Educational Inequality: A Case Study of Instructional Strategies and Student Engagement

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Abstract

The United States has long been dubbed, "the land of opportunity," but is there equality within those opportunities and more importantly, are today's students receiving fair and just services within our schools? For the past five decades, we have witnessed numerous educational reforms, which have targeted educational equality; however, equal and fair opportunities fail to exist and the achievement gap continues to widen. This case study examined data collected from a Title I school regarding teacher effectiveness and student learning. The ramifications of the findings suggest that the educational consequences include a lack of professional development, less teaching experience, lower teacher retention rates, low student achievement, and a lack of culturally responsive teaching. This is important because these factors play a critical role in the dropout rate, unemployment rate, and the rate of those living in poverty, all of which significantly impact our society.

Keywords: differentiation, equity, diversity, instructional strategies

1. Introduction

As proclaimed in the national anthem, the United States of America is hailed, "the land of the free and the home of the brave." But is there truly freedom, equality, and justice for *all*? While the federal constitution and many state laws mandate equality in education for everyone, it seems that such regulations leave ever-widening gaps where many of our most vulnerable students seem to fall. As is evident in the last several decades, educational reforms have targeted student achievement and equality. It has been the goal of both national and state education policy that *all* students be afforded the opportunity to achieve academic success and the goal has been to narrow the achievement gap among diverse learners (NAEP, 2009). Because today's educators are faced with rising expectations amidst an ever-changing culture due to the rapidly changing demographics, it is becoming increasingly paramount that teachers understand the diversity that students represent and how such differences can affect their overall learning and academic achievement. Given this current arena, it is critical that such issues of inequality be not only evaluated, but also addressed.

The Research Problem and Purpose of the Study

Improving education and creating educational equity for all students are the fundamental principles of the Elementary and Secondary Act of 1965. Therefore, financial assistance is awarded to educational institutions in an effort to afford low-income students the same opportunities as students from increased financial support. A case study was conducted in a Title I small urban school district, on the outskirts of a large city on the United States border, to determine if the increase in funding was a critical factor in improving student achievement to ensure educational equity.

Observational data was obtained from teachers chosen at random at the middle school level. Teachers had previously been provided with manipulatives, technology resources such as graphing calculators, projectors, and Interactive White Boards (IWBs), multiple professional development opportunities, and all resources needed to provide quality instruction to engage all students.

Approximately 85% of the students served in this Title I district were identified as Economically Disadvantaged, 27% were English Language Learners, and 53% were classified at-risk.

2. Literature Review

Legal attempts have been made in an effort to provide equality in education, which was initiated with Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color or national origin in programs or activities. Additionally, Title I (Part D) of the Elementary and Secondary Education Act: Improving the Academic Achievement of the Disadvantaged, refers to a Federally funded educational grant provides financial assistance for intervention programs to schools with high percentages of children who are neglected, delinquent, or at-risk. Furthermore, the No Child Left Behind Act of 2001 (No Child Left Behind Act of 2001, U.S.C. § 6319, 2008) demanded that teachers be *highly qualified* to teach a specific subject area, increased mandatory testing requirements, and set standards by which states, districts, and schools would be measured to ensure adequate yearly progress (AYP). This act also set out to guarantee that all students, regardless of ethnicity, gender, and socioeconomic status, would receive quality education, determined by measurable objectives. While all of these acts have sought to provide educational equality to all, it is apparent that not only does the gap continue to widen, but also leaves many students far behind.

This is of critical importance due to the lasting effects on society. The Alliance for Excellent Education (2011) reported that the dropout rates are higher for Black and Hispanic students as compared to White students. More specifically, it was reported that 21 percent of Hispanic students dropout as compared to 8 percent of Black students and 5 percent of White students. In addition, it reported that these individuals are much more likely to spend time periodically unemployed, on government assistance, or rotating in and out of the prison system than their graduate counterparts. The National Endowment for the Arts (NEA, 2007) reported that the unemployment rate for Hispanics is 8 percent, as compared to 9 percent for Blacks and 4 percent for Whites. Furthermore, children living in poverty are more likely to come from minority families, in that 27 percent of Hispanic children live in poverty, 34 percent of Black children live in poverty, as compared to 10 percent of White children live in poverty.

