Adult Multiple Intelligences in Practice

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NCSALL

National Center for the Study of Adult Learning and Literacy

Adult Multiple Intelligences in Practice

This seminar guide was created by the National Center for the Study of Adult Learning and Literacy (NCSALL) to introduce adult education practitioners to the research that shows that instructional practices inspired by Multiple Intelligences (MI) theory have resulted in high levels of authentic instruction and student engagement. Given these findings, practitioners may be interested in exploring MI for use in their instruction. This seminar focuses on the experiences of the practitioner researchers in using MI theory. Programs or professional developers may want to use this seminar in place of a regularly scheduled meeting, such as a statewide training or a local program staff meeting. Use the seminar on Adult Multiple Intelligences Theory as a prerequisite to this seminar.

Objectives:

By the end of the seminar, participants will be able to:

- Use Multiple Intelligences theory in their own instruction

- Explain the benefits and challenges of using adult multiple intelligences in adult literacy

- Name ways to use multiple intelligences in working with learners

Participants: 8 to 12 practitioners who work in adult education—teachers, tutors, counselors, and others

Time: 3 ½ hours

Agenda:

10 minutes	1.	Welcome and Introductions
5 minutes	2.	Objectives and Agenda
60 minutes	3.	Discussion of Reading: Emerging Themes
15 minutes		**Break**
105 minutes	4.	Multiple Intelligences in Practice

10 minutes 5. Evaluation of the Seminar

Session Preparation:

This guide includes the information and materials needed to conduct the seminar: step-by-step instructions for the activities, approximate time for each activity, and notes and other ideas for conducting the activities. The readings, handout, and signs, ready for photocopying, are at the end of the guide.

Participants should receive the following reading at least 10 days before the seminar. Ask participants to read the article, take notes, and write down their questions for sharing at the seminar.

- 📖 **Emerging Themes in Adult Multiple Intelligences** (*Focus on Basics*, Volume 3, Issue A, March 1999)

The facilitator should read the article, study the seminar steps, and prepare the materials on the following list.

☐ **Newsprints** (Prepare ahead of time.)

___ Objectives and Agenda (p. 6)

___ Discussion Questions (p. 8)

___ Useful/How to Improve (p. 11)

▤ **Handouts** (Make copies for each participant.)

___ *Menu of Activities*

For ABE teachers/tutors:

___ *Putting Theory into Practice*

___ *Multiple Assessments for Multiple Intelligences*

___ *"I Can't Learn This!" An MI Route Around Resistance*

For GED teachers/tutors:

___ *MI, the GED, and Me*

___ *"I Can't Learn This!" An MI Route Around Resistance*

For ESOL teachers/tutors:

___ *Multiple Assessments for Multiple Intelligences*

___ *Putting Theory into Practice*

For Counselors:

___ *Adding a Dimension to Career Counseling*

📖 **Reading** (Have two or three extra copies available for participants who forget to bring them.)

___ **Emerging Themes in Adult Multiple Intelligences**

Materials

___ Newsprint easel and blank sheets of newsprint

___ Markers, pens, tape

Steps:

1. Welcome and Introductions   (10 minutes)

- **Welcome participants** to the seminar. **Introduce yourself** and state your role as facilitator. Explain how you came to facilitate this seminar and who is sponsoring it.

- **Make sure that participants know** where bathrooms are located, when the session will end, when the break will be, and any other housekeeping information.

- **Ask participants to introduce themselves** (name, program, and role).

> **Note to Facilitator**
> Since time is very tight, it's important to move participants along gently but firmly if they are exceeding their time limit for introductions.

2. Objectives and Agenda   (5 minutes)

- ☐ **Post the newsprint <u>Objectives and Agenda</u>** and review the objectives and steps with the participants.

Objectives

By the end of the seminar, you will be able to:

- Use Multiple Intelligences theory in your own instruction

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- Name ways to use multiple intelligences in working with learners

Agenda

1. Welcome and Introductions (Done!)
2. Objectives and Agenda (Doing)
3. Discussion of Reading: Emerging Themes
4. Multiple Intelligences in Practice
5. Evaluation of the Seminar

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3. Discussion of Reading: Emerging Themes   (60 minutes)

- 📖 **Explain that, in this next activity,** participants will reflect on the reading for today's meeting.

  [Note to facilitator: The author, Kallenbach, states that, while there is no one way to apply MI theory to teaching, some common instructional approaches emerge as the ten teacher researchers in the Adult Multiple Intelligences (AMI) Study investigate how MI theory can be applied to adult literacy education. The author argues that using an MI framework leads teachers to expand their instructional approaches, offer a variety of learning activities, and promote constructivist learning. She also determines that MI theory supports and validates multimodal teaching and that teachers learn more about students' strengths and build on them in instruction. Kallenbach asserts that MI activities can engage students in material that they may have resisted and that students sometimes find it useful to reflect on their learning styles. She advises that developing metacognitive skills is a lengthy process and requires a sense of trust and community and a shift in the balance of power in the classroom. The author concludes that teachers learn more about students and increase their expectations of their students and of their own teaching when using MI-inspired instruction.]

- ▭ **Post the newsprint** <u>**Discussion Questions.**</u>

  Ask the participants to form small groups of three to four people to explore the following questions. Ask the groups to also note questions that arise during their discussion that they would like to discuss with the whole group.

Discussion Questions

- What did you see as the key points of the article?
- What evidence have you seen in your practice to support the theory that there are many ways to be "smart?"
- What implications do you think MI theory has for teaching and learning?
- How might you observe learners' intelligences?
- What might you do to draw on students' strengths?
- What resources would you need in order to implement MI-inspired teaching/counseling?
- How might you introduce MI theory to learners?
- How do you think students might respond to MI theory and MI-inspired activities?

Helpful Hint

If you find that participants don't have follow-up questions or seem quiet, you should begin to ask questions that you feel can facilitate more discussion in the large group format.

- **After 35 minutes, reconvene the whole group.** Each group reports back to whole group about any observations, questions, or issues that arose from the reading or small group discussion. After each group presents, there should be time allotted for questions and comments from other groups. (This should be encouraged by the facilitator.)

Break (15 minutes)

4. Multiple Intelligences in Practice   (105 minutes)

- **Explain to participants** that in this activity they will reflect on how to use MI theory in their own contexts.

- **Ask the participants to form small, working groups** according to the context in which they work: adult basic education (ABE), GED, English for Speakers of Other Languages (ESOL), and counseling. Invite them to take 30 minutes to read and discuss the articles written by the practitioner researchers.

- 📄 **Distribute the handouts** as listed below to the working groups.

  For ABE teachers/tutors:

  Putting Theory into Practice

Multiple Assessments for Multiple Intelligences

"I Can't Learn This!" An MI Route Around Resistance

For GED teachers/tutors:

MI, the GED, and Me

"I Can't Learn This!" An MI Route Around Resistance

For ESOL teachers/tutors:

Multiple Assessments for Multiple Intelligences

Putting Theory into Practice

For Counselors:

Adding a Dimension to Career Counseling

[Note to facilitator: The summaries of the articles follow.

Putting Theory into Practice describes how teachers in two distinct contexts, one comprised primarily of Hmong immigrants learning beginning English and the other consisting of mothers receiving public assistance and having low literacy skills, use MI theory to assess students and then to shape instruction by building on their students' intelligences. The two authors observe improvements in learners' skills when they offer a variety of activities within lessons, allowing students to express their strengths and to explore new avenues of learning.

In *Multiple Assessments for Multiple Intelligences,* the authors argue that MI theory offers an extended framework for assessing students for demonstrated mastery of material. Costanzo, who teaches beginning and intermediate ESOL learners, and Paxton, who works with ABE, GED, and adult diploma students, explain their differing views on the value of asking students to assess their own intelligences and speculate that students' cultural and educational backgrounds may influence their responses to this activity. Both authors determine that, when using MI-inspired activities, classes become student-centered as students reflect on their skills and the skills of others. Meaningful assessment and project-based activities encourage students to assume control of the learning process and to value themselves and others in a nontraditional, teaching and learning community.

In *"I Can't Learn This!" An MI Route Around Resistance,* the authors assert that students' conflicting goals often interfere with learning and argue that MI-inspired lessons can help overcome resistance to learning skills that are within students' reach. They propose that, when given the opportunity to learn and express knowledge through various

intelligences, students feel less threatened and can find their own path for learning

In *MI, the GED, and Me,* the teacher researcher asks whether GED-based, MI-informed activities help students use their intelligences as learners and GED test-takers. This study focused on two classes, one in which the author implements MI-informed activities, and the second a traditional GED class. The author discovers the importance of allowing students to choose from a menu of activities and develops "Choose 3" lessons in which students select three activities. The author determines that, by providing these options, students were able to use their strongest intelligences and notes increased student involvement and improved attendance and retention for all students, including those with learning disabilities (LD) and attention deficit disorder (ADD).

In *Adding a Dimension to Career Counseling,* the author describes how she used MI-inspired activities in a career center to help clients identify potential careers. She found that these MI-related exercises enhanced the discovery process as students assessed their intelligences and possible career paths.]

- **Reconvene the large group** and invite participants to share what they found surprising or intriguing from the articles.

- 🗎 **Distribute the handout *Menu of Activities*.** Ask participants to choose one of the activities on the handout to demonstrate what they have learned from the research on adult multiple intelligences. Explain that they may work alone, in pairs, or in small groups for the next 30 minutes to complete the activity. Invite participants to state the option they are choosing so that they might identify partners or small group members, if desired.

- **Reconvene the large group** and invite any participants to share their activities. **Then facilitate a 10-minute discussion**, using the following questions as a guide:

  - **?** *How do you feel about having choices?*

  - **?** *How did this help you to understand the articles?*

  - **?** *How do you feel about using MI-inspired activities with your learners?*

> **?** *What do you see as the challenges and rewards in using MI-inspired activities?*

- **Summarize the discussion** and refer those participants who want a more in-depth understanding of the research to the following resources:

  Kallenbach, S. & Viens, J. *Multiple Intelligences in Practice: Teacher Reports from the Adult Multiple Intelligences Study.* (NCSALL Occasional Paper, 2001)

  Kallenbach, S. & Viens, J. *Multiple Intelligences and Adult Literacy: A Sourcebook for Practitioners.* New York: Teachers College Press, 2004

5. Evaluation of the Seminar (10 minutes)

- **Explain to participants that, in the time left, you would like to get feedback from them about this seminar.** You will use this feedback in shaping future seminars.

