

## ABSTRACT

Lezlie Rocka's research project, on which her colleague Louise Cherubini collaborated during the first six months, is driven by a quest to understand whether MI theory has anything to offer to their multisensory approach to teaching reading and writing at the low-intermediate level. Lezlie contrasts lessons that were initially designed using a multi-sensory approach to those after she integrated MI theory into her thinking. She realizes that multi-sensory teaching uses the senses to impart information, but it does not entail choices for students to express their understanding. One outcome or change is the addition of choices to the reading comprehension component of her curriculum.

*We thought that if students were expressing and processing the information in as many ways as possible, this would assist them in using their strongest intelligences to understand the information. . . We began to consistently create lessons that were more interactive and action oriented. Students worked together, gave presentations, acted in skits, organized presentation charts, drew or sculpted scenes, etcetera. They seemed to comprehend the writing well enough that they could teach it to others.*

The choice based activities allowed Lezlie a much better view of her students' comprehension skills and strategies. She provides several examples from her classes that support her conclusion that "The application of MI theory in my reading lessons seemed to cause improvements in specific reading strategies, comprehension, retention, and interest in the reading." She notes that this progress was true for all but two of her students whom she suspects to have severe learning disabilities.

## RESEARCH QUESTION

The Adult Multiple Intelligence research project required teacher researchers to design and pursue questions regarding the application of the Multiple Intelligence (MI) Theory in adult education. I created and researched the following questions:

- 1) How does knowledge of Multiple Intelligence Theory broaden a multi-sensory approach to the teaching of writing?
- 2) How does the application of Multiple Intelligence Theory enhance a multi-sensory approach to teaching reading?

Allow me to explain why and how I came to choose these questions.

I am a teacher at Dorcas Place Parent Literacy Center in Providence, Rhode Island. Dorcas Place is a community-based adult literacy center providing comprehensive services to low-income, multicultural adult students. Dorcas Place stresses using education, self advocacy, and community involvement to pursue one's greatest potential.

Students at Dorcas Place are predominately single women with dependent children who receive public assistance. My students want to improve their lives and set a good example for their children. Most of them have a long range goal of passing the GED test. Most are dedicated students and work hard on their education.

My classroom generally consists of thirteen women, ages seventeen through forty-three. Most dropped out of school between seventh and eleventh grades. They are placed in my class because their reading and/or comprehension levels fall between third and fifth grades. Most of the women have learning difficulties due to emotional or physical factors, and or inappropriate instruction. Many students have learning disabilities evidenced by their decoding, encoding, letter reversal, and retrieval difficulties.

Our school year is split into four quarters each lasting eight weeks. At the end of each quarter new students may fill the spaces made available by students moving to the next level or attrition. By the end of the year I have usually had about thirty women enrolled in my class.

*1. How does knowledge of Multiple Intelligence Theory broaden a multi-sensory approach to the teaching of writing?*

*2. How does the application of Multiple Intelligence Theory enhance a multi-sensory approach to teaching reading*



When I began teaching adults in 1995, I was introduced to a multi-sensory teaching approach by my coworker and mentor, Louise Cherubini (Louise was later my research partner for the first year of this project). A multi-sensory approach to teaching encourages students to utilize as many sensory pathways as possible when learning. Students learning to spell, especially those who may have learning difficulties, learn and remember words more efficiently when they see the word, hear the word, say the word, and are taught to be aware of how their muscles, vocal chords, and tongue feel when making certain sounds. The senses of smell and taste are also utilized to learn, for example tasting an apple when saying “A apple \a\.” Writing a word with a pencil, writing it with a finger in the air, or tracing it on sandpaper and simultaneously spelling it out loud makes learning more efficient and aids the memory process. A multi-sensory approach compensates for inefficient sensory processing by involving all the senses in the learning process. It allows information to be transferred to the brain using many media thus providing the brain with more information from which to glean meaning and cause retention.

Last year Louise and I researched how applying MI Theory would broaden our multi-sensory approach to teaching writing. This year I focused on how applying MI Theory would enhance my multi-sensory approach to teaching reading comprehension and retention. Our research project together and then mine alone explored how instructional strategies were broadened by the application of MI Theory. These subjects were chosen because they embody two of the main content areas for which our students come to school. Our questions reflect the work we do in the classroom every day. Louise and I undertook this research project and I continued on with the hope that the MI Theory would help us teach more effectively.

