## ABSTRACT

Betsy Cornwell's research project is motivated by a desire to gain a better understanding of why some seemingly motivated and capable students appeared to be unable or unwilling to do the academic work necessary to reach their own goals. She sets out to assist her students in developing their intelligence profiles, expecting "the intelligence profiles to be a self-reflection tool that would help my students determine their most effective problem-solving techniques." She discovers that "what had appeared to be ineffective problem-solving techniques turned out to be a series of complex decisions and survival skills." Betsy finds herself compelled to examine her own assumptions and values related to teaching and learning. She comes to terms with the fact that, in many instances, they are different from those of her students. "Rather than forcing a student to choose between "my way," and "your way," I found that honoring my students' assumptions can be a starting point for expanding their understanding." This realization leads her to seek and create other tools besides intelligence profiles to help her students meet their basic needs for security and dignity while reaching their academic goals.

Relying on insights gained through student logs, her own journals and observations from her one-to-one or small group tutoring sessions, Betsy develops MI-based ways to encounter student resistance. The report profiles five students as well as specific learning activities informed by MI theory that proved to be turning points in these students' learning process. Betsy concludes, "When my students feel threatened by an academic task, I can now look at the task through the lens of different intelligences and find optional ways to approach it. Often, just a change in materials can provide the way out that allows everyone to maintain their dignity and security."

# Betsy Cornwell

## RESEARCH CONTEXT

I work for an Even Start family literacy project in rural Maine. Most of the time I wear the Coordinator's hat, working with collaborators, writing reports and grant renewals and maintaining the budget. Part of the time, however, I am an adult instructor, teaching adults in their homes. Depending on the student's needs, I do ABE, ESOL, GED or ASE instruction with parents while I help them nurture their children's education.

*Will awareness of their own intelligence profiles help my students become more independent learners*

Living as we do in a rural area, student isolation is a reality we have to deal with. Isolation is a function of limited transportation and child care options, but it also goes beyond that. Whether it is because of lack of transportation, extended work hours, or just not enough trust to feel safe in a learning center, our students are grateful for the opportunity to receive instruction in their homes. By delivering instruction in students' homes, we can offer a way around the logistical barriers as well as the less tangible ones.

When I visit a home, in some respects the teacher/student relationship is reversed. I am the visitor and my student is the host. I am the one who is unsure of the prevailing rules and appropriate conduct. My students find themselves in the role of protector and teacher as they help me figure out where to sit, how to address family members, which pets to approach and even how to find the home in the first place. This role reversal often feels strange, but I think it is good for all of us.

The biggest challenge is that I only have 90 minutes' contact with each student per week. This precious time is too often eaten by distractions from children, phone calls, and real-life issues that legitimately sidetrack our plans. While many distractions are serendipitous and productive, lack of continuity is a constant frustration for me.

Something about family literacy intensifies the teacher/student relationship. Although we only have 90 minutes a week, each student has my undivided attention for that time. I also get to know children and other family members. Working with entire families in their homes has given me a wider perspective on my students and the factors that influence their learning.

## RESEARCH QUESTION

*Will awareness of their own intelligence profiles help my students become more independent learners?*

This question had its origin in an uneasy observation. I always try to design my teaching around my students' own goals. Even so, I was occasionally feeling a sense of active resistance from some of my students. Sometimes they would adamantly refuse tasks that were clearly within their abilities. Sometimes they would argue endlessly over trivial matters. More often, they would just watch passively while I desperately tried to engage them, making no effort to help me in any way. These students persisted in their resistance, even when it meant sacrificing goals about which they obviously cared. They also persisted with me, apparently hoping that I could somehow find a way for them to reach their goals despite their refusal to do the necessary work. Most of the time, my teaching was enjoyable and exciting, but these situations were frustrating and draining. As I began my research, I wanted a better understanding of why some seemingly motivated students seemed unable to reach their goals no matter how hard I tried to teach them. I especially wanted to know if Multiple Intelligences theory had anything helpful to offer them.

My research question and plan evolved as my understanding of my students' learning increased. When the project began, I assumed intelligence profiles to be a self-reflection tool that would help my students determine their own most effective problem-solving techniques techniques. I soon realized that there was nothing simple about this project. What had appeared to be ineffective problem-solving techniques turned out to be a series of complex decisions and survival skills. As my awareness of the deeper motivations behind my students' resistance grew, I realized that I would need other tools besides intelligence profiles to help them meet their basic needs for security and dignity while reaching their academic goals. While my question turned out to be more complex than I thought, the answers are also much richer and useful than I expected. Together, my students and I explored the meaning of "independent learning" and what it means to be "smart". They patiently explained to me that many of my expectations of them seemed unrealistic. I sharpened my powers of observation and increased my ability to interpret their verbal and non-verbal messages. In the end, my students and I found some ways to help them succeed in their academic pursuits despite their inability to conform to my original expectations.

My students have taught me a great deal about their hopes and needs. The journey has not been at all what I expected. I still have not found the perfect term to describe my observation. Sometimes "resistance" seems to fit. Herbert Kohl's "not-learning" has appeal as well. Whatever I choose to call it, I now have a much clearer idea about how to confront (or "not-confront") it.

## EVOLUTION OF MY WORK AND THINKING

I have always wondered why some supposedly "smart people," myself included, can seem so "dumb" in certain contexts. I was labeled "highly intelligent" in school, partly because of my knack for remembering trivial bits of information. Even though I passed as a "smart person" in school, I know better than to rely on my memory when I go grocery shopping. I never put my bags in the trunk of my car because I know I'll forget that I've been grocery shopping if I can't see them in my back seat when I get home. Most of my Even Start students have at one time or another been labeled

"school failures," but they shake their heads in amusement at my absent-mindedness. They may not have been shining stars in school, but they can certainly remember when they have groceries in the trunk. I, in turn, am awed by adult students who can cook well without recipes, build without blueprints, or guide a skunk out of a department store without causing a smelly disaster. They have been able to develop and refine all of these skills without the written instructions and reminders I rely on so heavily. I was attracted to the AMI project because MI seemed to explain some of our differences.

