TEACHERS AS REFLECTIVE PRACTITIONERS USING MULTIPLE INTELLIGENCES –BASED INSTRUCTION

Marjorie Hall Haley, PhD
Associate Professor
George Mason University
Center for Language and Culture
Graduate School of Education
4400 University Drive, MSN 4B3
Fairfax, VA 22030-4444
Phone: 703-993-8710
Fax: 540-253-5024
E-mail: mhaley@gmu.edu
Abstract

This study highlights efforts to learn more about teachers as reflective practitioners and to better understand learner-centered instruction from the perspective of Multiple Intelligences (MI). The purpose of this study was two-fold: 1) to empower teachers to look at their teaching practices; and 2) to investigate the use of MI theory in shaping and informing instructional strategies. Research related to reflective practitioners and the application of the theory of multiple intelligences in foreign and second language classrooms is scarce. This study attempted to broaden the research base. The results of the study clearly indicate a need for educators to answer the following questions: Why do I teach this way? Why does a particular instructional strategy or assessment work well for some students and not others?

Key words: Reflective Practice, Teacher Action Research, Theory of Multiple Intelligences

Languages: Spanish and French
Teachers as Reflective Practitioners Using Multiple Intelligences-Based Instruction

Introduction

This paper examines reflective practitioners engaged in an action research study conducted in the fall of 2004 in a suburban high school in Arizona (USA). Six foreign and second language teachers and 350 students participated in this study to determine the impact of implementing the theory of Multiple Intelligences (MI) in daily classroom activities. Of primary importance was an investigation of the ways in which teachers reflect on their practice.

In an effort to learn more about teachers as reflective practitioners and better understand learner-centered instruction from the perspective of Multiple Intelligences (MI), the purpose of this study was two-fold: 1) to empower teachers to look at their teaching practices; and 2) to investigate the use of MI theory in shaping and informing instructional strategies. Specifically, the author wanted to explore what teachers discover about themselves when using MI-based teaching and how they reflect on it.

The premise being assessed was that, given what we know about the educational needs of today’s learners, all teachers must be better equipped to examine their own practice and their reasons for why they do what they do. The article begins with an introduction to the idea of teachers as reflective practitioners. This introduction is followed by a discussion of the theory of Multiple Intelligences.

Reflective Practice

Reflective practice means many different things to educators. The literature provides ample evidence that reflective practice is an increasingly common phenomenon
and has been studied and amplified since the days of John Dewey (1933). Is reflective practice an integral part of a teacher-training program and should it necessarily be a part of novice and veteran teachers’ professional development or is it merely an indication of intellectual curiosity? Further, at what point does one know, with some degree of certainty, that one is, in fact, a reflective practitioner? Is reflecting simply a matter of journaling, keeping notes on one’s classroom practices? Once one has journaled (reflected), then what? Are these ideas/reactions/notions then shared or acted upon? If so, when, how, and under what circumstances? These questions are essential to an understanding of the importance of reflective practice.

In 1987, Donald Schon introduced the concept of reflective practice as a critical process in refining one’s artistry or craft in a specific discipline. According to Schon, reflective practice involves thoughtfully considering one’s own experiences in applying knowledge to practice while being coached by professionals in the discipline (Schon, 1996). In an educational context, reflective practice can be broadly defined as the systemic inquiry into one’s teaching practice and the deliberate attention to one’s experience (Van Manen, 1977). More specifically, reflective practice is a conscious, systematic, deliberate process of framing and re-framing classroom practice, in light of the consequences of the actions, democratic principles, educational beliefs, values and preferred visions teachers bring to the teaching-learning event (Serafini, 2002). Reflective practice can also be defined in terms of action research.

**Action Research**

the reflective process whereby, in a given problem area, where one wishes to improve practice or personal understanding, inquiry is carried out by the practitioner first, to clearly define the problem and secondly, to specify a plan of action including the testing of hypotheses by application of action to the problem. Evaluation is then undertaken to monitor and establish the effectiveness of the actions taken. Finally, participants reflect upon, explain developments, and communicate these results to the community of action researchers. Action research is systematic….self-reflective inquiry by practitioners to improve practice.”

