction and they prefer other subjects.

The second part of my observation was focused on the multiple intelligence checklist and identifying students displaying characteristics of multiple intelligences. Group 1, as I previously mentioned, primarily exhibited characteristics of verbal-linguistic intelligence. Those students are all mid to high-level writers. They were engaged in their work, grappling with topics in research and writing at a level that is above their grade level. These students also could understand and decode difficult articles about their debate topic. They were at the beginning stages of meeting the learning objective for the unit by successfully identifying aspects of the arguments presented in their researchable topic. Upon my post-lesson reflection, because they are good writers, and had high decoding skills, this could be interpreted as this group having high verbal-linguistic abilities.

Several students from each group previously referred to as groups 1, 2, and 3 presented characteristics of having high interpersonal intelligence. During the lesson, they seemed to enjoy working with their classmates. This was indicated by them laughing and talking with each other. Through watching their interactions, it was clear these students made friends easily and were sought out for company by other students which are both characteristics listed in the checklist for interpersonal intelligence. Furthermore, several students were taking leadership positions and delegating tasks to others. Several others were explaining or teaching other students in the group something they recently learned in a past lesson about research skills. These characteristics indicate a select few from the class had interpersonal characteristics.
Throughout most of my observational lessons, an overwhelming majority of students exhibited characteristics of being engaged learners by fulfilling characteristics of both emotional and behavioral engagement. In this instance, the study from Kutluca et al., (2020) comes to mind where it was mentioned how important it is to adapt lessons from a teacher-centered approach to a student-centered approach and that the traditional education approach is laden with verbal-linguistic and mathematical intelligence influence. This needs to change for students whose strengths are not in these areas. It is necessary to engage all students in lessons as much as possible to accommodate their own multiple intelligence through activities that are interesting and enjoyable to them. Multiple intelligence centers aim to promote student engagement simultaneously with English content standards, particularly for the previously mentioned students in group 3

**Multiple Intelligence Questionnaire Findings:**
Students were eager to find their multiple intelligence strengths through the online questionnaire. Many of them were very surprised by the results. The pie graph below illustrates student intelligence strengths from the questionnaire in both sections of my Year 9 English class.
As shown by the chart above, a majority of the students scored highly in logical-mathematical intelligence. Musical intelligence and interpersonal intelligence were the same amounts at 5 students for each category. Intrapersonal and bodily-kinesthetic were also the same numbers of students at 4 each. Finally, 2 students scored highest in visual intelligence.
Student Feedback Survey:
Students filled out this survey just after participating in multiple intelligence activity centers. An example of one lesson’s multiple intelligence center activities is detailed in chart 2 below.

Multiple Intelligence Menu for review of the article, “Is Television Educational?”

<table>
<thead>
<tr>
<th>Multiple Intelligence Menu</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logical</td>
<td>Work together to create a crossword puzzle online or on paper using some words from the essay</td>
</tr>
<tr>
<td>Musical</td>
<td>Create lyrics for a song about the artist and his life and match it to a tune.</td>
</tr>
<tr>
<td>Bodily-kinesthetic</td>
<td>Act out a role play about this article using the same ideas</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Write an interview summarizing this article</td>
</tr>
<tr>
<td>Intrapersonal</td>
<td>Write a reflective journal about a time when you had an argument about TV being educational</td>
</tr>
<tr>
<td>Visual</td>
<td>Create a picture slide show that presents the argument of this article</td>
</tr>
</tbody>
</table>

Students had several full lessons of 55 minutes to work in their groups with other students who had the same multiple intelligence strengths. Each class took the same survey but the results have each section of Year 9 English separated by 9A and 9B. The purpose of these lessons came with a variety of aims including, reading and comprehending argumentative texts, identifying the argument in an article, identifying the claims and corresponding evidence, and writing responses to articles.

The main aim of this survey was to gauge student perceptions of multiple intelligence theory. In addition, to corroborate my anecdotal notes and the multiple intelligence questionnaire. The following select excerpts of the student feedback survey, with particularly interesting findings, are listed below in bold.
In general, I rate my engagement in MI centers as…

Pie graph 2 below indicates responses from 9A, and pie graph 3 shows responses from 9B.

