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# Multiple Intelligences Theory and the College English Classroom

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Imagine walking into your first college English classroom. Instead of rows of desks facing the chalkboard, they are arranged in clusters of three to four. Each cluster is assigned labels: “Small Group Discussion,” “Journaling,” “Hands-on” etc. There’s even a cluster that has a television and a VCR. Many teaching materials such as educational games, flash cards, and books are piled on the clusters as well. Upon further investigation, you notice a stack of large pillows in the corner of the classroom and assorted types of plants lined up on the window sills. Colorful displays and posters about English concepts adorn the wall, and a bookcase full of college English books occupies the corner opposite the pillows.

You are probably thinking that the above description hardly sounds like a college English classroom, and you are right. During classes, nearly all college students still experience an hour or two of pure lecture or discussion as the way they encounter course material in the college classroom. Though those teaching methods are effective, they may be only reaching a fraction of students who have much linguistic strength. Students’ learning potentials are multifaceted and multidimensional; therefore instruction should be as well. This is the main reason why so many instructors of all different subjects at all different levels have turned to Howard Gardner’s Multiple Intelligences (MI) theory.

For over twenty years, kindergarten through high school

instructors have recognized Gardner's MI theory as a key part of creating effective lesson plans, pedagogies and classroom environments. As Reichert noted in her article, "Using Multiple Intelligences to Create Better (Teachers of) Writers: A Guide to MI Theory for the Composition Teacher," college application of the theory, however, has continually been lacking at all subject levels and still is today. This could be in part due to lack of knowledge about the theory, and instructors tend to teach from their strengths. For these reasons, an explanation of the theory, application strategies and activities will be discussed. Much of the information within this article can be altered to include many age groups as well.

For my master's thesis, I applied MI theory into two sections of English 191, first-year composition. Students had no knowledge of the application. In order to gather whether or not I had effectively applied the theory, I obtained student feedback from four different sources. The two anonymous sources were from frequent note card feedbacks and surveys, and the two non-anonymous sources were from class blog entries and individual conversations during or out of class, usually occurring during individual conferences. Though two sources were not anonymous, the students' identities and names were kept confidential. The most frequent sources of feedback were on note cards at the end of class every two to three days. On the note cards, students were asked to answer the constant question, "Which activities helped you learn the most today or in the last two class meetings?"

Another way I collected feedback occurred during individual conferences. I chose certain aspects of writing or course material that the student needed to improve on; then I used either questions or prior knowledge and observation of the students' intellectual strengths to find pedagogical methods of helping the student grasp the material. If the student did not seem to understand a particular method, then I found another way to present the concept. In this way, I individualized students' education as their strongest or preferred routes to learning were discovered.

Finally, students filled out anonymous surveys based on all the activities that transpired during class. The surveys assisted in determining not only if an all-intelligence inclusive

pedagogy was successfully accomplished, but also if the inclusion of all the intelligences facilitated their learning more than other intelligence exclusive college pedagogical approaches.

### **Background of Multiple Intelligences Theory**

Howard Gardner and his colleagues at Harvard created a multidimensional view of intelligence. By studying the effects of brain-damaged individuals, savants, prodigies, the learning disabled, and the autistic, Gardner developed criteria to determine the existence or nonexistence of an intelligence. Thus, Gardner has concluded that there are eight tentative intelligences: linguistic, mathematical-logical, spatial, musical, interpersonal, intrapersonal, naturalist, and bodily kinesthetic.

Gardner's pluralistic view is in contrast to the prevalent view of intelligence—the unitarial approach—that believes that a person's intelligence can be determined through an Intelligence Quotient (IQ) test. Evidence of this predominance is the continuation of the ACT and SAT tests that can determine whether or not a student can get into a particular college. Gardner believes those aforementioned tests only test two of the eight intelligences—linguistic and logical-mathematical—the most commonly utilized intelligences in instruction. Though the linguistic and logical-mathematical intelligences are important in our Western culture, Gardner insists that no intelligence is better than another. All individuals who have not had brain damage or have some other condition that affects their brain have all eight intelligences. Therefore, MI theory is not meant to pigeon-hole students into categories such as “bodily-kinesthetic,” or “logical-mathematical.” Any individual can develop any intelligence to a reasonably high level with particular environments, stimulation and encouragement (Gardner, *Frames of Mind* 35).