Reading *Frames of Mind* (Gardner, 1983 ) and *Seven Kinds of Smart* (Armstrong, 1993) gave me a framework for understanding these differences. The best thing that has come from my study of multiple intelligences is that it takes talk of intelligence away from the "smart/dumb" dichotomy. I have never allowed any of my students to refer to themselves as "dumb." Even Start students, however, are not interested in hollow attempts to bolster their self-esteem. MI theory has given me a sound psychological basis on which to anchor my insistence that my students are not 93dumb" and must not refer to themselves as such.

Howard Gardner describes intelligence as the ability to do tasks and create objects that are valued by others. His emphasis on "authentic tasks" in learning is derived from this definition of intelligence. I can relate to it. In my "other life" as a piano teacher, I would never dream of trying to teach anywhere but a piano bench. The expectation that someone might learn to create music by reading a book is ludicrous. It stands to reason that my Even Start students will be more successful in meeting their goals if the learning tasks I assign them involve the tasks and objects that are important in their daily lives as parents, employees and citizens. A student's home is an ideal environment for authentic tasks. We are surrounded by "authentic" materials and "authentic" events. Throughout my Even Start career I have tried to use my students' real-life dilemmas and experiences as a basis for lessons. While this was generally a successful approach for me, I sometimes found that this kind of task could also be perceived as an invasion of students' privacy. Some of my students eagerly bring their mail to use in reading lessons. Others do not wish to share their personal business. I can understand why students might be reluctant to share such things as their checkbooks with me even when keeping a check register is a skill in which they are intensely interested.

Reading *Making Connections: Teaching and the Human Brain* (Caine and Caine, 1994) and *Multiple Intelligences in the Mathematics Classroom* (Martin, 1996) gave me a new spin on the idea of authentic tasks. Caine and Caine speak of the importance of making learning playful and meaningful in a non-threatening environment. Martin provides a variety of whimsical projects that nevertheless use math skills in authentic ways. I think my potato chip lesson could be put into this "whimsically authentic" category. Determining the weights and dimensions of various brands of potato chips may not be of pressing importance to the quality of anyone's life, but the skills we used - applying known processes to unexpected tasks, measuring and estimating - were definitely applicable to "real life." Moreover, I think the silliness of the task fulfilled an important function for my students. Men and women who worked the hardest to protect themselves from some kinds of learning would drop their defenses when the task at hand involved frivolous materials.

I began this project with the assumption that the resistance I sometimes encountered was due to students' lack of understanding. I thought that if I could just find the missing piece of background information or the right way to present the material, my students would drop their resistance and begin to learn. "'A Belief in Self Far Greater than Anyone's Disbelief': Cultivating Resistance Among African American Female Adolescents," by Tracy Robinson and Janie Victoria Ward (1991)

introduced me to the idea that some students might have their own, very valid, reasons to be wary of education. Even though Robinson and Ward were talking about urban African-American teenagers, I could see many points of resonance between their descriptions and the experiences of my white, undereducated, rural students. Like the young women Ward and Robinson described, my students felt alienated and threatened by our community's educational institutions. Among the teenage mothers I worked with, I heard many of the same arguments for having children early and dropping out of school that Ward and Robinson described.

As one of my early attempts to describe the resistance I'd encountered, I had written an essay called, "Does the World Make Sense? Is it Supposed To?" In the essay, I described a young woman who could repeat and use the formula for converting ounces to pounds but thwarted my every effort to get her to apply that formula to a word problem. In my world, numbers have consistent properties that relate to physical reality in predictable ways. I had the sense that this particular student thought I was being terribly naive to make such an assumption. It seemed to me that her resistance to word problems arose from an alternative conception of reality where numbers were neither predictable nor related to the physical reality she knew. While my other students don't baffle me with word problems in the same way, they frequently present me with similar puzzling challenges to my assumptions about learning and education.

In his book, *In Over Our Heads* , Robert Kegan (1994) describes the orders of consciousness that define adult experience. The chapter entitled, "Learning: The Teacher Wants Us to Be Self-Directing" was especially helpful to me. Kegan confirmed my impression that the differences between my students' views of reality and my own were, indeed, sometimes fundamentally different. Reading his book helped me better understand what I could reasonably expect from my students. His descriptions of effective strategies for helping students bridge the gap from one order of consciousness to another encouraged me to use my students' understanding as a starting point for learning.

"But I'm Not a Therapist" (1998) is a working paper by Jenny Horseman in which she discusses the impact of violence upon literacy. She describes behaviors and coping mechanisms of trauma victims. Like Robinson and Ward, she questions the characterization of misunderstood behaviors as "unhealthy". All of my students are survivors of trauma, although not all have been subjected to domestic violence. Many of the situations she described have parallels in my Even Start experience.

My most recent "Aha!" experience has come from reading *I Won't Learn From You* by Herbert Kohl (1994.) He writes about "not-learning," which happens when students choose to reject subject matter their teachers are trying to teach. Kohl writes about "oppressive education" as the culprit in not-learning. Some of his examples relate to life circumstances as well as formal education.

Each of these authors shed light on the behavior of my students. I began to realize that, in many cases, my students were making deliberate choices not to learn, despite their obvious desire to reach their goals. *Frames of Mind* provided an expanded framework for understanding my students' abilities. The other readings encouraged me to also observe my students' learning in light of relationships, past experience and deeply felt loyalties. I began more seriously to consider the environment necessary for learning. I became more aware of the profound ways in which education changes students, creating unanticipated costs and unlooked-for rewards for the persistent student. My research progressed from being a "how-to" kind of project where I could just plug in missing

information, to seeing much more complexity and richness in my students' relationship to learning. As my understanding grew, I became more skilled at finding ways to help my students meet their goals without asking them to sacrifice more than they were ready to give.

## METHODS

### The Students

During the project, I worked with ten different adults singly or in groups. Of the ten, Beth, Ben, Diane, Sohkom and Boeun best exemplify the insights I gained from my research. Therefore, I focused on them in this report.