## **EVOLUTION OF MY WORK AND THINKING**

### **The First Year**

Ever since I started teaching, I have been interested in improving my knowledge and skills. My goal is for my teaching to be as effective as possible.

While receiving my teacher training in 1991, I attended a workshop on Multiple Intelligences with David Lazear. He stressed teaching every lesson using as many intelligences as possible. He gave an example of his daughter who was active but had difficulty focusing on and understanding what she read at times. If she walked around while she was reading, she seemed to understand and retain the information better. He credited her improved understanding and retention to filtering the reading she was doing through an intelligence in which she excelled, bodily/kinesthetic. He said that Dr. Gardner’s book Frames of Mind, supported what he experienced as making a positive difference with his daughter. And again he stressed teaching using as many media as possible because one of these is bound to help students learn in a way that suits them best.

The idea that we all have preferred ways of learning was not new to me. Individuals excel in different arenas and seem to learn best in different ways. Having students use their preferred way of processing and expressing to learn information made sense to me. From this point on I used this approach in any teaching I did: my student teaching, my experience as an elementary school teacher, and as an adult basic education teacher. I tried to include all the intelligences in each lesson. For example, if I was teaching multiplication tables, I would have students say the numbers chorally; march while saying the numbers, visualize the numbers, use a finger method for the sixes through

the nines, and use mnemonics. It seemed to me that both a multi-sensory approach and what I understood about MI teaching supported each other. They both seemed to stress using all the senses.

It was Dr. Gardner's comments in the first AMI institute about some of the myths related to applying MI theory to teaching that began to transform how I had previously understood MI theory. He emphasized that teaching all subjects using all the intelligences may be ridiculous. For example, kids who are rolling on the ground while they do division may just be rolling on the ground. He highlighted that educators should draw on students' intelligences for solving realistic tasks.

I learned from Dr. Gardner that MI theory was not an approach like I had previously thought; it was a theory. What I had learned in my first workshop in 1991 on MI had made it seem like a multi-sensory approach, or at least that's what I had understood it to be. In the AMI project we as teacher researchers were to figure out what it meant to apply MI theory in our practice. So, how were we to do this?

Louise and I began by reading *7 Kinds of Smart* by Thomas Armstrong (1993.) His presentation and his application of the theory were easy to understand. We read Gardner's *Frames of Mind* (1991) and found it dense but informative. We also read countless articles that were interesting and inspiring *The Multiple Intelligence Handbook* by Bruce Campbell (1994.) But even after all our reading, Louise and I could not figure out how the application of MI theory differed from our multi-sensory approach. We couldn't tease out the difference between using a multi-sensory method and applying MI theory to teach. It seemed that what we were doing already reflected MI theory. We kept talking about it.

We eventually came to an understanding that MI theory is a psychological theory. It addresses what happens in the brain after information is transferred to it. Multi-sensory teaching is an approach to get information into the brain. The intelligences act on all the information the brain receives, no matter how it, the brain, receives this information. It seemed to us that by getting information to the brain via one or more senses that were congruous with the student's strongest intelligences would give the students a better chance of understanding the material. MI theory and the multi-sensory approach seemed to support one another. We felt validated in what we were already doing in the classroom. We also realized that there was more we could be doing with MI theory.

Louise suggested that we begin doing something we thought was completely based on MI Theory and forget whether it was different from multi-sensory teaching. Since our question addressed using MI theory to broaden our approach to teach writing we invented projects and activities in order for students to learn and express what they understood about writing. We thought that through learning activities our students might be able to use their strongest intelligences to express and process what they were learning about writing. We began with a project called Paragraph Players Theater in which students became parts of paragraphs and then presented and taught another class how to make paragraphs. It was quite successful in that the students enjoyed themselves and understood better how to write a paragraph. In the end, a notable change in our teaching was an increase in projects in which students learned in ways other than reading and writing and in which students taught each other.

