



## **DEVELOPING SKILLS TO DIFFERENTIATED INSTRUCTION IN PRESERVICE TEACHERS**

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### *Abstract*

*This pilot study analyzes the development of differentiation skills in preservice teachers enrolled in a community-based model of teacher education in the United States. The study analyzes teacher narratives collected from ten preservice teachers during their last year of a community-based model of teacher education. Teacher narratives were analyzed to determine how they differentiated instruction for culturally diverse learners. Four of the preservice teachers were followed into their first year of teaching to determine if their strategies for differentiating instruction changed. Findings indicate that preservice teachers apply instructional strategies to the entire group, rarely taking into consideration individual learners' needs. However, when preservice teachers became classroom teachers, they reported that they do consider individual learners' needs when making instructional decisions and include higher-levels of differentiated instruction in their daily practice.*

Keywords: differentiated instruction, community-based model, preservice teachers

### **Introduction**

At the end of the teacher preparation program, preservice teachers should be at a point in their career preparation to practice the knowledge and

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skills about teaching, learning, and students. Research in this area indicates that field experiences improve preservice teachers' confidence in their role as teachers and allow them to apply some of the theories learned to classroom practice (Clift & Brady, 2005). However, preservice teachers enter the teacher education program with their own beliefs about teaching, learning, and students because of their role as learners in their own K-12 program. Clift and Brady's (2005) review of the research in this area indicates that preservice teachers' beliefs about teaching and learning are formed before they enter their teacher education program and do not change much as a result.

Preservice teachers who participate in field experiences through a Professional Development Schools' experience seem to have a greater understanding of learners and is more confident about their ability to teach than teachers who attended a more traditional teacher education program. However, they were not confident in their ability to handle things they did not see modeled, specifically different instructional strategies and meeting the needs of culturally diverse learners (Alleksaht-Snyder, Deegan, & White, 1995). How do preservice teachers learn to make critical decisions about learners and differentiate instruction to support culturally diverse learners?

Students enrolled in the early childhood and elementary licensure programs in one university in the United States (US) self-selected to participate in a teacher education program that specifically focused on preparation of highly qualified teachers to work with culturally diverse learners in the local urban school district. Students in the program were continuously challenged to consider the cultural context of learners while completing a yearlong field experience and to differentiate instruction for individual student success. University faculty developed a community-based model of teacher preparation through an U. S. Department of Education Teacher Quality Enhancement Grant. Through this model, preservice teachers completed a yearlong student teaching experience in a Professional Development School using the Renaissance Group's template for a teacher work sample each semester (The Renaissance Group, 2008).

The process for completing the teacher work sample was developed using a backward design method for planning curriculum (Hendrickson, 2006; McTighe & Brown, 2005). To complete the work sample, the preservice teachers considered the learners, the learning goals, assessment-both pre and post, how decisions were made, and their own role as a teacher. Work samples

were completed at two times during the teacher education program. As university faculty teaching in this community-based model of teacher education, we reviewed both teacher work samples prepared during the program to determine what preservice teachers reflect about as they make curriculum decisions.

The first section of the teacher work sample required preservice teachers to consider the culture and community of the learners and reflect on how these factors impact school achievement. Another section of the teacher work sample, named Instructional Decision Making, asked the preservice teachers to identify a point in the curriculum delivery when they had to make changes to meet the individual needs of learners (The Renaissance Group, 2008). The Self-evaluation and Reflection piece of the work sample required preservice teachers to reflect on the experience of developing and implementing curriculum in the classroom. These three pieces were of particular interest to us when determining the criteria used by preservice teachers as they learned to make decisions about differentiating instruction for diverse learners.

### **Current Literature**

We first reviewed studies of the processes teachers use to make decisions in the classroom. Then, a second review of the literature identified differentiated instruction and culturally diverse children in the classroom as two areas of consideration when developing a framework to determine how preservice teachers make decisions. Finally, the literature was reviewed again to determine if the teacher work sample was an appropriate instrument to use to measure decision making for preservice teachers.