Although additional funding major for materials and resources are given to Title I schools, there is often a lack of professional development for teachers to more effectively use such resources and technologies. Unfortunately, there is a considerably lower teacher retention rate at such schools, which makes sustainability much more difficult. Finally, since the demographics are rapidly changing in today's schools, it is becoming increasingly important for teachers to understand students' diverse backgrounds and how such differences can affect their overall achievement. Until these issues are addressed, educational equality will not truly exist and serve the needs of all students.

2.1 Differentiated Instruction

Numerous scholarly resources validate the importance of differentiated instruction to challenge all learners to reach their individual potential (Anderson, 2007; Broderick, Mehta-Parekh, & Reid, 2005; Carolan & Guinn, 2007; Douglas, Burton, & Reese-Durham, 2008; King-Shaver, 2008; Lewis & Batts, 2005; Sherman, 2009; Tomlinson, 2000a, 2000b, 2005; Witzel & Riccomini, 2007; Wormeli, 2011). However, before an analysis of existing research and its implications for educational practices can be discussed, one must have a clear understanding of what differentiation is and some of the myths associated with the term. Differentiation is defined as "designing lesson plans to meet the needs of a range of learners; includes learning objectives, grouping practices, teaching methods, varied assignments, and varied materials chosen based on student skill levels, interest levels, and learning preferences" (Southeast Regional Educational Laboratory, 2008, p. 2). Many of the tools teachers use daily to engage students in the classroom, such as cooperative learning and interactive activities can be altered to reach all learning styles (King-Shaver, 2008). Differentiated instruction includes the delivery of the material, but the material, or content, needs to be considered and yet, is often neglected.

2.2 Content Differentiation

Common classroom practices such as cooperative learning and interactive activities can be altered to reach all learning styles. Assessments and data are used to determine student placements based on instructional readiness, skills, backgrounds, choices, or interests (Kingore, 2007; Logan, 2011). Teachers may allow students to choose a group or assign peer tutoring pairs or random teams.

"Tiered instruction blends assessment and instruction . . . [and] aligns complexity to the readiness levels of students" (Kingore, 2007, p. 6). Teachers may begin content delivery with whole class instruction, continue by having pairs share with the class, and proceed to group work. Individual conferencing, literature circles, writing options, and book choices are methods of modifying curriculum to meet individual learner needs (King-Shaver, 2008). Content should be presented using multiple approaches such as vocabulary activities, manipulatives, visual aids, diagrams, varied reading levels of materials, concept maps, graphic organizers, hands-on activities, brainstorming, games, online projects, and experiments (Kingore, 2007; Lawrence-Brown, 2004; Logan, 2011; Muschla & Muschla, 2004; Tomlinson, 2000b, 2005). Additional variations are "acceleration, compacting, variety, reorganization, flexible pacing, advanced or complex concepts, abstractions, materials, and interdisciplinary or thematic approaches" (Bailey & Williams-Black, 2008, p. 136).

Academic vocabulary represents an area of difficulty for the majority of students. Multiple strategies for teaching vocabulary are present throughout the literature. Realia, demonstrations, graphic organizers, and hands-on learning provide the foundational background needed to connect vocabulary to mathematical content (Furner et al., 2005; Hansen-Thomas, 2008). Visual drawings and symbols make concepts more comprehensible for struggling learners. Crossword puzzles and vocabulary games engage learners in vocabulary development (Slavit & Ernst-Slavit, 2007). Students need the opportunity to relate their learning to everyday situations and real world applications through discovery and process learning (Hansen-Thomas, 2008). For these reasons mentioned and overall learning acheivement, the delivery of instruction needs to be addressed.

2.3 Instructional Delivery

Traditional lessons normally include teaching all students the same topics in an identical format with equivalent independent practice and assessment. Rock et al. (2008) developed *REACH*, an acronym that helps teachers implement differentiation, and it represents the following:

A general plan of action composed on proven, effective, research-based methods to improve outcomes for all students by promoting cognitive access, participation, and progress in the general curriculum.