- ⬜ **Post the newsprint <u>Useful/How to Improve.</u>**

Useful	How to Improve

  Ask participants first to tell you what was useful or helpful to them about the design and content of this seminar. Write their comments, without response from you, on the newsprint under "Useful."

- **Then ask participants for suggestions on how to improve the design and content**. Write their comments, without response from you, on the newsprint under "How to Improve." If anyone makes a negative comment that's not in the form of a suggestion, ask the person to rephrase it as a suggestion for improvement, and then write the suggestion on the newsprint.

- **Do not make any response to participants' comments during this evaluation.** It is very important for you not to defend or justify anything you have done in the seminar or anything about the design or

content, as this will discourage further suggestions. If anyone makes a suggestion you don't agree with, just nod your head. If you feel some response is needed, rephrase their concern: "So you feel that what we should do instead of the small-group discussion is . . . ? Is that right?"

- **Refer participants to the National Center for the Study of Adult Learning and Literacy Web site (www.ncsall.net) for further information**. Point out that most NCSALL publications may be downloaded for free from the Web site. Print versions can be ordered by contacting NCSALL at World Education: ncsall@worlded.org.

- **Thank everyone** for coming and participating in the seminar.

Reading 📖

(To be read by participants *before* the session.)

Emerging Themes in Adult Multiple Intelligences
by Silja Kallenbach
Focus on Basics, Volume 3, Issue A, March 1999, pp. 16–20

A team of teachers researched the effects of using multiple intelligence-influenced instruction in their adult education classes. Their experience suggests that MI theory has much to offer adult basic education.

A group of Latino elders is gathered in the kitchen of Centro Hispano in Chelsea, MA, for their English lesson. One woman is scraping the gelatin from an aloe vera plant while an elderly man is blending chopped onions and water. Another "senora" is chopping limes; several others are assisting and observing. They are talking animatedly in halting English peppered with Spanish about different ways to heal various ailments with natural remedies. Their teacher, Diane Paxton, is busy taking photos she will ask them to sequence later. The photos will also serve as a memory prompt when the learners write down their recipes. When the class does its customary assessment of what the students liked and disliked about the preceding month's activities, several students agree with a classmate's sentiment when she says, "Very good, we learned a lot of words. I'd heard the word blender, but didn't know what it meant." Another student holds up the book "Natural Medicines," which the group has written as a class project, saying: "This is our literature."

Several hours' drive north, in Manchester, VT, another group of adults is hunched over multicolored flash cards spread on a table along with math manipulatives. Converting measurements is the topic of this evening's class. Written on the cards are measurements expressed in fractions, percents, or decimals. The students' task is to puzzle out which figures are equal. There is a lot of laughter and negotiation of correct answers. Meanwhile, Meg Costanzo, the teacher, is watching silently.

Both of these vignettes took place in the course of the Adult Multiple Intelligences (AMI) study. Both learning activities could be described as being "in the spirit of" multiple intelligences theory. They illustrate what we have learned in the AMI study: There is no one way to apply MI theory in instruction, but some common approaches have emerged.

The AMI study explores the application of Howard Gardner's theory of multiple intelligences (MI) to adult learning and teaching. The theory defines intelligence as the ability to solve problems or create products that are valued in one or more cultures or communities. It counters views that intelligence can be measured solely through IQ tests. It contends that all humans possess at least eight forms of intelligence: linguistic, logical/mathematical, spatial/visual, bodily/kinesthetic, musical, interpersonal, intrapersonal, and naturalist.

MI theory has been widely applied at the pre-K–12 level. The National Center for the Study of Adult Learning and Literacy AMI study is the first extensive and systematic investigation of the use of MI theory in adult literacy education. It is a qualitative, naturalistic study with teacher research at its center. Between December, 1996, and June, 1998, 10 teachers, working with about 140 students, grappled with and applied MI theory in their classrooms. While the analysis of commonalities and differences in the teachers' experiences continues through 1999, the themes emerging from the research are instructive.

Six Themes

Using an MI framework leads teachers to offer a greater variety of learning activities.

MI theory supports and validates creative, multimodality teaching. Given that MI is not a technique but a theory, it lends itself to varied interpretations, all of which have in common their student-centeredness. While it is just one entry to such teaching, it tends to propel teachers to "push the envelope."

The AMI experience suggests that when teachers begin to consider students' strengths beyond the linguistic and math/logical they gain, more often than not, an increased appreciation of their students and new insights into how to reach and teach them. Furthermore, it appears that the consideration of MI theory leads teachers to offer a greater variety of learning activities, whether or not they try to identify their students' particular strengths.

AMI teacher Martha Jean developed lessons that gave students choices that corresponded roughly to combinations of the eight intelligences. These lessons became especially popular among the AMI teachers. They could provide options for students to learn through different types of experiences and media.

Choice-based lessons were by no means the only way the AMI teachers carried out MI-based instruction. As a whole, MI-based approaches can be characterized as constructivist. They invite students to construct their own meaning through problem-solving and the media of their intelligence strengths, building on what they already know and feel competent in. Thematic and project-based lessons are common ways in which teachers put constructivism into practice. Meg Costanzo's students' favorite project without exception was to devise ways to increase enrollment in their learning center. They redesigned the center's recruitment flyer and sign, wrote a public service announcement, interviewed graduates, and calculated attendance rates. The number of hours of student attendance, mostly their own, increased 220% since the beginning of Meg's involvement in the AMI study.

Sometimes an MI-based activity functioned as a "hook" that got students engaged and willing to grapple with more abstract, rote, or decontextualized material. Martha had her students choose and complete three learning activities out of a possible six to 10 across GED content areas. For example, she invited the students to "compare the size and look of each planet using Play-Doh, paper, or balloons" or to "show what would happen to you if you were standing on each planet using mime, dance, or play." These choice-based activities were typically followed by work in GED workbooks. Lezlie Rocka followed readings in her basic literacy class with choice-based activities.

All but one of the 10 AMI teachers concluded that MI theory pushed them to take more risks and broaden their teaching beyond what they had been doing. The level of creativity in their lessons increased discernibly. Lezlie, for example, went from believing that MI theory had little to offer to her already multi-sensory teaching approach to asserting that MI theory informed and broadened her approach to teaching reading and writing. Throughout her AMI experience, Diane Paxton described her use of MI theory as "only one aspect that I draw on under the umbrella of my teaching" (Paxton, 1998, p. 26). Nevertheless, she "used MI theory to develop thematic units and creative group projects MI also helped to overcome the problem of various levels in the class, helping to ensure language acquisition opportunities for all students" (p. 16).

Observing students' learning preferences generates valuable information about students' strengths that can inform the development of future lessons.

An alternative or complementary approach to having students assess their own intelligences is for the teacher to observe and analyze their learning preferences, interactions, and writings over time. Terri Coustan found that she could generate rich information about her beginning ESOL students' intelligences by paying close attention to the choices and comments they made. For example, when a student expressed preference for math, Terri

suggested she choose a paragraph-sequencing activity that draws on logical/math intelligence. Meg reports that she gained new insights into her GED and diploma program students' intelligences through weekly dialogue journals with her students. She then used this information to guide the students in choosing learning strategies. For example, she found that MI theory provided a compelling rationale for using webbing as a pre-writing activity to collect one's ideas and thoughts, particularly with students who are spatially intelligent.

Wendy Quiñones developed an original method for observing students' intelligences. Before showing the movie Educating Rita, Wendy asked her students to choose one or two things to observe from among several possibilities that were calibrated to the eight intelligences. She explained the value of this experience: "One of the questions I developed clarified for me the distinction between linguistic and non-linguistic approaches to problems: I asked [students] for the floor plan of Rita's house. Now, to ultralinguistic me, this seems almost silly: I don't care what the floor plan is, nor would I normally think to ask about it. For someone strongly spatial, however, this might be an extremely interesting project—and the point is that the floor plan would have to be deduced from the events in the movie. For the spatial person, this activity would involve her quite literally in putting these events into a perspective that makes deep sense to her" (Quiñones, 1998, p. 11).

The diversity of viewing preferences expressed by the students was illuminating to Wendy and to her students: "For example, one normally quiet woman demonstrated a stunning spatial intelligence by citing detail after detail of color, clothing, jewelry each one a significant commentary on the movie and on Rita's character. Among many other observations, she noted that Rita at times had red in her hair and clothes so we could really see fire in her.' She pointed out that Rita's shirts literally had blue or white collars, depending on whether she was doing manual or intellectual work, and that for the last half of the movie, Rita wore a dragonfly pin so that we would get the message that she was really starting to fly.' In one of those rare but glorious moments, a different student picked up the conversation. That's just a whole different way of thinking,' she said. I would never see all that. I wish I could do that.' But a third student couldn't let things rest there. Turning to the second student, who is extremely musical, she said, Yes, but you thought of all the music, how the beginning music added to the scene'" (Quiñones, p. 18).

Teachers often begin applying MI by having students assess their own intelligences, but a range of factors affects whether students find the assessment useful or meaningful.

Self-knowledge is one of the defining features of intrapersonal intelligence. One dimension of this knowledge is knowing one's intelligence strengths. The development of this form of intrapersonal intelligence is important to many endeavors, such as career planning. That was the hunch Jean Mantzaris had when she set out to investigate what MI theory might have to offer to her career-planning course with ABE and GED students. She began this process by teaching her students about the theory and by having them assess their own intelligences. Like several of her peers, Jean used a survey instrument developed by Meg Costanzo. Jean reports that the eight of 11 students who stayed with the course gained positive insights about themselves partly as a result of doing MI self-assessments. Both Jean and her students found the intelligence self-assessments to be easier to relate to and therefore more meaningful than traditional career aptitude tests.

One of Jean's students writes, "This stuff is fun, but more than that it shows you how many people around you are smart in many ways and so am I," (Mantzaris, 1998, p. 5). In addition to speaking to a heightened sense of his own capabilities, the comment also highlights the appreciation many students gained for each other's intelligences when the surveys were discussed in class. Wendy focused on this aspect in her teacher research. She concludes that, for her students, "Adding the MI framework, which validates many ways of learning, knowing, and demonstrating knowledge, makes it impossible to ignore the evidence that others have strengths which we ourselves lack, and makes the conclusion almost inescapable that working with others is at least sometimes advantageous" (Quiñones, 1998, p. 17).

