Appendix E

Readings #6 and #14

Contents:

TWO AMI TEACHERS' PERSPECTIVES: MULTIPLE WAYS AROUND RESISTANCE THROUGH MULTIPLE INTELLIGENCES

Wendy Quiñones and Elizabeth (Betsy) Cornwell

In this article Wendy Quinones and Betsy Cornwell share the new understanding they developed in the course of their AMI teacher research. Both teachers faced an incongruous form of student resistance to learning skills that seemed to be well within students' reach and stated goals. They came to believe that for many "resistant" students, success in academics threatened their social relationships and sense of self in complex and puzzling ways. Betsy and Wendy found that MI-based learning activities offered a promising way to sidestep this resistance. They developed non-traditional activities that lowered the presumed threat to self by circumventing paper and pencil tasks and tapping the students' strengths rather than expecting them to change their disposition. For one of the students featured in this article, the MI-based learning activity became the watershed event that paved the way to her successful completion of the geography coursework she previously resisted.

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In a language arts class, Sue has just spent a half-hour or so working on homonyms. Because Sue is masterful at creating things with her hands (spatial and bodily-kinesthetic intelligences) her teacher suggested an exercise of modeling the letters for there, their, and they're in play dough and arranging them according to their different usages. Sue seems to both enjoy the exercise, and gain a clear understanding of which word to use where. But later, when making corrections to a letter she's writing to the housing authority in her town, she struggles with the same homonyms. "There," the teacher says. "You know this; we just finished working on it. Is this the right word here?" Sue throws down her pencil and refuses to think further about the problem. She says angrily, "I can't do this. I never can do things like this. I'm just too stupid."

Diane is determined to earn her adult diploma this year and has only the world geography unit to complete. Punctual, enthusiastic, and diligent in most things, she is late for appointments to work on geography at the library, is sullen and unresponsive during the lessons at her home, and procrastinates in doing the worksheets. The deadline for graduation passes with the unit still incomplete. Diane grouses in her learning log, "I asked why I would ever need geography for my life. She [the teacher] won't answer me about geography. She is up to spring something on me that I don't know about yet."

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Any teacher in adult education has stories like these: students refusing to attempt or to master tasks well within their reach, students seemingly unwilling to learn subjects required for achieving their stated learning goals. These students frustrate, exhaust, and discourage us, for they seem so capable – and yet they seem to refuse to succeed and resist what we thought were our best efforts to help them reach their own goals. In our

research, we found that combining a new understanding of the source of this resistance with the use of MI-inspired lessons provided a wealth of exciting avenues for helping students work toward their goals.

Let us be clear about the phenomenon we are discussing here. The student who fails to learn – whose abilities are not up to her ambitions – is not our topic. Rather, we are seeking to understand the student who, while she may be cooperative in many other ways, is in at least one area actively, willfully, consciously refusing to learn what we are attempting to teach. These are students who, according Herbert Kohl (1994), are actively engaged in "not-learning." Such not-learning is no easy feat, says Kohl: "Learning how to not-learn is an intellectual and social challenge; sometimes you have to work very hard at it" (p.2). He continues, "It can require actively refusing to pay attention, acting dumb, scrambling one's thoughts, and overriding curiosity" (p. 4).

For us, teachers who have devoted such a large part of our lives to the process of learning, such an attitude seems incomprehensible. These students **say** they want to learn, but our methods, which work well with other students, don't seem to work for them. What's the problem?

We believe the issue revolves around the resistance generated by conflicts between students' desire to learn and "the larger context of the choices they make as they create lives and identities for themselves" (Kohl, p. 10). A rich academic literature of what is called "resistance theory" focuses on issues of race, gender, culture, and language conflict in education shaped by the dominant culture. According to that theory, for example, the standard American teaching about Christopher Columbus might conflict with a native American student's beliefs and historical perspective. For a Latino child, learning English might compromise a sense of loyalty to family and native country. Resistance in these cases could be anticipated, even seen as a healthy response. While questions like these certainly play a part in the not-learning we see among our students, we believe, as does Kohl, that education may raise many other "unavoidable challenges to adults' personal and family loyalties, integrity, and identity" (p. 6).