Just as McKernan connects action research and reflective practice, Howard Gardner (1996) recommends that educators reflect on their practices to focus more on depth than breadth in teaching and learning in order to penetrate the engravings (personal theories of knowledge) of students.

**Howard Gardner’s Theory of Multiple Intelligences**

The Theory of Multiple Intelligences, first introduced by Howard Gardner (1983), posits the concept that there is no general intelligence, but rather that individuals have at least eight distinct intelligences that can be developed throughout their lifetime. According to Gardner’s theory, there are eight intelligences: Bodily/Kinesthetic, Interpersonal/Social, Intrapersonal/Introspective, Logical/Mathematical, Musical/Rhythmic, Naturalist, Verbal/Linguistic, and Visual/Spatial. Every learner has the capacity to exhibit all of these intelligences, but some are more highly developed than others in certain individuals. Based on MI theory, the challenge in education is for teachers to create learning environments that foster the development of all eight intelligences. Balanced instructional presentations that use the multiple intelligences
benefit all learners and expose students to the appropriate means through which they can strengthen their underutilized intelligences.

The MI theory suggests that there is a plurality of intellect. From birth, individuals may differ in particular intelligence profiles, that is to say, “all human intelligences are a function of genes and environment interacting in different ways and in different proportions for each group and for each individual.” (Gardner, 1996). Life experiences may alter these profiles over time. Intelligences are biological potentials that are seen in “raw” (unchanged) form in individuals.

The literature on multiple intelligences provides a sound theoretical foundation for an integrated, multidimensional style of education across learning styles and cultures. However, the review of the literature points out the paucity of research in practical applications of MI theory in foreign and second language classrooms. Gardner’s seminal work on this subject, *Frames of Mind (1983)*, devotes over 300 pages to explaining and differentiating what were then conceived as six intelligences, but only two chapters, or 60 pages, are concerned with the implications and applications of MI theory in education.

One proponent of Gardner’s theory is presented in the article, “Where Do the Learning Theories Overlap?” Guild (1997) compares the key features and principles of three learning theories: multiple intelligences, learning styles, and brain-based education. She concludes that these theories intersect significantly, particularly in terms of their intended results. One point these theories have in common is that they are learner-centered. Another similarity is the teacher’s role as reflective practitioner and facilitator, with the student acting as a reflective partner. An additional mutual theme these theories have is the concern for the education of the whole person. All three theories emphasize
curricula with depth and breadth. Additionally, MI theory, learning styles, and brain-based education promote diversity and inclusiveness, rather than the “lowest common denominator” approach to teaching. These three approaches focus on how students learn differently, acknowledging, “The more diverse learning experiences we provide our students, the more robust their education will be, the more ways they will learn each topic, hence the more they are prepared to succeed in a world marked by increasing diversity and an accelerating change rate” (Guild, 1997).

Since Gardner’s announcement of his theory of multiple intelligences, many books, professional papers, and journal articles have been published to fill the perceived gap in field research related to classroom lesson planning based on the theory. One example, *Multiple Intelligences: Multiple Ways to Help Students Learn Foreign Languages* (Gahala & Lang, 1997) notes, “Teaching with multiple intelligences is a way of taking differences among students seriously, sharing that knowledge with students and parents, guiding students in taking responsibility for their own learning, and presenting worthwhile materials that maximize learning and understanding.”

Additional examples are earlier studies conducted by the author (XXX, 2001, 2004). The purpose of these studies was to identify, document, and promote effective real-world applications of MI theory in foreign and second language classrooms. Results indicated that teachers were profoundly affected by these approaches: they felt that their teaching experienced a paradigm shift to a more learner-centered classroom; they were once again energized and enthusiastic about their teaching; and they felt they were able to reach more students. Students demonstrated keen interest in MI concepts and showed
positive responses to the increased variety of instructional strategies used in their foreign
language and second language classrooms.

