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# Developing High School Multiple Intelligence Learning Centers: An Action Research Project in History.

## **Abstract**

Research that provides results which can be almost instantaneously put into use is looked on by some teachers as a path to better student learning. Accordingly, action research is a form of critical reflection that some experts believe can achieve instant change. Although, action research is sometimes denigrated as lacking in precision, the critical reflection necessary in any well done action research project demonstrates that such research while, not quantitatively rigorous can still be qualitatively useful. As such, the author discusses her own implementation of MI learning centers as a form of action research in the classroom.

## **Keywords**

action research, multiple intelligence learning centers, history teaching

## **Author Statement**

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## **Developing High School Multiple Intelligence Learning Centers: An Action Research Project in History**

**Jessica Cannaday**

### **Abstract**

Research that provides results which can be almost instantaneously put into use is looked on by some teachers as a path to better student learning. Accordingly, action research is a form of critical reflection that some experts believe can achieve instant change. Although, action research is sometimes denigrated as lacking in precision, the critical reflection necessary in any well done action research project demonstrates that such research while, not quantitatively rigorous can still be qualitatively useful. As such, the author discusses her own implementation of MI learning centers as a form of action research in the classroom.

### **Introduction**

In recent years, action research, a cyclical “research process which allows action (change improvement) and research (understanding, knowledge) to be achieved at the same time” (Dick, 2002), has become a prevalent form of study in the educational arena. This is not surprising when considering that John Dewey’s pragmatism and the teaching of problem solving strategies have become two very popular teaching philosophies taught in education programs around the country. Authors (Hargreaves, 1999; Elkind, 1999) suggest that teaching and research are fundamentally linked, and it is believed by some educational researchers that the purpose of research is to inform educational decisions and actions, thereby increasing classroom quality and teaching practices (Hargreaves, 1999). Moreover, experts in the field of educational research suggest that teachers as practitioners have a responsibility to act as researchers (Elkind, 1999), and that most teachers naturally complete and act on research through time spent in the classroom (Rinaldo, 2005). Research that provides results which can be almost instantaneously put into use is looked on by some teachers as a path to better student learning. As such, the possibility of studying a specific teaching strategy or method, such as multiple intelligences (MI), in the course of a regular school year could be a beneficial form of research. Moreover, the teacher who embarked on such a project could certainly improve productivity and learning in his/her own class. Although, action research is sometimes denigrated as lacking in precision, the critical reflection necessary in any well done action research project demonstrates that such research while, not quantitatively rigorous can still be qualitatively useful. Therefore, a discussion of an action research project implementing multiple intelligences learning stations in the classroom may be exceptionally useful to other teachers considering ways in which to execute MI activities in their own classes.

### **Connections: MI Theory and Learning Centers**

In order to contemplate implementing MI learning centers within a classroom, the teacher must have a clear understanding of Howard Gardner’s multiple intelligences theory. Much of the work of

Howard Gardner has focused on studying intelligence in terms of gifts or strengths. Gardner's MI theory focuses on specific areas wherein people have strengths. These areas which Gardner has defined as intelligences include; verbal/linguistic, logical/mathematical, musical, bodily-kinesthetic, visual/spatial, interpersonal, intrapersonal, and most recently, naturalistic (Armstrong, 2000). All eight of the intelligences can be seen in every person to some degree. In fact, it is because each area delineated was universal that partially convinced Gardner that they could be classified as intelligences as opposed to merely talents (Gardner, 1993). One basic idea of Gardner's theory is the premise that in order to best teach any student, it is important to understand wherein the child's strengths lie. As such, Gardner's Multiple Intelligences Theory is intended to allow teachers to format their classrooms in such a way that the teacher can help all students in the class, while at the same time differentiating for students with special needs, including those that are gifted, learning disabled, English Language learners, etc. MI Theory and practice can be applied in a variety of different ways. Multiple intelligences can be utilized as an everyday part of classroom instruction in the form of a learning centers model (Greenspan, 2001). In order to best meet the needs of a variety of students, it is essential to teach to the varied intelligences present in the classroom. One specific way of achieving this, is the learning centers approach. As Michael Opitz says in Learning Centers: Getting Them Started, Keeping Them Going (1994):

