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# Reconstructing the Vision: Teachers' Responses to the Invitation to Change[1]

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## Abstract

The student population in contemporary public middle schools is growing increasingly more diverse. While heterogeneously grouped classrooms are consistent with middle school philosophy as well as recommendations from leading middle school advocacy groups, many teachers in these settings seem to downplay the differences among the students and "teach to the middle." This qualitative explores 200 middle school teachers' responses to an initiative in differentiation intended to address the variation in student academic readiness, interests, and learning profiles. Using systematic grounded theory methodology, a model of teacher change emerged including four categories of teacher responses to the differentiation initiative. This study's findings suggest that a variety of factors, including teachers' pre-existing beliefs about teaching and learning, and teachers' willingness and capacity for reflection greatly influence their responses to differentiation in heterogeneous, middle school classrooms.

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Contemporary American middle schools have become increasingly diverse in recent decades. The number of non-white American citizens is rising yearly, increasing the cultural diversity of classrooms (Correa & Tulbert, 1991; U. S. Office of Civil Rights (OCR), 2000). Rising immigration rates, particularly from Latin American and Middle Eastern countries, contribute to varied languages, cultural traditions, and values represented in classrooms (Correa & Tulbert, 1991; OCR, 2000). Increased political and educational pressure to mainstream exceptional learners—handicapped, learning disabled, as well as students identified as gifted—into the general education classroom has also contributed to the growing academic diversity in U.S. classrooms. Additionally, proponents of middle school philosophy seek to eliminate educational labels, believing that such designations unfairly separate students, indicating high status for some and low status for others (Carnegie Council on Adolescent Development, 1990; Jackson & Davis, 2000; National Middle School Association (NMSA), 1995). As a result, middle school teachers face a broad range of students representing a wide variety of educational needs.

Tomlinson (2001) suggests that teachers respond to this diversity through differentiated curriculum, instruction, and assessment. Differentiation, as defined by Tomlinson (2001), is the recognition, articulation, and commitment to plan for student differences within mixed-ability settings. The translation of this philosophy into practice can take multiple forms in the middle school classroom. Differentiation requires educators to anticipate student diversity and consciously modify curricular and instructional experiences in response to varied students' needs and interests as determined from pre-assessment information. These differentiated learning

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experiences should build on clear and focused objectives, effective instructional practices, and be respectful of students' varied needs. A differentiated classroom balances whole-group, teacher-directed experiences with student-centered experiences driven by individuals' interests and/or learning needs (Tomlinson, 2001). The configurations of student groupings should be flexible, dynamic, and driven by the ongoing collection of student data based squarely on the identified learning goals.

Tomlinson's philosophy of differentiation is compatible with the NMSA recommendations (1995) for appropriate middle school curriculum and instruction. The NMSA calls for middle level curriculum and instruction that is developmentally responsive, incorporates varied teaching and learning approaches, and employs flexible classroom organizational structures. However, research indicates that the instructional practices of many middle school teachers do not reflect a responsiveness to a wide diversity of student needs (e.g., Brighton , Hertberg, Moon, Tomlinson, & Callahan in press; McEwin, Dickinson, & Jenkins, 1996; Moon, Brighton, & Callahan, 2003; Moon, Tomlinson, & Callahan, 1995). Instead, middle school teachers' classroom practices have been found to reflect traditional pedagogy, reminiscent of an earlier era when schools were less diverse and additional educators shouldered educational responsibilities for exceptional learners' unique needs (McEwin, et al., 1996; Moon, et al., 2003; Moon, et al., 1995). According to the Academic Diversity study (Moon, et al., 1995), heterogeneously grouping students was the most widely practiced grouping strategy in middle school teachers' classrooms, and lecture and skill practice dominated as the chief mode of instruction. This study's findings confirm the conclusions from the 1993 National Middle School Study (McEwin, et al., 1996), which found that roughly 90% of middle school teachers used direct instruction regularly. Middle school teachers reported infrequent use of any instructional strategy to meet the needs of diverse learners such as curriculum compacting (a strategy that streamlines content for learners who demonstrate mastery), tiered assignments (a strategy that incorporates multiple levels of the same task for students' varied readiness levels), advanced organizers (a strategy that provides students with a framework of the material that is to be learned prior to beginning the lesson), interest groups, learning centers, or flexible pacing of instruction (Moon, et al., 1995).

The recent increased focus on high-stakes testing has reinforced the use of these traditional approaches to teaching (e.g., Moon, et al., 2003; Herman & Golan, 1993; Klein, Hamilton, McCaffrey, & Stecher, 2000; Linn, 2000; Shepard, 2000). In part due to achievement gaps between racial and cultural groups, middle schools, like all American public school levels, are under increased pressure to meet acceptable levels of student achievement on mandated state-administered achievement tests. As a direct result of the 2001 *No Child Left Behind* legislation, public schools are now required to increase student achievement for all students to a level designated as "proficient," a reform effort punctuated by increased assessment and accountability components (PL 107-110, http://www.ed.gov/legislation/ESEA02/). Recent studies report that state standards, mandated high-stakes testing, and accountability pressures significantly influence teachers' instructional and assessment practices, decreasing the use of strategies focused on problem-solving and enrichment while increasing the use of test-preparation materials (Herman & Golan, 1993; Klein, et al., 2000; Linn, 2000; Moon, et al., 2003; Shepard, 2000). Research also indicates that teachers seem to harbor the belief that the most efficient method of delivering the voluminous facts, concepts, and skills needed for state tests is through heterogeneously grouped direct instruction, followed by individual repetition and practice, thereby eliminating the need for alternative instructional approaches (Moon, et al., 2003).

That teachers cling tenaciously to traditional classroom practices is not surprising when considering the complexity of enacting change in schools (Fullan, 1995; Tyack & Cuban, 1995). One prominent theme in the literature on educational change illuminates the importance of considering individual teachers' beliefs about the nature of teaching and learning when considering a reform effort, rather than the school faculty as a whole. (Aubrey, 1996; Brighton, in press; Datnow, 2000; Franke, Carpenter, Fennema, Ansell, & Behrend, 1998; Smylie, 1988). Smylie (1988) found that teachers' perceptions and beliefs about their own practices were the most significant predictors of individual change. Others suggest that most middle school teachers' belief systems involve traditional viewpoints about the nature of teaching and learning for adolescents, which are in many instances incompatible with the philosophy of addressing academic diversity (Brighton, in press; Brighton, et al., in press).

The bottom line is that despite the increasing diversity in middle school classrooms and the pressure to bring all students to necessary achievement levels on state tests, traditional classroom practices and underlying traditional

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beliefs still prevail in middle school classrooms (Brighton, in press; McEwin, et al., 1996; Moon, et al., 1995). The reality for students in contemporary middle schools is likely to be predictable, teacher-directed instruction with few, if any, accommodations for students' learning preferences, academic differences, or interests. The task that teachers face is formidable: they are challenged to address the needs of increasingly diverse classrooms of learners while simultaneously ensuring that all students reach acceptable benchmarks on state tests. Whether teachers are able to successfully tackle this challenge lies in their willingness and ability to examine and alter their traditional beliefs about teaching and learning to accommodate new instructional strategies that recognize and respond to students' diverse academic needs. In short, this challenge requires many middle school teachers to change their beliefs and practices. This study sought to examine the patterns of teachers' responses to this invitation to change.