Pie graph 2

As indicated by student feedback from the form, a majority felt they performed well during activity centers by choosing the excellent, good, or fair performance indicator. Through my anecdotal notes, I noticed that students showed signs of increased engagement such as trying their best. This was exemplified by students exerting effort in the task by interacting with each other, working on the task shown by writing or
reading, or asking the teacher clarifying questions. I particularly noticed the logical-mathematical groups in each class showed signs of engagement and prolonged concentration throughout the activities. They seemed to enjoy the task they were doing which was indicated by their eagerness to share their completed work with others. Several individual students in this group were ones who were not as engaged during my previous observation. This increase in engagement correlates with the characteristics of behavior engagement. This is similar to how students indicated their performance in the survey.

How much of the lesson do you feel you understand as a result of doing these activities?
Pie graph 4 below indicates responses from 9A and pie graph 5 shows responses from 9B.
Pie graph 5
As shown from the pie graphs above, a majority of students felt they had a thorough understanding of the material they were engaged with during the multiple intelligence center activities. Two students in 9A took the liberty of writing in the percentage they understood which is why the green color shows up twice. The student chose to write %95 percent. Additionally, a student wrote in, as indicated by the pink color, that she understood the article we were working on and the activity was not necessary. She was the only one who answered this way.

‘What did you like most about these activities?’
9A responses

- **the activity itself**: 5 (41.7%)
- **interaction with others**: 3 (25%)
- **self-challenge**: 2 (16.7%)
- **English practice**: 5 (41.7%)

9B responses

- **the activity itself**: 7 (50%)
- **interaction with others**: 6 (42.9%)
- **self-challenge**: 4 (28.6%)
- **English practice**: 6 (42.9%)

The question referred to students’ perceptions of what part of the multiple activity centers they most enjoyed. Most students in 9B identified their affinity for English practice and interacting with others. Similarly, most students in 9A also said they liked the English practice but the same number cited that they enjoyed the activity itself. As mentioned previously, according to my anecdotal notes, students exhibited positive characteristics of being engaged with the activity. The least number of students in both cited self-challenge as their most enjoyable aspect of this project.

What would you like to try if we did these activity centers again next time?
Students responded to this question in an open-ended format. Many students expressed interest in trying another activity center that is different from their predetermined strengths. Their engagement in learning is commendable.

- “I would like to try the Musical or Bodily-kinesthetic MI centers.”
- “I would like to try writing role play or script :)”
- “Maybe different activities that I do with my friends.”
- “I would like to try myself at logical MI center”
- “I would like to try to learn with info-graphics next time. That’s because it's not only very easy to apply and very informational, but it also incorporates technology (something I'm passionate about). Overall, infographics are a very easy and fun way to learn, and it's an approach to learning I would most definitely like to try next time.”
- “Maybe doing activities with people of the same MI, such as learning about each other's experiences, teaching each other about stuff, or identifying stuff and challenging each other.”

There were a few students who said they felt like they were in the wrong group. I checked my observational checklist notes and noticed a disconnection between some students, their intelligence strength did not match my observations or their opinion of themselves. Below is an example of this.

- “I don't think I belonged with the group because musically can figure out the rhythm and the beats and tiny details in songs with can't be spotted by others, this means they are also considered visual cause they see and hear details that other people do not acknowledge, and I would like to do a more interesting topic, for example, all people should have the right to own a gun or climate change is the greatest threat facing humanity, etc.” (student c)
In this case of student c, as mentioned above, I initially thought it was strange that her top intelligence was musical. As mentioned in her response, she clearly did some research to compare her results with other intelligence. My observations of her primarily fall under verbal and spatial intelligence. For example, I’ve observed her enjoying visual presentations, she often daydreamed and wrote better than average for her age, these are both characteristics from the behavioral checklist.