For better understanding of these eight intelligences, descriptions are provided below. Again, the linguistic and logical-mathematical intelligences are among the most widely incorporated into the classroom. The linguistic intelligence involves aptitude with the oral and written workings of language. According to Gardner, any individual could exhibit sensitivity and strength in all or some of the following linguistic abili-

ties: word meanings, word order, word sounds, and language function (*Frames of Mind* 77-98). Such a person, as Kagan and Kagan describe, is “Word Smart.” Individuals with highly developed linguistic intelligence may be a poet or a novelist. The logical-mathematical intelligence involves ability to “...analyze problems, logically, carry out mathematical operations, and investigate issues scientifically” (Gardner, *Intelligence Reframed* 42). Kagan and Kagan describe this intelligence simply as “Math Smart.” Accountants and statisticians have many strengths in their mathematical-logical intelligence.

Gardner defines spatial intelligence as the “...potential to recognize and manipulate the patterns in wide space... as well as the patterns of more confined areas” (*Intelligence Reframed* 42). An astronomer, interior decorator or an artist may have highly developed levels in their spatial intelligence. The next intelligence, musical, can be described as individuals having skills in the “...performance, composition, and appreciation of musical patterns” (Gardner, *Intelligence Reframed* 42). Not surprisingly, a composer or a music critic manifests high levels of functioning in this intelligence.

The interpersonal and intrapersonal intelligences, though distinctly different, are termed the “personal intelligences” because their capacities involve humans. Interpersonal intelligence involves the ability to perceive other individuals. Politicians and salespeople have high levels of interpersonal functioning. The intrapersonal intelligence includes the capacity to know oneself and the skill to use that information to adapt (Gardner, *Frames of Mind* 239). Religious leaders and counselors tend to have much strength in the intrapersonal intelligence.

The naturalist intelligence can be described as the “... recognition and classification of the numerous species—the flora and fauna—of his or her environment” (Gardner, *Intelligence Reframed* 48). Farmers, hunters and cooks rely heavily on this intelligence. Finally, the bodily-kinesthetic intelligence is the “...potential of using one’s whole body or parts of the body to solve problems or fashion products” (*Intelligence Reframed* 42). An athlete, sculptor or carpenter ex-

hibits many strengths in their bodily-kinesthetic intelligence.

Though the above descriptions are only a snapshot of each intelligence, the activities associated with these intelligences tell much more about their capacities.

## **MI Activities**

### **Linguistic**

The following activities mainly involve the linguistic intelligence. Armstrong proposes using worksheets, manuals, brainstorming, word games, sharing time, student speeches, storytelling, talking books and cassettes, extemporaneous speaking, debates, journal keeping, individualized reading, reading to the class, memorizing linguistic facts, tape recording one's works, publishing, and writing (*MI in the Classroom* 40). Campbell, Campbell, and Dickinson also suggest using all the activities listed above by Armstrong, but also list others such as teaching and expanding upon effective listening skills, interviewing others for knowledge, developing a classroom library, nurturing an appreciation for the process of writing, and including computer programs to learn linguistic concepts (6-26). More narrowly, to engage students' linguistic intelligence, Kagan and Kagan suggest an activity they term "Round Robin," which can be easily applied to college instruction. It entails having students share their written work with their peers for the purposes of either sharing or generating ideas or publishing their work (8.10).

### **Mathematical-logical**

To include the mathematical-logical intelligence, Campbell, Campbell and Dickinson offer many great ideas such as diverse questioning strategies, posing open-ended problems, applying math to real world situations, and using concrete objects to demonstrate understanding (34). They also suggest using prediction and verifying logical outcomes, discerning patterns and connections in diverse phenomena, justifying or verifying statements or opinions, providing opportunities for observation and investigation, using technology to teach, learn, and extend student understanding, and connecting mathematical concepts to other subject matter areas (34). These approaches were in-

cluded in my pedagogy through the implementation of a class and personal blog, requirements for students to visit workshops and/or presentations that apply to class material with the purpose of students reflecting, and connecting and writing about the subject matter. Also, some of my students have created websites on which to publish their papers and/or class work.