Meg found that "Students appreciate having their intelligences acknowledged and valued. Many have never had the opportunity to claim their intelligences before this experience" (Costanzo, 1998, p. 9). A comment by one of her students explains Meg's assertion, "I haven't really had time to think about where my strengths are. I just know my weaknesses and that sometimes worries me. I always knew everyone had strengths and weaknesses, but I always worried about the things I couldn't do, not the things I could" (p. 32). A month later, the same student wrote, "You have inspired me in more ways than one and I never thought I could feel this good about my education and my self-esteem."

Jean and Meg are two of the five AMI teachers who found it useful to have their students assess their own intelligences. Three teachers did not find this approach useful, and one never tried it. A more thorough analysis will, it is hoped, reveal what underlies this diversity of opinion.

Meg's and Jean's students were secondary, rather than basic literacy, students, which may be why they were more readily able or willing to find

value in MI self-assessments than their less literate counterparts. A divergent case is presented by Betsy Cornwell's ABE and high school diploma program students, most of whom did not respond positively to the idea of assessing their own intelligences. Betsy writes, "While I expected that the creation of individual intelligence profiles would yield a wealth of information about my students' intelligences and preferred ways of learning, I found that the exercise had limited usefulness and relevance for my particular group of students" (Cornwell, 1998, p. 7).

Neither of the two ESOL teachers who participated in the AMI study found it particularly useful to have students assess or talk about their own intelligences. One reason they did not use Meg's survey was that its vocabulary is inaccessible for beginning ESOL learners. They tried to have their beginning ESOL students identify their intelligences through pictures that depicted people using particular intelligences. Diane felt that trying to identify the exact combinations of intelligences that underlie her ESOL students' strengths was confusing both to her and her students, even when the students' native language was used to clarify concepts, and of questionable educational value: "I would venture to say that every adult student has stories of the development or estrangement of their intelligences For me this is really beginning to call into question the part of MI that stresses that individuals investigate and become familiar with their own intelligence profiles."

Students' regular reflection on their learning shifted and broadened their paradigms of effective and acceptable teaching and learning practices.

According to the AMI teachers, a typical ABE, GED, or ESOL student expects traditional lessons with workbooks or other text-oriented methods. At this stage of our data analysis it is not clear, but we wonder whether the students' level of previous education is a factor in how fast and willingly they will expand these expectations once they experience other ways to learn. Our data does suggest that when MI-based lessons are coupled with regular reflection and self-assessment of what is helping adults to learn, students begin to shift their paradigm of effective teaching and learning. More specifically, they begin to see value in more diverse ways of learning. Diane's findings are instructive in this regard: "Ongoing assessments, both formal and informal, of the students' ideas and feelings of what helps them to learn, understand and practice English, were what showed the students and me that the changes towards a more diverse curriculum resulted in an effective way to learn English. Therefore these assessments were essential in students coming to accept MI-inspired curriculum" (Paxton, 1998, p.27). Diane used multiple types of assessments such as student-teacher conferences, surveys, and group discussions.

The AMI teachers concurred that developing students' metacognitive skills can be arduous. Reflecting on one's learning does not come easily for most adult literacy students. It is both a skill and a habit that needs to develop over time. Students may resist reflection and fail to see its relevance. A few of Diane's students apparently thought that she did not know how to teach because she was asking for their opinions on the subject all the time!

Diane and several of her colleagues found that building trust and community in the classroom is necessary for MI-based instruction. Trust and mutual respect enable people to take risks into the unfamiliar together, to perform a skit, to tell a story, or to build something. Terri expresses this: "Although trust was not directly germane to MI-based learning, it supported MI-based learning. A trusting community allowed students to take chances in their learning and to try new things" (Coustan, 1998, p. 28).

Teachers perceive a shift in the balance of power in the classroom when they offer students intelligences-informed choices in how they learn and express their understanding.

When teachers gave students choices in how they learn and demonstrate what they have learned, they were effectively giving some control to students. As a group, the AMI teachers' perception of the effect of their AMI work was a noticeable shift in the teacher-to-student power relations. It is possible that the act of validating students' strengths, interests, and preferences is an important first step that helps build the students' self-confidence and enables them to take control over their own learning and the curriculum. Furthermore, when students examine their strengths, they are likely to deepen their self-knowledge, which gives them a firmer foundation from which to direct their learning.

Several AMI teachers found themselves relinquishing some control by giving students choices and respecting their individual ways of learning and knowing. Terri found that, as students began to express preferences through choice-based activities, they also became more assertive in other ways, shifting the balance of power in the classroom somewhat. She writes, "My experience over the past few years had shown me that these students were reluctant to share their preferences with me. I had almost given up hope of ever being able to learn their preferences and had decided that this behavior was related to learners with limited English. Now the students appeared to have reached a benchmark or milestone More students made choices. And those choices reflected both what the students liked and did not like about the activities I suggested" (Coustan, 1998, p. 21).

Likewise, Lezlie comments, "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" (Rocka, 1998, p. 15). Sharing power with students was an unanticipated outcome of the changes Terri and Lezlie made in their teaching. Exploring how MI theory might serve to empower students was the focus of Wendy's research project. Her answer was "yes" in terms of the classroom-based power relations: "A change in the teacher-student relationship in the classroom rapidly became apparent. The combination of assignments based on multiple intelligences with the strategy of allowing students to choose their own assignments was the best I have yet found for sharing power while giving students a firm structure within which to work" (Quiñones, 1998, p. 13).

MI-informed education encourages teachers to learn more about their students, and may cause them to increase their expectations of students.

A well-known principle of adult education is that adults come to us with plenty of life experience, and that good adult education should acknowledge and draw on that experience. Teachers commonly try to get to know their students' goals and interests. MI theory offers another lens through which to view students. This lens can be perplexing or illuminating.

The majority of the AMI teachers did find value in viewing their students through an MI lens. They felt that they gained a richer perspective on the student as a whole person. It provided not just interesting but also substantive information they could use to prepare lessons to help their students find new, perhaps more effective pathways to learning. Terri, for example, uncovered talents she did not know her Hmong students had and created opportunities for them to use those talents to learn English. When she saw that Choua, who is not literate in his native language, was good at building, she made sure his learning options included modeling new vocabulary words from clay or other material. This is not to say that her teaching approach is not validated by, or consistent with, other theories and approaches, such as participatory education. Nevertheless, Terri comments that MI theory led her to see more dimensions of her students.

As students were better able to demonstrate their strengths and use those strengths to learn new skills and information, their achievements sometimes exceeded their teachers' expectations. Wendy writes of her secondary level students, "My students' enthusiasm for being allowed to make their own choices, and their resulting willingness to spend time doing things they previously didn't think they could enjoy or learn, would have been enough reward for using this structure in my classroom. But there was much more! Students very often surprised me with their choices in these activities, taking on tasks one would never have suspected them capable of" (Quiñones, 1998).

Lezlie writes, "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 only doing paper and pencil work. 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" (Rocka, 1998, p. 15).

It would stand to reason that as students exceed teachers' expectations, teachers would begin to raise their expectations of students. It is too early in our data analysis to make a strong case for this. We can, however, say that the teachers' expectations of themselves and their teaching has changed. Perhaps Meg sums it up best: "I come away from my research with a revised model for an effective ABE classroom, one that is less teacher-centered and which gives the students a greater voice in what they study. It is a classroom that emphasizes personal growth as well as academic development. It is a model that encourages students to solve real life problems and develop a variety of skills they will find useful in the future" (Costanzo, 1998, p. 28).

Conclusion

The AMI experience suggests that the 10 teachers involved tended to go through stages in their efforts to apply MI theory. They typically began by assessing students' intelligences under the assumption that intelligence profiles are the most important feature of MI theory. Later, they came to realize that what matters is not achieving perfect accuracy in assessing students' intelligences as much as their awareness that any given group of students possesses a diversity of intelligence strengths, and that their learning will be facilitated if they draw on those strengths. MI theory became another lens through which they could view, understand, and appreciate students and with which they could design engaging lessons.

The AMI teachers' efforts to engage students and facilitate their learning in light of MI theory led most of them to offer choices and multiple ways to engage with topics and materials. Having choices, in turn, gave their students more control over their learning and developed student voice. Teachers and students shifted their paradigm not only of what is desirable but also of what is possible. As one of the AMI teachers said about MI theory in education: "In the end, it's about looking at everyone from a strengths perspective. We all have strengths."

The work of the AMI teachers lay the groundwork for our understanding of what happens when "MI grows up." As befits an initial investigation, we expect the AMI study to generate at least as many new

questions as it will answer. It will surely point to new and promising areas of inquiry related to MI in adult education.

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About the Author

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and has 17 years of experience in adult basic education in numerous capacities, including teaching ESOL.

Handout 📄

Menu of Activities

Choose one of the following activities to demonstrate what you learned from the research on adult multiple intelligences.

- Draw a picture or create a collage to represent an activity/class based in Multiple Intelligences (MI) theory.

- Identify a song or compose a song that reflects or summarizes MI theory.

- Write a description of key components of a lesson inspired by MI theory.

- Create a cause/effect chart of why MI-inspired activities/lessons were used in the situations described in the article(s) and their impact on students.

- Make a cartoon strip depicting an activity/class based in MI theory.

- Create a skit to demonstrate an activity/class based in MI theory.

- Create a diagram representing the differences and similarities between MI-inspired activities and activities you are currently using.

Handout 📄

Putting Theory into Practice
by Terri Coustan and Leslie Rocka
Focus on Basics, Volume 3, Issue A, March 1999, pp. 21–24

Applying MI in the classroom meant enhancing, rather than replacing, techniques we value

In 1997, we were teaching adult basic education. Terri taught low-level learners, mostly Hmong from Laos, who had little or no schooling in their own language and limited use of English. Lezlie taught adult basic education to low-level learners, women, most of them single mothers with dependent children receiving public assistance. We became participants in a teacher research project that focused on applying multiple intelligences (MI) theory to our adult education practices.

Multiple intelligences theory is just that, a theory. It is a psychological theory that addresses what the brain does with information. After learning about MI, we were both excited to try it in our classrooms. It made so much sense. It validated what we witnessed with our students everyday: people seem to have different strengths, or intelligences, and they seem to process information and express what they know in different ways.

We wanted to use the theory, but we found ourselves asking just what that meant. How does one apply a theory? MI theory has no specific application method, instructional approach, or curriculum, yet teachers in many K–12 schools are applying it today. What this means to us is that they are using the theory to guide how they teach. We decided to begin by using MI theory as a way to think about our students as we did the day-to-day, on-going, on-your-feet assessment we always do. Then, we let the theory influence instructional choices. We will talk about these processes separately, although often they happened simultaneously.