For all students in Year 9, this was the first time they had learned about multiple intelligence. They were eager to learn their intelligence profile and compare their questionnaire results with what they considered to be their interests. Most students were keen to try out new activities in English class that were adapted to their specific strengths despite the fact that the activity may not have been interesting to them at that time. This was particularly true for the students who felt like they were not in the correct intelligence group.

Over the course of this action research, I reflected on my teaching practice and attempted to create lessons that can be adapted to student strengths and interests in order to continue to provide lessons with high student engagement. I realized there were alternate assessment methods I could have used to assess student understanding of English concepts other than those primarily focused on the 2 main intelligences commonly acknowledged in schools; verbal-linguistic and logical-mathematical intelligence. I observed students’ engagement in lessons before and after implementing multiple intelligence activities in the Year 9 ESL classroom. Students were given the opportunity to work with their intelligence strengths through the application of English concepts and standards. I agree with Kutluca et al., (2020) that learning is more fun and attention-grabbing with activities designed according to multiple intelligence theory and makes difficult subjects easier, and more memorable to students (Kutluca, 2020:p. 266). When students are able to participate in English activities related to their intelligence strength, they are more likely to be more behaviorally engaged, emotionally engaged, and more likely to be all-around happy students.
Limitations and Other Project Considerations

Due to the nature of our school's busy schedule, there were numerous time constraints and disruptions during English class. Lessons were often interrupted by all-school assemblies, football tournaments, field trips, and science fair preparation. In addition to this, the Ramadan holiday began on the 1st of April and resulted in a shorter school day and lesson times of only 40 minutes. This interrupted the final stages of activity implementation as well as students completing their surveys. Additionally, throughout the entire month of January, school resumed the new year with online learning. Staff and students did not return in person until mid-February as mandated by the Ministry of Education. This slightly interrupted the beginning of the action research cycle.

Furthermore, there are more students than usual in Year 9 at a low level in English. They particularly struggle with reading comprehension and their writing levels are several grade levels below where they are supposed to be. Because of this, some of these students had difficulty understanding and properly answering the multiple intelligence questionnaire. To accommodate for this, I originally planned to use a lower level field-tested questionnaire but this would have skewed their intelligence profile results. As a result, I attempted to work with them individually when they didn't understand a word or a question. I also encouraged them to use their decoding skills or to ask a friend. However, upon looking at their multiple intelligence questionnaire results, some students ranked their interests using the Likert scale on a topic in a different way than I would have expected. One student of mine’s results originally indicated he has high musical intelligence. I noticed that he enjoys playing all sports and really enjoys PE class. His multiple intelligence strengths and interests did not align. After asking him about it he indicated he didn't understand the questions very well. I asked him to take the test again to see if his results would change. The second time he was higher in bodily-kinesthetic intelligence than musical intelligence.

Additionally, students may not have been frequently exposed to musical intelligence for instance, and not know much about it. Our school does not have a music program therefore, students are not exposed to the arts in school. Perhaps they have experience
in the arts outside of school. Moreover, for naturalist intelligence, most students don’t go outside into nature often because they live in a hot desert climate.

One concern I had for data collection was students’ ability to answer the questions based purely on their individual interests. Teenagers often like to try on different personalities and like to emulate others in areas they might not actually be interested in. Further, students might not recognize their strengths when taking the intelligence test and check off a topic that they don’t like doing but are quite good at. Any of these situations could throw off the data collected from their multiple intelligence questionnaires and put them into an intelligence group that is not a reflection of their strengths or interests. In these situations, the observation checklist, and observation journal were intended to reflect the disparity between the data and the situation.

In an effort to limit bias, I used a reviewed multiple intelligence questionnaire that was previously used in other studies. Also, the multiple intelligence checklist I utilized was from a similar study by Bărbuleț (2014) about multiple intelligences in the English as a foreign language Primary classroom. Further, the post-research survey that I asked students to complete based on students’ perceptions of multiple intelligence activities was derived from Macais’ (2013) study on ways to develop primary students’ multiple intelligence through English centers. The combination of a variety of data collected was to decrease bias through the triangulation method to present a comprehensive presentation of this action research.