In addition to teaching core content, learning centers provide opportunities for children to learn other important skills, such as responsibility, decision-making, and self-evaluation. A selection of carefully planned activities in a center can give students a chance to work in ways they learn best - and strengthen other areas at their own pace. All of this adds up to increased self-confidence and ownership in learning - and greater student success. (p. 82)

Learning centers can be set up in each of the eight intelligences delineated by Gardner. Students can complete standardized material in non-standard ways by visiting each of the centers throughout the year. For example, students who are gifted artistically can complete basic vocabulary information by utilizing the visual spatial intelligence. They can draw and color cartoons that demonstrate the meaning of the standardized words. Students who are more verbal-linguistic may simply copy and memorize the definitions of the same standardized set of words. While a student who is musically gifted might fare better memorizing the prescribed words by setting the definitions to music. Learning centers can be incorporated into any classroom as an ongoing project, or as a peripheral activity (Armstrong, 2000). Regardless of the method, centers are easily adapted to MI theory and can help teachers to meet the needs of a variety of students. In the case of my own action research, I found that learning centers were appropriate for utilizing MI theory in an instructional setting. However, finding that out took patience, reflection, and flexibility.

### **Actual Implementation of an Action Learning Project**

One of the first steps I took in implementing MI learning centers in my classroom was to give students an MI diagnostic survey that identified the child's most developed and least-developed

intelligences. Teachers can often get a general picture of a class with this type of introductory activity, because often the majority of students have strengths in the visual/spatial or the verbal/linguistic. After reflection, I viewed this is important because the teacher can then plan instruction based on student strengths. The second step to implementing the MI learning centers then - was to actually plan instruction that met the needs of students with differing levels of intelligence as well as different strengths in each of the intelligences. One way to accomplish this task was to make certain that instruction varied. In any classroom if the teacher plans on lecturing, it is simple enough to draw particular images that reflect the lecture content, or to use hand movements during the lecture that represent ideas. For example, in my own classroom, when teaching about the causes of World War I, I must instruct on the concept of nationalism, (which is roughly defined as devotion or pride in the culture of a nation). In order to utilize MI instructional practices, I first verbally explained the idea, yet I also drew a picture of an American Flag on the board, and I also placed my hand over my heart as if I were going to say the pledge. I also brought in student's own experiences with Nationalism, by asking them to remember the year after September 11th when everyone placed flags and bumper stickers on their cars promoting U.S. solidarity. In this way, I as the instructor was able to teach utilizing verbal/linguistic, visual/spatial, and bodily-kinesthetic intelligences. As a result, more students remembered the concept.

A third step in implementing MI learning centers was to create stations around the room according to each of the eight intelligences. Each center covered the same content, but each was done through a different activity, product, or project. For example, when my class discussed Vietnam, my musical intelligence station had a tape recorder with a headset and protest music from the era that students could listen to in order to gain a better understanding of the protest movements going on during the war. Students were then required to write their own song lyrics protesting something current. The visual/spatial center had political cartoons and posters protesting the war, that students were required to analyze. The verbal/linguistic station had a copy of a speech given by a protester and students were asked to read the speech and then write a short story detailing the day of a protester during the Vietnam War. The bodily-kinesthetic and interpersonal stations were combined, and students were allowed to create and act out their own skit of a Vietnam War protest. The skits had to include an actual speech detailing the group's reasons for being against the war and the group had to demonstrate equal participation. The logical/mathematical station included papers detailing the numbers of soldiers dead and injured during the war by state and students were required to compare the totals to the states with the highest numbers of protests. Students then discussed in one paragraph what they believed the results indicated. The Intrapersonal station allowed individual students to write a letter from the perspective of a protester that discussed their feelings about the war, as well as their feelings about being involved in the protest movement and away from home. Finally, the naturalistic station allowed students to look at actual realia or items that were worn or used during the protests, or photographs of the same. Students were then asked to create a collage of magazine or book pictures and quotes representative of current protests or wars. After creating