Viewing Students

At first, our application of MI theory involved only how we, as teachers, viewed our students. When we were "wearing MI glasses," we could view students' choices and preferences. We could see ways in which students learned most easily, enjoyably, and efficiently and assumed that they corresponded with students' strongest intelligences. Equipped with this

information, we tried to develop or encourage students to participate in activities that would aid their learning by drawing upon their strengths.

For example, decorating at Christmas last year was not necessarily an MI-based activity. But when Terri wore her MI glasses, the activity provided her with information about her students. She offered the learners, mostly Hmong, the opportunity to decorate the class door. She brought in a variety of materials and framed the top of the door with jagged paper resembling mountains. After a discussion about Christmas in Laos, the students went to work.

Blia cut out a tree using a paper folding and cutting technique that differed from the technique used by everyone else in the class. He made another tree with a star on top. Choukha cut out a bird within the body of the tree and then he cut out a dinosaur.

Mai See and Seng, two women, traced and pasted trees directly on the door. Choua chose not to make a tree but made an airplane with a slit in the side in which he inserted a wing. Other students did not use the paper or the scissors but told Terri about Christmas in Laos, where it never snows.

Without MI glasses, Terri would have seen that her students cut, pasted, drew, traced trees and airplanes, and that some people talked. She would have made a mental note that some students were "good" or "gifted," as demonstrated by their art work. She might have focused on how their individual efforts blended into a spectacular seasonal display with interesting shapes, colors, and textures. The decorated door would have held her attention. She was looking at the forest and not the trees.

With her MI lenses on, she was able to see beyond the end product, to how individual students uniquely communicated their knowledge and their strengths. For example, the students demonstrated differing spatial strengths. Blia's tree, complete with star on top, demonstrated his unique two-dimensional spatial intelligence; Choua's airplane was an example of three-dimensional spatial intelligence. Some experimented with familiar animals and objects; others chose more unfamiliar animals such as dinosaurs, demonstrating both with their spatial and linguistic strengths. Mai See and Seng demonstrated differing linguistic and intrapersonal strengths in talking about their memories of Laos.

These observations helped Terri to assess the strengths of the students. She noted her observations in her teacher's log and thought about them later. She was not only able to learn more about the ways that her students used and expressed information, but she also used the information in planning activities

more mindful of their strengths. In the past, she would have assessed her students using more traditional ways, through reading and writing activities. She learned that she can assess students by paying attention to all the things they do in the classroom, even decorating a door for Christmas.

Understanding Strengths

All the intelligences are operating at all times in people. When we perform an action, such as playing the piano, for example, we don't use only one intelligence. We usually have our whole array of intelligences involved in everything we do. Individual strengths and weaknesses differ, but we use all our intelligences to make sense of the world.

Intelligences by themselves cannot be observed, but can be inferred by analyzing individual strengths. In our classrooms, we were able to view areas in which we thought our students had strengths, but it was not possible for us—or necessary—to define anyone's intelligence profile. Instead of guiding students' towards what we saw as activities that suited their intelligences, we decided it was best to supply, within lessons, an array of choices and opportunities through which students could express their different intelligence strengths. We thought that this would allow students to explore receiving and communicating information in ways that suited them best.

We saw students' strengths and preferences reflected through the activities they selected, the length of time they devoted to the activities, their body language during the activities, and what they said about the activities both during and after doing them. These strengths and preferences emerged as we observed students choosing the same activities or types of activities over and over.

Terri had this example in her classroom observation journal: The students really liked looking through the magazines for the new vocabulary. Yang Lee found four pictures for the word "problem." She said the word "problem" each time she found a picture. I could see her mind working as she scanned the picture bringing new and old information together. Over the year, whenever Terri offered choices of activities to illustrate understanding of new vocabulary, Yang Lee regularly chose to look for pictures in National Geographic magazine. She noticed details and questioned the background of pictures. In viewing a photo of a girl in a village, she alone commented on the mountains and their shape and compared them to those in Laos. For Yang Lee, pictures provided informational input as well as an opportunity to communicate her knowledge. Her keen interest in pictures seemed to reveal her strengths in spatial intelligence, which she used to reinforce or expand vocabulary and gain information from pictures. Yang Lee also seemed to link

her spatial intelligence to her linguistic and intrapersonal strengths by labeling or questioning the spatial forms and describing them to Terri and to the class. Spatial intelligences seemed to be the force driving Yang Lee's comprehension and expression.

Influencing Instruction

Our MI-related instructional goal was to allow students to succeed by providing them with opportunities to work from their strengths. Each day we offered them choices. They were able to select how they wished to learn and how they wished to demonstrate that they mastered information. The choices we offered reflected the different intelligences identified by Howard Gardner.

Some students chose to read about a topic, some chose to look for pictures, or to hear a story on tape. Some chose to write, others chose to draw, or to construct. On other occasions we used whole-group instruction, asking our classes to draw, act out a play, or pantomime a word.

Lezlie's Experience

A reading lesson Lezlie modified after learning about MI is a good example of the choices we offered. The class read Meet Addy by Connie Porter, a book classified as historical fiction. It illustrates some of the experiences slaves had on the Underground Railroad. Addy, the main character, is a young teen born into slavery who escapes with her mother to freedom.

Before she learned about MI theory, Lezlie began the group reading lesson with a pre-reading question based on what the class had already or were about to read. She asked the students whether they thought that Addy and her Mama would make it to freedom. They discussed and wrote about this.

Then, while the students read aloud, Lezlie encouraged them to apply all the skills they already learned, reminding them to use their finger, a pencil, or a book mark to help guide their eyes. She made sure to allow them ample time to use decoding strategies before giving a prompt, and coached students on beginning or ending sounds of words. They discussed what they read after every paragraph, reviewed the meaning of difficult words, and reread the paragraph if necessary. After reading, she led a post-reading activity in which she asked students what they liked or did not like about what had been read. Students wrote about this. Some shared their writing with the class.

When Lezlie looked at this lesson from an MI perspective, she did not change it, she added to it. The projects and activities she added allowed students to choose how they wanted to express what they understood about the

reading. She presented the students with options. They did these activities after doing the reading for the day. After they finished, she had them share what they worked on with the class.

Lezlie explains: My assumption in offering choices was that students would choose projects which corresponded with their strongest intelligences. Those who felt most comfortable role playing the stories possibly had greater bodily/kinesthetic and interpersonal skills; those who chose drawing possibly had stronger visual/spatial skills. I am not positive which expressions correlated with which intelligences, yet this knowledge did not seem necessary. Once we began doing the projects along with the reading, students' interest in the story increased. They came into class excited to read and were lively and animated while working on their projects. They worked together organizing themselves and their projects until they were finished. Their new-found ability to perform a task well in school seemed to elevate their egos, as did their newly-gained understanding of the reading material.

> ### Post-Reading Choices
>
> To add an MI perspective to a reading lesson using the book Meet Addy, Lezlie added these post-reading activities. Students could do them alone, with a partner, or in a group.
>
> - Draw a picture or show in Play-Doh any part of what we read.
> - 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.
> - Make your own map of Addy and journey either on paper or with Play-Doh
> - Write or discuss with someone a part of what we just read that you think is interesting.
> - Act out a part of what we just read
> - List the places Addy and Mama hid on their escape to freedom.
> - Design your own project for this chapter.

Value

Lezlie felt that instruction based on applying MI theory did seem to facilitate learning for her students. For example, reading comprehension did not seem to happen as easily when students only read and wrote. There seemed to be a synergy between expression and comprehension. Students seemed to gain greater understanding of a story after they expressed what they read in a way that was comfortable for them. Renee, for example, remembered little of what she read until she started to role-play the story after she finished reading. This alternative form of expression seemed to make meaning of the text and embed it in her memory. The more Lezlie encouraged students to express and explore meaning in their own ways, the more she was surprised and moved by the depth of their responses.

Instruction based on MI theory also seemed to cause improvements in specific reading strategies for students. This was not a planned goal but an unexpected and powerful result. It seemed that when students were given the freedom to choose how they wanted to express what they understood, they became invested in the final result of their efforts and wanted their information to be presented as accurately and as well as possible.

While students were doing their projects, Lezlie saw them combing through the reading to get information and details. They wanted to be sure their projects were accurate. She had not seen this desire for accuracy and details when they had to write a book report; then they just wanted to get the report done. Reading became a tool to do the projects, whereas a book report makes the reading the focus.

Terri also found compelling reasons to use MI theory-based instruction with low-level ESOL learners who experienced failure in traditional classrooms. Reading and speaking are very limited channels of expression for these learners. MI-based instruction offers a greater range of activities through which they can learn. For example, since Ka and Pia's English is so limited, they are not able to communicate much through writing and speaking. Ka prefers to draw. Although her drawings do not have much detail, they are important because they allow her an additional pathway via which she can communicate. Since she was unable to say many words in English, by drawing she was able to demonstrate to Terri her knowledge of a word or an idea. Terri was then able to respond verbally and help her with the words that were slow in coming. Her drawings became a bridge to learning English and a way for Terri to check on her level of understanding.

Once her low-level learners became more familiar with having choices, Terri observed changes in their choices. Students started with easier activities or those chosen by a friend. After four weeks, they were trying new activities and working efficiently on the ones that they have previously tried. They were no longer doing just the easier activities, such as writing their new spelling words in glitter. They were doing the harder activities, such as sequential story strips, and they were taking more control of their learning. They were seeking out their own ways to learn and developing confidence in their choices. Terri believes that these new skills will make it easier for them to learn English and will transfer to problem solving outside the classroom.

In Conclusion

Teachers are bombarded with new curricula and instructional approaches. Each new approach seems to suggest that we replace the old with something new. Applying MI theory was different: it did not mean that we abandon

activities that are important to us and to our students. It meant that we enhance them, and think about our students differently.

None of this came easy to us. We found that after each class, we needed to reflect on what had happened and what to do next. However, from the beginning, we saw validity in the theory, and after applying it we saw that it helped our students learn. How did MI theory affect us and our students? Our students broadened the ways in which they expressed themselves and benefited from this learning process. They liked being able to express themselves in ways other than speaking and writing. When given the opportunity to choose, they tapped into their own strengths, finding a picture to illustrate a vocabulary word, or building objects with clay.

We as teachers discovered fuller and richer ways to assess our students, and we used the information in planning our lessons. We are still reading about the theory and talking to other teachers who are using it. As we continue to teach, we know that our application of MI theory will take us in new directions. We wish you good luck on your own MI journey.