During the second year Louise had to bow out of the project, and I decided to pursue a question about how applying MI Theory would enhance a multi-sensory approach to teaching reading. I experienced *deja vu* of the previous year when I tried to apply MI theory to my multi-sensory

approach to teaching reading. I couldn't think of what to do other than my multi-sensory approach. Meg Costanzo, a fellow teacher researcher, suggested I add a "Choose 3" activity created by Martha Jean, another AMI colleague. In a "Choose 3" activity students are given choices of how they want to express what they know. Each choice correlates (as much as possible) with the way an intelligence might be applied. For example, someone who is stronger visually/spatially might choose to draw what they know. I was so excited to try this because it felt like I had been handed the missing piece. After trying one "Choose 3" activity and experiencing its usefulness, I integrated it into all the readings.

At about this point, I read an article by Bruce Pine called, "Meaning Through Motion: Kinesthetic English," (December 1995, English Journal Volume 84). Mr. Pine proposed that using the body to express text is valuable only when discussion follows. The meaning of what you are doing and why you are doing it in a specific way must be processed. This article validated changes that I had already been making in my teaching and reminded me to go even further: slow down, cover fewer subjects in class, and cover them deeply. This is necessary to cultivate metacognition (knowledge of why you are doing what you are doing). I think that this was what had been so successful with our writing project. When students could teach others how to write paragraphs, they then had that knowledge within them.

In January 1998, nine of my students moved to the next level. Four stayed with me, and ten new students were placed in my class. They were at a lower reading level and often weren't able to finish even one project after we read because they worked so slowly. This new group was quiet. They did not choose drama to express text. They chose drawing and writing most of the time and play dough only once. I wondered whether this less active type of expression was as useful.

I decided to take a new approach to doing projects. We would do them as we read instead of at the end of each reading. I thought this would introduce students to a wider variety of ways to process text. We would stop reading whenever something from the text suggested a way of expressing and processing the information, and we would explore it together. For example, while reading about Sojourner Truth, the author discussed all the places Sojourner Truth traveled on her freedom campaign. I had maps of the United States, and we figured out how to plot where Sojourner Truth had traveled. When the book indicated dialogue through quotes, we read the dialogue as if we were the people. We would often read it several times.

This is how I am applying MI theory in my classroom now. I know it will evolve as I have more information and experience to draw on.

## **METHODS**

### **Data Collection: Year One (January - June, 1997)**

During the first year our data collection consisted of:

- transcribed discussions about what we thought of the MI readings and of what our co-researchers said online, and how the application of MI Theory might or might not broaden a multi-sensory approach to writing
- outlines of our lesson plans
- notes on what happened in class, and our impressions

- copies of all student writing.
- direct quotes from students
- video tapes of selected classes
- notes and feedback from observers, Julie Viens and Janet Isserlis

**Data Collection: Year Two (September, 1997 - March, 1998)**

In year two I no longer had an on-site research partner, but I continued the previous year’s data collection methods with some modifications and additions. I took notes during class, instead of afterward, on what was happening and recorded direct student quotes. I typed these up in a log at the end of the day. I included editorial notes on what seemed to work, what did not seem to work, my thoughts as to why, and possible ideas for revisions. I discussed my concerns, confusions, and questions as well as successes. I explored what I knew about MI theory, what I was learning about MI theory, and how applying MI theory was enhancing my multi-sensory approach to the teaching of reading.

A new data collection method in the second year was that I had my students keep reading logs in which they responded to what we were reading and what they thought would happen. They also wrote about how they liked what we were reading in dialogue journals, but by the end of the year, students were no longer doing the dialogue journals. These were too similar to the reading logs. I kept copies of students’ writings and drawings and took pictures of their play dough sculptures. I photographed or video taped their skits and plays.

**FINDINGS**

**Finding 1: We found that the application of MI theory did broaden a multi-sensory approach to teaching writing.**

**Evidence**

The following lesson plan is a typical multi-sensory reading lesson before applying MI theory.

**A Multi-sensory Writing Lesson: Writing Paragraphs**

(I was introduced to the idea of using the hand as a guide to writing at a SABES workshop in New Bedford, MA in the Spring of 1996.)

*Begin by saying that all you need to write a paragraph is your hand. Have students hold up their hands, then have students draw their right hand on note paper. “When you are asked to write a paragraph, first you need a thumb.” Hold your thumb up in an “everything is A-OK!” position, and have students do the same. “Your thumb is the first sentence of a paragraph. It answers a question or makes a statement. It is the answer or main idea of a paragraph.” Have students hold up their thumbs and*

**Findings**

- The application of MI theory did broaden a multi-sensory approach to teaching writing.
- The application of MI theory did enhance my multi-sensory approach to teaching reading.
- The application of MI theory in my reading lessons seemed to cause improvements in specific reading strategies, comprehension, retention, and interest in the reading.

say, "Answer sentence." On their note paper, have students write on their drawn hands in the thumb space: answer/ main idea sentence.