Providing opportunities for students to learn in ways to which they are most
receptive maximizes their potential for success in the academic setting and in real life
(Armstrong, 1994; Beckman, 1998). Integrating multiple intelligences into the classroom
setting does not require a major overhaul of teaching methodology or a total revamping
of adopted curricula. In general, supplementing and revising existing lesson plans with
creative and innovative ideas suffice (Campbell, 1997). Thematic and interdisciplinary
units that provide cooperative learning and that include a variety of tasks accomplished
through a choice of activities allow for multiple intelligences to be adequately included
within the context of instruction. Both Glasgow (1996) and Glasgow and Bush (1996)
emphasize classroom use and real-world applications of such lessons.

The Present Action Research Study

Research Questions

The study addressed the following research questions:

1. From the teachers’ reflective practices what has been the impact of MI-based
teaching?

2. In what ways did teachers apply MI theory in foreign and second language
classrooms?

3. How are the MI activities evidenced in instructional strategies?

The first research question influenced the way in which the teachers participated in
the study. The teachers were encouraged to share and discuss among themselves their
experiences during the study. These discussions were both formal (at weekly department
meetings) and informal (whenever teachers could chat before or after school). In their weekly journals (Appendix A) the teachers tested their assumptions about what was occurring in their classrooms, i.e., what worked and what did not. Answers to the second question were reflected in the teachers’ daily MI logs (grids used by teachers to chart MI activities) (Appendix B).

**Sample Population**

The six teachers in the study have from between three and twenty-eight years teaching experience. All have Master’s degrees and one is National Board for Professional Teaching Standards (NBPTS) certified. The participants teach Spanish and French, levels one, two, and three. Prior to an all-day orientation conducted by the researcher, each of the six teachers had some formal or informal MI training. One teacher had facilitated two online MI courses. Teachers taught a minimum of 5 classes each day with an enrollment of between fifteen and thirty-five students. The teachers were all volunteer participants and received no monetary incentive for their work.

**Research Design**

While both quantitative (students’ achievement scores) and qualitative data were collected, this paper focuses on the qualitative, reporting on the findings from the teachers’ weekly logs and reflective journals. Qualitative research provides detailed information about a small number of cases, thus increasing understanding of these cases and the context in which they occur (Patton, 1990). According to Merriam (2002), the underlying premise of qualitative research is that reality is socially constructed; therefore, there are multiple interpretations of reality that are constantly changing.
Qualitative research is interested in examining a snapshot of those varied interpretations at a particular point in time and in a particular context. Applicable to this study were certain strengths of qualitative study: understanding meaning not only in events and behavior but also in how participants make sense of their world; the interest was in process more than outcomes, and, most importantly; in a deeper understanding of the context in which the participants acted (Maxwell, 1996). The participating teachers discussed with their students the action research study and explained the activities they would experience. It should also be noted that the students were not randomly assigned to groups since the study began after the start of the academic year.

**Experimental Groups**

Students in the experimental groups were selected by the teachers. They received instruction that incorporated MI theory. Their classes were generally more learner-centered and include a wide variety of instructional activities. Teachers designed thematic and content-based lessons that strengthened the multiple intelligences. The objective was to have teachers construct planning webs and themes that incorporated a wide range of multiple intelligences activities and outcomes. Teaching strategies included demonstrations, modeling, feedback response, learning centers, discussion, students’ responses to learning experiences, total physical response (TPR), hands-on experiences, and cooperative learning.