Sohkom and Boeun are sisters. Sohkom and her husband have recently purchased a home near their parents' home. Before that, Sohkom, Boeun, their husbands, children, younger siblings and parents all lived in one large house. Sohkom and Boeun represent the "in-the-middle generation": Cambodian immigrants who came as children to this country with their parents and are now raising families of their own. I have been working with them for several years. Our current goal is to pass the exam for naturalization as U.S. citizens. Sohkom and Boeun's husbands and mother are also my students.

Diane is married and the mother of four children. A survivor of severe childhood sexual and physical abuse, she dedicates herself to healing. Her family lives in a cramped, rickety trailer in the woods. At this writing, Diane is a brand-new high school graduate. Her struggles to complete her final work in world geography will be an important feature of this report.

Beth and Ben are a couple with four daughters and a baby son. Ben works as the animal control officer for several local towns and as a security guard at a local sawmill. Beth came to Even Start five years ago as a very new reader. We are currently working on her writing, multiplication and measurement. Ben worked with me to pass his GED exam three years ago. Whenever he has time between animal calls and trying to grab a few minutes of sleep, we work on the very basic math skills he somehow never mastered.

### The Plan

*Research Question: Will awareness of their own intelligence profiles help my students become more independent learners?*

In order to answer this question, I had to assist my students to understand their own intelligences as well as create a working definition of an "independent learner". Because I wanted my students to take more responsibility for their learning, I planned to let them have as much input as possible into the form of the intelligence profiles and the independent learner definition.

Like my question, my research plan has undergone several incarnations. Data collection tools have included periodic taped interviews, written case studies, learning logs kept by students, a teacher journal, my notes and reflections on my readings, and a jointly derived definition of the "independent learner."

**Data Collection**

- Scenario Tapes
  I taped interviews with my students during the period when I was thinking of my project as concerning problem-solving. I described open-ended situations involving everyday problem-solving such as broken washing machines and school dances. I asked students how they would cope with these situations and recorded their responses on tape. We then discussed the skills, talents or intelligences the students brought to bear on the situation and speculated on applications to our academic work. Several students have done two interviews. When I changed my focus to student resistance to learning, the scenarios seemed less useful, so I stopped using them.

- Learning logs
  Each of my students has been asked to keep a learning log or journal. Because many of my students have only very basic writing skills, I wanted the logs to be simple to complete. I started with a lined page that had several questions to answer. The current log consists of two spaces, "This is what we did," and "This is what I think." I copied several different versions of the form, each with a different decorative border, to add visual interest.

- Case studies
  All home-based teachers in my Even Start program are required to keep anecdotal records of all visits. For the duration of the research project, I expanded these records into what I call case studies. There is one case study for each home (i.e., "Beth and Ben," "Diane," and "Naturalization Class at the Samrith Home.") Each case study includes a description of the lesson as well as my observations and reflections. I have collected detailed accounts of each visit with each student over the course of the AMI project. For most of the project I also kept a separate journal to record reflections on my reading and the project as a whole.

  These written case studies have proven to be very useful. I have tried to elicit my students' reflections on our sessions together, but the most revealing information by far has come from students' behavior as recorded in the case studies.

- The Profiles
  My original plan called for several steps in the creating of individual intelligence profiles:

  1. *Introduce students to MI.* I began in my typical linguistic way, by showing my students a list of Howard Gardner's seven original intelligences. I quickly discovered that the terminology was intimidating to insecure readers so I replaced the list with a pie chart using Thomas Armstrong's terms and simple graphics. I added my own description of "nature smart" because it was not available at the time.

  2. *Students create "I can...." lists.* I asked each of my students to complete the sentence, "I can...." as many times as they liked. I wanted them to list the activities in which they felt most confident. In order to stimulate their thinking, I asked how they spent their days, what kinds of things other people asked them to do, what made them feel happy.

3. *Create student intelligence profiles.* I asked each student to compare the items on the "I can...." list to the eight intelligences and to speculate on how those strengths might influence their learning. I had planned to ask each student to create a representation of his or her intelligences. This could be a list, drawing, song, essay, chart, or anything else that would show the student's perception of his or her intelligence profile. As it turned out, I never asked any of my students to do this step. Sohkom, Boeun, Dare and Chan cooperated with the preceding steps but showed no enthusiasm. When they asked me to focus lessons more directly on their preparation for the citizenship exam, I complied. Diane seemed to feel threatened by this part of the project, as if I were invading her privacy or asking her to take on an identity with which she didn't feel comfortable. I backed off. Beth created her own pie chart and drawing even before I had a chance to ask her to.

- <u>Defining the independent learner</u>

  Like the logs, the "independent learner" definition was an attempt to get student reactions with which to compare my own. I began by interviewing each of my students about their definition of "the independent learner." I wrote each response on a separate card. At subsequent visits, I let each student review all responses and asked them to sort them into piles for "agree," "disagree," and "don't know."

  My conclusions about independent learning are based on a combination of student responses to the definition process, my observations of their behavior during lessons, and the research I have done on the topic.

## FINDINGS

### Finding 1: Individual Intelligence Profiles

When I began my investigation into adult learning and multiple intelligences, I expected that the process described under "The Profiles" in the "Methods" section of this paper would play a large part in my project. I thought my students would be as fascinated as I was with their learning processes. I learned that words I considered to be "student-friendly" such as "music smart," or "people smart," still could have threatening connotations for some students. They were frequently reluctant to admit to their strengths. They were suspicious of my attempts to validate abilities outside the recognized academic realm of linguistic and mathematical. I think that the discussion of individual intelligences may have felt invasive for some students, Diane especially. When they were willing to discuss their strengths and skills, I discovered that making connections between particular skills and specific intelligences was not as easy as I thought. I think we could have achieved the same results more easily without the emphasis on my students' individual intelligence profiles.