"To answer any question in writing, you need a complete sentence. You can even use the words from the question you are answering in your sentence. If you were asked to write about the following question, 'What is your mother-in-law like?' you could start your paragraph with an answer to this question." Linda, one of my students, wrote, "My mother-in-law is a wonderful person."

"Now you have answered the question, but someone who is reading your paragraph might want to know why you think the way you do. So, you have to write details about or reasons that support your first sentence. Your reasons why will be your index, middle and ring fingers of your paragraph." Have students hold up these three fingers and say, "Supporting sentences." On their note paper, have students write on their drawn hands in each of the three fingers: supporting/detail sentence. Also, color code the parts of a paragraph; use one color for the thumb and one color for the three fingers. "These three fingers must talk about the first sentence, the thumb. These also need to be complete sentences like the thumb sentence."

Linda wrote, "She is kind and lovable woman. She trieats me like a daughter. She thoughtful in many ways.[sic]"

Linda's complete paragraph was, "My mother-in-law is a wonderful person. She is kind and lovable woman. She trieats me like a daughter. She thoughtful in many ways.[sic]"

After students have written their own paragraphs, have them reread them and use their fingers as a guide to see if they have all the parts they need. Then have them underline each sentence with its corresponding color to see if they have all the parts they need.

Once students write a paragraph, look in books to see how authors organize their paragraphs. Students see that paragraphs are indented, that new sentences follow the previous period, and they notice the periods and capitals. For many of my students learning how to use all this information is new. Each time they write a paragraph they use their hand to check if they have everything necessary. My students get excited at the idea of writing a paragraph because it seems such a successful thing to be able to do.

### **Projects Based on MI Theory**

Rather than change our multi-sensory approach when we started applying MI theory, Louise and I added projects and activities to aid students with learning paragraph writing. We thought that if

students were expressing and processing the information in as many ways as possible, this would assist them in using their strongest intelligences to understand the information. Perhaps what distinguishes the following activities from what we did before the most is their interactive nature. By having students work together and coach each other they draw more on the interpersonal intelligence. They also engage the emotions by creating opportunities for humor and laughter.

**Oral Paragraphs:** We would say a paragraph about each person in the room. For example, “Rita looks pretty today. She has a nice hair-do. She has on a nice looking outfit. She also has a big smile on her face.”

**Paragraph Puzzles:** Students cut up their paragraphs and other students tried to piece them together in the correct order.

**More Paragraph Puzzles:** I made two paragraphs on one subject giving a pro and a con view. Students unscrambled my paragraphs, and we discussed which paragraph was the best or right. We discussed that as long as you can support a main idea with three reason sentences (or three fingers), any opinion is valid.

**Paragraph Playhouse Theater:** My class performed as the Paragraph Puzzle Players for Louise’s class. Our class wrote a paragraph together, edited it, then put in purposeful mistakes. We printed it on poster board, cut up the poster board into sentence strips, and each took sentence strips to hold up. Students then planned how they were going to scramble themselves up and figured out how they were going to give directions to Louise’s class. The Master of Ceremonies made her own cue cards of what she wanted to say to Louise’s class. She wanted them to know exactly what they had to do, “Hi, we are here to do a presentation about a paragraph puzzle. This puzzle is out of order. You’ll have to guess which one is the main idea and which are the details. You guys need to put this puzzle in order. You guys need to figure out punctuation marks and correct spelling. Punctuation means capital letters.” After this project Donna from my class said, “I understand a paragraph.”

**Writing Notes:** Louise’s class learned how to write a note, and then invited us into their class, using a note, to teach us how to write notes ourselves. Both our classes find this difficult (though my class at a third through fifth grade level is more advanced in reading and writing than Louise’s). Often our students will ask us to write notes for them. We all received note paper. Louise’s students suggested we write a note as if we had dropped by someone’s house, and they were not home. They coached us through the process by asking questions like, what do you need at the top of your note? My students would answer, the date and the time. We each finished a note by following this question and answer process, and at the end everyone shared the note they had written. Everyone seemed pleased with what they had written based on the smiles on their faces. All of us left Louise’s class with a well written note.