The following are sample activities used with MI-based instruction:

1. Create a poster to describe a place you want to visit, using pictures, phrases, etc. Describe what you can do there, what the attractions are, etc.
   • must use 8 places vocabulary
   • must use adjectives for descriptions
   • must use one present progressive (estar, seguir)
2. Create a tech presentation (3-4 min) about a place to visit. Describe what you can do there, what the attractions are, etc.
   • must use 8 places vocabulary
   • must use adjectives for descriptions

3. Create a Concept Web (using Inspiration software program) by sorting places categories in a logical manner. (ex: water-related vs. land-related; by function; man-made or natural; etc.)
   • must use 30 places vocabulary
   • must describe the categories
   • must be able to defend your placement of a vocabulary into its category

4. With a partner create an interview with a travel agent. Discuss possible places to visit. Be creative.
   • must use 6 places vocabulary
   • must use 1 tener idiom

5. With a partner create a song about places you like to visit.
   • must use 6 places vocabulary
   • must use one present progressive (estar, seguir)

Control Groups

Students in the control groups were taught using a “modified” pedagogy, and instruction was mostly teacher-centered. Because teachers relied heavily on the use of rote drill and memorization, i.e., listen and repeat, there were no cooperative learning, group, or interactive activities. Students engaged in few hands-on activities. Most lessons were thematic and taken from textbooks that provided black-line master transparencies which were the only visuals aids. Plans were constructed to strictly follow the textbook, page after page. There was no inclusion of supplemental material(s) for variety or enrichment. Teachers were instructed to maintain standard classroom procedures for the “control” groups. In other words, teachers taught the same content as the experimental group, but altered their instructional strategies to be more teacher-centered.
Data Collection

Data were collected during the second quarter of the academic year, as teachers implemented MI activities in their foreign and second language classes for approximately six weeks. To begin the MI study, teachers explained the research project to students in selected classes, and secured parental permission for participation.

The researcher provided teachers in the project with data charts in which they recorded the frequency of implementation of MI activities in their classes. As mentioned earlier, participating teachers communicated electronically with the researcher, providing weekly updates and reflective comments on the ongoing progress of the research project (Appendix B). Their messages included pertinent observations of class responses and individual student reactions. Teachers also provided the researcher with descriptive narratives to summarize their own feelings about the research project (Appendix C).

Data Analysis

An examination of all data sources provided rich information. Qualitative data consisted of teachers’ electronic communications, i.e., reflective journals, weekly activity logs, lesson plans, project descriptions, student exit slips (Appendix D), and participants’ comments at the end of the study. Quantitative data included looking at student grades both before and after the MI study to determine if there had been a change. Finally, a reflective interview was conducted with teachers at the end of the study, ascertaining their views on their participation in this action research. Descriptive data were collected providing answers to the three research questions. For the purposes of this paper, the primary focus on results will be highlighting the teachers’ participation in the study, i.e., discussing their outcomes as reflective practitioners.
Results and Discussion

The following are answers to the research questions posed at the beginning of this article:

1) From the teachers’ reflective practices what has been the impact of MI-based teaching? The activity log grids provided an immediate mirror for teachers to reflect on their teaching. The balance or lack of teaching to all intelligences soon became quite apparent. For instance, “I was shocked to see that I have very little planned for the Intrapersonal/Introspective intelligence. When some of the activities are group-oriented, I do allow for those who want to work alone to do so. However, I need to include more introspective activities for them. I was also amazed that there are very few students who have Naturalist as one of the stronger intelligences. I guess I somehow need to work on this so that this intelligence can be stronger! I will have to work on this since it is difficult for me.” A teacher discussed acknowledging her comfort level and how she felt when it was abandoned. “…when I go beyond my level of comfort and not everything runs smoothly, there can still be successful moments in the classroom.”

The participating teachers noted that initially they were quite unaware of how dependent they had become on teaching to their own strengths. For instance, they quickly pointed out that they realized they taught the way they preferred to be taught. One teacher wrote, “It wasn’t until I started keeping the journals and logs and really started focusing on what I do and why I do it. I soon realized that there was room for a more ‘balanced’ approach to my teaching.”

2) In what ways do teachers apply the MI theory in foreign and second language classrooms? The teachers modified their lessons in an attempt to activate all the multiple
intelligences as they presented thematic units. They developed instructional plans that incorporated a number of multiple intelligences-based activities and products. See Appendix E. Using a variety of planning tools, teachers exchanged ideas and shared successes as they implemented new and innovative instructional strategies and assessments.