Sue, for example, is the single mom of a toddler. Although she has a diploma from a vocational high school, she is nearly illiterate. Determined to improve her reading, she has been both attending Wendy's 20-hour a week education program and working with a special reading tutor; her reading ability is improving markedly. Her son's father does not support the family economically, but he is actively involved with both Sue and the child. He seems threatened by Sue's increasing skills and self-confidence. He tells her the teachers are lying when they say her reading is improving – she is really just as stupid as she ever was. Furthermore, he insists, she shouldn't be in an education program anyway – she can't be a good mother unless she's home full-time with her child. Sue herself grew up as the child of a single mom, and she is determined that her son will have his father. She also wants very much to improve her reading and go on to college. These goals are in direct conflict. She honors her learning goal by coming to the program; perhaps her not-learning is an attempt to placate her son's father and thus honor her family goal.

Diane participates in a family literacy program in rural Maine. Both an early childhood specialist and Betsy, an adult education teacher, come each week to the cluttered, tumbledown house trailer Diane shares with her husband and four children. Diane has indicated her suspicion and contempt for what she calls "smart people" – those who know everything and never need to ask questions because they know how to find things in books. Going to the library, looking in atlases, even acknowledging that she

owns a complete and current encyclopedia, may simply place her too close to that category of "smart people" she scorns.

In other words, what to us seem like simple learning activities in pursuit of a set of stated goals are, for Sue and Diane, threats to other, perhaps unstated, goals and familiar identities. In willfully refusing the tasks we set for them, they are not merely being irrationally oppositional or defiant, fearing failure, or engaging in power struggles. Although these may play a part in not-learning, it is critical for teachers to realize that the not-learning student is, as Richard Everhart (1983) says, acting as an agent "with the ability to interpret the meaning of social situations and to take action based on those meanings" (p. 20). Our not-learning student is interpreting what we are asking her to do from a system of goals, beliefs, and values different not only from ours but also perhaps different from – even in conflict with – others she has stated. The actions she takes based on her interpretation – her not-learning – provide a satisfaction far different from the feelings produced by failure to learn. According to Kohl, the personal consequences of failure "are most often a loss of self-confidence accompanied by a sense of inferiority and inadequacy" (p.6). Not-learning, by contrast, "tends to strengthen the will, clarify one's definition of self, reinforce self-discipline" (p. 6).

So what's a teacher to do? We are, after all, not therapists. Many of the factors that influence our students' decisions about learning are simply beyond the scope of schools and teachers. It's not for us to insist that Sue get rid of her son's verbally abusive father so that she can learn. It's not for us to force Diane to accept an identity she despises so that she can learn. Directly confronting students with these conflicts before they are themselves ready to acknowledge and resolve them is likely to produce only more and more passionate not-learning.

It is, however, precisely for us to acknowledge and respect the fact that Sue and Diane do have reasons for their not-learning. These reasons may or may not appear valid to us, but they are valid to the not-learning student – even when neither she nor we can precisely identify them. Identification isn't important. Respect is. Once we respect that the motivation behind the student's behavior is valid for her, we can abandon the efforts to change or ignore it, efforts which produce precisely the not-learning that frustrates us. Instead, we can acknowledge and move around the conflict to concentrate on the learning goals we share with the student, concentrating on her interests and strengths.