About the Authors

Terri Coustan has a master's degree in elementary education and elementary administration. She holds certification in ESOL and has taught a family literacy class at the International Institute in Rhode Island for the past eight years.

Lezlie Rocka has a bachelor's degree in anthropology and holds a certificate in elementary education. She taught low-level basic adult education at Dorcas Place Parent Literacy Center in Providence for three years and now teaches ESOL at the Adult Collaborative of Cape Cod for Educational and Support Services.

Handout 🗒

Multiple Assessments for Multiple Intelligences
by Meg Costanzo and Diane Paxton
Focus on Basics, Volume 3, Issue A, March 1999, pp. 24–27

Teachers use many kinds of assessment for many different purposes. They often use formal tests—commercial or "home grown"—for placement: to decide in which class to enroll students, and to determine where to start instruction. They informally assess students as they teach, to gauge whether the students have grasped the material. They may use tests or assignments to do this, too, and to mark the completion of a section of curriculum. For guidance in choosing instructional methods, many teachers observe students' enthusiasm or ask their students which instructional activities they prefer.

Multiple intelligences (MI) theory, which identifies eight ways in which students can be "smart," provides educators with an expanded framework to use when assessing their students' strengths and potential. Schools have traditionally emphasized only two of these intelligences, linguistic and logical/mathematical. Multiple intelligences theory encourages teachers also to recognize their students' bodily/kinesthetic, spatial, musical, naturalist, interpersonal, and intrapersonal intelligences. It stimulates teachers to plan assessments that allow students to draw upon these intelligences when trying to demonstrate their mastery of content material.

As teachers interested in finding ways to engage adult basic education students in nontraditional approaches to learning, MI theory was appealing. We were curious about the efficacy of formally assessing students' intelligences. We also wanted to see if we could use MI-influenced assessment and instruction as a springboard to break our students away from their attachment to traditional modes of learning. Over the course of our teacher research project, we found that our view of the value of developing intelligence profiles for our students differed. One of us concluded that developing individual intelligence profiles was not meaningful; the other found the process beneficial and empowering to students. We both found that MI-enhanced, nontraditional classroom practices were accepted by our students, more by some than others, but accepted nonetheless. In the ongoing classroom process, we used diverse assessment formats to invite students to think about their own learning as well as the effectiveness of activities.

Diane's ESOL Classes

I taught two different English for Speakers of Other Languages (ESOL) classes, beginning literacy and intermediate. At the start of the project, I had the impression that individual profiles were essential in bringing MI theory to the classroom. And, at the 1997 TESOL convention, Thomas Armstrong, a well-known speaker on multiple intelligences, emphasized that individual profiling was one of the most valuable aspects of the theory for students. Many of my AMI colleagues also felt this way. With my beginning ESOL students, I introduced the intelligences explicitly and worked with them to help them identify their areas of strength and weakness. My hope was that if they realized they had many areas of strength besides the linguistic intelligence, they might begin to value nontraditional learning activities designed to emphasize other intelligence areas.

My students' limited ability to communicate in English encouraged me to find ways that were not dependent upon language to help them to assess their intelligences. I used photos of people engaged in tasks that represented each of the intelligences. The students guessed the underlying intelligence categories. Next, they identified areas of their lives that indicated skill, interest, and experience in those areas. For example, students who liked to dance, take walks, and exercise identified bodily/kinesthetic intelligence, and those who enjoyed reading and studying English identified linguistic intelligence as an area of strength. I created a self-assessment chart using drawings of people learning in different ways: working alone, in pairs and groups, singing, writing, laughing, reading. The students circled the ways they like to learn.

My elderly Latino students did not see the identification of their intelligence profiles as relevant to our class. They followed the class process I have described, but did not understand how the idea of their intelligence strengths could help them learn. In my view, the thinking about intelligence or "being smart" in eight different ways was not part of their cultural backgrounds, perhaps as a result of their limited experience with literacy. They appeared to be going through the motions to please the teacher, which is part of their educational background. Neither during this part of the class nor later did they take ownership of or show additional interest in the idea of intelligences. I overheard Juanita very softly say something like, "All this is not related to English class."

Jesus replied, "Sssshhh, the teacher is giving us a gift of what she knows, she is trying to help us learn, and we should be thankful." They seemed to feel that I was taking class time to focus on a topic in which they were not interested. I, too, was coming to doubt the usefulness of MI self

assessment. I began to realize that, at least the way I taught, individual profiles were not relevant to my beginning students' potential to benefit from the application of MI theory, nor could thorough MI profiles be done in the context of our class. The most I could do is to look for domains of a student's experience in which the intelligences manifest themselves.

While our class did not see intelligence profiles as useful, they did benefit from MI theory in other areas. The students came to accept more hands-on, non-traditional activities which were extensions of topics in which they were interested, and I used MI as a framework to inform the development of their learning projects.

Meg's Classes

I taught an adult basic education (ABE), preparation for tests of general educational development (GED) and adult diploma class. My ABE and GED students arrived in class expecting to hear lectures and be assigned workbook pages. I needed a way to redirect these expectations and encourage the students to approach learning from a different perspective. If I could alter my students' expectations about what they would experience as learners in my class, perhaps I could reach them in a more effective way.

When I introduced MI to my students, they were interested in learning about the theory, but they could not transfer the abstract ideas to their own experiences in the classroom. To help them do this, I wanted them to begin reflecting on their strongest intelligences. Developing individual profiles seemed to be a concrete way to begin this process. Also, we operated under an open enrollment, open exit policy at our center. This meant that new students were constantly rotating in and out of our program. I needed a standard introduction to orient students to the types of MI-inspired activities and projects they would be experiencing in our class. Creating individual profiles became a way of making new students more comfortable with the style of work they would be encountering in our program.

At first, I had the students complete a learning preference questionnaire that I found in The Multiple Intelligences Handbook by Bruce Campbell (1994). As I reviewed these questionnaires with my students at individual conferences, I realized that they had little experience with this type of self-assessment. I decided to create an AMI assessment survey that the students would find easier to complete. I wrote eight scenarios, each containing statements specific to a certain intelligence, and recorded the script on a cassette. As the students listened to the tape, they responded to each scenario by stating whether the statements described them very much,' a lot,' somewhat,' a little' or hardly at all.' The students then graphed their responses

on a grid. In subsequent class discussions we talked about the intelligences associated with the scenarios. The students began to reflect upon the ways they learn best. The on-going discussions about the students' strengths that stemmed from the development of the profiles were far more valuable than the actual profiles themselves.

Most students reported enjoying this type of individual MI assessment, often using words like fun' and interesting' to describe the experience. One student said she was now aware that there were more ways than one a person is smart; another student thought this was a good exercise to make you think. Whenever someone new enrolled in the program, the other students were often the first to remind me that the new student needed to complete the survey. In addition, the students frequently referred back to information found on their individual profiles. At the conclusion of our class, one student suggested that they take the survey again to see if there were any changes in their profiles.

Perhaps the reason my students reacted so differently to this type of assessment than Diane's students did have something to do with their vastly different cultural and educational backgrounds. My students did not find it inappropriate or impolite to discuss their strengths and talents. Through their children, many were already familiar with educational contexts that emphasize individual projects and nontraditional teaching methods. Most of my students had already completed a couple of years of high school and many had held jobs where they had experienced continual success. Maybe they felt less threatened about discussing their strengths and weaknesses because of these experiences.

Variety of Approaches: Diane

In an effort to help students develop metacognition—an awareness of their thinking and learning processes—about the effect of the diverse approaches to ESOL we were experiencing as a class, I incorporated assessments into the routines of the class. These assessments were designed so that the students could reflect individually and as a group on the value of the activities and thematic units we did. The assessments raised their awareness and ability to articulate how they learn effectively, as well as encouraging them to express their needs and begin to take control over the class and their own learning.

I used a variety of assessment tools, some created spontaneously and others prepared ahead of time. Usually once a week I asked them to reflect as a group on an activity, writing their responses on newsprint or the board in categories, good' and not so good' or it helped me learn because/it didn't help me learn because.' At mid-semester, I asked each student to complete a form that was part chart, part short-answer questions. The evaluation chart listed all

the activities done in class. Each student indicated with a check if they wanted more, the same, or less of each activity. I tallied the responses, brought them back to the class on newsprint, and we discussed them. This helped all the students see the diversity of activities that were helpful and also created a community of learners who were expressing their needs in English, which in itself represented a developmental step.

Hearing each others' opinions about teaching and learning helped the students in both classes recognize and value their own voices as well as the many different ways there are to learn. Twice a semester I held individual conferences. Several of the students pointed out their appreciation of the varied methods we used in a videotaped assessment at the end of the semester. Samaria noted, "All three points of what you write on the board help [their journals; their notebooks for all the grammar, readings, and textual activities we had done; and the creative wall projects]. Because you have to try many different way how you can learn more fast. For me I like to try a different ways. I like this."

Randolfo said, "Everything in this class helps us. Believe me, because you know everything is interesting. And for myself, I can say that writing I learned so much because when before I came here, I write just a little, but now I can write a lot. Because I speak more than writing. Everything in this class is good, myself I can say."

Concepcion reported, "I like the cassette, because at home we can listen the story and read it at the same time. When we don't know how to pronounce a word, we can practice. The stories are interesting, and later you give a song or a poem or a photo that has the same idea. It makes me think a lot about how to say my ideas in English. Later when I write in my journal, I know more how to write my paragraphs to say ideas."

I also believe that listening to and building on what classmates said and thought helped their bonding process, building community and trust in me and each other. And, seeing that their opinions were solicited and respected by peers and the teacher helped them to become empowered as individuals and as members of the learning community and to take ownership of their learning processes.

Many Methods: Meg

I used many assessment methods when I evaluated my students' learning preferences. The notes from the teacher journal, as well as the anecdotal musings I wrote after each class, provided useful information. I also examined samples of class work when looking for evidence of student strengths. I

assigned writing topics that gave me insight into the students' intelligences. We worked on team-building activities that allowed the students to display their strengths through project work. I gave open-ended assignments such as: What can we do as a group to make our center a more comfortable place in which to work and learn? How can we, as a group, encourage more adults to attend classes at our center?

The students expressed interest in working on these real-life challenges, often saying that this was their favorite part of our program. One student told me, "The project is very important to me because I'm learning more with every step we take. It's exciting to find out what's next and begin the project. The most exciting part is the finished project because we all worked together to complete it." As the students worked on their projects, I had time to observe them in authentic settings as they solved problems and created products.