Summary and Conclusions
Despite extensive research by practitioners in pedagogy, authentic educational experiences adapted to student needs are rarely utilized. Educational institutions primarily focus on catering to verbal-linguistic and mathematical intelligence which often results in a lack of participation and student engagement in class. The ideas for this project transpired from the need to improve student engagement in the Year 9 ESL classroom and more specifically to focus on students whose intelligence strengths were not verbal-linguistic or logical-mathematical. Additionally, my personal experience has
taught me that each student enters the classroom with gifts and talents that should be recognized and fostered in a supportive environment.

The results of this action research have substantiated that student perceptions of multiple intelligence activities are positive, as proven by student survey results that show a positive impact on students in the Year 9 ESL classroom. A majority of students showed increased engagement in activities related to their intelligence profiles and conveyed interest in participating in multiple intelligence centers again. These results align with the previously mentioned notions brought forth by Madkour & Mohamed (2016) that “when students become aware of their multiple intelligence profiles they manage to enhance their motivation and consequently their language skills” (p.103). Despite learning a difficult concept, students are willing to put effort into their learning when learning activities are tied to their intelligence strength. As Kutluca et al., (2020) mention, learning is more fun and attention-grabbing with activities designed according to multiple intelligence theory; they make difficult subjects easier, and more memorable to students (p. 266). When students are able to participate in classroom activities related to their intelligence strength, they are more likely to be more behaviorally engaged, emotionally engaged, and more likely to be all-around happy students.

Additionally, I agree with Xie and Lin (2009) who pointed out that understanding student strengths and weaknesses through multiple intelligences helps me as the instructor in understanding their learning patterns and I can provide specific support where necessary (p.111). Accommodating students’ individual learning needs is not possible without a comprehensive picture of the student as a whole child which includes their interests and specific intelligence strengths. Understanding this puts the priority back on the needs of individual students instead of constantly scrambling to get them to meet universal standardized skills and content levels.

**Recommendations for Further Study**

Further action research cycles are necessary to explore additional benefits of using multiple intelligence for improving students’ weakest intelligence. As educators, our goal
is to develop students as whole individuals. Can multiple intelligence be used to improve students’ weakest intelligence as well? Perhaps students could improve their weakest intelligence group through subject content they really enjoyed. It would be interesting to see the impact this would have on student engagement.

Additionally, it should not be forgotten that standardized test scores are required of students for admission into higher education. Students in high school often do not have a chance to develop interest areas of their own due to standardized test preparations in an attempt to meet undergraduate college admissions. It would be interesting to see if applying multiple intelligence at this age would be beneficial for student test-taking abilities. Would multiple intelligence activities improve their scores as well? Would it make them happier and less stressed out to engage in learning activities accommodating their strengths?
Appendices

Appendix A - Sample of Administrative Consent Letter

Dear ____________.

I hope you are well and had an enjoyable weekend.

I am writing to you asking for your approval to continue my action research project by collecting and analyzing data with the students in my Year 9 English class for the completion of my master’s degree final project.

For this project, I will be looking at Howard Gardner’s theory of multiple intelligences and the impact it has on each learner when they are aware of their intelligence strength. I believe that each of our learners comes to the classroom with their own unique set of gifts and talents and Gardner’s theory supports this idea through his theory of multiple intelligence. Through this project, I am looking to find out the impact of multiple intelligence on my learner’s motivation in the Year 9 English classroom.

I will start by giving each student a multiple intelligence quiz to find out their greatest intelligence strength. Then we will proceed with a unit on argumentative writing in which students will engage with intelligence activities based on their greatest and lowest scores. After the unit, I will be comparing learner engagement before and after with their specific intelligence in mind.

If this is approved by you, I plan to send an email to Jennie for her approval as well. After her approval, I will send a parental consent letter to all Year 9 parents. I have attached the consent letter. In the letter, I ask the parents to reply to me if they do not want their child to participate in research.