**As I compared the case studies I had written with my students' entries in learning logs and their interview responses, I came to four conclusions:**

- 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.
- Careful observation and analysis of students' behavior and feedback provided extremely useful information about their intelligences as well as the ways in which they learned best.
- The discussion of the "independent learner" revealed to me that my students and I approach adult learning from fundamentally different perspectives. Rather than forcing a student to choose between "my way," and "your way," I found that honoring my students' assumptions can be a starting point for expanding their understanding.
- Activities based on multiple intelligences theory can provide an effective way for students who resist certain academic tasks to reach their goals. MI-based activities helped my students approach my independent learner ideal, even in cases where they didn't value the ideal themselves.

**Diane**

Diane did not seem very interested in designing a personal intelligence profile. I asked her to look through her learning logs and categorize some of her activities by intelligence. She came up with the following list:

> Word Smart — Writing Skills
> Picture Smart — Standing your ground (showing feelings.)
> Body Smart — The way you handle things in your life. Teaching skills
> People Smart — Social skills. Knowing people. Support group. Counseling sessions.
> Self Smart — Survival Skills. Teaching skills (techques [techniques?] to survive.)

"Standing your ground," is a reference to an incident when Diane had been very angry with me. She was proud (and I was relieved!) that she had not struck me. She had originally categorized this entry as "Body Smart." When I asked why she wanted to call it that, she changed it to "picture smart," and refused to discuss it further. I wanted to know more about Diane's list but she did not want to answer questions.

**Sohkom and Boeun**

The best way I can describe Sohkom and Boeun's reaction to the intelligence profile project is that they were patient with me. When I asked them to create an "I can...I had to entice Boeun away from a book she was reading. Eventually the two women produced identical lists:

I can cook and eat.
I can work.
I can shop.
I can take good care of my children.

We followed this activity with a "cooking class," where I observed and took notes while they prepared fried rice in their kitchen. The intention was for them to produce a written recipe from my notes. I had also been hoping that I would be able to extrapolate the intelligences they were using as I observed them at work. Even after reading several articles and initiating discussions of "the cooking intelligence" on the AMI listerv, I am unable to tease out the specific intelligences I saw at work that day. Sohkom and Boeun didn't seem very interested in discovering which intelligences they were using. They already knew they could cook. The lesson, however, was a valuable experience which gave validation to Sohkom and Boeun's impressive skill while helping them to make a connection between writing (producing a recipe) and something they do well. Even if I had been able to say definitively what intelligences were in operation, I don't think that would have added any significant value to the lesson. I chose to abandon further work on intelligence profiles because the task did not appear to be especially meaningful for these students. I did not want to use our limited time together on an activity that was not engaging their interest.

**Beth**

Beth was the only student who seemed to enjoy creating an individual intelligence profile. She was inspired to draw a pie chart similar to the one I had shown her. On it, she delineated her own "intelligences": "picture smart," "music smart," "kids smart," "nature smart," "math smart," "people smart," and "self smart body smart." Outside the circle, she wrote relevant activities for each category. (E.g., for "kids smart," she wrote, "I like to know different kids. They are all different." Next, she asked for a 18" by 24" piece of paper on which she drew pictures illustrating some of these intelligences. After much thought, I chose not to correct her choices to separate "kids smart" from "people smart" or to combine "self smart" and "body smart." [sic.] She offered her own simple and eloquent response to multiple intelligences theory. If we were to use the theory to design learning experiences that would suit her individual needs, this response seemed like a logical starting place.

### Finding 2: Student Behavior and Feedback

I found that comparing my case studies with students' learning logs and their responses to our lessons provided a rich source of information about their needs and expectations as learners. As I re-read the case studies, I was often struck by details that had seemed insignificant to me at the time I recorded them. When compared with my notes as recorded in the case studies, the sparse learning journal entries became an eloquent testament to the kinds of learning activities that were most helpful to my students. Students' written log entries sometimes appeared to contradict the enthusiasm or boredom they exhibited during lessons. Putting together the various data sources gave me a much more complete picture of what was happening in our lessons and helped to resolve many of the apparent contradictions. The variety of activities with which we experimented became a much

more rewarding source of information than my attempts to help my students create individual intelligence profiles.

**Beth**

Beth's simple learning log entries revealed information about the kinds of learning activities that were most meaningful to her. In the section labeled, "This is what I think": she usually wrote "ok." Several lessons, however, elicited longer responses as listed below:

| Date | Lesson | Comment |
|---|---|---|
| 10/20/97 | Apples by the pound (Part 1) | How it cost |
| 10/30/97 | Apples by the pound (Part 2) | Yes we did fine (find) how much cost. I got good buy on my apple. |
| 11/6/97 | Apples by the pound (Part 3) and potato chips | I don't understand math. |
| 11/14/97 | Subtracting with beans and plates | I like math. Can do on paper. Can't on plants (plates.) |
| 1/14/98 | How long is $1,000,000? | It was good. |
| 2/11/98 | Study of patterns in 12 x table math. | It was good because the pattern how |
| 2/25/98 | Writing announcements for Even Start events | That good for me because didn't have my read teacher on Friday. |
| 3/4/98 | Doubling a recipe | Good! |

My observations confirm that the lessons listed above were probably the most significant for her. Beth is always cooperative, but on these occasions she was less passive, asked questions, commented on the process of the lesson and offered suggestions. Although she records, "I don't understand math," for the potato chip lesson on November 6, she was more than typically engaged in this lesson. She formulated most of the questions for our investigation and took an active role in carrying out Ben's suggestions for finding answers. Whether or not she is willing to claim understanding, I know from my record of her behavior that this is the type of lesson I want to repeat with her because I know that engagement is a prerequisite to learning.

**Ben**

Ben occasionally joined Beth and me in our sessions together but did not participate in the intelligence profile project. The November 14 lesson with beans and plates was a truly significant session for Ben because during that and subsequent lessons he was finally beginning to understand the concept of regrouping in subtraction. Early in December, however, he and Beth had a terrible fight. Beth decided she had enough of Ben's put-downs of their daughter's poor school performance so she "gave him a taste of his own medicine." She told him that using beans to subtract was

something that really dumb people had to do. Maybe he was not any smarter than the child he was calling dumb. She struck her mark, maybe too well. That was the end of beans and plates. It was almost the end of my work with Ben.