### **Teacher Decision Making**

Shavelson and Stern (1981) completed a review of literature on teachers' planning, judgments, decisions, and behaviors that included work from both psychology (human decision-making) and education. Several findings in the Shavelson and Stern (1981) study apply to this study, specifically how classroom environment and teacher characteristics influences decision-making. Cohen (1979) noted that teachers establish the climate of the classroom for the social interaction of the teacher with students and the students with each other. Cohen (1980) also determined that not only does the classroom

environment influence a teacher's decisions; the environment is also influenced by the teacher's decisions. The classroom environments in all of the schools in the urban district at the focus of this study are challenging physically, with crumbling walls and a lack of resources for basic repairs. They are also challenging emotionally with 100% of the children in the schools where the teachers in this study were placed living in poverty. Children living in poverty are characterized by being more likely to arrive at school without prior experiences to inform learning, living with adults who are struggling to provide basic needs, and parented by someone who has little interaction with the school (Banks, Cochran-Smith, Moll, Richert, Zeichner, LePage, Darling-Hammond, Duffy, & McDonald, 2005).

Everhart (1979) noted that teachers determine instructional goals and differentiate among their students based on the student's effort, ability, and personal characteristics. Teachers make decisions about student learning based on their personal beliefs about education, especially if they do not have specific information or facts on which to make a decision (Bernstein-Colton & Sparks-Langer, 1993). The teachers in this study were not familiar with the culture of the children in the classrooms where they were working. They were all White, middle-income preservice teachers who attended suburban schools. They were working in urban schools with 100% African American children who were living in poverty.

Noting that heuristics, rules that people automatically use to select information, classify objects or people, or revise their knowledge, are used by teachers when considering instructional decisions, Nisbett and Ross (1980) determined that teachers attribute abilities and make decisions about students based on generalities and experiences. For preservice teachers, without experience, decisions are based on their own limited beliefs and expectations of the students (Kohler, Henning, & Usma-Wilches, 2008). Many teachers working in urban schools tend to have lower expectations of their students based on their beliefs about families living in poverty (Banks, et al., 2005).

Shavelson (1976) developed a model of teacher judgment and decision-making that determined teachers' concerns, decisions, and actions are driven by students as a group, not by the individual needs of students. Teachers are confronted with information about students, as formal data, generated from assessments, and/or from their own observations of student behavior (Mokhtari, Rosemary, & Edwards, 2007).

Another source for teacher decisions is student cues. Studies indicate that new teachers use student cues more often to handle classroom management challenges than to adjust instruction (Kagan & Tippins, 1991; Kohler, et al, 2008). New teachers tend to focus on getting through the delivery of planned instruction rather than considering if learners were processing the information. To stop and make changes to instruction might increase the risk of learners becoming disengaged, allowing off-task behaviors to escalate out of control (Shelveson & Stern, 1981).

### **Differentiated Instruction for Students and Their Teachers**

Although differentiated instruction lacks empirical validation, a growing body of case study literature emphasizes the positive impact of this approach and its practices (eg, grouping students, ongoing assessment, focusing on students' strengths) on student learning (Hall, 2002). Many urban schools have embraced differentiated instruction as one way to meet the challenge of working with culturally diverse groups of learners within the pressure to raise test scores and meet the requirements of No Child Left Behind (Kapustka, 2007; Subban, 2006; Vaugh, Hughes, Moody, & Elbaum, 2001). Differentiated instruction requires teachers to think about the learners as individuals, including recognizing how cultural diversity influences curriculum planning and instructional delivery. Teachers learn to make decisions and implement instructional strategies that will benefit each student. Grounded in the theory of social constructivists Vygotsky (1986) and Wertsch (1991), teachers who use differentiation as an instructional strategy recognize that understanding and taking into account the differences in the classroom among learners, and working to accommodate their needs requires thinking outside the lesson and focusing on the learner.

Differentiated instruction is a term used to describe classroom strategies that meet the needs of individual learners in K-12 schools and teacher education programs. This instructional process was integrated into teacher practice through the work and writings of Tomlinson (2000). Tomlinson (1999, 2000) engages classroom teachers to adjust content, process and product in response to students' varying background knowledge, readiness, language and interests. Building upon students' differences along with meeting their needs requires teachers to think through what and how they are teaching. Other key principles that Tomlinson (2000) considered as

significant when differentiating instruction are the following: assessment and instruction should be inseparable, assessment should have ongoing flexibility (eg, grouping), students and teachers collaborate towards maximum growth and individual success, students complete meaningful work, and teachers are clear about what matters in subject matter. We have used the key principles of a differentiated classroom by Tomlinson (2000) as a theoretical framework for our study.

