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Foothill Elementary
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Research Question

In what ways, if any, do NCLB assessment policies and the use of California standards influence teachers' instructional practices, and student motivation to learn math?

Rationale

My thoughts for this study were inspired by my personal experiences teaching lower performing sixth grade math students. Most students that come to my class haven't mastered many of the math concepts taught in the previous grades. Right from the beginning it is a challenge to try to catch them up and jump into the sixth grade curriculum. It is next to impossible to effectively teach these students all the standards in the time allotted. At first I thought I was the only one of the sixth grade teachers that felt that there were too many standards. Over time I discovered the teachers of both the high and middle math classes were feeling the same way I did. There wasn't enough time to teach the 6th grade standards effectively before the No Child Left Behind (NCLB) assessment (In California we use the STAR), in May. Learning this, I began to wonder if we might be putting too much pressure on the middle level students, as well as the lower level math students, by our use of the rigorous California standards. If this were true would their motivation to learn math be in jeopardy. At the same time, I wanted to begin to document teachers' thoughts and opinions about the California standards and the NCLB assessment policy as they relate to their instructional methods and the curriculum they employ in the classroom.

Context

The Foothill Elementary is a K-6 elementary school situated in a middle class neighborhood. Our school community is friendly and involved. Parents are well-educated and involved. Our staff is both cooperative and highly skilled. Students who attend come mainly from the surrounding neighborhood. The school has a student population of 380 students: 73% White, 20% Latino, and 7% other. Approximately 14% of the students receive free or reduced lunch. Special services are given to the following: Gifted and Talented Education (16%), English Language Learner (8%), and Special Education (15%). The mobility rate is 1%. Most of our parents have some college education (88%) and 31% attended graduate school. The average classroom size is 19 for K-3rd grades and 26 for 4-6th grades.

Method

Two questionnaires were administered: one to a 6th grade teacher, another to one of her students. Questions were designed to ascertain how the use of California math standards and NCLB assessment policy has affected both teachers and students in the classroom. The questionnaire was administered to Mrs. June (pseudonym), a sixth grade teacher at Foothill Elementary School. Mrs. June has been teaching for about ten years. For the past three years she has taught 6th grade. She is a skilled teacher who is well liked by the Foothill Elementary School community. Mrs. June's classroom environment can be characterized as friendly and focused on learning. After analyzing Mrs. June's initial questionnaire, I decided I needed to ask her some follow-up questions to clarify some of her responses.

Research

No Child Left Behind Assessment Policy

What does the research suggest? Educational proponents of NCLB assessment policy view the use of one standardized test to measure student achievement as an efficient way to collect data related to implementation of the standards. Critics voice concerns about: the validity of the test, the structure of the test, problems with the use of the test with students with special needs (e.g. Special education and English language learners), its limited value to teachers for instructional planning, and the negative influence the use of the test has had on teachers' choices of instructional strategies and curriculum. Further critics think, the test covers too many standards and encourages shallow teaching of concept; thus promoting instructional practices not supported by brain research. Instead of spending time building a solid foundation of knowledge in basic concepts that

will support future learning, teachers sometimes feel compelled to move quickly through the curriculum, often relying on direct teaching strategies that give students little time to fully comprehend the concepts being presented. This practice can have a negative impact on future learning since many math concepts build upon each other. What some educators say is a more serious concern about NCLB assessment policy has to do with equal access to quality education for all. Others believe the use of high stakes exams to measure achievement may in fact impede student's educational opportunities. For example, the practice of using one kind of test to measure a student's knowledge of the standards is especially problematic when used with special education students and with English language learners. Both of these groups of students can be at a significant disadvantage when taking the NCLB assessment. This is especially troublesome when results on the STAR, the California's NCLB standards based test are used for making educational decisions that can have significant impact on a student's future educational opportunities

California Mathematics Standards

California educational standards are among the most demanding standards in the United States. As such they were established with the intentions of ensuring students' competitiveness worldwide. The standards help teachers by defining what curriculum they need to teach. It helps make sure all students are exposed to the same high standards. As ambitious and attractive as the California standards may be, there are those who believe that their use is having a negative impact on teachers and students. Some of the criticism stems from the fact that they were, "developed with little knowledge of the context for implementation". As such, the standards have been criticized as being too detailed, too numerous, and too rigorous. From my experience, the majority of teachers I know believe this to be true.

Motivation

Research on the topic of student motivation tells us that students require an environment in which their basic needs are met first. When a student believes that he/she is a valued member (sense of belonging) of his/her class and is provided opportunities to be a successful learner student motivation to learn is enhanced. Conversely, when instructional practices interfere with a child's ability to feel like a valued member of his/her class and opportunities for him/her to be successful are not present, motivation can be negatively affected.

Methods

Two questionnaires, designed to explore the effects of NCLB assessment policy and the California Mathematics standards on teacher instructional practices and student motivation were administered; one to a 6th grade teacher and another to one of her middle performing math students.

Analysis

The 6th grade teacher, Mrs. June, stated the NCLB assessment policy did not affect her choice of instructional strategies. She reported that she used information from the STAR (NCLB assessment) to determine concepts that need to be taught or re-taught. She would like to receive more specific information from the STAR. Further, she believes that there are too many standards to cover, and some standards are too high for her grade level. Her student, Anne, felt that the pacing of math instruction and the concepts presented were not too hard or too easy: just right. She has to work hard, and receives the support she needs to be successful.

Discussion

Mrs. June reports that the NCLB assessment policy does not affect her choices of instructional methods. She continues to do what she believes is in the best interest of her students. She voiced concerns that many teachers hold about the standards and the use of NCLB assessments; that some of the standards are not grade appropriate and that there are too many to cover adequately during the school year. Teachers have to make choices about what standards to choose to emphasize and what standards to give less time to. At the same time, they must decide which instructional methods will be the most effective in the short time allowed them. In some instances, that can mean teachers will choose to teach the content in ways known to be less effective, as they rush to cover all the standards by test time. As Mrs. June's responses indicate, she, like other teachers, does not want to make the standards less rigorous, but more realistic and developmentally appropriate for their students.

Policy Implications

- Slow the pacing of the teaching of California standards and/or reduce the number of math standards to allow teachers to give their students a solid understanding of mathematics concepts and their application before going on to the next concept.
- Include teachers in the policy making process. The teacher's perspective should be a part of all policy decisions that have an impact on instructional practices, student achievement and motivation.

Implications for Administrators

- Provide teachers with training to support their efforts to meet the requirements of the California math standards and NCLB assessment in the classroom. Ask teachers what they need to be successful and provide it.

Implications for Teachers

- At the classroom level, teachers need to make educationally sound decisions about how to pace and teach the standards effectively. Sometimes this will mean doing what is right, not what policy demands. Further, teachers need to become more vocal about the changes in the California standards and NCLB policy they seek.