We all agreed that my working with both partners together was no longer a good idea. Ben and I planned to begin meeting at the learning center while Beth (who does not drive) would continue seeing me at home. This plan did not work because Ben never showed up at the learning center. Beth eventually persuaded me to let Ben join us again at home. Recently, I was able to use the beans in a multiplication exercise with both of them. Whenever I mentioned subtraction, though, Ben seemed to have a need to go somewhere.

What I learned from these interactions was that Ben's identity as the "smart person" in his family was crucial not only to his relationship with his wife, but also to his ability to learn. Only when Beth and I worked together to protect his self-esteem could Ben successfully confront as intimidating a task as subtraction was for him.

During our final session of the school year, I tried again to give Ben some subtraction problems. Before attempting the problems, he pointed out the ones that would be hard for him. He said he still didn't know how to deal with problems that contained a "0" in the first number. (e.g. 207 - 153). I did one problem for him, explaining the procedure for what seemed to me to be the hundredth time. Ben gave a happy exclamation and proceeded to solve the problems I had written for him and then asked for more. Why could he suddenly do a task that had eluded him for eight months? I think the exercise with the beans helped him to glimpse the relationship between mathematics and concrete reality he feels comfortable with. I think Beth's and my patient nurturing helped him feel secure enough to risk failure by really looking at a set of subtraction problems and thinking about what they meant.

**Diane**

My observations of Diane gave me more direct information about her intelligence profile than I was able to glean from my other students. Right from the beginning, she showed a preference for interpersonal intelligence. She participated in both scenario interviews, choosing to enlist another's help or cooperate in sharing resources. When I first discussed multiple intelligence theory with her, she immediately chose "people smart" as her best strength. This surprised me a great deal at first. Diane had recently lost a job because of her inability to accept even the most gentle criticism without losing her temper. While she has been an enthusiastic participant at Even Start events, she frequently shows a lack of understanding of basic social skills.

As I read her learning logs and reviewed my case studies, I began to see a pattern emerging. In her learning logs, she frequently writes about other people or herself in relation to others. Sometimes she talks about what she wants her children to learn from her experience. Often she writes about the people who may read what she has written. On February 2, 1997, we edited a personal journal entry for News From Home, our Even Start newsletter. I was pleased that, for once, she was willing to go back over something she had written and make corrections. Her description of the task was, "Reread it, fixed spellings, rewrite it. Got it ready for newsletter. To maybe help them to survive the abuse through my writings & how I worked at surviving the abuse to become a better person that can teach survival skills." When she was working to complete a high school course in geography, she collected a large stack of newspaper articles about various famous personalities instead of doing the

worksheets I had assigned. Despite my assessment of her interpersonal skills, I had to recognize that she was processing much information through an interpersonal "lens."

Diane did not say much to me about her having linguistic intelligence, but often I observed her using writing to sort out her feelings. She was the only student in this project who made full use of the learning logs, often filling the front of the page and moving onto the back.

Although Diane made few claims to intrapersonal intelligence she did keep an extensive personal journal assigned by her counselor. She often asked me to read the journal, and several times used journal entries as starting points for my writing assignments. In her writing and in conversation, she made frequent references to her experience as an abuse survivor. Reading her journal and recording her statements about her inner life revealed a depth of self-knowledge that didn't show up in intelligence profile discussions.

My observations of Diane's behavior during our sessions contrasted with her learning logs. They provide a rich source of information about how she uses the various intelligences to learn. Over time, these observations provided the key to the successful completion of the geography course that surprised and delighted both Diane and me.

**Sohkom and Boeun**

Sohkom and Boeun's learning logs were unrevealing. Boeun usually wrote, "good," about every lesson. Sohkom had slightly longer entries, such as, "It was good." I observed that they were both very clever about avoiding writing. When I assigned written homework, they usually turned in identical assignments and confessed to having asked a younger sibling for help. In conducting personal business, Sohkom and Boeun typically handle the telephone calls and personal meetings, while delegating filling out forms and writing letters to their husbands.

A review of the case studies showed that Boeun enjoyed reading, although her reading skills were still quite basic. She often read during lessons, even when I or someone else was trying to talk to her. Sohkom prefered to chat. Both women were very focused on the needs of their husbands, parents and children. Most of our lessons involved day-to-day literacy tasks, such as filling out forms, understanding written materials from school and planning encounters with banking and other professionals. Sohkom and Boeun and their family represented my first contact with Cambodian culture. I do not think I know enough to separate which of my observations are expressions of their intelligences and which relate to their culture or experience in a repressive political climate.

### Finding 3: The Independent Learner

I chose the term, "independent learner," because I wanted a way to express what would happen when my students moved beyond resistance. By the time I arrived at the final version of my research question, I knew that I was looking at students' active resistance much more than a gap in knowledge. Because I was looking for solutions instead of problems, I did not want to identify particular students as "resistant." I believed that one of the sources of resistance was the perception that learning was something I was trying to impose on my students. I guessed that if my students felt more responsibility for their own success, the resistance I was seeing would evaporate. This led me to the term, "independent learner." The final version of the question became, "Will awareness of their own intelligence profiles help my students become more independent learners?"

**Teacher's Conception**
I started with a vision of the "independent learner" as a person who knew what she wanted to learn and had enough grit to insist on a program that fit her goals and individual needs. She was not afraid to learn to use new resources and to try again when she failed. She could relate to teachers and peers as partners and resources in her quest for education.

As can be seen from the student input below, it quickly became clear that my vision and my students' expectations were very different. While I had respect for my students' desire to depend on me for their education, I didn't believe their position was very practical. For one thing, I was well aware of my own limitations in determining their needs and finding ways for them to meet their goals. Kegan (p. 275, 1994) says, "Educators seeking 'self-direction' from their adult students are not merely asking them to take on new skills, modify their learning styles, or increase their self-confidence. They are asking many of them to change the whole way they understand themselves, their world, and the relation between the two." Following Kegan's advice, I sought a way to meet my students where they were and go from there.