Thank you in advance for your consideration and your assistance in the project. Please let me know if you have any questions or concerns.

Regards,

Ms. Allison Horner
Appendix B - Sample of Parent Consent Letter

Dear Parents and Guardians,

My name is Ms. Allison; while I have had the pleasure of teaching your children the past few years, I have also been pursuing my master’s degree in International Education with SUNY Buffalo State based in New York.

As a part of my graduate studies, I am required to conduct a research project and chose to focus my research on multiple intelligence in the Year 9 English classroom. This study is done with the permission of our Head of School, and the principal. The purpose of the study is to observe the impacts of multiple intelligence in the Year 9 English classroom. The results will contribute to the knowledge and understanding of the value of fostering each child’s individual gifts and intelligence through English lessons.

The study involves (1) your child will take a short questionnaire to determine their intelligence profile, (2) observation of two sessions of English classes where multiple intelligence activities are incorporated into the lessons, and (3) a survey whereby students will be asked about their engagement and interest in the lessons. During the survey, your child is free not to answer any of the questions asked and you or your child may terminate the survey at any time. I assure you that your child’s privacy and anonymity will be respected and protected throughout the process and no real names or identifying information will be included in my final research report. Participation in the study is voluntary. If you are not comfortable with having your child participate in the study, you may at any time withdraw your child’s participation by sending me an email.

I would like to formally ask for your permission to allow for your child’s participation in this research project. If you do not wish for your child to participate in the research please respond directly to this email and let me know.

Thank you in advance for your cooperation and support. Please feel free to contact me at allison.homer@emskhor.net if you have any questions about the study.

Sincerely yours,

Allison Homer
Appendix C - Sample Multiple Intelligence Strength Test

Assessment: Find Your Strengths!

Instructions: Read each statement carefully. Choose one of the five buttons for each statement indicating how well that statement describes you.

1 = Statement does not describe you at all
2 = Statement describes you very little
3 = Statement describes you somewhat
4 = Statement describes you pretty well
5 = Statement describes you exactly

1. I pride myself on having a large vocabulary.
2. Using numbers and numerical symbols is easy for me.
3. Music is very important to me in daily life.
4. I always know where I am in relation to my home.
5. I consider myself an athlete.
6. I feel like people of all ages like me.
7. I often look for weaknesses in myself that I see in others.
8. The world of plants and animals is important to me.
9. I enjoy learning new words and do so easily.

Your top three intelligences:

<table>
<thead>
<tr>
<th>Intelligence</th>
<th>Score (5.0 highest)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Movement</td>
<td>4.43</td>
<td>You like to move, dance, wiggle, walk, and swim. You are likely good at sports, and you have good fine motor skills. You may enjoy taking things apart and putting them back together. Incorporating body movement into your learning will help you process and retain information better. Here are</td>
</tr>
</tbody>
</table>
The scores for your other five intelligences:

<table>
<thead>
<tr>
<th>Self</th>
<th>Social</th>
<th>Musical</th>
<th>Spatial</th>
<th>Math</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.14</td>
<td>4.14</td>
<td>4</td>
<td>2.29</td>
<td>1.71</td>
</tr>
</tbody>
</table>

Just because these five are not in your top three doesn’t mean you’re not strong in them. If your average score for any intelligence is above three, you’re probably using that intelligence quite often to help you learn. Take a look at the Practice section to see how to engage all your intelligences.
## Appendix D - Anecdotal Notetaking Template

### Observational notes

**Research question(s):**

**Date of observation:**  
**Time frame:**

**Location of observation:**

**Who are the foci of the observation?**

**Activities:**

**Purpose of observation (behaviors, interactions, responses):**

**How does the observation reflect what I want to know?**

**What is important here?**

**What would I want to focus on more closely if/when I return to this setting?**

<table>
<thead>
<tr>
<th>Descriptive Field Notes</th>
<th>Reflective Field Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E - Sample of Practitioner’s Multiple Intelligences Observation Checklist

Multiple Intelligences Checklist for Students:

Linguistic Intelligence:
- writes better than average for age
- tells jokes and stories
- has a good memory for names, dates, places, or trivia
- enjoys word games
- enjoys reading books
- spells words accurately
- appreciates nonsense rhymes, puns, tongue twisters
- enjoys listening to the spoken word (stories, commentary on the radio, talking books).
- has a good vocabulary for age
- communicates to others in a highly verbal way.