And here is where MI comes in. There are many avenues to learning; MI-based activities allow us access to many more of them than do more traditional methods. Sue, for example, is gifted and enthusiastic in artistic and dramatic endeavors. Give her play dough, markers, craft materials, or the assignment to produce a skit, and she can participate in and even design successful learning activities. Translate the same material to paper-and-pencil tasks, and all of her energy goes into not-learning. Sue's interpretation of learning seems to dictate that competency with paper and pencil (linguistic intelligence) threatens her goal of retaining a relationship with her son's father while competency with play dough, markers, crafts, and skits (spatial, interpersonal, bodily-kinesthetic) does not. Therefore, when we use these ways to teach, she will learn. When we switch to paper and pencil, she will not-learn – throwing her pencil down in disgust, doodling, or telling jokes to diffuse the conflict she feels and to prevent herself from learning.

Similarly, while Diane refused to go to the library to "find things in books" about the countries she needed to research for her geography unit, she happily (and on her own) cut and saved items out of newspapers and magazines. Although at first the cuttings seemed

to be chosen at random, Diane eventually (and again on her own) demonstrated her collection strategy by organizing them into folders labeled with the subjects that interested her – Princess Diana, the Unabomber, JonBenet Ramsey, and Terry Nichols, among others. Building on Diane's strong interpersonal intelligence, Betsy was then able to organize geography lessons around people and current events, evidently without threatening to make Diane into a "smart person." In addition, being able to do research in her own home with the newspaper, her encyclopedia, and stacks of old National Geographic magazines bought at yard sales also apparently avoided threatening Diane's identity as a stay-at-home mom. She noted with satisfaction in her log,

Today I learned how to find places on the world map….On places that current events happened that was of interesting to me…Learn to use a map can be fun and interesting to do. Being able to travel to different places without having to get on the plane myself. Because I can do it from my kitchen table in my home.

We have presented these cases as if they were easy to figure out. They weren't! More importantly, we believe that "figuring them out" in the way we have done here is not always necessary and, in many cases, impossible. The circumstances surrounding the relationships between these two students and their teachers made it possible for the teachers to know a great deal more about their students than might normally be the case. But that knowledge about individual students isn't crucial to a teacher's ability to find successful learning strategies. We don't have to know students' individual histories.

We believe two things to be important, however. First, we must acknowledge that not-learning serves an important function in the lives and identities of our students. By honoring our students' stated and unstated goals even when they conflict with our own – and with each other -- we are expressing our confidence that our adult learners are capable of incorporating education into their own unique world views. Second, we must be willing and flexible enough to expand the number and variety of learning strategies we offer to our students so they may find their own paths to growth. We ask our students to take ownership for their own learning. For many, however, their only educational experience has been one that denied them responsibility for what and how they learned. For these students, resistance may be the only way they know how to achieve ownership. As Kohl says, "To agree to learn from a stranger who does not respect your integrity causes a major loss of self. The only alternative is to not-learn and reject the stranger's world." (p. 6). A teacher's recognition that resistance has purpose may be the beginning of helping the student discover a way of learning that she can own without that "major loss of self."

Will the use of MI mean that teachers can successfully skirt all not-learning? Probably not. The evidence is mixed even in our own examples, and there are many more issues for these students than the ones we have presented so far. Sue, for example, was homeless and seeking housing while she attended Wendy's program, and in addition to everything else seems to have a profound learning disability. Giving priority to her family goals, Sue relocated to out-of-town housing before the success of alternative MI-based activities could be tested. We hope she will be able to transfer her learning about homonyms from play dough to pen and paper, but we have no way of knowing. It is not possible for us to predict her future competence with pen and paper. But what seems equally apparent is that through MI, there are other avenues for her to learn other types of skills and content that might elude her if her only options for learning are reading and writing.

Diane is the survivor of childhood physical and sexual abuse. She endures flashbacks and other aftereffects that make it very difficult for her to hold a job or to accept criticism without becoming almost uncontrollably angry. Nevertheless, through Betsy's use of MI Diane found a way to avoid what are to her negative characteristics of "smart people" in order to complete her geography unit and earn her high school diploma.