The central questions of this study were:

1. What are teachers' responses to the invitation to change their beliefs and practices to better address students' academic diversity?
2. What patterns of teachers' responses to this invitation emerge?

## Methodology

Data used in this study were gathered as part of a larger study conducted by the National Research Center on the Gifted and Talented (NRC/GT) at the University of Virginia. The Feasibility of High End Learning in the Diverse Middle School (Brighton, et al., in press) was a five-year, federally funded study that examined the feasibility of providing high-level instruction for all students—including gifted, struggling, minority, and limited-English proficient (LEP) students—within diverse middle school classrooms. The qualitative study discussed in this article employed an interpretivist conceptual framework (Schwandt, 2000). Researchers sought to examine teachers' words and actions to determine how teachers interpreted their roles as teachers in diverse classrooms, and how (and if) their roles and perceptions changed over the course of the study period when invited to change their classroom practices.

### Sampling Framework

Six middle schools in three states volunteered to participate in this study. Within each middle school, an average of 12 teachers per grade level representing the four core disciplines became the primary sample of teachers (N=204). In four of the six schools, the target teachers were selected for participation by the principal, and in two of the six schools, the principals sought volunteers to participate. The target teachers were diverse in race, gender, background, and years of experience in the classroom. No first year teachers participated in the study; however, several target teachers possessed less than three years of experience. The average number of years of teaching experience for the sample was 14.

Four target teachers were placed on the same team (one target team at each grade level) and these teachers shared the same group of students. Each target team was asked to select approximately six students to participate in focus group interviews throughout the study period. The students were diverse in race, culture, language proficiency, and identified school success. Some of the selected students were identified for gifted and talented programs and others received special education services. New students were added to fill vacancies as needed.

### Data Collection

Target teachers participated in formal professional development sessions and coaching sessions with project staff members knowledgeable about differentiating instruction and assessment in diverse middle school classrooms. Observer/coaches possessed theoretical and practical knowledge about differentiation in middle school classrooms and in most cases held faculty positions at universities within relative proximity to the schools. The purpose of coaching was to help target teachers learn to adjust materials and tasks for varied learners' interests, readiness, and modes of learning. Individual or small group coaching sessions occurred approximately monthly for a period of three academic years, but varied in frequency according to teachers' or teams' needs, contextual factors, or observed classroom issues (e.g., a teacher's concern with management of student behavior). Coaches described the

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interactions with teachers and documented the frequency and types of sessions that occurred with each teacher in field notes and data logs. Additionally, coaches observed target teachers' classrooms and interviewed teachers approximately once per month. The observations were written in a script format, noting the words and actions of the teacher as well as students' responses. Interviews were tape-recorded and professionally transcribed. The students from target teachers' classrooms were interviewed approximately four times per year in focus group-style interviews and building-level administrators were interviewed approximately one time per year. These interviews were also tape-recorded and transcribed. Semi-structured interview protocols were developed to guide the interviews with teachers, students, and administrators and to provide some consistency across sites.

Primary data sources used to address the research questions were teacher interviews and classroom observations. These data were triangulated with the secondary data sources of student and administrator interviews, teachers' planning and instructional materials, and student work products.

### Data Analysis

Data were analyzed using a systematic grounded theory approach including three levels of data coding: open coding, axial coding, and selective coding with a constant comparative method of data analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1990). The theory, grounded in the data, inductively developed as a result of the reciprocal relationship among data collection, analysis, and theory development. In a grounded theory approach, "one does not begin with a theory, then prove it. Rather one begins with an area of study and what is relevant to that area is allowed to emerge" (Strauss & Corbin, 1990, p. 23).

During open coding, the transcribed interviews, observation notes, observer/coach field notes, and varied documents (teacher materials and student products) were read for the purpose of determining open, general categories that described, conceptualized, and categorized these data. Following the open coding of the transcripts, researchers generated written reflection papers about the emerging categories. In the next phase of analysis, axial coding, researchers configured the emerging themes, attempting to discover relationships between categories and sub-categories. Written reflections about the concepts emerged, transcending individual teachers' incidents, exploring causes and effects, and necessary conditions for the concept to manifest. In the final stage of analysis, selective coding, researchers identified the most encompassing categories, and collapsed the other themes into the most prominent concepts. A model of teacher identity and change behaviors developed at this phase that interconnected other prominent themes from earlier phases of analysis.

In the following explanation of the theory, quotes and classroom vignettes are provided to support the categories. The audit trail references following direct quotations include abbreviations that contain the data source, school and/or teacher pseudonym (all individuals' and schools' names have been changed), the year in which the data were collected, the number of the document in chronological order, and the page number where the verbatim quotes can be located.

## Findings

Metaphors allow us to understand complex and unfamiliar information by examining ideas or constructs that are more familiar to us. They can be powerful tools through which to communicate new concepts in an economical way. To condense the vast and complex findings from this study into a comprehensible format, we searched for an appropriate metaphor for teacher responses to change initiatives. What emerged—the metaphor of the house—is explicated below.

### The Metaphor of the House

If we envision teachers' practices as houses that they have carefully designed and constructed, then what we ask teachers to do when we ask them to transform their classrooms through differentiation is to renovate these houses. We ask them to tear down walls, rip up floors, and rebuild their visions of themselves as architects of learning. This is not a comfortable process, nor is it quick, neat, or easy. It is particularly difficult to ask teachers to undertake renovations when their houses are populated by rotations of 30 students who need some sort of shelter during the renovation process. Such change requires, first of all, that a teacher recognize that the house

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is ill-fitted for its inhabitants, that the walls are cracking, or that the floors are warped and worn bare. That is, it asks teachers to reconsider their visions of the ways in which students learn, the nature of curriculum, and the roles of the teacher and learner. When we consider that many teachers have been in the classroom for numerous years, developing strategies for teaching in and managing their classrooms that they have seen "work," and have been receiving approval or even accolades for precisely what they are being asked to change, it is no wonder that so many doors are closed with varying degrees of courtesy in the faces of change agents.

And yet, despite the discomfort and difficulty of what we were asking teachers to do in adopting differentiation, many teachers did take us into their homes to begin the process of creating a new environment. Some simply added a plant; others tore down exterior walls. Their stories allow insights into what prompts teachers to change and how that change can best be facilitated in the future.

**Resisters, Accessorizers, Redecorators, and Renovators: A Model of Teacher Change**

Four categories of teacher responses to the invitation to change emerged from data analysis. These categories were developed in response to patterns evident in the data of likenesses between teachers implementing differentiation at similar frequencies and levels of accuracy in their classrooms. Several points of comparison, determined from inductive analysis of raw data, were considered in determining these categories: degree and nature of teacher involvement in the study; primary motivation for involvement in the instructional change process; fidelity to instructional innovations; placement of "blame" for success or failure; and level of reflectivity on both classroom practices and beliefs.