R – reflect on will and skill
E – evaluate the curriculum
A – analyze the learners
C – craft research-based lessons
H – hone in on the data (p. 33)

Understanding individual needs of all students is imperative for a challenging educational environment. Gifted characteristics, special education needs, and language barriers must be defined and assessed to determine areas where students need assistance (Ernst-Slavit, 2007; Giambo, 2010; Lay & Stokes-Brown, 2009; Moon, 2009). Differentiated instruction is recognized as a method for reaching all student-learning styles in the classroom, but effective teaching is not a new concept. Many veteran teachers were focused on helping all students succeed before the term differentiation was coined. Today's educators must continue to provide a quality education for all students while focusing on the skills necessary for the 21st century (Luterbach & Brown, 2011). The literature suggests several ideas to assist students as they move into future roles as leaders. Problem-based instruction has emerged as a theme to ensure students are prepared for the future. Incorporating problems that peak student interest allow for meaningful and personal connections. Students must learn to analyze situations, incorporating multiple steps to reach an appropriate solution (Gasser, 2011; Perritt, 2010).

Teachers who want to encourage critical thinking skills may incorporate problem-based learning. However, one must recognize that this strategy may be difficult for some individuals. Challenging students to alter their thinking process requires flexibility and acknowledgement that students are conditioning themselves to become problem solvers. According to Gasser (2011), "Allowing students to think through problems and invent their own possible solutions requires more patience than many math teachers have" (p. 111). Problem-based learning provides a subjective interpretation to evaluate student learning, which connects learning through meaningful exploration (Perritt, 2010). Teachers must embrace the concept of risk-taking, allowing students to learn from their mistakes. An environment of mutual respect, where students are encouraged to focus on correct processes versus what is incorrect, can be established when teachers set a positive tone for the classroom. A positive environment offers opportunity for collaboration and teamwork, preparing students for successful integration to a work environment (Furner et al., 2005; Sherman 2009; Wormeli, 2011).

Technological advancements afford educators access to an abundance of resources, providing differentiated opportunities for English language learners, "at-risk" students, gifted learners, and those with special needs. Schweizer and Kossow (2007) warn: "a classroom without technology can be a painful exercise of recitation—go to the encyclopedia, write down the relevant facts, and organize the facts into a paper—or memorization—listen, take notes, and retrieve the information for an end of the unit test" (p. 29). Technological integration can transform a traditional classroom into an engaging learning environment.

The majority of classrooms today are equipped with an Interactive White Board (IWB) to facilitate student learning. Recent studies have identified mixed results when investigating the effect of the IWB on student achievement. Some studies refer to the IWB as a replacement for the overhead projector, allowing for continued teacher-centered instruction (Kuehn, 2010). Other critics do not view the tool as a medium for development of long-term critical thinking skills (British Educational Communications and Technology Agency (BECTA), 2008). Several studies support the use of the IWB for student achievement of all student groups (Hofer & Swan, 2008; Manny-Ikan et al., 2011; Moore, 2008; Oleksiw, 2007; Starkman, 2006; Swan, 2007). Consistency throughout the literature emphasizes a need for teacher training and support for effective integration of the IWB into classroom instruction (BECTA, 2008; Moss et al., 2011; Schweder & Wissick, 2008; Zittle, 2004). Educators must have a positive attitude toward using a new medium for instruction or the IWB simply becomes another task that must be completed.

Technology-driven instruction can become more meaningful for students because of the unlimited resources available. Mathematics studies have confirmed that students gain a clearer understanding of difficult concepts when teachers use the IWB for visual illustrations, multimedia integration, and representations that are impossible without the aid of technology (Manny-Ikan et al., 2011; Schweder & Wissick, 2008; Swan, 2007; Zittle, 2004). When used correctly, the IWB encourages cooperative learning and allows teachers to collect real-time data to assess student learning (Manny-Ikan et al., 2011). However, without a focus on pedagogy in addition to technology, the IWB will become another tool for teacher lecture (BECTA, 2008; Kuehn, 2010; Lightfoot, 2012). One teacher summarized the value of the IWB as follows: "It isn't about the boards; it's about the learning that is happening. The boards are a conduit to the curriculum" (as cited in Starkman, 2006, p. 36).

Technology accommodations can enhance learning through videos, multimedia, and interactive solutions; however, educators must recognize that student-teacher interaction is still a critical instructional component. Additionally, if new technology advancements are used as a direct teaching tool, they are not being used to involve students in active learning (Hofer & Swan, 2008; Swan, 2007). Researchers continue to investigate the effect of the IWB on student achievement in multiple subject areas. One must remember that student engagement is a critical component of student success. Effective integration of this type of technology engages students through visual stimulation and provides resources that have never been available before (Schweder & Wissick, 2008). In consideration of this, educators must consider the plethora of products that exist and find the appropriate components that will help meet the needs of all students.