Once we added projects and activities to our multi-sensory lessons, we began to consistently create lessons that were more interactive and action oriented. Students worked together, gave presentations, acted in skits, organized presentation charts, drew or sculpted scenes, etcetera. They seemed to comprehend the writing well enough that they could teach it to others. We saw that while students were preparing to teach the writing, they learned it better themselves. Their preparation to teach and the actual teaching seemed to promote metacognitive awareness of the writing process. This awareness of the writing process seemed to assist students in applying their knowledge to writing.



**Finding 2: I found that my application of MI theory did enhance my multi-sensory approach to teaching reading.**

**Evidence**

The following lesson plan demonstrates how I took a multi-sensory reading lesson and enhanced it by applying MI Theory.

**A Multi-sensory Reading Lesson**

This was a typical multi-sensory reading lesson before applying MI theory.

*Meet Addy* by Connie Porter. Chapter 5

*This book is classified as historical fiction. It illustrates some of the experiences slaves had while trying to escape on the Underground Railroad. Addy, the main character, is a young teen born into slavery who escapes with her mother to freedom.*

*I begin a group reading lesson with a pre-reading question based on what we have already read or what we are about to read. For example I ask students, do you think Addy and her Mama will make it to freedom? We then discuss or write about this.*

*While reading, I coach students in applying all the multi-sensory skills they have already learned in order for them to decode and comprehend what they are reading.*

*I remind them to use their finger, a pencil, or a bookmark to help guide their eyes. I make sure to allow students ample time to apply their decoding strategies before giving a prompt. I coach students on beginning or ending sounds of words when they need it. We discuss what we read after every paragraph. We discuss the meaning of difficult words. And, we reread the paragraph when necessary.*

*When we finish reading, we do a post-reading activity. I ask students what they liked or didn't like about what we read. Students write about this. Then those who want to share their writing with the class do so.*

**Choices based on MI Theory**

Again I didn't change the multi-sensory approach; I added to it. I thought that through projects and activities students would be expressing and processing the information in as many ways as possible, and that this would assist them in using their strongest intelligences to understand the material. Students could choose among activities that gave different ways to express what they understood about the reading. They did these activities after doing the reading for the day. I call this choice expression. We did choice expression as part of every lesson. I varied the choices in order to allow students to process the reading using different intelligence strengths.

*Post reading: Choose one to do alone, with a partner, or a group. Share what you worked on with the class.*

- 1. Draw a picture or show in play dough any part of what we read.*
- 2. Pick a song or a chant that would give you inspiration if you were doing something very scary. Write the words to the song or sing it.*
- 3. Make your own map of Addy and Mama's journey either on paper or with play dough.*

4. *Write or discuss with someone a part of what we just read that you think is interesting.*
5. *Act out a part of what we just read.*
6. *List the places in which Addy and Mama hid on their escape to freedom.*
7. *Design your own project for this chapter.*

Looking back through our data, Louise and I were surprised that our lessons were not as active as we thought they had been before we added an approach based on MI Theory. We were able to see how multi-sensory teaching used the senses to impart information, but our students were not given choices as to how they preferred to express their understanding. We assumed that students would choose projects that correlated most closely with their strongest intelligences. Our MI-based approach allowed students to process information in different ways, and therefore students seemed to understand more and better.

**Finding 3: The application of MI theory in my reading lessons seemed to cause improvements in specific reading strategies, comprehension, retention, and interest in the reading.**

### ***Evidence***

#### **Reading Strategy: Picking out details in a text**

In the past we spent most of the reading time reading aloud and talking about the reading as a large group. But now a good chunk of the time was spent with students working independently or together rereading, planning, combing through the text for the information they wanted to learn more about. While it wasn't my explicit goal that students learn the specific reading strategy of picking out details from text, they were doing this on their own. Usually at my level students find this skill difficult, but it became a daily occurrence because they wanted information for their projects. Students chose to look through the text on their own. The reading material became a tool, as a means to an end and not the end in itself.

For example, I watched Renee and Lyn pick through the reading for information for their project which was to figure out the important dates in Sojourner Truth's life. They chose to list the dates when Sojourner Truth was sold and for how much she was sold. As they came across new information, they discussed its validity.