Logical-Mathematical Intelligence
- asks a lot of questions about how things work
- enjoys working or playing with numbers
- enjoys maths class
- finds maths and computer games interesting (or if no exposure to computers, enjoys other maths or science games)
- enjoys playing chess, checkers, or other strategy games
- enjoys working on logic puzzles or brainteasers
- enjoys putting things in categories, hierarchies, or other logical patterns
- likes to do experiments in science class or in free play
- shows interest in science-related subjects

Spatial Intelligence
- reports clear visual images
- reads maps, charts, and diagrams more easily than text
- daydreams a lot
- enjoys art activities
- is good at drawings
- likes to view movies, slides, or other visual presentations
- enjoys doing puzzles, mazes, or similar visual activities
- gets more out of pictures than words while reading
- doodles on workbooks, worksheets, or other materials

Bodily-Kinaesthetic Intelligence
- excels in one or more sports
- moves, twitches, taps, or fidgets while seated for a long time in one spot
- cleverly mimics other people’s gestures
- loves to take things apart and put them back together again
- enjoys running, jumping, wrestling, or similar activities (or if older, will show these interests in a more “restrained” way—e.g., running to class, jumping over a chair).
- shows skill in a craft (e.g., woodworking, sewing, mechanics)
- has a dramatic way of expressing herself/himself
- reports different physical sensations while thinking or working
- enjoys working with clay or other tactile experiences (e.g., finger painting)

Musical Intelligence
- Tells you when music sounds off-key or disturbing in some other way
- Remembers melodies of songs
- Has a good singing voice
- Plays a musical instrument or sings in a choir or other group
- Has a rhythmic way of speaking or moving
- Unconsciously hums to himself/herself
- Taps rhythmically on the table or desk as he/she works
- Is sensitive to environmental noises (e.g., rain on the roof)
- Responds favorably when a piece of music is put on
- Sings songs that he/she has learned outside of the classroom

Interpersonal Intelligence
- Enjoys socializing
- Seems to be a natural leader
- Gives advice to friends who have problems
- Seems to be street-smart
- Belongs to clubs, committees, organizations, or informal peer groups
- Enjoys informally teaching other kids
- Likes to play games with other kids
- Has two or more close friends
- Has a good sense of empathy or concern for others
- Is sought out for company by others

Intrapersonal Intelligence
- Displays a sense of independence or a strong will
- Has a realistic sense of his/her abilities and weaknesses
- Does well when left alone to play or study
- Marches to the beat of a different drummer in his/her style of living and learning
- Has an interest or hobby that he/she doesn’t talk much about
- Has a good sense of self-direction
- Prefers working alone to working with others
- Accurately expresses how he/she is feeling
- Is able to learn from his/her failures and successes in life
- Has good self-esteem

Naturalist Intelligence
- Talks a lot about favorite pets, or preferred spots in nature, during class sharing
- Likes field trips in nature, to the zoo, or to a natural history museum
- shows sensitivity to natural formations (e.g., while walking outside with the class, will notice mountains, clouds; or if in an urban environment, may show this ability in sensitivity to popular culture “formations” such as automobile styles)  
- likes to water and tend to the plants in the classroom  
- gets excited when studying ecology, nature, plants, or animals  
- speaks out in class for the rights of animals or the preservation of planet earth  
- enjoys doing nature projects, such as bird watching, collecting butterflies or insects, studying trees, or raising animals  
- brings to school bugs, flowers, leaves, or other natural things to share with classmates or teachers  
- does well in topics at school that involve living systems (e.g., biological topics in science, environmental issues in social studies)
References