In my classroom, I incorporated the mathematical-logical intelligences mainly by translating English terms into mathematical expressions, creating recipes to make certain English “dishes,” and problem solving. For example, classical arrangement can be explained with math: introduction + background + proposition + proof + refutation = classical arrangement. Over 68% of students in the MI sections found the translation of English terms into mathematical ones beneficial to their learning. Recipes are also a great way of incorporating mathematical-intelligence into the English classroom. An example of a recipe for properly punctuating compound sentences might look like: ingredients: two independent clauses, one comma, one coordinating conjunction, and one semi colon (optional route). Process: remove period at the end of the first independent clause; replace with comma. After the comma, add one coordinating conjunction (for, and, nor, but, or, yet, so). Optional: you may combine the sentences only using a semicolon. Process: remove period at the end of the first independent clause. Place a semicolon in its place. More than 55% of students found recipes helpful to their learning. I’ve also incorporated problem solving in my pedagogy to include the mathematical-logical intelligence. I’ve given students worksheets and/or sample papers for practice in finding and discussing errors as well as praising areas; I’ve also given students a real or imagined societal problem and had them take sides and create a viable solution. Of all the students in class, 73% found problem solving beneficial to their learning in English 191.

### Spatial

Many activities involve an individual’s spatial intelligence. Instructors can employ the use of visual-spatial learning environment equipped with access to visual tools, intentional display areas, and changing perspectives through rotating seat-

ing (Campbell, Campbell, and Dickinson 96). I have tried the above suggestions with success; I've found that the creation of educational displays that address particular problem trends as well as informational displays about a particular author we'd be reading greatly helpful. I've exhibited these displays both in my classroom and desk space. Armstrong also suggests using charts, graphs, and diagrams, visualization, photography, videos/DVDs, slides, and movies, visual puzzles and mazes, art appreciation, imaginative storytelling, picture metaphors, creative daydreaming, idea sketching, visual thinking exercises, mind mapping, visual pattern seeking, optical illusions, and color cueing (*MI in the Classroom* 42). I've found color cueing particularly helpful to teach organization. In this activity, students assign a color to the thesis, supporting topic sentences and their supporting information. Each sentence is highlighted according to its topic. Students are directed to constantly ask themselves the question, "What is this sentence talking about?" (This helps in determining what topic the student is addressing). With color cueing, students easily see when they stray to another point. They can also better determine when to move/combine sentences or break topics into separate paragraphs.

### Musical

To incorporate the musical intelligence, instructors can play mood and background music, linking tunes with class concepts, and giving students musical options for their projects or assignments (Armstrong, *MI in the Classroom* 42). Campbell, Campbell, Dickinson suggest that background and mood music helps set an engaging climate for students to work in, as well as providing supportive technology (145-46). Even having a portable compact disc player in class gives students options. The majority of students in my classes used the compact disc player when giving presentations. Students can also be encouraged to create music from class material as a project or to show they understand the material as an alternative. For example, one student in class decided to write a song in response to a reading instead of writing a poem. He even offered to share it with the class by performing it to a beat he created at home!

### Interpersonal

To help students learn with and from others, instructors can incorporate cooperative groups, interpersonal interaction, conflict mediation, peer teaching, group brainstorming, peer sharing, community involvement, and parties or social gatherings as context for learning (Armstrong, *MI in the Classroom* 43). Approaches such as encouraging the development of social skills and service learning are also interpersonally grounded (Campbell, Campbell, Dickinson 155), as well as interviewing for knowledge and finding individuals with like interests (Kagan, Kagan 8.52-8.56). To encourage interpersonal interaction in my classes, students often work in small groups that I assign. Later in the semester, students have become comfortable enough to choose their own groups. I also require a variety of research sources for students with a requirement to interview experts about their paper topics.

### Intrapersonal

Instructors can include the intrapersonal intelligence through activities such as independent study, self-paced instruction, individualized projects and games, private spaces for study, one minute reflection periods, encouraging personal connections, options for assignments or projects, exposure to inspirational/motivational curricula, journal keeping, self-esteem activities, and goal setting (Armstrong, *MI in the Classroom* 43). Campbell, Campbell, and Dickinson also add the following activities for the inclusion of intrapersonal intelligence: compliment circles, individual acknowledgement, peer support, challenging students to learn, metacognition, and encouraging the identification and expression of feelings (188).