Since there is no specific formula on how to systemically implement the differentiated instruction approach, some teachers struggle with the principles, depending on their experiences, level of support, and resources provided in their schools. Tomlinson (2003) points out that classroom practices are complex and one of the biggest challenge for teachers is being able to provide adaptations for all learners in the classroom. It is a difficult task that new teachers may abandon due to the difficulty of accomplishing it.

One way to foster equity and excellence in diverse students is by using a strengths-based approach rather than a deficit paradigm (labels) to create opportunities and engage all learners (even the reluctant ones) in learning. Other researchers argue that new teachers will be more successful if they build upon their own strengths and talents when selecting instructional practices, such as, use of learning centers (Lawrence-Brown, 2004), pre-assessments (Gregory & Chapman, 2007), developmentally-appropriate activities, expertise in the subject area, instructional strategies aligned with an understanding of the cognitive theory, and knowledge of the processes involved in differentiating instruction (Wormelli, 2003).

### **Preparing Teachers to Work with Diverse Learners**

Preservice teachers in this project were working within the community-based model to develop their teaching skills. They documented this process in the two teacher work samples they were assigned to complete. The preservice teachers were challenged not only to learn to teach, but also to meet the needs of the culturally diverse learners in the urban schools. It is well documented that while the student population is becoming more and more diverse, the teacher population remains mostly white, female, monolingual, and monocultural (Banks, 2001; Darling-Hammond, 2000; Nieto, 2000). Consequently, teacher education programs must purposefully prepare preservice teachers to address the needs of all

children during their field experiences. Authentic, diverse, opportunities to engage with children in school settings where new teachers will be employed are crucial to making sure that new teachers embrace their first teaching jobs, implement effective instructional teaching strategies, and commit to staying at the school long enough to make an impact on student achievement (Darling-Hammond, 2000).

Scholars and researchers advocate training in open inquiry, reflection, and guided experience to help preservice teachers understand the world better by analyzing it from multiple perspectives in order to reach diverse learners (Banks, 2001; Darling-Hammond, 2000; Grant & Sleeter, 2006; Harrington & Hathaway, 1995; Rosenfelt, 1997). Going beyond their personal boundaries, learning would become not only the basis for developing knowledge but also a unique experience for the teachers themselves as they are trying to see it through the eyes of their learners.

### **Use of the Teacher Work Sample**

The teacher work sample, initially developed through a collaborative group of universities that named themselves, The Renaissance Group (2008), constitutes a process for developing curriculum and instructing learners that requires the preservice teacher to think backwardly. They must first consider the learner before considering the methods or topics for instruction. It also requires the teacher to construct knowledge from experiences, reflect, and ask questions to improve their teaching. Kohler, Henning, & Usma-Wilches (2008) reviewed the Instructional Decision Making section of 150 preservice teachers' teacher work samples to analyze the decisions teachers make, how the decisions affected instruction, and how a written description of decisions can support the development of reflection skills by teachers. Their findings indicate that preservice teachers did modify their instruction; however, the teacher's use of formative assessment was limited. They also determined most modifications were implemented on the entire group rather than to support individual children. The method used to make decisions seemed to be a trial and error approach to modifying instruction rather than thinking through a differentiation model. Teacher work samples can document how preservice teachers make instructional decisions.

## **The Study**

We wanted to find out what criteria preservice teachers used as they learned to make decisions about differentiating instruction for diverse learners. We decided to conduct a pilot study to review the two teacher work samples preservice teachers produced during their final year of teacher preparation. We wanted to identify what knowledge or information gained from their teacher education program was used to help preservice teachers differentiate instruction for culturally diverse learners when they began applying what they had learned to their performance as a teacher in the classroom. In order to find out about what happened in the classroom and their thinking about it, we studied the work samples and spoke with some of the graduates of the community-based model of teacher education program to find the answer to the pilot research study question: How do preservice teachers learn to differentiate instruction to support culturally diverse learners?