stations, it is important to determine how those stations will be used. This is a part of the action research project that may require the greatest amount of reflection. In my own Vietnam instructional experience, some of the stations required more work than others. As a result, I had to reflect on how to determine point totals. I eventually made full participation at each station a requirement and each station was worth ten points. However, I also gave each product an extra amount of points dependent on how well done it was. So, a child that participated in and produced some work for all stations automatically received a full 80 points, and those who created outstanding products received extra points based on the exceptionality of their work. This way, every child had the opportunity of demonstrating content knowledge through their strongest intelligence, and those willing to put in the extra work were able to gain extra points and recognition. As a form of action research, it is essential to understand that the method of utilizing stations for the Vietnam War was not the only method I used. I constantly reassessed how the stations worked and I made changes accordingly. During the course of the year, I set up stations for eight different concepts. Sometimes the stations were entirely extra credit and were used when students finished work early and needed something to do (I did this during standardized testing)... and sometimes the stations were intended for a grade and I made the attempt to make all products relatively equal in terms of effort required. In such cases, I either provided extra-credit opportunities when effort did not seem equal, or I allowed students to choose one station and do what ever project most appealed to them. I had to determine how to use the centers based on what I was doing in my class at the time, and how students were responding. Further, I had to make changes based on student responses. Hence, this was where the action research portion came in. I was constantly reflecting and putting those reflections into action in order to make the MI stations work most effectively.

### **Other Examples of MI Applications in the Classroom**

Several types of assignments can easily be incorporated into the inclusive classroom in order to best serve student needs. All of these assignments lend themselves to a Multiple Intelligences approach, and can be useful in both learning and assessment practices. Further, it is important to connect assignments given with the designed assessment. The two are not separate entities and a Multiple Intelligence classroom should have several different kinds of assessments as well as assignments. Further, to truly make a Multiple Intelligences classroom effective, the teacher should instruct using the different intelligences as well.

As stated previously, learning centers is an excellent way to implement Multiple Intelligences. If other teachers choose to complete their own action research project utilizing MI learning centers, I have created a list of activities that worked in my own MI learning centers experience:

- Role-play
- Video production
- Journaling
- Storytelling

Poetry  
Speeches  
Essays  
Posters  
Jeopardy Quiz game cards  
Diaries  
Song Lyrics  
Advertisements  
Propaganda Posters  
Brochures  
CD cover jackets including songs  
Graphing  
Map analysis  
Measurement activities  
Calculation of Historical data  
Compare-Contrast activities  
Graphic Organizers and Venn particularly  
Castle or other model Building  
Scale Models  
Field Trip sheets (Worksheet to fill out if student goes to a museum/other with family)  
Scavenger Hunts  
Mini Archaeological Digs

### **Conclusion**

In conclusion, by participating in an action research project, during the course of one year, I found that the use of the Multiple Intelligences in the classroom is essential in order to best meet the needs of my students. Children do not come in one cookie cutter form and as such they should not be treated as if they do. It is important that school and government officials, (as well as parents, teachers, and community leaders), recognize the uniqueness of our varied students so that we may help each individual child to reach his or her highest potential. One way of doing this is Multiple Intelligence learning centers in the classroom. In this type of environment, students are assessed and their individual strengths are determined. They are then allowed to learn the standardized material in the way that best suits their own cognitive abilities. Multiple Intelligences can then be tailored towards individualized instruction. The teacher can set up learning centers throughout the room of particularly dominant intelligences. Further the teacher can vary his or her instructional practices so that more than one intelligence is utilized. For example, if a teacher lectures and writes notes on the board, he/she can also draw an illustration to demonstrate the meaning that is being expressed. Moreover, in my own experience, I found that the class should complete a variety of assignments

that are also representative of the various intelligences. This allowed students to demonstrate their true ability. Not every child will do well on a multiple choice exam. It is important to allow children to truly shine in the intelligence in which they are most equipped. In my own action research experiment, I found that Howard Gardner's multiple intelligences theory is an excellent tool that provides students with opportunities to reach their full potential.

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