#### **Comprehension and Retention**

The choice-based projects seemed to cause a positive cycle of comprehension and retention. The students' comprehension seemed to improve when they processed the reading from their strengths. As they understood the reading better they remembered it better as well. The opportunities for expression in the classroom seemed to increase most students' retention of what they had understood from the reading. For example, some students chose to do a skit to express what they had understood in the reading. Doing the skit helped students understand better what was happening in the reading. Improved understanding helped them remember what they had read. It also seemed to help them understand subsequent sections or chapters.

I present Renee to you as a case in point. When I first started working with Renee her fears of appearing stupid, of not knowing how to do something, and of not understanding the material were palpable. The following entries are from my journal.

On **9/25/97** Renee mumbled to her table mates through much of the reading. Later when I asked her to tell me what the paragraph was about, she said that she had zoned out and did not know. She seemed upset when I told the class that they had to write in their journals about how they felt about what they were reading. She did not want to discuss it at that time. Students then wrote about what they understood and liked in the story. Renee said she had difficulty understanding what she read with the group, so she would try reading the same book to herself the next day. She later talked to me about zoning out, and how that frustrated her.

On **10/2/97** we were reading *Addy*. A guest was in the room, and I think this affected Renee. She asked, Why do we have so many other people in the room?

On **10/9/97** students could choose how they wanted to express what they read in *Addy*. Renee sat slouching against the wall with a frown. I went through the list of choices and asked if she wanted to do any of the activities. She said no to all except the acting. At this she gave a slight shrug and slight lip-up. She said no one would do it with her because they all had started. I said I would do it with her. Then Lyn said, "I will do it with you."

Other students ended up joining Renee. They used tape for shackles and an umbrella as a whip. When Renee pretended to whip the person who was playing Addy, the umbrella extended and really hit Addy. This brought a feeling of realism to the skit. The students had a blast. They held up the book, read it, and acted out everything that happened in one scene.

On **10/21/97** after reading *Addy*, Renee said she wanted to discuss what she had read, but did not move over to work with Nora and Von right away. I told her she could come discuss with them, and then she moved over.

On **11/5/97** we read the end of the story part of *Addy*. Renee did not like the ending. She did not say why. I said there are more books in the *Meet Addy* series.

For the project after the day's reading, Renee and Hanna worked together and made with play dough the wagon in which Addy and her Mama escaped to freedom.

On **11/20/97** students were to present their final projects on *Meet Addy*. Most students straggled in. Renee had not brought the fixings for the food she was going to prepare for her project, and she had had a hard morning. Renee said too that she was short on money. I was so pleased that she had come in just the same. It meant to me that she felt comfortable in class and knew that she was more important than any food she could bring. She used school funds to buy supplies, and made spinach because, as she said, slaves ate greens.

On **11/25/97** I asked students what they liked about the Addy project. Renee said, "I know all about Addy's book in my head."

On **12/5/97** we were reading a report on the Underground Railroad and Renee said, "I really didn't get into this. This little paragraph I done lost concentration. I got to read this over." I told her to go ahead and do so.

On **12/11/97** we were reading our Sojourner Truth book. Renee interrupted while Viv was reading. "So who did he sell? He bought her for \$50 and sold her for \$105." This is the first time that Renee had done this. When we finished reading for the day, Renee read on and said, "Wow, they sold her again."

After reading, Lyn wanted to do a skit. Renee got up to do it with her. Renee and Lyn were combing through the reading for information to do one of the "Choose 3" activities. Kim joined them. They discussed how the skit should be acted out. They decided who would take which role and what they would each say. They began to act, and while acting, they discussed what each character should be doing and feeling.

Renee and Lyn were later combing through the reading again for the important dates of Sojourner's life and the prices for which she was sold.

At the end of class, Julie Viens interviewed Renee about what she liked in class.

*Well, I like the readin'. I like the readin'. How we act all, and then one time we had cooked. You know out the book, we had cooked.... Yeah we cooked some rice, some rice, and well it was supposed to be collard greens, but it was spinach. And we all ate it. We act out the book out of Addy. Addy's book you know when she... you know when Addy's father was sold and all that stuff. I like the reading and Lezlie's class. We're only talking about Lezlie's class. It's the reading, and umm it's helping me. And now I'm startin' to ask questions... I read somein', I have to go back and read it again, so I can understand it. And if I don't understand it, now I'm startin' to ask, 'Does this mean?' or 'What they sayin'?'*

**Julie:** "You said that you had started to ask questions?"

**Renee:** "Because I had read it and I didn't understand some of it, so I have to read it again, and then I start asking questions about that paragraph to see if I am right. You know?"