Perhaps the most effective assessment tool I used was dialogue journals. During the last 10 to 15 minutes of each class, I asked the students to reflect upon the evening's lessons. The students could write about anything they chose, but I often set the direction for their reflections by posing such open-ended questions as, What do you think of the math activity we did in class tonight? or What kinds of lessons work best for you? Based on their responses, I pursued further discussions to encourage them to think about the ways that they learn best. As time went on, student comments became lengthier and more introspective. When I asked the students what they thought of the dialogue journals, they emphatically endorsed their use. One student made the following comment regarding our journals: "I like [the journals] very much. We can talk about something we liked or didn't like, what we might want more work in, some things we couldn't say in class or didn't have a chance to say."

As this project progressed, I realized that a few of the assessment tools I had developed to gather data for my research were becoming an end in themselves: a model for ways to draw upon students' interpersonal and intrapersonal intelligences to help create a positive classroom environment, a community of learners. The interactions in the classroom stemming from data collection activities, both one-on-one and as a group, helped to establish closer bonds between my students and myself. I noticed a new dynamic emerging in the class and a shift in the balance of power. The students began to assume a greater role in determining how the class was organized and what they studied. Their work during our team-building activities made them aware of the wide range of their abilities, and they started to view themselves in a different light. One student's reflections in her dialogue journal underscore this change. "I haven't really had time to think about where my strengths are. I

just know my weaknesses and that sometimes worries me. I always knew everyone had strengths and weaknesses but I always worried about the things I couldn't do and not the things I could."

A month later, after we had completed our first team-building exercise, the same student wrote this: "First of all, I really believe that our project was a success for two reasons. 1) We all worked together and worked for something that we thought was important. 2) That you have inspired us to open our minds and have [the] belief that we are capable of almost anything if we really want to do it I never thought I could feel this good about my education and my self-esteem."

As a result of my work on this project, I have an entirely new view of the meaning of assessment. Besides relying solely on my observations of student strengths and weaknesses, I now encourage my students to assume a greater role in this process. I include their input more than ever when designing our lessons and units. More and more, I found myself saying, "Why am I doing this, when the students could do it instead?" I believe that my work on the AMI Research Project tipped the scales of the balance of power in our classroom, making it more student-centered now than it had ever been before our involvement in this research.

Conclusion

Our experience with the MI project affirmed the value of designing assessment tools that are meaningful and empowering to students, not just sources of information to be used exclusively by the teacher. The information we gathered from the assessment tools also informed our classes' work with project-based activities, which in turn contributed to the students' taking control over their learning processes. As a result of their growing self awareness as members of a community of learners, the students in our respective classes bonded, determined how they acquired skills, appreciated each others' strengths, and learned to value nontraditional approaches to teaching and learning.

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About the Authors

Meg Costanzo carried out teacher research as part of the AMI study while teaching a GED/external diploma class at the Tutorial Center in Manchester

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Diane Paxton is the ESOL specialist at the Adult Literacy Resource Institute in Boston and teaches writing at Cambridge College. When she worked on this project, she was teaching at Centro Latino and at Bunker Hill Community College, both in Chelsea, MA.

Handout 🗒

"I Can't Learn This!" An MI Route Around Resistance

by Wendy Quiñones and Betsy Cornwell
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When students have trouble learning skills that seem within their reach, academics is probably not the problem. MI may be a useful tool with these students.

In a language arts class, Sue has just spent a half-hour or so working on homophones, modeling the letters for there, their, and they're in Play-Doh and arranging them according to their different usages. Sue seemed to enjoy the exercise, and to gain a clear understanding of which word to use where. But later, making corrections to a letter she's writing to the housing authority in her town, she struggles. "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 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 work. 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."

Most adult basic education teachers have stories like these: students refusing to attempt or to master tasks well within their reach, or students unwilling to learn subjects required for achieving their stated learning goals. These students say they want to learn, but our methods, which work well with others, don't seem to work for them. What's the problem? In our research, we found that combining a new understanding of the source of this resistance with the use of multiple intelligence (MI) inspired lessons provided a wealth of exciting avenues for skirting this resistance so that students can approach their goals.

Refusal to Learn

Let us be clear about the phenomenon we are discussing here. The student who fails to learn—whose intellectual abilities are not up to her ambitions—is

not our topic. Rather, we are seeking to understand the student who, while cooperative in many other ways, is in at least one area actively, willfully, consciously refusing to learn. These are students who, according to Herbert Kohl (1994), are actively engaged in "not-learning." Such not-learning is no easy feat, says Kohl: "It can require actively refusing to pay attention, acting dumb, scrambling one's thoughts, and overriding curiosity" (p. 4). It is a result of conflicting goals: 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" (p. 10). The attempt to get an education may raise for an adult many "unavoidable challenges to her or his personal and family loyalties, integrity, and identity" (p. 6). The student who is unready to resolve those challenges and conflicts may well find not-learning the most available defense.

Sue, for example, is the single mom of a toddler. Her son's father does not support the family economically, but he is actively involved with both Sue and the child. Sue is nearly illiterate despite her diploma from a vocational high school. Through Wendy's 20-hour-a-week program and additional work with a tutor, her reading ability is improving markedly. The child's father, however, insists that the teachers are lying when they say this, and that Sue can't be a good mother unless she's home full-time with her child. Will Sue's refusal to give up education and her increasing skills drive her child's father away? Sue grew up as the child of a single mom, and she is determined to maintain her son's ties with his father. She also wants very much to improve her reading and go to college. These goals are in conflict. She honors her learning goal by attending an education program; perhaps her not-learning is an attempt to placate her son's father and thus honor her family goal.

Diane, sharing her cluttered house trailer with her husband and four children in rural Maine, is working toward her alternative diploma. Diane has indicated her suspicion and contempt for "smart people" who know everything, especially 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.

Identities Threatened

In other words, what to us seem like simple learning activities in pursuit of stated goals are, for Sue and Diane, threats to other, perhaps unstated, goals and to familiar identities. It is critical for teachers to realize that the not-learning student is, as Richard Everhart (1983) writes, 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 not only different from ours but also perhaps even in conflict with others she has stated. She is not failing to learn; she is actively not-learning as a way of avoiding this conflict among goals. The more we insist on her learning, the more she is likely to feel that her goals—and her unspoken, perhaps unacknowledged conflicts—are being dismissed, and that we are simply another of those impersonal forces that attempt to control her life.

Not-learning in such circumstances allows the student to be loyal to whatever goal she is unready to alter or relinquish. This positive action of not-learning provides her a satisfaction far different from the feelings produced by failure to learn. According to Kohl, failure can produce "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). A teacher's insistence over a student's resistance can indeed be perceived as an oppressive condition, one that must be resisted. As Kohl indicates, that resistance—that act of loyalty to her own goals—can provide the student with intense satisfaction. As novelist Alice Walker writes, "Resistance is the secret of joy" (1993, p. 279).

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, or to force Diane to accept an identity she despises. Directly confronting students with these conflicts before they are ready to acknowledge and resolve them is likely to produce only more and more passionate not-learning. Pressing on toward the goal as we try to ignore the resisting behavior can have the same result. We must acknowledge and respect the fact that Sue and Diane do have reasons for 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. We can acknowledge and move around the conflict to concentrate instead on the learning goals we share with the student, harnessing her interests and strengths to move toward her goal.

MI Connection

This is where MI comes in. As teachers, we know that students learn in different ways. The theory of multiple intelligences allows us to systematically provide and validate ways both of learning and of demonstrating learning that are not commonly used in the classroom. Traditional education uses primarily linguistic and mathematical intelligences; MI adds to these musical, bodily/kinesthetic, naturalistic, interpersonal, intrapersonal, and spatial. Giving students opportunities to learn and to express their knowledge through these

additional intelligences may provide a way to learn without threatening whatever the not-learning student is trying to protect. Once we are able to temporarily leave the realm of traditional school activities, some not-learning students feel more free to explore. Give Sue, for example, lessons that allow her to learn through Play-Doh, markers, and craft materials (spatial and bodily/kinesthetic intelligences), or by producing a skit (interpersonal, bodily/kinesthetic, perhaps musical intelligences), 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-Doh, markers, crafts, and skits—spatial, interpersonal, bodily/kinesthetic—does not.

Similarly, while Diane refused to go to the library to "find things in books," she happily, and on her own, cut items out of newspapers and magazines, eventually organizing them into folders labeled with the subjects that interested her: Princess Diana, the Unabomber, JonBenet Ramsey, and Terry Nichols, among others. With this clue to Diane's strong interpersonal intelligence, Betsy organized geography lessons around people and current events. Diane's extensive learning logs reveal a turning point with an assignment that involved using colored dots to mark the travels of Princess Diana on a map. In her log, Diane noted, "Today I learned how to find places on the world map On places that current events happened that was of interest to me Learning 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." After completing that assignment, Diane began to create elaborate collages using magazine pictures to illustrate the customs, costumes, topography and animal life of several different countries. After beginning the collages, Diane also insisted on completing the worksheets she had refused to do the year before.

Those worksheets involved using atlases and encyclopedias to find facts and figures about seven different countries. This assignment relied almost totally on linguistic and logical/mathematical intelligences: the two "school intelligences." Diane initially responded to the worksheets by insisting that the assignment was beyond her capabilities. Several months later, when the focus was shifted to the people who lived in and traveled through those countries, and she was allowed to express her knowledge using pictures and newspaper clippings, Diane met and then exceeded the expectations of the course. Charting the travels of Princess Diana was actually a more complex task than what was asked for in the worksheets. In addition to using a world map and atlas, Diane had to consult a biography and newspaper clippings to determine which places the Princess had visited. To complete her

collages and collections, Diane had to master all the research techniques demanded in the original worksheets. Once she mastered those techniques, she insisted on completing the worksheets even after Betsy informed her that she'd already done enough to satisfy her course requirements. We believe that the opportunity to view the subject through interpersonal (studying people instead of countries) and spatial (pictures and collages) intelligences created a safety zone in which Diane could express her knowledge without the need to confront her complex feelings surrounding school and "smart people."

Lesson Learned

The lesson we can learn from both of these women is that the actual task, understanding homophones or researching information about different countries, was by no means beyond their abilities. What they needed was a way to demonstrate their knowledge without threatening their sense of personal integrity.