### Naturalist

For those students in tune with nature, the inclusion of the following activities may help them learn English material by creating a naturalist inclusive atmosphere: nature walks, pet or plant in the classroom, and nature films (*MI in the Classroom* 43). In order to teach summary writing, I've played nature films, and because the naturalist intelligence is the most difficult to incorporate in the English classroom, film can be an excellent way

to engage those students who are naturalistically inclined. Armstrong also suggests using plants as props; this is where natural things or elements are used to explain course concepts, and it also invokes learning from observation from class windows (43). To incorporate the naturalist intelligence, Kagan and Kagan suggest using categorization of class concepts (8.48). Activities such as blindfolded walks (for the purpose of relying on different senses), inferring, theorizing, keeping field logs, noting distinctions among similar items, understanding interdependence, hypothesizing, and experimenting all engage with the naturalist intelligence as well (Campbell, Campbell, Dickinson 227-41). To incorporate these elements into pedagogy, I have students journal about upcoming assignments regularly, hypothesize about problems they believe they'll encounter and keep note cards about research sources not only to remind themselves what the source covers, but also to compare and contrast among research.

### Bodily-kinesthetic

To include those students who have many strengths with “hands-on” material, instructors might try using creative movement, hands-on thinking, field trips, classroom theatre, competitive and cooperative games, use of kinesthetic imagery, tactile materials and experiences and using communicative body language (Armstrong, *MI in the Classroom* 42; Campbell, Campbell, Dickinson 66). Kagan and Kagan emphasize the bodily-kinesthetic game of charades to help students learn (8.5), while Campbell, Campbell and Dickinson highlight exercise breaks to help energize or calm down students (66). I've found versions of games such as Charades, Jeopardy, Family Feud, and Heads Up 7 Up to be useful tools. These games were particularly helpful for review or gauging if students understood difficult course material.

To apply the bodily-kinesthetic intelligence, I have also often incorporated skits in my lesson planning. For example, when I want students to practice argumentation strategies, I have them imagine that they're an expert on a talk show representing a particular view on a topic. Then the students try to convince the audience (i.e. the rest of the class) as to why they should take their side. Afterward, a discussion ensues

about effective and non-effective argumentation techniques.

Students reported that the incorporation of games and skits into class material created high levels of learning, interest, and engagement. Most importantly, 95% of one section of students found that educational games facilitated their learning, and over 68% of students found skits beneficial to their learning. Overall, 86% of students felt that bodily-kinesthetic activities helped them learn course material.

### **College English Application**

All the above activities are meant for the college English classroom, but with careful planning, they can be easily tailored for almost any age group. Below, I describe an example of how to include all eight intelligences into pedagogy. During a memoir writing unit, I would include all eight intelligences in my lesson plans over two to three 50-minute class meetings. (Gardner does not recommend including all eight intelligences in one class meeting). If the objective of my lesson was to teach students how to write concrete, realistic setting sketches for use in a memoir unit, I would take the students outdoors and have them write from their senses what they experience in front of them. An overwhelming 86% of students reported that writing in nature helped inspire writing and learning. This incorporates the naturalist and linguistic intelligences. Then I would have the students come inside, place them in groups of three to four, and have them share their setting sketches. Next, students would be expected to take the most concrete and realistic images or “best practices” from all of the sketches to write a collaborative “super sketch.” The small group work and collaborative writing incorporate the interpersonal intelligence. Following the small group work, students would play an educational game to solidify concepts. Since students would be expected to write concretely about the settings in their memoirs, they need to be clear on what is considered abstract as well as concrete. The game would involve me calling out either a concrete and abstract word. (For abstract, I might call “beautiful”; for concrete I might call out “door.”) After the word is called, one member from each of the two teams is responsible for running up to the chalkboard, and needs write “concrete” or

“abstract.” The first person finished writing the correct answer gets a point for their team. Playing this sort of game involves students’ bodily-kinesthetic intelligence as they use their bodies to communicate an answer. To make sure that students really get a feel for the subject, they would be given time to read and discuss samples of students’ past papers that have hit expectations well. Students will be given specific questions involving the samples, particularly asking them what the student did well as well as what elements they could have improved on. While they read, discuss and answer questions, light classical music would be played. (Classical music was found to be the most effective genre of music since it was found the least distracting. A large majority of students—91%—thought background music helped them focus more than silence in class). Viewing the sample papers hits on spatial intelligence as students can better visualize what is expected; students then use their mathematical-logical intelligence as they problem solve the discussion questions, and musical intelligence is incorporated with the background music. Finally, students would be asked to journal about what they learned and also their plans for their memoir assignment, which consequently hits on their intrapersonal intelligence.