**Student Input**
The quest for the "independent learner" placed several demands on me, including the need to refrain from imposing my personal conceptions of our common goals on my students. I needed a student-derived definition of the "independent learner", which I sought by interviewing each student about his or her response to the term. This is what they said:

- Someone who learns on his or her own.
- A smart learner will ask for help when she or he needs it.
- You don't forget the things you learn on your own.
- A person wants to do different things.
- I'm an independent learner. Everything I've ever learned, I've learned on my own.
- An independent learner gets better at doing what he or she does.
- Someone who goes different places (store, library) to find out what he or she wants to know.
- Someone who uses a dictionary.
- One person is learning.
- Someone who works alone. (Good if she knows what she's doing.)
- Someone who talks to people.
- It's the teacher's job to make sure the student is learning.
- It's the student's job to learn.
- Being an independent learner is a toss-up between good and bad.
- It's good to be independent in some things.
- An independent learner can show you the work he or she has done.
- Someone who is willing to work.
- If I were an independent learner, I wouldn't be in Even Start.
- People don't learn alone.
- Teacher and student need to work as a team.
- The student needs to work but the teacher needs to be sure the student doesn't have too much work.
- When a student doesn't understand, the teacher should give extra help.
- Sometimes it takes longer to learn on your own.

Every student told me they did not like the term, “independent learner.” Many of them pointed out that learning works best as a cooperative venture. My term conjured for them an image of being left alone to teach themselves. I tried offering some alternatives to “independent learner.” Although there was no consensus, the most popular alternative was “lifelong learner.”

In this part of the project, I think Beth could be seen as a divergent case because her ideas matched mine most closely. She said an independent learner was a person who “goes different places” to learn things and “can show you the work he or she has done.” My other students focused their responses largely on the responsibilities of the teacher. Their vision of a successful student was someone who could work well under a teacher’s careful guidance. They repeatedly told me that “learning alone” was not a good thing.

My next step was to write these responses on separate cards and ask each student to sort the cards into three piles: “agree,” “disagree,” and “don’t know.” There was little agreement among students’ opinions. The responses most often in the “agree” pile were:

- Teacher and student need to work as a team.
- When a student doesn’t understand, the teacher should give extra help.

All other responses ended up in a least one person’s “disagree” pile.

While sorting cards into piles, I had a very interesting conversation with Diane about the word, “smart.” In the past, Diane had enjoyed Thomas Armstrong’s terminology and adapted it to her own use. (Learning Log March 4, 1997 — “...and used my smarts from the center computer to this computer.”) On this day, however, she had great contempt for “smart” people. When we came to the card that said, “A smart learner will ask for help when s/he needs it,” Diane disagreed:

> ***Diane:*** *‘Cause if they was a smart learner they would not be asking for help. You’d already know all the answers. If they were smart they would not need school, and they would not need teachers.*
> ***Betsy****: Do you really think there is such a person?*
> ***Diane:*** *No*

At this point, I pressed her to explain, but she merely repeated her two assertions that smart people know all the answers and that nobody can be that smart. She continued:

> ***Diane:*** *I can’t be a smart learner because I don’t know all the answers. I can’t even say the — far away places (searching for the word, “geography.”)...I’m really stupid. I ain’t got the brain.*
> *(AMI videotape 11/14/97 )*

Two months later, at Diane's graduation ceremony, she presented me with the following letter:

> *To Betsy,*
>
> *Thanks for teaching & taking me all over the world from my own kitchen table once a week.*
>
> *I really have learned a lot from you in the last two years we've been together as teacher and student.*
>
> *I will miss the time we shared together when we was teaching and learning from each other.*
>
> *Once you asked me what a lifetime learner is to me and I really didn't have an answer for you then.*
>
> *My answer today to you is take a look at you and I together sitting at my table, learning from each other, teaching each other week after week to me this here today is a lifetime learner setting goals for yourself and dreams & seeing those goals and dreams come through as I did today at my graduation.*
>
> *I learned how to be a friend to a good teacher.*
>
> *So I say to you Betsy thanks for being a really good friend in my life.*
>
> *Diane*
>
> Your friend for life.

### Finding 4: MI-Based Activities and Resistance

MI has offered me a whole new set of ways around student resistance to learning. When my students feel threatened by an academic task, I can now look at the task through the lens of different intelligences and find other ways to approach it. Often, just a change in materials, informed by my observations of the student's strengths and preferences, can provide the way out that allows the student to maintain her dignity and security.

The way it is usually taught, Diane's geography course utilizes atlases and encyclopedias and perhaps a globe. When we added magazine pictures, colored stickers, glue, wallpaper, newspaper clippings and a biography of Princess Diana, she found her own way to reach her goal. Beth and Ben's potato chip lesson provided us with a dramatic break from their usual competitiveness. I attribute that partly to the unexpectedness and "safety" of using junk food in a math lesson. I think another part of its effectiveness is the fact that they were shaking, measuring, nibbling, estimating and thinking without pencils in their hands.

Diane's experience with geography provides a graphic example of the role of MI-based activities in circumventing student resistance to learning. She presented me with a daunting challenge when she failed to complete the geography course in time for our learning center's high school graduation ceremony in June 1997. Following the pattern of resistance I had seen in other students, she seemed unable to complete a task that was well within her abilities and necessary to the achievement of a goal about which she cared a great deal. Diane and I persisted in trying to complete the course throughout the 1997/98 school year. As I talked with Diane about multiple intelligences and the "independent learner," read her learning logs and journal, and recorded my observations from our

sessions together, a picture of Diane's learning processes began to emerge. My suggestion that she use maps to locate places where celebrities lived or traveled was based on my knowledge of her interpersonal intelligence. I believe that this activity helped Diane move beyond her resistance for two reasons: One, because the activity was a good match with one of her strong intelligences. Two, because it allowed her to function in a realm where she felt safe, she was able to use maps and conduct research without feeling that her identity as a "not-smart" person was being threatened. Knowledge of MI-based teaching allowed me to offer Diane several options for completing her geography unit. Diane chose the ones that were most effective for her and achieved her goal.