Our experiences with MI make us hopeful that we can duplicate Diane's success with other students. We do not hope for unalloyed success – what teacher can expect that? But with the deepened respect for our students that this understanding permits, and with a wide array of MI-based learning strategies, we are optimistic that we can find ways around resistance and not-learning so we can help our students move closer to achieving their goals.

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MI-INFORMED PRACTICES AND COMMERCIALLY AVAILABLE RESOURCES

Meg Costanzo

In Jan Tucker's ABE classroom, students enthusiastically use hinged mirrors and pattern blocks to explore angles. The students work at their own pace, moving about the room to trade materials and share their findings with each other. Although Jan recognizes that this constructivist approach to learning takes more time, she also understands that her students "are learning in a way that lasts."

Robert Hoffman's students at the Community Correction Center work industriously in small groups to meet the challenge he has put on them:

> *With 20 sheets of 8½" x 11" paper (plain printer or photocopy paper) and a roll of scotch tape, design and build a structure with paper on which you can stack several large textbooks or encyclopedias. The structure must be 11" high and cannot be wider or longer than one sheet of paper. The team whose structure can support the most books win this competition!*

Robert is encouraged by his students' immediate involvement in this task. In the end, all those involved are amazed by the winning design that holds more than 50 heavy books. The students run out of ceiling clearance and never know how many more books that could have added to the pile.

In *Multiple Intelligences and Adult Literacy,* the authors refer to MI theory as a lens through which we view and understand our students, and through which we analyze and add to our repertoire of teaching and learning strategies. Creating an MI-informed classroom means applying the MI lens to your goals and analyzing your offerings to build on – not replace – current practices. "Going MI" does not require creating activities anew or implementing activities that are marketed as "MI lessons." In fact, there are many excellent resources available commercially that fit in an MI-informed classroom.

Let's return to our two AMI pilot classrooms with which we started out. Jan Tucker wants to use constructivist approaches that she feels MI theory suggests. Rather than create or find "MI Algebra" activities, Jan mines geometry resources and finds an excellent resource that aligns with the important aspects of MI theory that she wants to bring to her classroom (Burns & Humphreys, 1990). Jan may continue with this resource as her group moves onto other math topics. She may also want to find other entry points into a topic such as algebra (for example, using music to explore mathematical relationships) (Beall, 2000).

As an instructor working in a correctional setting, Robert Hoffman is always looking for innovative teaching ideas that work with his student population. He learned about the Tower Activity (NYC Board of Education, 2000) during an AMI Study Institute. He saw that it emphasized hands-on, small group work and engaged students in an authentic task using physics and math principles. Although he saw this lesson presented in a different context (as primarily an elementary school teachers' professional development activity), Robert successfully integrated the Tower activity into his adult education classroom.

Our primary point is that neither Jan nor Robert, nor any other teacher, needs to develop "MI activities" from scratch. Indeed, bringing together excellent resources from different subject areas or domains is, for most teachers using MI theory, a basic function

of the "MI lens." Moreover, considering available resources from an MI perspective gives teachers insight into how particular students or groups of students might benefit from these resources. In the two examples found above, teachers took materials that are conventionally used with younger students and adapted them for use in an adult learning context. Materials that teachers might have previously dismissed as too juvenile for adult learners, when viewed through an MI lens, can be seen as valuable resources for teachers who are working with adult populations.

Many of the adult educators involved in the AMI Study experienced success when incorporating into their lessons materials typically aimed at a middle school population. They found that their students responded especially positively to those materials that fostered classroom interaction. The activities also drew the students more closely into the learning process. Jan Tucker reported that her students benefited from having the opportunity to "mess around" with learning materials during "hands-on" exploratory sessions. For Jan, these were important criteria to consider when searching available commercial resources for her MI-informed practices.