One teacher wrote: “In doing this study, I learned how much I have changed since my first year of teaching Spanish 18 years ago! At that point in time, I relied heavily on the teacher directed learning to worksheet practice- mostly in a very logical-mathematical format, which of course is one of my strongest areas! However, as the years went on, I tried to find new ways to reach all my students and involve all of them. Now, I see how much I rely on MI activities to reach all students and keep them involved. If one way doesn’t work for them, another will. Having to teach a class without the use of the many different activities made it very difficult, since it is now my “style” and many of the activities are what I am known for. In fact, it often didn’t matter that I didn’t use the chants, rhymes, stories, etc since these were advanced students, they had already been exposed to them in an earlier class and they brought them up and recycled them without me.”

The department chair wrote to the researcher at the end of the study and summed up the experience:
“We have all grown and become better teachers. Our discussions have provided rich input for professional development. We all agree that MI-based teaching provided a conduit for us to reach all learners. Writing about our experiences enhanced our
abilities as reflective practitioners and what made this particularly gratifying was that we became an even more cohesive community of learners.”

3) How are the applications evidenced in instructional strategies?

The following are three emerging themes that resulted from coding and analyzing the teachers’ reflective journals and weekly activity logs: (A) Most teachers thought deeply about what took place in their classes. They were committed to making sure that instruction provided optimal learning opportunities for every student. One teacher wrote, “I am also more aware of the amount of/lack of participation of individuals. Since I encourage group responses, I frequently assume that all are participating, even though I know that this is not always true. Changing review methods is allowing/forcing every single student to participate. I am now “tracking” (albeit in a rudimentary manner) to ensure that everyone speaks during the class period.”

(B) They were open and receptive to “surprises” and carefully devised ways to address these issues. This was especially true when one teacher discovered that her one group preferred teacher-centered instruction and pencil/paper tests. The teacher wrote, “I have also been very surprised by the number of students (6 in the Control Group) who have come to see me to tell me that they like the class much better this way. I sensed from the third week of school that this class needed more structure, as their achievement on every assessment was lower than in my other classes. I did teach them differently, using mostly teacher-centered strategies that they found appealing, but having Spanish 3/4 last period in the day presented another challenge in the learning process. Remarkably, their scores have been improving.”

(C) Each teacher readily acknowledged that their teaching was not a fluid process. All of the teachers involved in
the study readily admitted that they had not realized the need to modify teaching
techniques from one class period to the next – that what worked well with one group did
not have the same impact with another class. This required a constant adjustment to adapt
instruction and to fit the group with which they were working. One teacher wrote, “Even
as a twenty-three year veteran teacher, I find that I am still growing and learning. How
exciting to know that I can teach the same content but in different ways to different
students.”

This group of teachers was collegial and clearly formed a community of learners.
They supported each other and actively and unanimously sought the opportunity to
participate in this study. They were open and receptive to new ideas and each reflected
on how they had grown from having participated in the study. “I learned some valuable
things for my own benefit during the study. One of the reasons I became a Spanish
teacher is that I wanted to have all the fun that the FL teachers have….. It was a
worthwhile experience as it brought to mind that all types of instruction and activities are
needed.”

**Conclusion**

This study highlighted some preliminary findings and raised a few important
questions for future research. The effects of MI intervention were documented. The
belief that how one is taught, what strategies are utilized, and in what manner information
presented, can and do affect student learning was reaffirmed. Learner-centered
instruction from the perspective of multiple intelligences further demonstrated that
students’ strengths and weaknesses can be affected by a teacher’s pedagogical style.
Students in the experimental classes were more enthusiastic about learning and behavior problems were minimized.

The author’s role as researcher has been enhanced because of this work. This study has convinced the author that educators must push themselves to look for evidence which might challenge their assumed views. For instance, they may ask themselves the following questions: Why do I teach this way? What are my basic beliefs (philosophy) about teaching and learning? Why does a particular instructional strategy work well for some students and not others? The author proposes the use of Figure 1 as a graphic organizer to conceptualize this process.