The above pedagogical application of MI theory is only one interpretation of many ways college instructors could incorporate the theory into their pedagogy. The following approaches are all intelligence inclusive. Armstrong suggests a station method he calls “MI Tables.” Eight tables are placed around a classroom, with each table representing an intelligence. A note card at each table describes what intelligence specific activities students should participate in, and students rotate from one table to another (35). Yet another all intelligence-inclusive approach is the use of board games. Though board games might seem bodily-kinesthetic specific, Armstrong suggests having all intelligence-inclusive activities within a game. Students could draw cards that stand for various intelligence-specific activities that they must finish to make progress in the game (36). Lastly, workshopping is another pedagogical approach that is all intelligence friendly. Students are put in small, stationary

groups and work on activities and/or class work that engage all intelligences. Though students are working in or near groups of students, they can also work independently (Reichert 172).

Another effective method is called bridging. For example, Wendy Simeone, a high school English instructor, builds bridges from students' strengths in other intelligences to their linguistic intelligence through assorted activities (60). For example, to help students learn about character development and theme in her English classroom, Simeone builds bridges from her students' linguistic intelligence to their bodily-kinesthetic, spatial, and musical intelligences as she instructs them to "compose" their knowledge with a video camera instead of a writing utensil.

An additional approach has been named "re-presenting" by Reichert. Re-presenting does what its name indicates—presents similar information in the many different lenses that MI theory provides. As a short example, I might be teaching students about argumentative thesis statements. I give students a definition of what it is followed by examples. To make sure students understand the concept, I might re-present the definition as a mathematical problem, which would hit on their mathematical-logical intelligence. Subject + Position + Reasoning = Argumentative Thesis Statement. Though this mathematical problem may seem to limit students' creativity, in the *beginning* stages of learning concepts it has proven quite successful. Once students master what a thesis statement is, their own styles emerge.

### **Conclusion: What the Students Thought**

The results of MI theory application were quite favorable. Students reported high levels of engagement, participation and retention of course material. Learning potentials were expanded as their experience with linguistic material was expanded to include their other ways of interpreting information. The perception of their learning environment was also positive; students thought the environment seemed more "natural" and "open" which in turn encouraged them to participate. Students reported that the environment felt more laid back, which led to quite positive reports. In describing the environment, one student wrote, "...everyone was relaxed and willing to talk and in-

tract.” Similarly, one student communicated, “I loved the classroom environment. I felt very comfortable saying what I felt.” Finally, one student described the environment as “relaxed,” and that she or he “... felt like a person and not just another face.”

Many students commented on their high level of engagement. One particular student wrote on an anonymous survey that “In English 191 she [Loli Dillon] didn’t just lecture the whole time, which helped whereas in a lot of my other classes the teacher just does a lecture and that can get boring.” When students were asked anonymously the question, “Was the way in which class material taught more beneficial to your learning than other classes you’ve had in college? Why or why not?,” students highlighted the increased participation levels of themselves as well as their peers. One student iterated this well when he or she wrote, “I definitely think it was more involved a lot of the time.” Finally, students reported high levels of retention. When comparing English 191 with other college classes, one student wrote, “The only thing I did was take notes like a zombie the whole time. To remember what was said in class, I had to refer back to my notes each and every time. With this class [English 191], I leave every day knowing what was talked about.” Students also felt their education was more individualized and tailored to their specific learning needs. MI theory also helped create a strong sense of camaraderie and community. Finally, students found that their comprehension of material during class time was also greatly improved from other college classes they had encountered.

Applying MI theory to college English composition took more time, research, effort and creativity, but the overwhelmingly positive results showed me that there was a way not only to teach effectively, but create excitement for a required class. By creating a more intelligence-inclusive pedagogy, I discovered something unexpected—I could build bridges from my own intellectual and instructional strengths to my weaknesses and taught in ways that I never thought I could. Students reported that MI theory helped them learn, but what they didn’t realize is how much I learned from them.

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