During those weeks May 1997 when Diane was finishing up her work for her diploma, she worked on a budgeting elective and a writing course, but never touched the geography assignments I had given her. At her request, I allowed her to read the AMI case study I had been writing about her. She was outraged to read that I thought she had not been doing geography homework. She showed me a large stack of newspaper clippings she had been collecting as proof of all the work she had done. At that point, I was at a loss to find a connection between the seemingly random collection of articles and the seven countries she had chosen to study for the course. The deadline for completion of her work went by and Diane was unable to attend the graduation ceremony she had planned on. Although we planned to meet during the summer, she never kept any of our appointments. Fortunately, she was ready to resume work by the following October. Diane's learning log entries illustrate what happened next:

**From Diane's Learning Log:**

*October 2, 1997*

*Made a plan for me to finish my work for my diploma. What I need to do so that I can graduate. I asked why I would ever need Geography for in my life. She won't answer me about Geography. She is up to spring something on me that I don't know about yet. I would do my best on getting all my work done on time. I will try my best to work around my husband work schedule to make it to the library or learning center for help on Geography. I will work very hard for Betsy even though she springs stuff on me at the last minute.*

*October 9, 1997*

*Today we worked on my geography papers of foreign countries. One of them was Germany. We tried to find them in the national geographic for pictures or articles on the places that I am studying about in them. We found a interesting article on the Berlin Wall and the way that Berlin was divided back then with this wall. In the article I found on Berlin Wall it told why the people from there thought it was a important thing to them that the wall be knoted down and for the country to change hopefully for the better today's world.*

*Even though I don't know why I need to know about Geography in my life as a mother of four children. There are some parts of it that I find interesting to me but as far as ever going to visit these places, I don't think so not if I have to get on airplane to get there.*

Finally, on January 15, 1998, I once again confronted Diane about her failure to do geography homework. Again, she was genuinely surprised that I thought she had not been doing any work and showed me her growing collection of newspaper clippings. This time I noticed that the clippings were about people rather than countries. There was a folder for Princess Diana, one for JonBenet Ramsay, one for the Unabomber, etc. At this visit, Diane also revealed that she owned a current and complete set of encyclopedias. This was significant because she had continually refused to go to the library for research.

Finally, it occurred me that we might be able to connect Diane's interpersonal intelligence to geography. The next week I brought blank maps of the United States and the world and a package of colored stickers. We browsed through Diane's book about Princess Diana and the newspaper clippings. Diane chose a color for each person represented in her collection. She then located places those people had traveled and placed appropriate colored stickers on the maps. She had to use the notebook atlas I had provided her to find place names and then approximate those same locations on the blank maps. Suddenly, maps and atlases were no longer the foreign, impossible tools they had seemed before.

**From Diane's learning log:**

> *January 22, 1998*
>
> *Today I learned how to find places on the world map. I used color coded stickers on the different places that I learned about today....*
>
> *Started my own map with the color coded stickers. On places that current events happened that was of interesting to me....*
>
> *Learn to use a map can be fun and interesting to do.*
>
> *Being able to travel to different places without having to get on the plane myself. Because I can do it from my kitchen table in my home....*

Although I offered Diane the option of adding more stickers to maps during several subsequent visits, she always declined in favor of working on the worksheets she had hated so much the previous spring.

When Diane first showed an interest in magazines, I suggested that she create collages as an alternative to the worksheets. I asked her to look for magazine pictures to illustrate such things as the scenery, animals, food and people of her seven countries. She seemed enthusiastic about the idea, but the collages, like the worksheets, were neglected until after that lesson with the colored stickers and the world map. After that she insisted on completing collages and worksheets. She also took magazine articles that she considered to be especially significant and bound them into "books" with decorative covers and magazine picture illustrations.

Just a few weeks before graduation, I was confronted with a new dilemma. Diane's social worker and her husband both sought me out to warn me that Diane was becoming depressed about finishing her work on geography in time to graduate. She was feeling like she had more work left than she could handle. The problem looked more to me like she had already done too much work and was having trouble putting it together in a final form that was satisfactory to her. As we had the previous spring, we once again found ourselves disagreeing about how much work she had to do and how

good it had to be. The difference this time was that I was telling her that she had done enough and she was telling me that she needed to do more. When I tried to tell her that she should stop tinkering with her Egypt collage because it was "good enough," she chided me, "but you're always telling me I can make it better!" As my last visit before graduation came to an end, she actually followed me to my car asking if I thought she should write one more essay or perhaps take another test. Over and over I had to repeat, "Diane, you are finished. You've done everything you needed to. You can stop now."

## DISCUSSION

My first surprise in this project was that my students didn't enjoy talking about their own thinking and learning. Fellow teachers and my piano students seemed to enjoy my questions about their strengths and thinking processes. Even Start students, however, responded with bewilderment or avoidance. All too often, students would respond to questions about their strengths by saying, "I'm not good at anything." I repeatedly got the feeling that I was invading privacy and dignity by persisting in the discussions. I think this was partly because students weren't readily seeing the connection between my talk of intelligences and their academic goals. Another element was the negative experience many of my students have had with institutionalized education. Any talk that included words like, "smart," or "intelligent," carried with it the unspoken epithet, "dumb." I was treading on sensitive ground.

Besides the resistance to talking about their own intelligences, I encountered another challenge to creating personal intelligence profiles. When students were willing to identify their own strengths, their identified skills often lay in domains that didn't match the eight intelligences. For example, several of my students identified cooking as something they do well. As I observed these students at work in their kitchen, I certainly agreed that they were demonstrating great skill but I was at a loss to identify which intelligence they were using. I encountered this same difficulty with many other domains. Tasks such as cooking and car repair (especially without a repair manual) require a complex mix of intelligences which vary with each individual. Even when the intelligence seemed clear to me, (e.g., parenting as interpersonal intelligence,) my students didn't always agree. Since my goal was to help my students come to a point where they were taking more responsibility for their own learning, I decided not to worry about fitting our discoveries into existing categories. I was happy that students were identifying strengths. Using the students' own terminology, (i.e., "kids smart," "cooking intelligence," etc.) could actually make the job of connecting skills to learning easier.