Four categories of teachers emerged from the analysis: Resisters, Accessorizers, Redecorators, and Renovators (see Appendix A). While these categories accurately describe individual teachers at specific points in the study, some teachers shifted in and out of categories during the study due to a variety of triggers (e.g., change in personal life, growing understanding of differentiation, shifts in district mandates). Others remained in a single category throughout the entire study. Because of the fluidity of teachers during the three-year data collection period, it is impossible to quantify the number of teachers in each of the categories at any given time. While these categories do indicate different levels of frequency and accuracy of implementation of differentiation, they are not intended to indicate a linear progression of expertise. That is, teachers did not move from one category to another in any systematic manner. Each category is described below, highlighted by quotations from and vignettes of participating teachers. For a summary of each category, refer to Appendix A.

**Resisters**

Resisters are those teachers who essentially refused to participate in the study. This refusal to participate took two distinct forms: overt resistance and covert resistance. Both overt and covert resisters emerged with varying frequency in all of the participating schools. Because of their limited willingness to cooperate, resisters were difficult to capture through observation and interview data. Fortunately for our data set, frustrated coaches often reported encounters with resisters in their field notes.

**Overt Resisters**

Overt resisters made clear through their undisguised verbal and behavioral dismissal of the project and the project's objectives that they had no desire to participate in the study. Overtly resistant teachers rescinded permission to be observed or interviewed, requested a transfer off of teams participating in the study, and/or told coaches that they did not have the time or inclination to be a part of the study. Generally, these teachers' interactions with researchers revealed that their resistance was rooted in one or more of the following factors: (1) the conflict between their beliefs about teaching and established teaching practices and the objectives or methods of the project, (2) feeling as though they had no choice in whether or not to participate in the study, (3) feeling that differentiation was just another initiative in a long line of initiatives, and/or (4) feeling more urgent pressure to attend to other district mandates (e.g., standards, preparing students for high-stakes tests, teaching in multiple disciplines) that they perceived as conflicting with differentiation.

**Overt Resisters: The Case of Franklin Middle School's Sixth-Grade Team**

In the first year of the study, the sixth-grade team at Franklin Middle School boycotted the project entirely, demanding that the principal move them off of the project. (This school's principal selected teams and teach-

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ers to participate.) The Franklin coach recounted a frustrating meeting with Ms. Harper and Mrs. Finnegan, two sixth-grade teachers on the boycotting team. At a staff development meeting on differentiation,

> Mrs. Harper would not be engaged. I asked her if she had found any of the math materials interesting and appropriate for her class. She rolled her eyes and said that the time it would take to implement the activities would be difficult … throughout the rest of the session she sat with her arms folded across her chest. (Franklin field notes, Y1, #8, p. 8)

Another sixth-grade teacher on the same team was particularly vocal about her objections to taking on differentiated instruction:

> Mrs. Finnegan was immediately engaged in a fairly heated debate with [a central-office coordinator] about how was it that she was expected to do this extra work … Mrs. Finnegan explained that she was taking graduate classes to be certified to be a school counselor, and that she certainly did not have the time to be keeping a journal and doing more work. (Franklin field notes, Y1, #8, p. 8-9)

The principal at Franklin shouldered the blame for the team's resistance, explaining later that the resistant team had never wanted to be part of the project.

Like the Franklin Middle School sixth-grade team, overt resisters were generally confrontational about the study, and most appeared to perceive the study's objectives and anyone associated with them as an intrusion in their classrooms and schools.

***Covert Resisters***

Like overt resisters, covert resisters refused to participate in the study. However, while overt resisters were not averse to openly communicating their distaste for the study, covert resisters never stated outright their refusal to participate. Instead, covert resisters' resistance was more subtle, but it produced the same result: they made no attempts to implement differentiation of instruction or assessment in their classrooms.

While overt resisters were characterized by their *confrontational* behaviors, covert resisters generally demonstrated strong *avoidance* behaviors (e.g., constantly scheduling conflicts to prevent observations, interviews, or attendance at meetings, hiding from coaches, fabricating lengthy reasons and rationalizations about why deadlines could not be met, lessons not executed, or assessments not completed). A coach from Greene Middle School reflected in her journal about a covert resister, Cathy Thiery.

> I was scheduled to interview Cathy from 9:00-9:30 today. This schedule had been given to teachers in September. She did not attend the meeting I arranged in September, she did not attend the workshop held in October … She was absent in November when I visited. I have left notes, talked to the principal about teachers not coming to morning meetings, and sent reminder messages to the school before each visit. This morning when I went to Mrs. Thiery's room, she was in the hallway. It was a bit before 9:00 a.m. I approached her and asked her if she remembered I was coming today (since she did not attend the morning meeting again today!) to interview her. She said that she did not, that this was her only planning period and she was very busy, then turned and walked away down the stairs. (Greene field notes, Y2, #1, p. 1)

Another covert resister, Merita Williams, permitted observations and interviews, but never made any efforts to change her practices or experiment with differentiation. Merita explained that she felt she was already differentiating instruction unconsciously.

> I believe I do differentiation every day in some form or fashion without even knowing it. Because I talked to my team leader and said, "Gina, is this it?" and she said, "Merita, you do it every day and don't even know it." I am trying to think, what did I do after that? It has slipped my mind. One thing that I did with industrialization as I always do with my groupings, is to have them get into groups and discuss with one another, to pull from one another. I don't know if that is really part of it … I haven't

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> done a tiered lesson or anything like that. (Teacher interview, Y3, #5, p. 8)

Because Merita was affirmed in her belief that she was differentiating instruction by her team leader, she excused herself from exerting any effort to make changes to her practice. Clearly, Merita did not understand what differentiation was, but this lack of understanding did not kindle an interest in learning more. Her influential team leader had convinced her that the need to change was unnecessary because she was already differentiating without knowing it. Merita needed little persuading that the project was unnecessary for her and consequently became a covert resister.

A third covert resister, Leah Robbins at Langley Middle School, played the "disappearing act" with such proficiency that the coach eventually dropped her from her schedule. Leah's elaborate avoidance behavior was common among covert resisters.

> Leah was the most difficult person to observe for me. Leah was one of the four or five teachers that I tried to keep track of. Leah was the biggest disappearing act I've ever seen. I only was able to get in to see Leah's classroom maybe three times [over three years]. I stopped counting the number of times I dropped by to see if I could talk with her or inquire about something or follow up on something. There was always something else that Leah had to do. She was an [athletic] coach and she needed to go here and do this or she needed to go there and do that. Leah had some things that worked for her in the classroom and I didn't see an ounce of difference between when we came in and when I left. It is not to say that she isn't an effective teacher. I think her classroom is well managed and she likes kids and connects with them. But I never saw her try anything [to address students' varied needs]… I think she is a capable young woman, I think she just bowed out of this project. She had some things that worked for her in the classroom, she already knew how to do all those things, and I'm not sure she thought her learning curve needed to be challenged. [Leah thought that] if we just wait, this will go away. (Coach exit interview/Robbins, Y3, #2, p. 15-16)

Like the other covert resisters, Leah found creative ways to avoid trying out differentiation in the classroom while never overtly expressing a desire to drop out of the study.