2.4 Product Options

Product differentiation provides alternative approaches to demonstrate conceptual understanding and varied expectations encourage academic exploration (NCAC, 2002). Variety can help fight student boredom and promote a learning environment in which risk-taking and abstract thinking are encouraged. Students can choose to create a product that is "oral (speeches, debates, or discussions), written (journal collages), kinesthetic (skits, models, demonstrations) or technological (Websites, slide shows, videos)" (Walker, 2002, p. 105). Other examples include task cards, tic-tac-toe boards, and learning stations (King-Shaver, 2008).

Product options motivate students to achieve at higher levels by (a) incorporating a range of modalities to match students' strengths, (b) providing choice, (c) appealing to students' varied interests, (d) increasing the variety and novelty of learning responses, and (e) allowing a range of complexity levels to encourage students to stretch their comfort zone and experience continuous learning (Douglas, et al., 2008; Kingore, 2007). Teachers must determine the strategies they are already using, build on those, and incorporate additional activities as they feel more comfortable (King-Shaver, 2008).

Product options that allow students to reflect on curriculum reinforce reading and writing skills. Allowing students to generate their own word problems requires critical thinking, provides formative assessment for the teacher, and assists students in taking mathematical concepts to an abstract level (Furner et al., 2005).

From an oral standpoint, thinking aloud and working through the learning process requires students to verbalize their thinking process, allowing educators to identify areas of weakness in student understanding. Students will often correct their errors when sharing explanations.

3. Case Study Results

All teachers who participated in this case study had previously received training and resources for the strategies identified throughout the review of the literature; however, effectiveness could not be assessed without firsthand accounts of teachers actively engaging in classroom instruction. The William and Mary Classroom Observation Scales-Revised (COS-R) was used as the classroom observation instrument to identify the strategies being implemented in the classroom. Clear guidelines for use of the instrument provided a specific protocol to be followed. The quantitative COS-R survey instrument focused on the following teacher behaviors: general teaching, differentiated teaching, critical thinking strategies, creative thinking strategies, and research strategies (VanTassel-Baska et al., 2003).

Four classroom observations were conducted to determine instructional effectiveness, in light of the additional funding that was provided to assist students. To minimize bias, observations were conducted with two-person teams. During each observation, a demographics section and a written classroom observation were scripted using detailed notes. Immediately after the lesson, observers met briefly with the teacher to complete the interview questions of the COS-R. Using information from the scripting, a Classroom Observation Scale (COS) and a Student Observation Scale (SOS) were completed by each member of the observation team.

Once the COS and SOS were completed individually, the observers completed the teacher and student observation scales together, documenting the decisions on the consensus forms (Van Tassel-Baska et al., 2003). Mean scores were calculated to determine the quality of instructional practices from the instructional viewpoint and in reference to student responses to the strategies. A 25-item checklist was scored using a "3" for effective, a "2" for somewhat effective, a "1" for ineffective, or an "N/O" for not observed. Results from each of the four observations are provided in Table 1. The Student Observation Scale (SOS) was scored using a Likert-scale format as follows: most is greater than 75% of the time with a score of "4", many is 50% to 75% of the time with a score of "3", some is 25% to 50% of the time with a score of "1", and few is less than 25% of the time with a score of "0". Not applicable (N/A) are other options on the scoring instrument.

Table 2 provides overall student results for the twenty-five items that were scored on the following categories: student responses to general teacher behaviors, student responses to differentiated teaching behaviors, engaged in problem-solving strategies, engaged in critical thinking strategies, engaged in creative thinking strategies, and engaged in research strategies. A rubric clearly delineated the attributes of each rating level: effective, somewhat effective, or ineffective. The content validity of the observation form is rated at a 0.98 (VanTassel-Baska, Quek, & Feng, 2007).

Two scheduled and two unscheduled observations were conducted for each teacher to maximize the reliability of the data. Scripting of each lesson also provided additional insight into areas of needed improvement in the classroom. Based on the data collected, instructional issues did not stem from a lack of funding but from a lack of implementation of effective instructional strategies. Prominent areas of concerns were as follows:

1. Group activities were used for individual instruction.
2. Only one teacher engaged students in hands-on activities.
3. Real-world scenarios were read to students without allowing them to reflect on the situation presented.
4. Critical thinking and brainstorming components were omitted from instructional plans.
5. Classroom games, intended for assessment review, were omitted.
6. Flipcharts created for the Interactive White Board (IWB) were omitted or were not used as a student tool for learning.
7. Class discussion and partner activities were lacking in the majority of classrooms.