While creating personal intelligence profiles and defining the "independent learner" seem to have been somewhat threatening for some of my students, many of the "authentic tasks" MI theory inspired me to try seemed to very effectively create a safe, playful learning environment. When I pulled potato chips out of my bag, Beth and Ben seemed to temporarily lose some of their competitiveness and insecurity as they worked together to answer their own questions. In another context, words like "calories, " "weight," and "nutritional value" might have seemed intimidating. Because Beth and Ben were investigating potato chips instead of "math," they felt secure enough to learn. (See "Lessons" section for a description) Sohkom and Boeun had a chance to show me their smooth competence and teamwork when I asked them to show me how to cook fried rice. I came

into this project wanting to feel more like a partner in learning than a leader. I liked the way these activities naturally led into that kind of relationship. In Sohkom and Boeun's case, I think the chance to use a skill which they have refined to a high level of competence was a welcome contrast to the way they feel when confronted with printed English. I've had a chance to use potato chips in workshops with adult educators. Like Beth and Ben, the junk food seems to encourage them to relax their self-consciousness and experiment freely.

I think Diane's breakthrough with geography followed my original expectations a little more closely. She wasn't very interested in the intelligence profile, but I did learn that she enjoyed using interpersonal intelligence. Once I noticed that she was organizing her newspaper clippings around people, I was able to help her see maps as representations of places where people she's seen on television live and work. That seemed to have been the connection she was waiting for. From that point on, she stopped creating barriers (can't go to the library,) and started creating solutions (producing the encyclopedias.)

I think that Diane's graduation letter indicates that her conception of adult learning is beginning to parallel mine. She talks about "setting goals for yourself & seeing those goals and dreams come through." The day she did the last of her work on the geography course, our disagreements about how much work was needed and how to decide when a project was "done," indicate to me that she was taking over the responsibility for her own learning. She further surprised me by showing up at the learning center when I wasn't even there to ask for help with some paperwork necessary for financing her family's new home. Whatever the problems were that made geography homework and visits to the learning center so impossible in October 1997, Diane clearly found a way around them. Her obvious pride in her achievement makes it clear to me that she found a way to reach her goals without giving up any important aspects of her self-image or world view.

In his book, *In Over Our Heads*, Robert Kegan (1994) included a powerful quote from Soren Kierkegaard: "If real success is to attend the effort to bring a person to a definite position, one must first of all take pains to find him where he is and begin there. This is the secret of helping others...In order to help another effectively I must understand what he understands. If I do not know that, my greater understanding will be of no help to him. Instruction begins when you put yourself in his place so that you may understand what he understands and in the way he understands it."

Kierkegaard's quotation takes me back to my original puzzlement over students' failure to complete simple, necessary tasks that would lead them to their goals. I now have a much improved understanding of the active resistance I've observed in some of my students. When I say "active" resistance, I don't mean that any of my students necessarily have a desire to thwart my attempts to help them reach their goals. I think that sometimes the process of learning brings all of us up against the need to change parts of ourselves that we don't feel ready to tinker with. In the chapter entitled, "Healing: The Undiscussed Demands of Psychotherapy," Kegan talks about how difficult it can be for a person who is constructing reality according to the third order of consciousness to separate his sense of himself from his feelings or his relationships. I've seen reflections of this idea in Diane's and Ben's reactions to criticism. They are vulnerable because, to them, any challenge to their behavior or knowledge is an attack on their worth as a person.

Diane is struggling with her self-image. Her contempt for "smart people" was coming through loud and clear. I would imagine that those "smart people" she so despises feel comfortable in places like libraries and schools. They can probably use reference resources with ease. I wonder if visiting a library or using encyclopedias might have been activities that threatened Diane's self-image.

Ben's skill with wild and domestic animals is highly prized in our community. He has a scrap book full of newspaper articles about his exploits rescuing endangered pets and playing temporary host to abandoned baby deer and moose. Despite all that, math reduces him to a fragile child. His role as the "smart" person in his family is severely threatened when he confronts the skills he lacks.

When I come up against puzzling, counter-productive behavior in my students, such as Diane's refusal to visit the library or Ben's rejection of a learning strategy that obviously helps him understand an important concept, I can't always expect to know the reasons behind the behavior. As well as I know both of these people, I'm just speculating about their reasons for rejecting the learning they so obviously need. I don't think it is usually reasonable to expect my students to explain themselves, either. I see my job as one of trusting their ability to define their own lives even when I don't understan d. If I can offer options for learning, my students can choose the path that works best for them. Understanding the cause of resistance isn't as important to me as finding a way around it. If I assume that the student is protecting some part of his or her self image, I need to find a way to reach the goal without threatening something fragile. I don't think it's a coincidence that Diane became willing to use her encyclopedias just when I came up with the "Princess Diana" activity. Something about linking geography with famous people helped her feel secure enough to believe that she could proceed with the demands of the geography course. Ben is eager to learn better math skills and seems to learn better through hands-on MI-based activities, but he needs to be able to do that without threatening his relationship with his wife.

## CONCLUSION

MI provided me with an exciting way to "understand what he understands in the way he understands it," as Kierkegaard put it. I can now see that the concepts I'm trying to teach will look very different to a person whose strong intelligences are different from my own. Further, MI provides a framework in which the hierarchy of abilities depends on the task at hand. For example, linguistic intelligence may be important when writing a story, but I'd rather be with a person who has strong naturalistic intelligence if I encounter a skunk in a department store. Working from this framework, it feels natural to approach my students as equals in learning.

I think that five years from now, I will be better able to discuss the ways in which my experience with the Adult Multiple Intelligences study has transformed my teaching. At this point, the one thing that stands out for me is the increased confidence I feel when approaching my students' varying goals and needs, whether stated or unstated. The recognition that my own strengths and expectations don't always match those of my students feels much more like an exciting challenge now than a frightening problem. My arsenal of "authentic" learning tasks is growing as are the options I can offer my students for connecting their strengths with their academic goals. Awareness of my own limitations is accompanied by growing trust and respect for my students' ability to set their own objectives and paths for learning. That's a very liberating experience for a teacher like me who always seems to have more questions than answers.