**Teachers as Accessorizers**

Accessorizers made small and superficial attempts at differentiating instruction or assessment in their classrooms. These teachers often participated enthusiastically in the study in its early stages, eagerly soliciting materials about differentiation and feedback from the coaches. Accessorizers typically quickly added isolated differentiation strategies to their teaching repertoires, but they did so haphazardly and without attempting to understand the larger philosophy underlying differentiation or questioning their own beliefs about teaching and learning. Accessorizers viewed differentiation as a series of strategies to add to their "teacher's bag of tricks," not as a complex structure of beliefs and practices geared toward meeting the learning needs of all students. In the language of our house metaphor, these were teachers who were willing to add a plant, a throw rug, or a piece of art to their houses, but who did not see the necessity of undertaking any major renovations to the larger structure. Accessorizers generally felt confident about their skills as educators and proud of the fact that they kept current with the latest instructional techniques. Most seemed satisfied that, by adding a few differentiation strategies to their instructional repertoires, they were differentiating instruction for all diverse learners.

Often, accessorizers' strong sense of professional competency was reinforced by their colleagues. Many were held up by their districts as model teachers and were frequently asked to be mentors or to take on other leadership positions in their teams or schools. Their reputations as master teachers often resulted from the fact that, from the outside, their classrooms looked impressive and well-run. These teachers generally possessed strong classroom management skills that kept their students on-task and orderly.

Because of their early enthusiasm for the study, accessorizers initially impressed coaches as those target teachers most likely to make large changes to their instructional practices. Over time, however, it became apparent that accessorizer teachers were not progressing beyond a very surface application of differentiation.

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Varying degrees of misunderstanding about the philosophy of differentiation became evident upon more prolonged investigation of their classrooms.

**Accessorizers and Surface Level Differentiation**

Anne Armstrong, a sixth-grade social studies teacher, emerged as an early implementer in her school. Her principal had identified her as successful at meeting the needs of all learners in her classes, describing her as a "master teacher" (Principal interview, Y3, #8, p. 7). While Armstrong was enthusiastic about differentiation and willing to try out new strategies in her classroom, in the end she never progressed very far with differentiation. The following classroom scenario occurred in the third year of the study and revealed Armstrong's serious misunderstandings about the philosophy of addressing academic diversity, appropriate instructional methods to shift the philosophy into practice, and effective instruction in general.

Mrs. Anne Armstrong stands at the front of the room and focuses the students to begin class.

> *Armstrong: Boys and girls, eyes and ears on me. Remember, I told you that this year we are going to do different things sometimes. Well, today I am going to find out some information about how you read so I can figure out what to give you for homework.*

She reaches over to her neatly organized desk situated in the front corner of the room and lifts a stack of copied papers—two pages from their current novel, *Johnny Tremain*. She passes out the papers face down on their desks, continuing to talk to the attentive students.

> *Armstrong: Since all sixth graders read differently, I want to see how this class reads.*

She reaches into her jacket pocket and pulls out a black stopwatch with a long string necklace she slips over her head.

> *Armstrong: I am going to time your reading. When I say 'go', you are to flip over your papers and read the pages as you normally would. When you finish, raise your hands so I can record the time it takes you to read. Any questions?*

Some students look around the room and smile at each other. Other students look intently at the stopwatch as Mrs. Armstrong adjusts the buttons. No students ask questions.

> *Armstrong: Go!*

Students read, some tracking with their fingers along the print of the text, others sit forward in their chairs, intently focused as if running a race with their eyes. After only a few minutes of competitive silence, the first student raises his hand and announces completion.

> *Student 1: Finished!*

Other students quickly pipe in and announce completion.

> *Student 2: Done!*

> *Student 3: Finished!*

> *Student 4: Yep! Got it done!*

After all the students finish the reading and raise their hands signaling completion, she makes notes on her clipboard.

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> *Armstrong: I am going to figure out the average reading time for this class and then I'll figure out how many pages to assign third block based on the class reading time. Remember, all the blocks may not have the same homework and that's okay.* (Observation, Y3, #6, p. 3)

Mrs. Armstrong noted in the post-observation interview that she was collecting pre-assessment data to drive her instruction and felt confident that she was appropriately differentiating instruction by assigning reading based on the average reading time of the whole group. Mrs. Armstrong's pre-assessment method ignored issues of reading comprehension, vocabulary, and the potential for students' false reporting, and used only information about reading rate to justify teaching to the middle of the class. A teacher with a deeper understanding of differentiation might have pre-assessed using varied texts reflecting different reading levels linked together by similar concepts or historical time periods, or might have provided students with differentiated reading support structures such as reading buddies, guided reading sessions, and books on tape. Additionally, a teacher more accurately attempting to differentiate reading would look beyond reading rate to include students' comprehension of the material and the subtleties of the author's style. Mrs. Armstrong's misunderstandings about the philosophy of differentiation, coupled with her limited understanding of appropriate instruction and assessment, yielded nothing more than a reading race that she believed to be a pathway to effective, data-driven instruction.

Most accessorizing teachers did not progress very far over time with differentiation, but rather took the ideas from the coaches that seemed to fit best with their visions of teaching and learning and ignored those components of differentiation that they felt were not appropriate for their students. One accessorizer did not believe that any small group work was appropriate for her largely learning disabled population (O'Leary, Y2, #3, p. 13); she felt that they, as a group, could not handle what she perceived to be the lack of structure involved in cooperative learning. Another Accessorizer categorically dismissed the idea of providing her gifted students with choices of assignments believing that they would only gravitate toward the easy ones (Schmidt, Y3, #8, p. 2-5). Accessorizers' typically rigid and unexamined beliefs about students often prevented them from trying certain differentiation strategies in the classroom.

To go beyond superficial applications of differentiation requires a large commitment of time and resources and a reconfiguring of existing beliefs and practices. Accessorizers never felt the need to do either of these things. Rather than reflecting upon the philosophy, they viewed differentiation as more “tricks” to use occasionally in the classroom to liven things up and, with the occasional use of these tricks, believed that they were truly differentiating. Misunderstandings about differentiation were common among accessorizers. Many teachers interpreted differentiation simply to mean that multiple options were provided for students. Patsy Milmont, a teacher who believed that she addressed all students' needs with tiered assignments, explained how she differentiated products by using two novels with multiple choices of culminating products.