Sue and Diane were both working in intensive learning environments where students and teachers have a great deal more personal contact than is possible in many adult learning centers. Our knowledge of our students' personal lives certainly helped us understand them better, but we don't believe that level of understanding was necessary to help them find ways to learn. We believe, however, that two things are crucial for teachers facing not-learning students. First, we must acknowledge that not-learning serves a vital function in the lives and identities of our students. By honoring our students' stated and unstated goals, even when they conflict with our own, we are expressing confidence in our adult learners' abilities to incorporate education into their own 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.

While our experience with MI makes us extremely hopeful that we can duplicate Diane's success with other students, we don't expect unalloyed success. What teacher can expect that? We do hope that MI can become one more tool available to teachers who wish to expand the options by which adult students can become successful learners.

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About the Authors

Wendy Quiñones was teaching in a year-long transitional education program for low-income women in Gloucester, MA, when she conducted this research. A former journalist, she has worked in adult basic education for about 10 years. She is now teaching GED, and doing teacher training and mentoring teachers who pilot the use of the Adult Multiple Intelligences Sourcebook.

Betsy Cornwell is a teaching coordinator for the Northern Oxford County EvenStart family literacy project in western Maine. She travels to students' homes in this rural area to work with them on high school diploma, GED, or ESOL needs. She also manages the program of 20 families and six traveling teachers who provide early childhood, adult education, and parenting instruction.

Handout 📄

MI, the GED, and Me

Perhaps you've been in the same place I was in 1996. I was a teacher, preparing students to take the tests of General Educational Development (GED). We spent much of class time using GED workbooks. Many of my students, most of whom were homeless, had great difficulty giving long-term attention to academic subjects and retaining the information being taught. Many students with these problems did not stay in the program long enough to reach their GED goals, yet I could see that these learners had abilities that made the world a better place. Then, I heard about the NCSALL's Adult Multiple Intelligences (MI) Project. I wanted to join the project because I had read a little bit about MI and was anxious to give some time and thought to how it could serve my learners.

Howard Gardner's multiple intelligences theory fit my observations of the students in my classrooms. MI theory proposes that there are eight and maybe more identifiable intelligences. The learners in my classrooms were smart in many different ways. Gardner defined intelligence as an ability to solve problems or fashion products that are valued in one or more cultures. He acknowledges the two traditionally accepted intelligences, which he calls mathematical/logical and linguistic, but he also theorizes the existence of the interpersonal, intrapersonal, spatial, musical, bodily/kinesthetic, and naturalistic intelligences as well. Drawing, fixing cars, singing, resolving conflicts, or composing a poem skills my students possessed all fit this model. I wanted to figure out a way for students to use their multiple intelligences to connect productively with GED material.

First Year

In the first year of the AMI project, my teacher research question was whether GED-based, MI-informed activities would help students use their intelligences as learners and GED test-takers. I taught two classes of four to seven students; each class met twice a week for a total of six hours a week. I would use MI activities with one of my two classes, and my usual approaches with the other as a comparison group.

In that first year, I stumbled around a bit trying to figure out how to make an MI-informed lesson that would help GED test takers. I read David

Lazear's *Seven Ways of Teaching* and *Seven Ways of Knowing* (1991), Thomas Armstrong's *Seven Kinds of Smart* (1993), and Bruce Campbell's *The Multiple Intelligences Handbook* (1994) to get ideas for my first MI lessons. After initial attempts that had every student trying activities in every intelligence, I realized that requiring work in each domain was not in the spirit of MI. I had to let my students choose activities. Their choices would probably mirror the intelligences in which they were strongest. I decided to use an MI-informed approach at least one day a week. I started to design "Choose 3" lessons on broad topics, such as math, for example. Each Choose 3 consists of choices based on the eight intelligences: at least one choice for each intelligence. Students picked the three activities they would do alone, with a teammate, or in a group.

I created lessons about home, travel, plants, math review, writing, and angles. I was trying to find topics that could reflect some of the GED subjects in each lesson or a lot of choices from one GED subject. For example, the math review had choices about angles, word problems, and perimeter, area, and volume. Students did do these lessons enthusiastically, but a couple of problems arose. The content of the lessons was too broadly defined: I could not connect the activities to a specific area of the GED for review. Also, the students did not always choose activities that centered on the content that they needed most. I began to address those shortcomings by creating lessons that were more

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CHOOSE 3 LESSON
Angles

1. In 2–5 minutes list as many angles as you see (inside or outside). Make a graph showing each type you found.
   Which angle is most common? Why?
2. Using your arm and elbow, make five angles.
   Draw those angles and write approximate measures for each. Are there any kinds of angles that cannot be made with an elbow?
3. Discuss with someone and write a response:
   A. What does someone mean when they say, "What's your angle?"
   B. If you were on an icy road and did a 360, what happened to you?
   C. Why do you think this angle called a right angle?
4. Using Play-Doh and/or paper show the angles 180, 135, 90, and 45 degrees.
5. Find or make five triangles. Measure and total the angles in each.
6. Draw, make with Play-Doh, or paint a place you know and mark and measure the angles.
7. Write a poem, song, chant, or rap using some of the following words about angles:
   - figure formed by two lines, intersection, elbow, notch, cusp, fork, flare, obtuse, acute
   - point of view, perspective, viewpoint, outlook, slant, standpoint, position
   - purpose, intention, plan, aim, objective, approach, method

narrowly defined by content. For example, angles from the GED math became the topic of one Choose 3 lesson, and all the activities related to angles. Brainstorming a pre-writing skill became the topic of another Choose 3 lesson. This way, after students completed a Choose 3 lesson, I knew the content had been covered and everyone could move into the workbook for review. I also found that the Choose 3 lessons could be used to review material already taught or to introduce a new topic.

CHOOSE 3 LESSON
Brainstorming

Take 15–20 minutes to do each of the three you choose.

1. Trace your hand. On the fingers write two or more sentences that express the main ideas you would use for an essay about one of the following:
   A. Why I like hands-on activities.
   B. I am handy at…
   C. I like the way I handled this situation…

2. Pick a graphic from the "GRAPHICS" folder. Color it.
   Write three things you see in the graphic. Write six sentences about what you think the graphic is about or what it makes you think about.

3. Using one of these—keyboard, magnet words, numbers, shapes, clay, Play-Doh, paint, markers, crayons, or paper pieces—show how you would design a five paragraph essay about "My Favorite Classroom Activity."

4. Draw three rooms from a house you lived in as a child. In each room write two or more sentences about what you remember in that room.

5. Pick three life symbol graphics (see folder) that represent your life right now. On another sheet of paper trace the picture and write two or more sentences in each picture about why you chose that graphic.

6. Choose an animal picture that most reminds you of yourself. Trace the picture, or draw your own image, or make the animal out of clay or Play-Doh. List everything you can think of that describes that animal: how it looks, where it lives, family, food, movement, sounds it makes, how it acts, etc. Put a check next to the things that are like you and explain how they are similar.

Tracking Progress

I kept track of learners' progress with student daily logs that asked what materials they had completed and how they had scored on GED workbook material. Students also recorded their views on what was or wasn't working in

MI lesson in multiple intelligence logs. I kept a teacher's daily log of my observations. The data show that, from the start, having choices increased students' involvement in class. Fewer students were going home early, taking lots of breaks, or just not doing anything. After I fine-tuned the Choose 3 activities, I observed that, although learners' choices differed, individuals thought they had chosen the easiest activities. Students who said they liked math often chose the logical/mathematical activities and students who said they liked discussions often chose the interpersonal activities, and so on. My conclusion was that learners were using their strongest intelligences to help them understand each GED topic.

By the end of that class year I was seeing something else that I thought was significant. Not only did I observe students using their strongest intelligences to learn GED materials, but I also noticed that students who traditionally drop out those with learning disabilities (LD) and attention deficit disorder (ADD) appeared to be involved in learning in ways that I had never seen before. These students were coming to class and starting the Choose 3s immediately. They were more willing to go into the workbook material that was related to a Choose 3 activity they had done. Compared to the non-MI-informed class, and to the period before I started the MI project, there was less complaining, less protesting: "I don't understand!" and less avoidance of any classroom or workbook activity.

When I looked back at my classroom observations and attendance records, I noticed that, although usually students with ADD attended no more than a few weeks, one of my students with ADD had stayed on from enrollment in December to the end of class in May. Another LD student had attended regularly and gotten her GED, unlike past students with LD who never came to class long enough to be test-ready. A third student had excellent attendance compared to other LD students in a class where I was not trying MI-informed lessons.

Second Year

In the second year of the project, my research question was: How do MI-informed lessons affect the attendance and progress of adult learners with LD or ADD? I also liked the idea that I could develop and refine the Choose 3 lessons to help students pass the GED tests. I planned to add some math activities and also design Choose 3s for science, social studies, grammar, and writing. Examples of the lessons are given on pages 48–51. I was so pleased by the results of MI-informed instruction the first year that I could not deny it to either group of students, so both classes subsequently received MI-informed instruction.

The students had struggled with doing daily and MI logs in year one. In the second year, they talked and I recorded their MI activities, which included their views on the MI lessons. I also kept my teacher's log. I also kept my MI activities log. At intake and during the year, I recorded students' self-disclosures about LD or ADD diagnoses through school or agency testing, and I compiled attendance data.

The second year of the project was especially exciting. I had the whole year to incorporate MI theory into my GED lessons and could be more attentive to how learners with LD and ADD were responding to an MI-informed class.

This is what a class looked like: Students came in and started reading the Choose 3 for that day. Play-Doh, markers, a keyboard, rulers, Legos, pen or pencil, paper, and maybe a partner or a group would be collected to do the chosen activities. Lots of discussion, movement, concentration, debate, questions, and answers filled the room. Learners who finished before the others did related workbook activities. When everyone completed their three activities, the whole group gathered. Everyone identified their choices. Anyone who wanted to, which was usually everyone, shared what they did. I distributed a GED worksheet on the subject, which

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CHOOSE 3 LESSON
The Planets

Choose 3 of the activities below.

Do any by yourself, with a partner, or in a group.
Read handouts: size, geography, distance of the planets.
Look at mobile and press on pictures.
Look at books about planets.

1. List the distance of each planet to the sun in scientific notation.

2. Describe the planets musically—use keyboard, song, song titles, etc.

3. Using the paper roll, compare the distance from the planets to each other and the sun.

4. Compare the size and look of each planet using Play-Doh, paper, or balloons.

5. Using mime, dance, or a play, show what would happen to you if you were standing on each planet.

6. Write a description or create a poem that compares yourself to the planets you think you are most like and most different from.