Teacher researcher Diane Marlowe experienced similar success when she adapted a lesson from *Multiple Intelligences in the Mathematics Classroom* (Martin, 1996), another instructional resource geared to middle school age children. Diane expanded the two lessons on tangrams into a one term interdisciplinary project that infused literature, writing, and art into the math curriculum. Because Diane worked with adults, she was able to take the basic lessons suggested for use with school-age children and adapt them into a unit that reflected the interests, talents, and abilities of her students. Instead of merely making a display out of paper blocks made from tangram pieces, her class assembled an intricate tangram quilt constructed from fabric squares that the students designed and sewed themselves. The project allowed the students to draw upon their strongest intelligences as they worked together to complete the quilt. Diane wrote about this experience saying, "Students worked together and created a product that was useful and beautiful – and this created a bond that 'group work' would not have achieved" (Marlowe, 1997).

Teachers also adapted manipulative materials normally marketed for elementary school-age children and used them in adult classrooms. I had success using Fraction Stax® with my adult learners. This resource is a set of pieces representing commonly used fractions which, when stacked side by side on pegs, together equal one whole. Because I taught a multi-level GED/Adult Diploma class, I frequently had students working at different levels in math. By making up task cards that correlated with materials like the Fraction Stax®, I was able to have my students work independently on those specific skills which they needed to master and review. An example of one of these task cards is found below.

EXAMPLE OF FRACTION STAX® CARD

Work alone, in pairs, or in small groups to complete the following activity:

Using the Fraction Stax®, find the fraction piece that represents ½. Combining different fraction pieces, how many fractions can you form that are greater than one-half? (For example, ⅓ and ⅓ = ⅔. By placing the stacks side by side, you can see that ⅔ is greater than ½.) Record your findings in your math journal.

What do you notice about the relationship between the numerator and denominator for each of these fractions? In your own words, develop a

general rule for determining whether or not a fraction is greater than ½. Write down the rule in your math journal.

Think of other fractions with denominators different from the ones found in the stacks. Using these denominators, name any five other fractions that are greater than ½.

Using manipulative materials such as the Fraction Stax® helps bridge bodily-kinesthetic and spatial intelligences with logical-mathematical intelligence. Adult students often need an opportunity to make this connection before they can truly understand the mathematical concepts they need to master.

The teachers involved in the AMI Study learned that even the most inexpensive classroom materials can be used to generate MI-inspired lessons. Jean Voekel, another pilot teacher who works with Robert Hoffman at the Community Correction Center in Ohio, developed a two-week unit from a bulletin board set illustrating the solar system. In the past, to introduce this topic, Jean simply would have hung up the paper cutouts included in the set herself. However, after considering the materials through an "MI lens," she decided to give her students, males ranging in age from 18 to 56, the challenge of finding a way to display the cutouts. After learning how to interpret information regarding the scale used in the set, they devised a way to suspend the cutouts of the planets from the ceiling in the correct order and distance from the Sun. After working cooperatively to answer questions about the solar system, they researched additional information about specific planets, adding their findings to an information grid that Jean had started for them. Finally, using this newly found information, they wrote brief reports about the planets and helped each other edit their work. This richer education experience had its advantages. At the end, Jean wrote, "Although we spent much more time on this project because of the extra work, " I believe, from observations and comments of the students as they worked, that they enjoyed the unit much more" (Voelkel, 2000).

When determining the advantages of using a particular teaching resource with adult students, teachers would do well to consider the following questions, which loosely map onto MI tenets and related goals (see *Multiple Intelligences and Adult Literacy,* Chapter 1, MI Basics):

Do the materials…

address the learning goals?

encourage students to work in groups?

provide for "hands-on" learning experiences?

allow students to explore concepts at their own pace?

present "open-ended" assignments with no one right answer?

offer students a choice in how they demonstrate their knowledge?

invite students to solve an interesting problem that adults would find challenging and relevant?

develop critical thinking and problem solving skills?

If the fit is right, integrate the material into your practice. After all, every MI journey does not require reinvention of the wheel.