> [For the group reading *Zia*] I asked them to write an essay for a culminating activity. I did give them a single topic. I told them I wanted [the students] to discuss the author's use of development of character, plot, and theme in *Zia*. For the *Island of the Blue Dolphins* group, the final exam was that I gave them a variety of questions from which to choose to write an essay. We had an alternative ending was one, an essay explaining how the novel was an example of a novel of survival and they would need to support their answer with specific examples from the book, and they had to give at least three examples well supported. Another option was to write a character sketch of Carona describing her personality as she grows from girlhood to young womanhood and I asked them to use at least six descriptive adjectives. (Teacher interview, Y3, #5, p. 9)

Ms. Milmont believed that she was effectively differentiating products by using multiple novels loosely tied to the concept of survival in addition to allowing student choice in assessments. The assessments, however, were not tied together by common objectives and did not seem purposefully designed in response to targeted student needs. More effective differentiated assessments would address all the objectives identified by the teacher at the beginning of the unit, with the assessment tasks tiered on multiple levels of complexity, abstraction, detail, reading level, or some other specific criteria determined by the documented needs of the students.

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Despite their often wobbly proficiency with differentiation, accessorizers did attempt to include new ideas into their teaching. They attended conferences, gathered ideas from other teachers, and continually looked for new ways of delivering their content. The new practices attempted in the classroom were often more showy than substantive, but nevertheless, these teachers spoke confidently about their use of differentiation and clearly felt that they were effective, expert-level teachers. Some accessorizers even presented differentiated lesson plans at conferences and provided professional development to other teachers in their districts.

As a result, the strength of accessorizer teachers' professional identities were often so formidable that they seemed to feel no need to reconstruct their practices: instead, they viewed differentiation as a helpful “add-on” or “accessory” to their already very polished teaching methods, a plant in the corner that gives a little color to the room. The experience with the study did not prompt Accessorizers to do any deep reflection upon their beliefs about teaching; they were well satisfied with what they were doing and felt no need to make renovations to a house they viewed as structurally sound.

**Teachers as Redecorators**

Redecorators were teachers who effectively introduced selected changes to their instructional practices that aligned with their pre-existing, deeply held beliefs about teaching and learning. Redecorators focused their efforts to differentiate on the specific areas of their curriculum that they had identified as lacking and chose specific differentiation strategies to address these areas. While redecorators resembled accessorizers in that the changes they made to their classroom practices did not challenge or alter their beliefs about teaching and learning supporting the structure of their classrooms, redecorators implemented these changes accurately, appropriately, and effectively. Unlike accessorizers, redecorators were not simply implementing differentiation techniques in order to add some “zip” to their teaching, but rather to address real issues that they had identified in their classrooms. Jeff Allen, an eighth-grade math teacher, was worried about the advanced students in his class. He felt that he had been largely unsuccessful in his attempts to challenge them. Allen recognized tiered assignments as a way of challenging these students while simultaneously addressing the needs of the rest of the class. Tiered assignments meshed with Allen's prior beliefs about the importance of providing challenge for advanced students and did not challenge his need for control in the classroom. Therefore, Allen was able to integrate tiered assignments into his teaching practices without otherwise altering the way he conducted his class.

**Redecorators: Reflective About Practices**

Redecorators such as Allen were further distinguished from accessorizers by the fact that redecorators were reflective about their teaching practices. Allen tried tiered assignments many times before he felt that he had done one appropriately. After his initial attempts, he would reflect upon the ways in which his lesson had succeeded and ways in which it had fallen short of his expectations. Based on these reflections, Allen continued to hone his skill with tiered assignments until, as the coach noted, he had “mastered” them.

The factors that motivated redecorating teachers to change their practices were diverse. Redecorators appeared to feel that part of their responsibilities as teachers was to meet the instructional needs of their students, but they also seemed motivated by their own personal agendas. These teachers generally possessed a strong command of their disciplines and were effective classroom managers. Their knowledge of pedagogy was generally less extensive than their strong content knowledge; many of the teachers were former high school teachers or had transferred into education from other discipline-related professions. Many of these redecorating teachers were seasoned teachers, several possessing greater than 20 years experience.

Redecorators' classrooms were, in general, less showy than those of their accessorizer colleagues, and teachers in this category seemed to harbor the belief that they knew better than the coaches what was appropriate for use in their classrooms. Redecorators generally did not stage glitzy lessons for the benefit of observers.

While redecorators were reflective about their *practices*, they did not reflect upon their beliefs about teaching and learning, perhaps because they did not see the need to question them. Redecorators' beliefs about the nature and purpose of education and teachers' and students' roles were dogmatic, rigid, and deeply ingrained. While redecorator teachers were willing to assimilate new ideas into their existing belief structure, they

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ignored and discarded any components that conflicted with their personal philosophies. Allen revealed his preference for teacher-centered, direct instruction, a bias that his participation in the study never caused him to abandon. This teacher-directed approach prevented him from creating the more constructivist classroom compatible with the philosophy of differentiating for students' academic diversity.

> What it boils down to is the kids are supposed to learn from their reading. Which is fine in theory. But again, I am a strong believer, in … I teach, I give the examples, and generally by and large they still have a lot of reading and math to do from their book. Usually that is going back and reading into another facet of what I've already taught. In other words, I'm asking them to make a connection rather than teach yourself … direct instruction. I believe the children have to be taught skills before they can use them. That is coming back … I guess I'm coming back into vogue. It used to be, at my old school for instance, we were told, now we don't want people up there teaching because we told the parents of this school that we are on a new course, children learn by getting together in groups by discussing things. This is one of the biggest decisions of my life … no, I'm not going to do that. Last period, I had parents come to me and say, "my God, you are the first person we saw teach today." [And I replied] "Yes, but I could get fired." (Teacher interview, Y3, #4, p. 4-5)

Mr. Allen's strong belief that teaching equated with direct instruction was unbending and non-negotiable, despite the coach's efforts to convince him of the value of more student-centered teaching. He viewed teaching as something that a teacher needed to control tightly, not as a negotiated conversation between the teacher and the students. His beliefs were so firmly embedded that he ignored the components of differentiation philosophy that conflicted with his beliefs about direct teaching and learning. Those components that did mesh with his beliefs about teaching, however (such as pre-assessment and tiered assignments), were effectively assimilated into his existing structure.

> I looked at some quiz results, because it was earlier in the year, I looked at some quiz results, or their last class work or lab activity and made groupings according to which level, you know, I thought they could achieve at. Um … and I think there was one group that was weak and that I probably could have made a couple of switches of stronger children, um… or should I say somebody who had a little more leadership. (Teacher interview, Y2, #4, p. 6-7)

Redecorating teachers were largely effective instructors, but tended toward more traditional beliefs and philosophies of teaching: most had teacher-directed styles and maintained control of most classroom elements. Management of student behavior was not an issue for redecorators; their students were generally continuously engaged in challenging and interesting work.

Redecorating teachers also shared other similarities: their instruction was fast-paced, they tended to maintain a businesslike demeanor and an aura of professionalism in teaching, and they all possessed a solid grasp on the content they taught. Redecorating teachers recognized the diversity of the students they taught and the necessity of differentiating to meet their needs. A coach reflected in her journal about how Jeff Allen balanced his recognition of the need to differentiate for students with his need to maintain control over his classroom.