## **Method**

In order to pilot this study we randomly selected a small number of preservice teachers to study; 10 out of the 68 preservice teachers who participated in the program between 2005 and 2007 were selected. In addition, we determined that four of the ten teachers had returned to the urban school for the second semester of their student teaching (a choice available to students in the program). Those four teachers completed a second teacher work sample as a student teacher. All four of the preservice teachers are working in a Professional Development School within the community-based model of teacher education program and all are working in elementary schools, three in community-based schools and one in a district-based charter school. One of the teachers studied was a kindergarten teacher in a community-based school that is the entry point for English Language Learners (ELL) for the district. We reviewed 14 teacher work samples as part of this pilot study.

To answer the research question, the Instructional Decision Making and Self-evaluation and Reflection sections of the two sets of teacher work samples were analyzed to determine if themes and strategies emerged to inform university faculty on the development of preservice teacher's ability to differentiate instruction for culturally diverse learners. To determine a set of



criteria for analysis, we used our review of the literature on differentiation of instruction to develop a coding sheet for analyzing the Instructional Decision Making and Self-evaluation and Reflection sections of the teacher work samples (See Appendix).

To determine if the differentiation skills they used as preservice teachers were also used as a classroom teacher, the four classroom teachers were invited to participate in a focus group interview and complete a survey to determine if they continued to differentiate instruction for culturally diverse learners through student teaching and into their first year of teaching. In addition, the four teachers were asked to read the reflections they made as preservice teachers and comment on whether or not they still used the differentiation strategies they identified as a preservice teacher. The focus group notes were transcribed and evaluated for themes that would inform us about the development of differentiation skills. We compiled and analyzed the survey results (See Table 2).

## **Results**

### **Review of Teacher Work Samples**

*Instructional Decision Making.* The first set of teacher work samples (from the initial 10 preservice teachers selected) was analyzed to determine if preservice teachers used the criteria from the framework of differentiated instruction to make changes to their instruction (See Appendix). We found that only criteria one through four from our coding sheet, teacher focuses on essential concepts, teacher attends to learner differences, assessment and instruction are inseparable, and teacher modifies content, process, and products, could be analyzed through the reflections of the preservice teachers. The other criteria could only be analyzed through observation of the teacher rather than written reflection. For this pilot study we did not observe the teachers.

Few references were made to the first areas of analysis on the coding sheet. The focus for the ten preservice teachers was on essential concepts or attending to learner differences in their reflections about what they did to change instruction in their descriptions in the Instructional Decision Making section of the teacher work sample. It was not clear if the third criterion, assessment, was ongoing (although most preservice teachers stated that they started their lessons based on the prior experiences of their students). It was also

difficult to judge if the teachers would use a pre-assessment if it were not a section and requirement of the teacher work sample. It was determined that all ten students had a pre- and post-assessment activity while they were student teaching.

For the fourth item on the coding sheet, the data analysis showed that all ten preservice teachers did focus on modifying content, process and/or products. Preservice teachers discussed strategies that used direct instruction, activities that are more concrete, and those that represented a change in the pace of instruction to make-up for gaps in students' prior knowledge. The attention was more on *struggling* learners than on students at grade-level or advanced learners.

All ten preservice teachers discussed making modifications in content, process and/or products for the *entire group* without determining if the entire group needed the modifications. One example was:

About half way through the first group of children...we realized that this activity needed to be altered... [they were] taking a very long time to write out the whole word for each column...we came up with an appropriate modification...we had them [all] write just the first letter of their prediction rather than the whole word (Jane1).

Another teacher commented:

...on their matter-walk sheet [we] would [focus on] the air coming out of the fan.

We noticed that almost all of the students drew the fan, but labeled it as a solid.

They could tell us that the air coming out of the fan was a gas, but almost all of them drew a fan on their papers and labeled it as a solid.

We had to take the time to go over the concept that the fan is indeed a solid, however, the air that we had intended them to draw is a gas...This helped me understand things from their perspectives (Leslie).