4. Discussion and Implications of Findings

The intent of this study was to determine if Title I funding was a primary factor of student achievement in the classroom. Three distinct implications for practice were derived from classroom observation results, supported throughout the literature. First, differentiated instruction is not only a teaching strategy, but an attitude toward helping all students achieve academic success.

Second, ongoing professional development is a critical component of implementing differentiated instruction. Third, without collaboration and support, teachers will become overwhelmed and become discouraged when trying to meet the varied needs of a diverse population, which leads to a lack of teacher retention.

Teaching styles and attitudes vary among teachers; therefore, without recognizing the value of modifying curriculum by content, process, and product, transformation will not happen (Douglas et al., 2008). Change can be achieved by creating a positive campus climate focused on individual student achievement. Educators must evaluate their current instructional practices, critically analyze the students benefitting from current strategies, and determine how instruction can be modified to meet specific needs (Broderick et al., 2005). Differentiation is a pedagogical approach to teaching and often requires veteran and novice teachers to change their mindset toward structured learning (Hofer & Swan, 2008). Each of the above changes can take place but require support from administrators and district personnel (Asaf, 2008; Lawrence-Brown, 2004; Manning et al., 2010).

Continuing staff development is needed for effective implementation of differentiated instruction (Beecher & Sweeney, 2008; Logan, 2011; Moss et al., 2011). Teachers are encouraged to challenge students to think critically, continually assess learning, and collaborate with parents and colleagues for success. Implementing varied instructional practices requires productive, ongoing staff development. Tomlinson (2005) stressed, "Staff development is reflective, informed, diagnostic, connective, application-oriented, problem-focused, quality-concerned, collaborative, supportive, sustained, and differentiated" (p. 11). Professional training is essential to empower teachers and provide a pathway for successful implementation.

5. Conclusion

Collaboration is a critical component of creating a quality differentiated curriculum (Lewis &Batts, 2005; Rock et al., 2008; Sherman, 2009; Swan, 2007). Teachers are often overwhelmed by lesson planning and finding resources to meet the needs of all learners. Established support systems assist teachers in becoming productive, valued members of the educational setting. Teachers overwhelmed with the concept of differentiating instruction would benefit from a mentor teacher who could provide guidance and help with lesson development and refinement to meet the needs of a diverse population. Teachers must also have opportunities to observe effective differentiated lessons in person, via technology, or through recorded lessons. Perhaps more support should be provided on a personal level to help teachers in the classroom. Financial resources are critical for all public educational institutions; however, we must never forget that teachers are the most important factor in student success.

Table 1: Summary of Teacher Observation Mean

	Gen. Tch.	Accom.	Prob. Sol.	Crit. Th.	Creat. Th.	Res. Str.
Teacher A						
Observation 1	1	1	1	1	1	1
Observation 2	3	3	2.7	2.8	2.8	3
Observation 3	Not present	Not present	Not present	Not present	Not present	Not present
Observation 4	2	2	N/O	N/O	3	N/O
Teacher B						
Observation 1	1.6	2	2.3	1.5	1.5	1.7
Observation 2	2.2	2.7	2.3	2.3	2.3	2.7
Observation 3	1.6	2	1	1.5	1.5	N/O
Observation 4	2.5	1.8	2	2.7	2	1.7
Teacher C						
Observation 1	1.6	2.2	1	1	1	N/O
Observation 2	2.5	2.8	2.7	3	2.5	3
Observation 3	1.4	1.5	1.3	1.3	1.3	N/0
Observation 4	1.5	1.5	2	1	1.3	1.7
Teacher D						
Observation 1	1.2	1	1	1	1	1
Observation 2	2.5	2.3	2.7	2.7	2.3	3
Observation 3	Not present	Not present	Not present	Not present	Not present	Not present
Observation 4	1	1.3	N/O	1	N/O	N/O
Teacher E						
Observation 1	3	2	2.3	2	2	2
Observation 2	2.5	2.5	3	2.7	2.7	1.3
Observation 3	2	2.5	2	2.5	3	N/O
Observation 4	3	3	3	3	3	3
Teacher F						
Observation 1	1	1	1	2	N/O	N/O
Observation 2	2.8	1.8	2.5	1.3	2	1
Observation 3	1.6	1	1.3	1.3	1	N/O
Observation 4	2.6	2.5	2.3	3	2.8	3
Teacher G						
Observation 1	2.4	2.3	2.7	1.5	2.5	1.5
Observation 2	Not present	Not present	Not present	Not present	Not present	Not present
Observation 3	1.8	1.3	2	1.5	1	N/O
Observation 4	3	3	3	3	3	3
Teacher H						
Observation 1	2	1.3	1.3	1	1.3	N/O
Observation 2	2.7	2.3	2.5	2	2	N/O
Observation 3	1.6	1.5	1	1.5	1.5	N/O
Observation 4	2.5	2.3	3	3	3	2.3
Teacher I						
Observation 1	1.6	1	1	1.3	1	N/O
Observation 2	1.5	1	1.5	2.3	1.5	1.6
Observation 3	1.8	1.5	1	1	1	N/O
Observation 4	2.8	2.5	2	2	2.3	2