7. Design two different aliens: One who looks like s/he could live on a planet closest to the sun and another who looks like s/he could live on a planet the farthest away from the sun. Use any materials to make each alien.

8. Make a list comparing the size, colors, distance from the sun, moons, and temperature of each planet.

students read and answered silently. Then they shared, debated, and checked their answers. The remainder of the class and the next class included some writing exercises and lots of workbook practice.

My records showed that students with LD and ADD had excellent attendance. They not only attended more regularly than in other years, but they also were actively participating in the activities while in class. Because they attended more regularly and were doing the workbook reviews more willingly, they made progress toward individual GED tests. This, of course, was also true of all the GED students that year.

Positive Outcomes

By the year's end I had learned much about how MI-informed lessons affect the attendance and progress of adult learners with LD or ADD. In interviews with these students, one student said, "To know something is one thing. To know something and do it is another." He continued, "I prefer hands-on because it clarifies everything. If it was all workbook, I wouldn't do well cause I'd lose interest. I wouldn't stay long cause I'd lose interest. If you make work fun, it wouldn't be work."

Another student who had just passed her GED math said about working only in the workbook: "I'd probably still be on the math in the beginning. I concentrate more on those [points to Choose 3 lessons]. My mind drifts if I just do the workbook." She said of the Choose 3, "These give you a different way of looking at problems. You go through the problems more this way. In the workbook you just do the problems, that's it, and with this you can work together."

The words and reactions of students in my MI-informed classes have stayed with me. I believe that choices should always be a part of the learning experience. I know that allowing students to learn through their strengths is successful. I'm beginning to think about how MI will help learners with the GED 2001. It's a never-ending quest.

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About the Author

Martha Jean was born almost 50 years ago. During the second half of those years, as a substitute teacher in the public schools and as an adult education teacher for Community Action, Inc., in Salisbury, MA, she discovered that her best teaching happened when she was trying to figure out the many ways that her students could learn.

Handout 📄

Adding a Dimension to Career Counseling
by Jean Mantzaris
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Introducing MI theory and MI-enhanced activities to a career counseling course opened everyone's eyes to new possibilities

At Wallingford Adult Education Learning Center, Wallingford, CT, we serve the needs of our adult learners with classes in basic education, general educational development (GED), and external and credit diploma programs. We also provide classes in English for speakers of other languages (ESOL) for a growing population of students, a significant number of whom are Mexican immigrants. Many of our students are employed at minimum wage jobs, or receive welfare, disability, or unemployment benefits. An essential element of their education at our Learning Center revolves around making career choices and seeking related higher education and training. As guidance counselor responsible for career development, I struggled with how to serve these students. They are under considerable pressure to make the "right" career choice, while constrained by limited time, limited finances, significant family obligations, and a limited view beyond standard careers.

In searching for new ideas and a more focused approach, I joined the Multiple Intelligences (MI) project. While traditional concepts of human intelligence measure linguistic and logical-mathematical abilities, multiple intelligences theory suggests that the range of intelligences be broadened to include spatial-visual, bodily-kinesthetic, musical, interpersonal, intrapersonal, and naturalist. All humans possess these intelligences in varying degrees and apply them in various combinations, given their proclivities, activities, and environment. This concept seemed a promising premise for guiding students through their career choice process. I therefore agreed to learn about MI theory and carry out a practitioner inquiry project in which I applied MI theory to my work with adult learners involved in career development. I decided to focus on how students' awareness of their own intelligences and participation in activities informed by MI theory affect their career-decision making process.

The class in which I did my research was a 12-week career development module that met each Wednesday morning for an hour and a half. I had 11 students, five of whom were male. Of the 11, eight participated in almost all the activities. Our Learning Center uses individualized instruction, so these modules were the only place where students were in

groups. To gather data, I had students write in their journals after each MI-inspired activity; I also kept observation notes and held individualized interviews with the students before and after the course.

Immediate Changes

Before the module started, I held individual interviews with students. In the past, when interviewing students, I began with a short conversation about why they came to adult education, then quickly had them filling out forms and taking assessment tests. With MI in mind, I asked students about their career choices, their strengths, what they felt they were good at, and a "wish" career. I also had all students assess their intelligences using an instrument developed by Meg Costanzo, another AMI project member. I wanted to see if their dream occupations matched their strengths.

During the first class session, using lecture and visuals, I introduced Gardner's theory of Multiple Intelligences, and then had the students work in pairs, interviewing each other about their intelligences. Each student reported to the group on the strengths of his or her partner. Journal entries from that day included: "This stuff is fun, but more than that it shows you how many people around you are smart in many ways and so am I" and "Like it woke me up. I though it was enlightening. I came in with a poor mood but this picked up my spirits." One student expressed negative views of the activity, describing it as "a waste of time. I'm here to study for my GED. I don't have time for this."

Another week, I asked students to "go back in time" and reflect on what they loved to do as children and bring representations—photos, favorite stories, etc.—of these activities into class. Two students shared childhood photos. John shared a picture of his first Halloween, commenting on how much he did and still does enjoy pretending. Kimberly talked about taking things apart and putting them together, something she still enjoys today. Students also had time to "play" with materials I had assembled that were familiar to them from childhood, such as kazoos, blocks, and Legos. They reflected on whether their favorite activities were connected to present favorite activities or strengths, and if they wished to resume or strengthen any neglected activities. They looked for links between their adult and childhood intelligences and explored why childhood intelligences withered or flourished. Eric, for example, talked about a childhood among adults and how being a clown in school got him in trouble. The students each made key chain ornaments depicting a strength they wanted to nurture.

During another meeting, the students completed the Harrington-O'Shea Career Decision Making System. This career inventory has several

reading levels and is available in Spanish. The students received an interpretive folder with their personal summary profile and I reviewed this material with them. Some of the students exhibited a flat profile on the Harrington-O'Shea, which may have resulted from a lack of familiarity with the scale used in the instrument: like and dislike. The students felt that these inventories were not as reflective of their strengths as the MI profiles they had developed. I believe the MI assessment seemed more personal to students.

When the students moved to a study of Connecticut career clusters—eight areas that drive Connecticut's economy—they looked at the careers in light of multiple intelligences. One student saw how a natural resource manager needs math/logical strength to study chemistry, physics, and math; linguistic strength to express concerns verbally and in writing; kinesthetic strength for field work; visual/spatial strength to look for clues in the environment; interpersonal strength to accept recommendations; and interpersonal strength to reflect on findings and to make ethical considerations. Another student for whom business and finance may not have previously had any appeal viewed his strengths as math/logical and musical and began to think about a business career in the recording industry. Yet another student with linguistic strength and no known career objectives described how his quick tongue—a source of trouble for him in school and with the law—might be an asset in the broadcasting industry.

New Possibilities

Once students became aware of their strengths, career possibilities abounded. While four students were fairly certain about possible careers during the interviews I held before the module began, only one remained certain of his choice at the completion of our work. A decision of "no choice," however, now seemed positive rather than directionless. The students were beginning to dream, and to explore. Three students decided to enter community college to explore different areas of study. The two who worried about having served jail time now made plans: one to attend a community college and the other to attend the state university. For the three public assistance recipients, the changes were significant. All three filed college applications and Free Application for Federal Finance Aid (FAFSA). For one, that took particular courage, since her benefits were ending and she faced opposition from family members.

Conclusion

The entire project was an extraordinarily enlightening experience for all of us involved, counselor and students alike. Rather than beginning the endeavor with a hypothesis—a statement of expected outcome—I began with a question: Can MI theory provide a valid approach for guiding students through the process of identifying their strengths and skills in order to make appropriate and ultimately gratifying career decisions? I was no longer operating within the parameters of proven research; rather, I was assuming the role of the researcher, and it would be I who formulated the outcome.

As a counselor, I had previously been so focused on the "right fit" in the career decision-making of adult education students that I missed the discovery process. Yet, as the students and I became more and more absorbed in this project, we found that the discovery process is a vital and multidimensional element of career choice-making. It was fascinating to watch the students reaching back into their childhoods for recollections of their strengths, skills, and favorite activities and drawing correlations to those extant. From there, they were able to extrapolate their career choices. Using what they learned about themselves through MI, they will now be able to capitalize on their strengths and talents in the future.

I was at first uncomfortable that this approach so widely expanded the students' range of choices; I had always viewed the career counseling process as one of narrowing, not broadening, possibilities. My own ambivalence became a discovery process in itself as I learned that the MI approach could be a valid and viable tool in career development.

Perhaps the words of John, one of my most eloquent student journal writers, best exemplifies our MI journey into self-discovery and career decision-making: " our past experiences shade our view on life...my glasses were somber and obscure, tainting everything that filtered throughout Then expectedly the world around me changed. The air gave birth to new sounds and smells. The land filled with colors I had never seen I had unconsciously changed my glasses. New dreams and desires danced through my mind. Words like college, career, and future introduced themselves into my vocabulary."

About the Author

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Information About NCSALL

NCSALL's Mission

NCSALL's purpose is to improve practice in educational programs that serve adults with limited literacy and English language skills, and those without a high school diploma. NCSALL is meeting this purpose through basic and applied research, dissemination of research findings, and leadership within the field of adult learning and literacy.

NCSALL is a collaborative effort among the Harvard Graduate School of Education, World Education, The Center for Literacy Studies at The University of Tennessee, Rutgers University, and Portland State University. NCSALL is funded by the U.S. Department of Education through its Institute of Education Sciences (formerly Office of Educational Research and Improvement).

NCSALL's Research Projects

The goal of NCSALL's research is to provide information that is used to improve practice in programs that offer adult basic education (ABE), English for Speakers of Other Languages (ESOL), and adult secondary education services. In pursuit of this goal, NCSALL has undertaken research projects in four areas: (1) student motivation, (2) instructional practice and the teaching/learning interaction, (3) staff development, and (4) assessment.

Dissemination Initiative

NCSALL's dissemination initiative focuses on ensuring that practitioners, administrators, policymakers, and scholars of adult education can access, understand, judge, and use research findings. NCSALL publishes *Focus on Basics*, a quarterly magazine for practitioners; *Focus on Policy,* a twice-yearly magazine for policymakers; *Review of Adult Learning and Literacy,* an annual scholarly review of major issues, current research, and best practices; and *NCSALL Reports* and *Occasional Papers*, periodic publications of research reports and articles. In addition, NCSALL sponsors the Connecting Practice, Policy, and Research Initiative, designed to help practitioners and policymakers apply findings from research in their instructional settings and programs.

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