> He (Mr. Allen) recognizes the need for differentiation for those who either already know the material or catch on very quickly. He has been most concerned, however, with establishing a classroom atmosphere in which students were in control and responsive to him before adding any elements. (Greene coach notes, Y3, #7, p. 6)

Redecorating teachers continued to seek opportunities to grow and change—within the confines of their traditional frameworks. Selective new ideas were assimilated into existing frameworks and other ideas, incompatible with their beliefs, were discarded. Two redecorating teachers reflected on their need to continue to push themselves forward. Joan Borden, a seventh-grade science teacher, explained that she wanted to continue to expand her horizons to include more performance assessments while firmly clutching her more traditional convictions about the textbooks, state-testing preparation, and direct instruction.

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> In fact, I'm looking forward to an activity next year and I'm thinking maybe this summer about trying to make it a unit … that's a maybe … and see if I can go back and incorporate the textbook and all of this stuff that we're held to the fire with, and let everything that I do revolve around entomology, but that's just a pie in the sky idea right now, and it would just depend on … if I really had … I just have to sit down and look at what I could incorporate using the insect … I think it's a possibility, but I just have to go through … (Teacher interview, Y3, #5, p. 4)

Allen analyzed his own practices but never questioned his underlying assumptions about teaching and learning.

> I'm never comfortable. That's the good and bad of teaching. You are never really comfortable. It's like … I'm wondering in science why do I do more of the independent choice type of things where it requires the kids … like I differentiate the requirements, like with organizers and then I don't do that in math and why don't I give more tiered assignments in science, it's constantly running through my mind. Don't the two fit, doesn't one fit here … So I never really get comfortable with it all. (Teacher interview, Y3, #4, p. 8)

Redecorating teachers believed that they accurately differentiated—and to a degree they were correct. They selectively chose parts of the philosophy that aligned with their deeply held beliefs and assumptions and accurately implemented those parts, but categorically dismissed the parts that did not fit. Redecorators believed they were systematically changing their teaching practices, but the reality was that they were merely adding new wallpaper, adding new countertops, or perhaps refinishing the floors. The process of redecoration can be messy, can require extended effort, and can change the way the house looks. Yet, despite the surface appearance of change, the wallpaper merely covers the existing cracks in the plaster, the refinished floors only cover the unstable foundation, and the underlying structure of the house remains the same.

**Teachers as Renovators**

Renovators were willing to rip down walls, tear off the roofs of their classrooms, and tackle new paradigms of teaching and learning. Renovators were characterized less by the *progress* that they made with differentiation than by the earnestness with which they embraced and internalized the entire philosophy of and practices that support differentiation. Renovators believed that their primary responsibility as teachers was to meet the needs of all of their students and passionately believed that differentiation was the way to do so. Renovators ranged in years of teaching experience from novice—less than three years—to veteran—greater than 20 years. Regardless of experience, these teachers had in common a receptivity to learning new ideas (even alternatives that seemed unfamiliar and intimidating), a teacher belief structure that prioritized the needs of children over their own personal needs, and a willingness to take the risks involved in reflecting upon their pre-existing beliefs and practices. These teachers seemed to realize that ambiguity is a natural part of the process of learning; they recognized that discomfort is necessary for growth. Renovators were open to comprehensive renovation of their instructional practices, to the chaos associated with the examination of their teaching structures, and to acceptance of vulnerability as they rebuilt and reassembled the floors, walls, doors, and windows of their teaching. As stated earlier, it is impossible to quantify the membership of the groups. However, it is important to note that only a small number of teachers were ever classified as renovators at any point during the study. This may be in part due to the vulnerability required to undergo systemic change.

Generally, many renovators came to the study with belief systems compatible with the philosophy of differentiation. Additionally, many had been struggling to find ways to meet the needs of the wide diversity of learners they had in their classrooms. Differentiation appeared to renovators as the solution to their nagging concerns about their students. As a result, they believed that differentiation had moved their teaching to a higher level.

> I always felt that—I know I'm really missing something. I know I'm just not hitting for this child. I always felt—I just always felt—successful—but like I never really reached it all and this is–I don't feel like have really reached it all but I feel like this is helping me make certain that the child that was so bright I thought was losing and the child that was so handicapped that never got there—it's making me think a lot more and it's certainly given me great ideas on how to incorporate things for both types

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> of students. It's something that I know I'm going to be working on over the years and I feel like I've started. I feel a lot better about that aspect of my teaching because of it. (Teacher interview/Talbot, Y1, #4, p. 12)

While renovators shared the belief that differentiation was the "right" approach to teaching, they also recognized that their initial attempts at using this approach in the classroom were flawed. Betsy Talbott, a seventh-grade history teacher who was admired by other teachers at her school for her ability to create interesting and effective differentiated lessons and who seemed to be quite comfortable and familiar with the principles of differentiated instruction, expressed feeling a lack of confidence in her teaching, realizing what she still had to learn regarding differentiation.

> I don't have the confidence this year that I've had in the past. I think we all have years like that—I don't, I just—I feel like I'm trying to capture far too many things and—so then you question, you know you question yourself—I want to be a differentiated teacher—I want to do all this stuff—but I've also got to get this done and all these other kinds of things … I know I can reach that particular goal. I know it's not going to happen—It's going to happen slowly—I know this is going to be a hard year for it to happen, and I just have to accept those things. But that is a goal and to try to do more, and more and more of that, cause I really do like it. (Teacher interview/Talbot, Y2, #1, p. 13)

While trying out differentiation forced renovators to come to terms with what they still had to learn about meeting the needs of their students, renovators recognized that such growth was necessary to remaining an effective teacher. Sally Morgan, an eighth-grade science teacher, also explained that differentiation forced her to move forward as a teacher and re-examine assumptions she had previously held.

> For years I was getting to a comfort level where I could practically do things with my eyes closed. I had been there too long. My comfort level is never to be stagnant. I want to kind of reach out. So there are days when I come home thinking if I was to rate this on a scale of one to ten—ten being the best, I probably could give myself a two because I didn't feel good about it. (Teacher interview/Morgan, Y2, #5, p. 15)

Ms. Talbott and Ms. Morgan, like other renovating teachers, discovered their vulnerabilities as they learned more about ways to address student diversity in their classrooms. Previously, these teachers had expressed confidence about their teaching, but when faced with the new ideas presented by differentiation, they reexamined their own beliefs and shifted their practices to better align with their newly acquired views about teaching and learning.

Such shifts in philosophy are accompanied by the learning of new skills and practices, which take time to develop. Initial attempts at new practices often fall short of teachers' expectations. Renovating teachers accepted these challenges and occasional set-backs with determination, not afraid to risk stumbling or falling, explaining, "I guess I fall on my face a lot" (Teacher interview/Morgan, Y3, #8, p. 2). These teachers recognized that learning required time and they valued the support of administrators who acknowledged their risk-taking as a part of a journey towards mastery.

