

BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NEW YORK

GROWTH PLAN END-OF-YEAR REPORT

Title: The Student Interview: A Qualitative Glance at Student Learning

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Year: 2010-2011

School/Grade: Wampus, Grades 3-5

SUMMARY OF ACTION RESEARCH PROJECT

Context

As a Wampus Math Specialist, the collection and analysis of data from multiple quantitative sources has helped continuously improve student learning in intermediate mathematics. At the Wampus Elementary School, the use of data analysis from summative assessments has improved our instruction and helped target significant areas of weakness for our student population.

As we continue to improve our instruction and target significant areas of weakness, we have uncovered a glaring gap, the lack of qualitatively-driven data resources. While the constructivist approach to learning math in the twenty-first century has proven to deepen our knowledge as demonstrated through our summative assessments on the state and local levels, the challenge has been to capture the depth of knowledge accrued in all learners.

The focus of this action research plan is to use the student interview as a formative diagnostic tool in improving student mathematical performance.

Action Plan

How can we use student interviews as a *diagnostic and formative assessment tool* inside the RTI process? The RTI process is a process that determines if the child responds to scientific, research-based intervention as a part of the evaluation procedure. The goal of the action research plan is to use the findings from student interviews to improve student learning and thus, improve student achievement.

1. Marilyn Burns Article, *Snapshots of Student's Misunderstandings*.

The article by Marilyn Burns pointed out that interviewing students enables an educator to collect useful information through hands-on observations and active listening. It captures a snapshot of what the student understands. Burns reminds us, the educators, to use the information gained from the interview to guide instruction and not to rely solely on students' written work to gauge what they know. Additionally, it is essential to incorporate the questioning and probing techniques used in one-on-one interviews into whole-class discussions to provide more opportunities for students to practice explaining their thinking.

We need to find the balance between the teaching of math and the teaching of students. As we engage in talking to students one-on-one we are helping find that balance.

2. Dr. Sandy Atkins, Staff Development: Student Interviews.
 - a. Second Grade Remedial Math Student
 - b. Third Grade Remedial Math Student
 - c. Second Grade Advanced Learner Math Student
 - d. Third Grade Advanced Learner Math Student

Actively observing an expert conduct these interviews with students reminded me of my very early teaching days, when I had the opportunity to visit classrooms to watch more experienced teachers implement lessons, differentiate instruction, and bring closure to lessons (formative assessments.) Sandy Atkins has conducted countless interviews with elementary-aged math students at a variety of intellectual levels. Watching her interview, listening to the questions she asked, observing her wait-time for students to respond, noticing her body language and understanding her response to students enabled me to better comprehend the power of the student interview. In sharing a conversation with her after the student interview was complete provided me with effective interview techniques that could improve my practice of the student interview.

3. Data was collected from various abilities of students in the third through fifth grade age-range. Student interviews were conducted as needed. When a teacher or parent had a concern, the interview was a viable tool to help capture the child's understanding of mathematic concepts.

Results about the Practice

- a. *I learned that less is definitely more.* As one interview was being conducted, Tom could not count by 10s starting from any given number that was not a multiple of 10. In the past, I would have kept pounding away at this struggle for Tom. After reading Marilyn Burns' article and watching Dr. Sandy Atkins, I learned to capture this struggle and move on.
- b. *I learned that interviews uncover misconceptions about students' strengths and weaknesses.* As one interview was being conducted, Ricky had trouble with the language of word problems. However, when I read the word problems aloud and Ricky was able to ask questions about the words in the problems, it became clear that Ricky understood how to solve the *math* component of the problem, but that the *language* often caused static in his mind.
- c. *I confirmed my challenge. How to efficiently conduct student interviews to improve the collection of qualitative data?* After completing this action research cycle, it is still glaring that efficiently collecting qualitative data is cumbersome and there continues to be a need to discuss ways to make this process more efficient. Through collaborative inquires, active observations, and research this quest can be strengthened.

Results about the Students

- a. *Interest based learning:* The interview excites learning in students. When Kelly entered the room, she was enthusiastic about answering questions and using manipulatives to articulate her knowledge of the subject. The interview easily adapts to a student's interests.
- b. *Improved differentiated instruction:* Students want to improve their understanding of math concepts. Ashley, an advanced learner, was intrigued by the follow up to her responses which led to a deeper discussion of a concept. Ashley walked away from the interview learning more than when the interview was initiated. This confirms that students are like sponges and genuinely want more and more knowledge, and educators need to provide opportunities that meet the level of needs within their classrooms.

Implications

The conclusions that I draw from action research project are global. Through the collaborative inquiry design of this committee, I have learned that the Byram Hills School District has common threads through our K-12 spectrum. The educators in Byram Hills are continuing to deepen their knowledge of active listening, collaboration, sustained differentiation and qualitative data measures. How do we continue to extend and strengthen the best practices from the kindergarten curriculum which include cooperative learning, differentiation, and active listening so that they are productive and developmentally appropriate as children grow? As I listen to other members share their action research, I am reminded of the construction workers building a skyscraper. How do we attempt to build the highest floors of a skyscraper if we haven't built a strong foundation and built on from that foundation level after level?