*Self-evaluation and Reflection.* Next we analyzed the Self-Evaluation and Reflection section of the ten teacher work samples because this section asked the preservice teachers to reflect upon what had been the most successful implementation of the learning goals during their field experience. The results

of the analysis of the teachers' reflections did not indicate they met any additional criteria from the differentiation framework (See Appendix). It did show that the learning goals of the teacher work sample they identified as being successfully implemented were the ones that were reinforced through hands-on activities, such as, experiments, focused observations and discussions, field trips, or subjects that the children were comfortable with (having had prior knowledge). Again, no reflection indicated differentiated instruction for culturally diverse children.

*Comparing Teacher Work Samples Set 1 and Set 2.* We also looked at the teacher work sample of the four preservice teachers (out of the initial ten) who continued to work at the school where they completed their first teacher work sample. They completed another work sample as a student teacher in the same classroom and school. Their Instructional Decision Making and Self-evaluation and Reflections sections for the second half of student teaching were compared with what they described in their first teacher work sample (See Table 1). Although this sample was small, we wanted to determine the consistency of the differentiation skills and the changes that occurred throughout the student teaching experience. We found that not much changed and all four students still focused on content, process, and products during instruction, along with focusing solely on struggling learners. They were still modifying instruction based on the entire group rather than individual learners. One example:

During a measuring activity, I had allowed the students to measure different items around the room. This allowed the students to get more familiar with the inches and the actual act of measuring. During this activity, I realized that I was having the students measure things much larger than one ruler. Some students became confused so I made the decision to let the students to come up with their own way of measuring....I felt that this helped the students develop their own strategies for measuring and turned out to be an even better learning experience (Renee).

*Focus group and survey.* The researchers met with the four preservice teachers who became classroom teachers for a focus group interview to find out if they were continuing to use the differentiation strategies they learned

during their student teaching. The teachers were given a copy of the reflection they prepared about instructional decisions in their student teaching to review. The researchers also asked the teachers to complete a survey (See Table 2), based on the differentiation criteria used to analyze the teacher work samples.

The focus group transcript analysis found the first-year teachers were using several instructional strategies: cooperative learning groups, mixed-ability grouping/pairing, using intervention strategies with struggling students, activities that promoted higher thinking skills with advanced students, project-based assessment, connecting concepts to real-life situations to make them meaningful and building on the students' background knowledge. All four teachers' comments indicated that they had expanded their differentiation strategies and were using additional strategies to what they used as student teachers. Specifically, they mentioned using re-teaching concepts in different ways: using ongoing assessments, using peer-teaching instruction or one-on-one tutoring, and spending extra time with the struggling students. Using small groups more than whole-class instruction and taking into consideration students' prior knowledge when structuring the activities and the learning goals were strategies that they continued to practice while paying more attention to students' interests and cultural backgrounds.

As classroom teachers, they were still reflecting upon how to differentiate instruction and mentioned they were continuing to thinking about it, journal, discuss with colleagues or ask for help from experienced teachers, try new textbooks and materials, or simply find the right time to reflect (e.g. in the car on the way back from/ to work). The teachers argued that some aspects of using differentiated instruction changed from being preservice teachers to becoming classroom teachers, such as learning to be more organized by planning ahead, having a planning time, collaborating with colleagues, writing notes and keeping folders by subject areas, having clear expectations, modeling and trying to include activities that motivate individual students and boost their self-esteem.

One of the classroom teachers was amazed to realize that the success or failure of a learning goal had a lot to do with students' cultural diversity, something that she did not think of as being important while doing her student teaching. All four teachers commented that it was important to pay more attention to students' interests and cultural backgrounds. Two of the teachers specifically commented that the culture and diversity of their learners were

factors they took into consideration when making instructional decisions. A survey, based on the coding sheet (see Appendix), was also administered during the interview.

The results of the survey showed that all four teachers were using more differentiation criteria by providing instruction for struggling and advanced learners. For the advanced learners, the teachers did not all agree on specific strategies and their responses scattered across the choices. In terms of skipping practice, a key strategy in differentiated instruction, none of the teachers used the strategy regularly and one did not check that she used it at all. Other daily practices enhanced through their teaching philosophies were using the collaborative model and student-centered instruction, balancing group and individual norms, and being flexible with the learners.