**Julie:** "So you do like a little check on yourself?"

**Renee:** "See like we do these books up here too. And findin' you know what's right what's goin' on in that sentence. And since I'm doin' a lot of it, I'm gettin' better at it."

On **12/18/97** while listing the times Sojourner Truth was sold and for how much, Renee jumped in and said, "And then \$105." Renee then said, "We did a skit on this. Remember?"

I think what I call “choice expression” that is based on MI theory allowed Renee to explore reading in an unthreatening way. She used her strongest intelligences to process what she read and as a result, was able to understand and remember more of what she read.

### **Increased Interest in Reading**

Adult students who read at low levels don't spend time reading a lot, and therefore don't get better at reading. Doing projects and having choices of how to express themselves seemed to increase my students' interest in reading. I observed that they thought about the reading when they weren't in class, and they showed interest while in class. Here are some examples.

When we first started the book *Meet Addy*, Viv said, “I hate reading.” She would sit in back of the class leaning against the wall hiding behind the book with the apparent hope that I wouldn't call on her (sometimes when I did call on her she would sigh in a resigned way.) On 11/5, after four weeks of doing choice activities, Viv asked to read first.

After we were a ways into the *Addy* book, Nita regularly asked, “Do we gonna read today? [sic]” And when we would finish reading for the day she would ask if we could continue reading.

When a group of students put on a final skit about Addy, Victoria brought candy worms as a prop. She also brought surgical gloves because she had to force these worms into another student's mouth during the skit. Victoria's thoroughness of preparation for her role surprised me. She had obviously thought about every detail of her part.

### **Divergent Evidence**

We had two students in my class and three in Louise's class for whom the multi-sensory approach combined with the application of MI theory did not make a difference. I think they are severely learning disabled. The advances these students can make in their writing and reading are slower than what a study of this length can show.

## **NEW QUESTIONS**

My successes at applying MI Theory to reading and writing compel me to question how I can apply it to all subjects. I also wonder how I can continue to expand students' exploration of their own intelligences.

Five students who seem to have severe learning disabilities and/or profound language deficiencies did not appear to improve in either reading or writing. I would like to see further research on whether the application of MI Theory can assist people with learning in the realm of their disability. I think that someone who needs accommodations (a person's legal right to have a disability accommodated for either at school or on the job) must constantly be relying on all their intelligences to make up for their disability. I would like to learn more about accommodations combined with the application of MI theory. I would like to know how to coordinate the two most effectively.

MI allowed more opportunities to succeed in my classroom beyond just being good at reading and writing. The students at my level are so used to not knowing how to do school work. It seems so

important to them to get the right answer right way. They seem to go blank when presented with a problem, or they give up without attempting. This raises a question for me of what MI theory might have to offer for teaching students problem-solving skills.

## **CONCLUSION**

I feel great appreciation at having been able to see sides of my students I had not seen in the past. MI-based activities provided a stage on which students could shine. Students got to share what they remembered in a way they enjoyed. Probably because of this, their projects were richer and included details, nuances and interpretations I had not seen before with students at this level. I enjoyed the slower pace a project or activity based class demanded. We covered more of what the students wanted to learn, and we explored it more in depth.

I enjoyed trying to keep my comments to myself and letting students find their own answers. My class became more interactive and student directed as I experimented with MI theory. Before this research project, I did most of the leading and dictated the order of the activities. In my journal after doing a choice expression activity I wrote, "I think that as a teacher I have always wanted to find the best way to give the class over to the students. It was just that I did not know how; now I know how." (Teacher journal, 10/9/97) I would like to move toward open ended questions and projects posed by the students or myself. I want to further create an atmosphere where the students and I journey to knowledge together.

I was continually moved by the students' depth of understanding, sensitivity to the subject, and interest once they were allowed to choose their form of expression. I wrote after doing the first choice expression project and being awed by its results: "I do not know that I am seeing changes in students abilities. What I am seeing is perhaps other sides of the students that I would not see if we were doing only paper and pencil work." (Teacher journal, 11/13/97)