Figure 1

In conclusion, this study provides further evidence that the theory of multiple intelligences may have significant implications for instruction in foreign and second
language classrooms. MI theory has the potential to make a positive impact on both teachers and students. Practitioners who thoughtfully apply the theory to support educational goals may discover multiple paths to contribute to their overall effectiveness as educators. Teachers who plan and organize instruction around the learning preferences of individual learners, emphasizing special strengths and shoring up underutilized gifts and talents, may unlock the full learning potential of their students. The benefits of implementation of the MI theory in daily instruction relate to academic achievement and student motivation. Future research should explore these issues in greater depth to better understand how best to teach culturally, linguistically, and cognitively diverse students.

References


Appendix A

Multiple Intelligences Research Project
Weekly Reflective Journal

Teacher

Class: Subject Spanish  Grade level_Sp 3/4 (second year)
Week # 2  Date  October 18-22, 2004

Open-ended responses for this week’s lessons

________________________

**Something I learned:** I learned that the Project Planning Grid (from notebook materials) is enormously beneficial. In fact, I decided to turn it into my Weekly Log (see other attachments). I planned lots of activities, and then selected the ones I wanted for the week. I've actually begun relying upon it to get a better objective on more of the strategies. I was pleased to see that I covered several intelligences in most activities, but am concerned about those that I don't incorporate too often. In fact, I will use this even after the study is concluded.

I'm also learning that structure is not such a bad thing. The academic successes in the Control Group continue to show improvement. Many have reiterated that this is a good approach for them, but that they wouldn't mind a song every so often. (They heard about all the activities in the MI group and my other classes and are feeling left out.) As I mentioned last week, I had already decided to move away from so many strategies with this class. I continue to believe that my decision was well-founded and that made the transition for this study that much easier.

________________________

**Something that surprised me:** After reviewing results of MI inventories, I was surprised to find how many of the students came out "high" in the Bodily-Kinesthetic intelligence. I continue to try to engage these students in movement (Charades, racing to board for sorting challenges, etc.), but find my strategies to be ineffective. Perhaps I need to look into other types of engaging activities? I also recognize that this class is the first of the day, so maybe they are still too tired to move. (They are very docile but cooperative at 8 a.m.)

I was also surprised by the results of Survey I. I make a concerted effort to treat each class the same, but it appeared to me that the Control Group was less positive about their experiences-to-date. There is a general feeling of discomfort/malaise many days that could be the result of several factors: the teacher is tired by the last period of the day;
there are students in the class who haven't liked Spanish since they began it over a year ago; there are strong negative feelings between certain members of the class; the academic successes have not been stellar, although no one comes in for extra help; and, finally, social situations seem to precedence over schoolwork. I am still "sorting through" these factors, trying to help students be successful and to enjoy the Spanish 3/4 experience. Looks like I have my work cut out for me! (On the other hand, the MI responses were more positive than I had hoped for, considering the population.)

Something that concerned me: I am trying to adapt many of the materials for both the MI and Control groups. In the MI group, we do choral responses, sorting, sharing, etc. In the Control Group, they translate, and then answer questions one by one. Is this wrong? Should I be creating different materials?
Multiple Intelligences Action Research Project
Classroom Log