One of the teachers was working with students who were learning English as a second language (ESL) and noted that culture and diversity was a critical component in making decisions. That teacher was the only one who did not check “Daily” on the survey in reference to specific differentiation strategies. She commented that she wished she could do all the things listed daily but she could not with such a diverse group of learners. Although all four teachers recognized as daily practice showing respect for the learners, the teacher, who works with ESL students, added a comment to clarify the context:

My students are newcomers and instruction has to be different than in a regular native English speaking classroom. I don’t get to collaborate with my students as often because of the language barrier. However, I do notice the non-verbal communication and I seek out activities based on interests! (Renee)

A teacher who works with 90% African American students commented:

When I wrote this [referring to her reflection while a student teacher], I did not realize how much culture affects learning. I say here that it doesn’t matter, but IT DOES [speaker’s emphasis]. I was so silly not to see that then but I do now.

The children’s home culture is very important when considering what curriculum should be offered and how (Jamall).

## **Discussion**

An analysis of the results informed us, as university faculty, about how preservice teachers, as they move into their own classroom determine how they will differentiate instruction for culturally diverse learners. The results showed that preservice teachers focused on differentiation strategies that dealt with content, process, and products for the entire group of learners. They did not address learner differences or discuss on-going assessment to determine individual learner success. Kohler, Henning & Usma-Wilches' study (2008) also found that preservice teachers struggled to make instructional decisions in the classroom because of their own limited experience and knowledge of learners. It seemed to be hard enough for preservice teachers to make appropriate decisions for the majority of the group without considering individual needs of specific students. The four preservice teachers who are now classroom teachers indicated that they have added to their differentiated strategies for their classroom.

During their teacher education program, the preservice teachers treated the learners as a whole and did not address individual differences among the students. The differentiation strategies that were used when they were working with struggling students were applied to the entire group of students regardless of their individual needs or interests. This confirmed Shalveson's (1976) findings on the model of teacher decision making that noted teachers made instructional decisions for the entire group of students rather than basing them on individual student need. Unfortunately, additional activities for students on grade-level or high achieving students were not part of the planning for instruction.

Following the preservice teachers as they become classroom teachers, we learned how they used what they learned about differentiation strategies from their field experiences. They all agreed that when they became classroom teachers, the process they used to differentiate instruction changed and they were now using a variety of strategies that we identified as key to a differentiated classroom (Tomlinson, 1999). In addition, as classroom teachers, the four former preservice teachers noted that they did consider individual students when making instructional decisions. Further studies or observations in the classroom would be needed to determine if what was reported was true.

Classroom teachers did describe moving beyond just considering changes to content, process, and projects when meeting the learning needs of their students. They were developing a more collaborative role and being more flexible with the students in their classroom. The more comfortable the teacher becomes in the classroom, the more willing they are to move outside the planned lesson. Tomlinson and Kalbfleisch (1998) noted that flexibility of the teacher, collaborative learning among students and teachers, and negotiated learning with students, were all criteria of a differentiated classroom.

All four of the teachers discussed culture and diversity of their students as having an impact on decisions about instruction. Although all of the preservice teachers studied completed their teacher education program through the community-based model of teacher education, the four classroom teachers made a commitment to work in a high-need, culturally diverse, urban school. Further research needs to determine if awareness of the impact of culture and diversity on achievement is a result of working in the school or participating in the community-based model of teacher education.

### **Implications for Future Considerations**

Although the researchers saw a change in teacher thinking from preservice to classroom, using differentiated instruction strategies as a framework, it was a small sample of teachers from one, highly focused, teacher education program. Disappointingly, there was little evidence that as preservice teachers, they were using their knowledge of instructional strategies or the cultural diversity of the students to make decisions by reviewing two of the sections of the teacher work sample. There was no difference in the decisions based on whether the learners were struggling, on-grade level, or advanced. The preservice teachers made instructional decisions that assumed all students were learning the same way, had similar levels of understanding, and had identical prior knowledge and previous experiences. The preservice teachers did not mention the student's cultural diversity when making instructional decisions. Although the interviews with the classroom teachers indicated that this does change when preservice teachers move into their own classroom, teacher preparation programs need to consider how they support preservice teachers to recognize the students in their classrooms for their unique culture, diversity and achievement level.