Note: Gen. Tch. = General Teaching strategies; Accom. = Accommodations for individual differences; Prob. Sol. = Problem Solving; Crit. Th. = Critical Thinking strategies; Creat. Th. = Creative Thinking Strategies; Res. Str. = Research Strategies; N/O represents that the strategy was not observed during the research period. Results are based on a scale from one to three.

Table 2: Summary of Mean Scores for Student Response to Instruction

	Gen. Tch.	Accom.	Prob. Sol.	Crit. Th.	Creat. Th.	Res. Str.
Teacher A						
Observation 1	0.4	0	0.3	0.25	0	1
Observation 2	4	4	2.7	2.8	4	4
Observation 3	Not present	Not present	Not present	Not present	Not present	Not present
Observation 4	N/A	N/A	N/A	N/A	N/A	N/A
Teacher B						
Observation 1	1.4	1.5	1	1.5	1.3	1.7
Observation 2	3.5	3.7	3.3	3.3	3.3	3.3
Observation 3	1.4	1.8	1.7	1.5	1.3	N/A
Observation 4	1.7	2	2	2	1	2.7
Teacher C						
Observation 1	2	2.7	0.3	2	2.7	N/A
Observation 2	4	4	4	4	3.8	4
Observation 3	1.8	1.3	2	1.5	0.5	N/A
Observation 4	1.8	2.7	2	0.5	1.7	2
Teacher D						
Observation 1	1.2	0.5	0.7	0.3	0.3	N/A
Observation 2	2.6	2.8	3.3	2.8	3.3	2.7
Observation 3	Not present	Not present	Not present	Not present	Not present	Not present
Observation 4	0.5	1.7	0	0	0	N/A
Teacher E						
Observation 1	3.2	1.3	2.3	2.3	2.3	1
Observation 2	3	3.3	3	3.3	2.7	3
Observation 3	2.3	2	N/A	2.5	3	N/A
Observation 4	4	4	4	3.8	3.8	4
Teacher F						
Observation 1	0.3	0	1	0	1	N/A
Observation 2	2	2	2	2	2	2
Observation 3	0.8	1.5	0.3	0.5	0	N/A
Observation 4	2.8	2.8	2.7	3.8	2.8	4
Teacher G						
Observation 1	1.4	2.5	2	1.5	2	1
Observation 2	Not present	Not present	Not present	Not present	Not present	Not present
Observation 3	0.2	0.3	1	0.5	0.3	N/A
Observation 4	4	4	4	4	3.8	4
Teacher H						
Observation 1	1.6	1	2	0.3	0.5	N/A
Observation 2	3.3	2	3.3	4	2.3	4
Observation 3	1.4	1	1.7	0.3	0.5	N/A
Observation 4	3	2.8	3	3.3	1.8	3.7
Teacher I						
Observation 1	0.6	0.3	0.7	0.3	0.5	N/A
Observation 2	1.2	1.3	1	1	0.8	1
Observation 3	1.4	1	1	0	1	N/A
Observation 4	1.4	2.7	1.7	1.5	1.5	2

Note: Gen. Tch. = General Teaching strategies; Accom. = Accommodations for individual differences; Prob. Sol. = Problem Solving; Crit. Th. = Critical Thinking strategies; Creat. Th. = Creative Thinking Strategies; Res. Str. = Research Strategies; N/O represents that the strategy was not observed during the research period. Student scores were scaled from a 4-point scoring scale to a 3-point score.

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