Teacher ____________________

Class: Subject _______Spanish 3/4______ Grade Level _______9-12______

Week # __2___ Middle of unit on Tech____ Date _____10-18 / 10-22______

Implementation of MI Activities

<table>
<thead>
<tr>
<th>MI Focus</th>
<th>Activity Descriptions</th>
<th>Target Content/Skills</th>
<th>Class Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bodily / Kinesthetic</strong></td>
<td>7. board game vocab. In pairs students use macaroni or other shapes. The first one to identify the place leaves their item on the board. (teacher gives description of the place or says what can be done there) Winner of pair gets piece of candy.</td>
<td>lugares vocab</td>
<td>20 min</td>
<td>students love to do this and it’s a great way to reinforce / learn the vocab.</td>
</tr>
<tr>
<td><strong>Logical / Mathematical</strong></td>
<td>see #3. backside of handout was 2 cryptograms &amp; one hidden message activity.</td>
<td>lugares vocab</td>
<td></td>
<td>most kids found the puzzles fun and tried those first before the sentences</td>
</tr>
<tr>
<td><strong>Verbal / Linguistic</strong></td>
<td>1. weekly tarjeta (every day this week—1st 3-4 minutes)</td>
<td>repaso de varios cosas</td>
<td>3-4 min</td>
<td>we do this each day at the bg. of the hour</td>
</tr>
<tr>
<td></td>
<td>2. in groups of 4-5 students 1st review vocab, then as a team answered the 15 questions on Smrtrbrd—team w/most correct in fastest time wins.</td>
<td>lugares vocab</td>
<td>10-12 min</td>
<td>the win team won a bag of MM’s to split</td>
</tr>
<tr>
<td></td>
<td>3. handout on places—worked by on own 1st &amp; then we worked as a whole group. Handout had sentences w/blanks as well as puzzles.</td>
<td>lugares vocab</td>
<td>15 min</td>
<td>they like competing to be 1st to answer</td>
</tr>
<tr>
<td></td>
<td>4. test on tech. vocab see #6. see #8. see #10.</td>
<td>tech vocab lugares vocab</td>
<td>20-25 min</td>
<td>no choices for testing options as most of this instruction was prior to the MI study.</td>
</tr>
<tr>
<td><strong>Visual / Spatial</strong></td>
<td>see #1—tarjeta ? is on the Smartboard see #2 see #7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naturalist</td>
<td>Musical / Rhythmic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Interpersonal / Social</td>
<td>see #2. see #3. when worked on handout as a group. 5. worked in pairs on vocab – pronouncing the Spanish word for the partner to say in Eng. &amp; vice versa. see #7 9. peer edited the 20 sent. from #8. 10. read out loud their best sentence from #8.</td>
<td>lugares vocab</td>
<td>10 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lugares</td>
<td>5 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lugares</td>
<td>5 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>we did this after the test</td>
<td>I haven’t done much peer editing before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrapersonal / Introspective</td>
<td>see #3. when worked on handout by self. 6. Pop-up quiz—students pops up, is given a vocab, &amp; has 5 seconds to answer. ¼ of vocab used. 8. Write 20 sentences using places vocab. Must state the place, what you do there, who going w/, when you go, or describe it. Must write complex’ish’ sentences.</td>
<td>lugares vocab</td>
<td>5-8 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>lugares vocab</td>
<td>30 min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>we’ll do this again w/another column of vocab.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix C

Samples of Teachers Reflections

Something I learned: “Integrating more structure into my Control Group is interesting and challenging. I like the sense of control, being the one to answer questions, to repeat instructions, etc., but miss the contributions of the students who, when helping out one another, are sometimes more articulate than am I. (And in the cases where this is not true, I learn from my mistakes and provide more detailed information in subsequent assignments.) I miss that validation that I have come to rely upon.”

Something that concerned me: “It is somewhat tough to prepare the same prep yet prepare different materials.”

Something that surprised me: “In the Control Group I have been making a concerted effort to eliminate choral responses and to call on students individually or to encourage volunteers. When I was doing a quick review of previous material, students started calling out answers while I wrote them on the board. Finally one young lady expressed frustration and said that she was confused, that she thought we were doing things differently, and she would appreciate individual answers so that she could hear better. I was surprised that I had “slipped” so easily but was enormously pleased that this student had the courage to speak up. She is normally very reticent and does not achieve high academic scores, so I looked at this in a positive manner, all the while hoping that my red face was becoming less so!”
Appendix D

Multiple Intelligences Research Project

Student Exit Slip (A)
Free Response Questions – Instruction this Quarter

1. How was instruction in this class different?

“The class was taught more visually and hands-on. We did more group activities and verbal activities.”