> I don't feel—if one of the principals had been in here—and I felt that lesson was very lacking … like the one you saw—I wouldn't have felt—I wouldn't have felt bad, I could just go and say, you know, it didn't work and I'm going to look for ways to make it better. I mean it wasn't that it was a total flop today, but you know … it can be better. (Teacher interview/Talbot, Y2, #1, p. 15)

Renovating teachers believed in setting high expectations for themselves, but also knew that small steps were often necessary to reach these high expectations. They held the same beliefs for their students, acknowledging that challenge for students is critical to ensure motivation and pride in their accomplishments. Renovating teachers believed that success was achieved only after a degree of struggle.

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Renovating teachers were not necessarily the teachers who implemented differentiation with the greatest frequency in the classroom, but they were identified as the group of teachers that implemented most purposefully and seemed most likely to make differentiation permanent, intrinsic parts of their teaching philosophies. Importantly, they possessed two qualities that other teachers did not: (1) they understood the larger philosophy of differentiation, and (2) they fully embraced the philosophy and could articulate how it would work with the population of students that they taught. By the end of the study, renovating teachers had begun the journey of transforming their teaching practices through questioning their prior assumptions about teaching and learning, becoming more aware of the wide variety of needs in their classrooms, and taking small, consistent steps toward implementing differentiation in their classrooms. No teachers emerged from this study as experts in differentiation; however, renovators appeared to hold the potential to get there over time when given the kinds of support offered in this study.

## Discussion

Teachers responded in myriad ways to the invitation to change, varying widely in the frequency, accuracy, and depth with which they implemented differentiation. Some did not respond at all, refusing to participate in the study. Some implemented “surface differentiation,” adding selected differentiation strategies to their practices without reflecting upon or altering the larger structure of their beliefs about teaching and learning. Others undertook “deep structure differentiation,” beginning the process of reflecting upon and then overhauling the entire structure of their classroom practices and beliefs. Figure 1 describes the general frequency, accuracy, and depth of implementation characteristic of each of the categories of teacher response (resisters, accessorizers, redecorators, renovators) described above.

**TABLE 1:** Frequency, Accuracy, and Depth of Implementation by Category

| | Resisters | Accessorizers | Redecorators | Renovators |
|---|---|---|---|---|
| **Frequency of Implementation** | NONE | Small, inconsistent, and random attempts at using many different differentiation strategies | Consistent, but selective, attempts | Consistent, thoughtful, purposeful attempts |
| **Accuracy of Implementation** | N/A | Low accuracy, frequent misunderstandings of differentiation | High accuracy, high level of understanding of self-selected differentiation practices | High accuracy, high level of understanding of general philosophy of differentiation as well as specific practices |
| **Depth of Implementation** | N/A | Broad but shallow implementation | Shallow implementation because of selectiveness of application | Deep-level implementation |

*Frequency of implementation* simply describes how often a teacher tried differentiation strategies in the classroom. With the exception of resisters, most teachers tried differentiation strategies at least once during the study, and some teachers tried to implement the practices more frequently. *Accuracy of implementation* refers to how accurately teachers interpreted and implemented differentiation strategies in their classrooms. *Low*

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*accuracy* indicates that a teacher frequently misinterpreted the goals and uses of differentiation strategies. *High accuracy* indicates that a teacher interpreted and implemented differentiation strategies appropriately. *Depth of implementation* refers to the level at which teachers were implementing differentiation: surface differentiation (adding selected differentiation strategies to their practices without reflecting upon or altering the larger structure of their beliefs about teaching and learning) or deep structure differentiation (overhauling the entire structure of their classroom practices and beliefs).

Many factors, both internal (factors within the teacher's control) and external (factors outside of the teacher's control), contributed to the variation in teachers' responses to the invitation to change. The larger study (Brighton, et al., in press) as well as the comprehensive body of literature in the fields of leadership, school reform, and educational change indicate that a series of external factors may positively influence teachers' responses to a new instructional initiative, including supportive administrators (e.g., Duke, 1993; Fullan, 1993), a school environment that is stable and that encouraged risk-taking and change (e.g., Fullan, 1983; Kanter, 1983), adequate resources including time and materials (e.g., Donahoe, 1993; Elmore, Peterson, & McCarthey, 1996), a positive relationship with the coach (e.g., Joyce & Showers, 2002), and a supportive group of colleagues with whom to collaborate. In this study, the presence of these factors facilitated the change process for many teachers. However, some renovators emerged from environments in which few or none of these factors existed, and resisters emerged from environments with many of these factors in place. In the end, teachers' internal factors had greater influence on the degree and accuracy of their participation than did most external factors.

A few internal factors seemed to have the greatest impact on teachers' responses to the invitation to change in terms of the frequency, accuracy, and depth with which they implemented differentiation. The *frequency* with which teachers implemented differentiation seemed to be influenced by whether or not teachers perceived the benefits of participation in the study to outweigh the costs. Only resisters seemed to feel that the benefits did not outweigh the costs. Accessorizers, redecorators, and renovators all perceived that the benefits of differentiation outweighed the costs, although what those benefits were perceived to be varied from teacher to teacher, ranging from increased status (accessorizers) to professional growth (redecorators) to improved student learning (renovators).

The *accuracy* of teachers' implementation seems to be influenced by the extent to which they engage in reflection about their practices. The *depth* of teachers' practices was influenced by the extent to which they engage in reflection about their beliefs. The distinction between reflectivity about practices and beliefs is an important one, as not all teachers engage in both types of reflection equally. Teachers who are reflective about their practices routinely analyze how successfully they have implemented a particular differentiated lesson or strategy and make alterations to their practices based on these analyses. For example, a teacher who tried tiered assignments for the first time reflects upon his lesson, noting that he did not make the highest tier challenging enough for his most advanced students. In a subsequent lesson, he successfully matches his highest tier with the needs of his advanced students.

Teachers who are reflective about their beliefs consider how the changes in practices that they are undertaking in the classroom are or are not supported by their existing classroom structures. For example, a teacher who is discussing how she evaluates a differentiated assessment reflects upon how, to make sense of differentiated assessment, she has to restructure her beliefs about student success from comparing one student's work against another's to considering the achievement of individual students based on clearly stated and articulated objectives.

Accessorizers tend to implement with periods of great frequency, but rarely reflect upon either their practices or their beliefs. As a result, accessorizers' attempts at differentiation tend to be shallow and inaccurate—what we call “surface differentiation.” Redecorators also implement with periods of frequency, but, unlike accessorizers, redecorators are reflective about their practices. redecorators do not, however, characteristically engage in reflection upon their beliefs. Consequently, redecorators' attempts at differentiation are accurate but limited to those practices that align with their well-established and often immutable belief systems.

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Renovators implement frequently but purposefully and thus reflect both upon their practices *and* upon their beliefs. While no renovator created a classroom that was fully differentiated during the data collection period, many made great strides toward differentiation that were both accurate and deep-level—what we call "deep-structure differentiation."