Future research needs to evaluate the entire teachers work sample to determine if the criteria of differentiated instruction were used in other parts of preservice work. In addition, observations of preservice teachers and their teaching styles in the classroom should be considered before determining if they implement criteria of differentiated instruction.

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## Appendix (1)

### Coding sheet for TWS

1. Teacher focuses on essential concepts, recognizes what is important for the learner to master, works to clarify information.
2. Teacher attends to learner differences-seeks strategies to make sure all learners are successful.
3. Assessment and instruction are inseparable; evidence of ongoing assessment as teacher is teaching; discusses using assessment information to plan future curriculum.
4. Teacher modifies content, process, and products; recognizes readiness and determines new items to teach:
  - Struggling learners:
    - a. Id gaps in learning and how to make-up for gaps
    - b. More direct instruction or practice
    - c. More structured or concrete activities
    - d. More deliberate pace of learning
  - Advanced learners:
    - e. Skip practice
    - f. Complex activities and practice needed
    - g. Brisk pace of work, more in-depth work
    - h. Notices a child's *interest*
    - i. Recognizes *learner's profile* (how they learn best)
5. Learners participate in respectful work-the teacher shows respect for the learner.
6. Teacher and learner collaborate in learning; student-centered, student-directed.
7. Teacher balances group and individual norms; does not leave any child without understanding.
8. Teacher and learner work together flexibly (Tomlinson, 1999).

**Appendix (2)**

Table 1. *Results of TWS Analysis*

<b>Differentiation Criteria</b>	<b>Evidence in TWS 1</b>	<b>Evidence in TWS 2</b>
Teacher focused on essential concepts; recognize what is important for the learner to master, work to clarify information.	3	4
Teacher attends to learner differences-seeks strategies to make sure all learners are successful	1	1
Assessment and instruction are inseparable; evidence of ongoing assessment as teacher is teaching; discusses using assessment information to plan future curriculum.	Not clear	Not clear
Teacher modifies content, process, and products; recognizes readiness and determines new items to teach struggling learners: <ol style="list-style-type: none"> <li>1. Id gaps in learning and how to make-up for gaps</li> <li>2. More direct instruction or practice</li> <li>3. More structured or concrete activities</li> <li>4. More deliberate pace of learning</li> </ol>	10	4
Teacher modifies content, process, and products; recognizes readiness and determines new items to teach advanced learners: <ol style="list-style-type: none"> <li>5. Skip practice*               <ol style="list-style-type: none"> <li>1. Complex activities</li> <li>2. Brisk pace of work, more in-depth work</li> <li>3. Notice a child's <i>interest</i></li> <li>4. Recognize <i>learner's profile</i> (how they learn best)</li> </ol> </li> </ol>	0	0

**Appendix (3)**

Table 2. *Survey Results Classroom Teachers*

How often do you do the following things?	Daily	Some days	Weekly	Some-times	Hardly ever
I focus on essential concepts; recognize what is important for the learner to master, work to clarify information.	4				
I attend to learner differences- seek strategies to make sure all learners are successful.	3	1			
I believe assessment and instruction are inseparable; I assess as part of teaching; assessment information is used to plan future curriculum.	4				
I modify content, process, and products; I use the following with struggling learners (put the # in box):					
1. I id gaps in learning and how to make-up for gaps	4		1		
2. Use more direct instruction or practice	3		1		
3. Use more structured or concrete activities	2		1	1*	
4. Use a more deliberate pace of learning	2	1	1		
I modify content, process, and products; I use the following with advanced learners (put the # in box):					
5. Skip practice*	2	1	1	1*	
6. Offer complex activities	1	2		1*	
7. Use a brisk pace of work, more in-depth work	3	1	1	1*	
8. Notice a child's <i>interest</i>	3			1*	
9. Recognize <i>learner's profile</i> (how they learn best)	2		1	1*	
Learners participate in respectful work and I show respect for the learner.	4				
I collaborate with the learners in my class; my * classroom is student-centered and student-directed.	2	1			
I balance group and individual norms; I don't leave any child without understanding.	2	2			
I am flexible with the learners in my class.	3		1		

\*Note: The classroom teacher who works with ELL students answered the items with a \* or did not answer the question at all.