2. What 3 activities did you find most helpful to you as a learner? Explain why.

“Flashcards – they were a good way to memorize and review vocabulary. I also liked using the computers with graphics. That was fun! Working with groups and partners gives everybody a chance to practice.”

3. What did you find out about yourself as a learner this quarter? How is this helpful?

“I learn better when I can see, hear, and move. I also like attaching a word to a picture. Words seem to stick if I can see, hear, and say them over and use them in meaningful ways.”

4. Now that you know about the Theory of Multiple Intelligences, how is this valuable in education?

“Every student learns better in a different way so I think that doing a little of each type of teaching would be most beneficial to all students. Now I know that I am smart “intelligent” in many different ways and I use that in all my classes.”
Student Exit Slip (B)

Please answer the following questions:

1. List two (2) things that you liked about today’s class.

“I liked the game with the flash cards but I also enjoyed the chance to review with the overhead.”

2. What is one (1) thing you would like to change about this class?

“Nothing about the class really, but I didn’t have my flashcards so that was bad.”

3. Today I did really well at…..

“The game with the flashcards. I did well trying to match the words with the pictures.”
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Watch skating video- journal using questions about sports, own interests, etc.</td>
<td>15 min., 10/18</td>
<td>x</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Some students struggled when journaling while others enjoyed it. Obvious intra style students.</td>
</tr>
<tr>
<td></td>
<td>Discuss ideas developed as groups and then as class</td>
<td>10 min. 10/18</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>In control group I did this as asking and answering individually and it the students still listened and paid attentions. I was amazed!</td>
</tr>
<tr>
<td></td>
<td>Explain Gustar and like verbs- using rhythm to review IO pronouns and patterns</td>
<td>15 min. 10/18 (rev. 10/19)</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Book activities on pattern drill but done in groups and random checked as group</td>
<td>10 min. 10/19</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Homework- teacher wkst. on gustar-translation</td>
<td>10/19</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Duration</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Checking wkst.- place on board then as group analyze them.</td>
<td>20 min. 10/20</td>
<td>x x x x x x This helps kids recognize own errors while allowing for errors. They are still uncomfortable not having this perfect and I had to remind them that through the errors we learn!</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>book activity- question/answer in groups and then call on ind. as class</td>
<td>15 min. 10/20</td>
<td>x x x x book activity- question/answer in groups and then call on ind. as class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book ACT. In Rally read form- puts 3 columns together to make sentence- but had one student do one section, another the next and a 3rd the last with explanation of why</td>
<td>7 min. Oct. 21</td>
<td>x x x Book ACT. In Rally read form- puts 3 columns together to make sentence- but had one student do one section, another the next and a 3rd the last with explanation of why</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Very interesting, this is 1st time I have tried this activity. It really made the kids interdependent, listening to each other since based on 2nd persons choice of sing. Or plural affected the choice of the 3rd. Kids developed the pattern of the this type of structure.
| 15 min. 10/21 | x | x | x | x | (x-preparation part) |

When I started, I said, "Guess what we are going to do?" and some of them got all excited and said "Dance"! (That's what they call it.) They enjoy the movement, music and freedom but I still walk around checking on them.
Human graph- had labels of love to dislike a lot. Used 10 students calling out diversion vocab. And they made formed line making human graphs. Others had to describe what the graph told us. | 10 min. 10/21 | x | x | x | x | x | Again, students enjoyed the movement and we used the language creatively but simply.

Prioritize likes of leisure activities- 7 act. On board students prioritize the find other in class who has the same and discuss why. | 7 min. 10/21 | x | x | x | x | x | This is nice because is has them not only tell what they like but also explain why.

Psychic- using same list, look at another person and guess their priority list, then discuss and compare. | 5 min. 10/21 | x | x | x | x | I like this one since it has them doing own information gap activity.

HW- teacher made review sheet in which they translate, and, given situations, tell how they and other people feel and why. | 21-Oct | x | x | This is nice because is has them not only tell what they like but also explain why.