While any attempts at differentiation—surface level or deep structure—provide greater variety and the possibility for enhanced learning opportunities for students, the possibilities for real and substantive effects on student learning expand when teachers utilize differentiation at the deep-structure level. Successfully attending to diverse student needs is not a haphazard endeavor or a matter of utilizing flashy new teaching techniques, but rather is the result of a thoughtful, challenging, and flexible course of instruction responsive to the needs of individual learners.

## Recommendations

While many teachers were willing to implement surface differentiation in their classrooms, fewer were able to do so with the great accuracy and depth characteristic of deep-structure differentiation. Encouraging deep-structure differentiation in teachers, like that seen in renovators and some redecorators, requires that teachers: (1) perceive the benefits of using differentiation in their classrooms, and (2) are encouraged and given time to engage in reflection upon both their practices and upon their beliefs. Under the best of circumstances, differentiation is difficult and time-consuming to implement in effective ways. To maximize the benefit for teachers and students, effective staff development for differentiation must respond to the need for teacher buy-in and the necessity of time for reflection. Effective staff development for differentiation should:

1. Balance the emphasis of professional development between content and practice

   Based on the findings of this study in conjunction with the educational coaching literature (e.g., Joyce & Showers, 2002), teachers need equal access to the content of the new reform (theoretical underpinnings of philosophy of differentiation and explanation of instructional and assessment methods to enact the philosophy) and opportunities for guided practice to implement the reform (coaching focused on co-planning, team-teaching, observation debriefing).

2. Model reflectivity in professional development

   The key factor that discriminated among groups in this study was a teacher's willingness and ability to reflect on teaching practices and underlying beliefs and assumptions about teaching and learning in general. Teachers who reflected about both their beliefs and practices were most purposeful in the changes they enacted in their classrooms. To encourage reflectivity and guide teachers through the process, include specific reflection opportunities (e.g., journals, small discussion sessions) in professional development and coaching experiences. In addition to professional developers modeling the reflection process in small group sessions, these opportunities will encourage teachers to more systematically examine their practices and their beliefs about teaching and learning.

3. Redirect misunderstandings about differentiation before they become ingrained

   Many teachers in this study demonstrated grievous misunderstandings about the philosophy and the instructional and assessment practices associated with differentiation. A critical responsibility of coaches and instructional leaders is to identify these misunderstandings as quickly as possible and redirect teachers' energies into more appropriate attempts. Misunderstandings left unidentified become ingrained beliefs that, as this study's findings suggest, are difficult to change.

4. Involve pre-assessment of a teacher's beliefs and practices prior to initiating a reform effort to determine a baseline and provide information about how to effectively differentiate staff development and coaching

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In addition to securing teacher buy-in, it is critical to collect specific data about teachers' existing knowledge, experiences, and beliefs about teaching, learning, and differentiation prior to enacting a change initiative. These data will be valuable tools in the process of providing needed support, professional development, and coaching.

5. Practice what we preach: Differentiate coaching opportunities according to a teacher's profile (resister, accessorizer, redecorator, renovator)

   The teachers in each category varied in significant ways from teachers in the other categories. For example, accessorizer teachers seemed the least willing and/or able to reflect on their classroom practices or beliefs. Coaching for teachers in this category should include, in addition to other things, structured modeling of reflection about teaching practices and eventually beliefs about teaching and learning. Likewise, in an attempt to persuade them to consider the new reform, coaching sessions with resisters would vary significantly from coaching sessions with renovators. Like the students they teach, teachers vary greatly in terms of willingness and ability to consider new teaching approaches. Consequently, as differentiation is a purposeful vehicle to maximize instructional opportunities for diverse students, it is equally important to include with adult learners.

**Endnote**

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## Appendix A
## Expanded description of teacher categories

| | ***Resisters*** | ***Accessorizers*** | ***Redecorators*** | ***Renovators*** |
|---|---|---|---|---|
| ***Involvement in study*** | None. Study is viewed as an imposition. | Inconsistent involvement. Innovation has no particular significance to the teacher. | Targeted involvement; teacher is interested in innovation insofar as it fits her prior beliefs. | Consistent and constant involvement. Innovation is of primary importance to teacher. |
| ***Primary motivation for involvement*** | No motivation for involvement. Teacher does not see relevance of study to her own practices. | Externally motivated. Teacher is involved to fulfill requirements, please administration, improve personal position, remain "up-to-date." | Internally motivated. Teacher recognizes the benefits of selected pieces of innovation to her professional practice. | Internally motivated. Teacher feels a responsibility toward the students. Teacher believes innovation is "right" way to teach. |
| ***View of professional growth*** | Teacher does not view this initiative as part of her professional growth. | Professional growth is a matter of improved status, position, approval. | Professionals achieve "mastery" of a profession. | Professionals must constantly grow, learn, try new things, and challenge old beliefs. |
| ***Tolerance of chaos and ambiguity*** | Not observable | No tolerance for ambiguity. Teacher has strong need to retain control of teaching and students. | Selectively tolerant of ambiguity within the framework of pre-existing beliefs and with a known timeline and outcomes. Some areas "off limits" for change. | Recognizes the necessity for and is tolerant of ambiguity as she makes sense of new ideas. Recognizes that a level of discomfort is necessary for growth. |
| ***Accuracy of implementation*** | No implementation | Serious misunderstandings evident in practice. Lessons are more showy than substantive. Implementation suggests surface level understanding of innovation. | Teacher is highly accurate with the components of the innovation that she chooses to implement. Ignores the larger philosophy of the innovation where it collides with pre-existing beliefs. | Seeks comprehensive understanding of innovation. |

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| ***Degree of understanding of content, pedagogy, and management*** | Not observable | Strong command of classroom management, does not fully understand pedagogy, modest to surface level understanding of philosophy and practice | Strong command of classroom management, deep content knowledge, limited pedagogical skills. | Strong command of content, pedagogy, and classroom management. |
|---|---|---|---|---|
| ***Beliefs about professional success*** | Not observable | Equates with status and recognition. | Equates with students achieving a high level of understanding of the content | Equates with meeting challenges and continually growing. |
| ***Sense of professional competence*** | Either:<br>High perception of competence that negates need for involvement with innovation<br><br>Or:<br>Not observable | High perception of competence reinforced by administrators, students, and parents. | High degree of perceived competence reinforced by administrators, students, and parents. Teacher believes that she has mastered/is nearing mastery of innovation | Competence questioned as teacher reconstructs practices, confidence shaken as she struggles to examine practices. |
| ***Willingness to take risks*** | None, in relation to this initiative | Willing to take limited risks. Perceives herself to be more a risk-taker than evidenced by data | Willing to take small risks within existing belief structure. Unwilling to risk high stakes. | Very willing to take risks. Not afraid to stumble or fail as a part of learning new skills and practices. Self-esteem not damaged by potential failure. |
| ***Placement of blame for success/failure*** | Often blames others or factors outside her control for their resistance | Perceives factors outside of her control as reasons for success/failure | Attribute successes to a history of succeeding as a teacher. Failures are attributed to miscalculations and the teacher tries again. | Attributes successes and failures both to herself and factors beyond her control. For factors beyond her control, she identifies strategies to succeed in the face of those factors. |

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