

BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NEW YORK

GROWTH PLAN END-OF-YEAR REPORT

Author: Anne Olivieri
Title: Student Interview as a Diagnostic and Formative Assessment Tool inside the RTI Process
Year: 2011
School/Grade: Wampus, Grades 3-5

SUMMARY OF ACTION RESEARCH PROJECT

Context

I am a math specialist in the 3-5 building. I provide remedial and enrichment services to designated students and guidance to teachers in the area of pacing and differentiation. I work with a team of math specialists who share two math labs that are richly equipped with resources to help us service teachers and students. I'm a member of the Response to Intervention (RTI) Team at Wampus. We are a group of professionals who meet to discuss students at risk. I've worked closely with my colleagues on the RTI team to craft an RTI process and communicate that process within our building. I was educated on the mandates the state has handed down. The effects of the mandates from the state, especially those requiring Academic Interventions Services (AIS) and Tier I interventions truly affected the services I provide in my building regarding RTI. Along with my colleagues, I felt intrigued by the new mandates, quite honestly a bit overwhelmed, and wanted to learn all I could so that I could help make the RTI process successful in our community of learners.

We are fortunate to have several pieces assessment information on each student in our building. These assessments have been analyzed and recorded for longitudinal data to share amongst our RTI team. The data has been an indicator of which students will be provided with remedial or enrichment services. Unfortunately, these assessments have not been good indicators of students who are in need of math services on either end of the spectrum; instead, they point out other weaknesses such as poor test taking ability, inattention, behavioral issues, lack of focus and stamina, weaknesses in accuracy and perseverance. Quite often we are servicing a mixed group of students with different needs where most of the needs are behavioral; however we lacked the data to prove this conclusion. According to the RTI process, Tier I interventions need to be administered and progress monitored for a designated amount of time. My colleagues and I have struggled to find a way to pin point mathematical weaknesses and find the point of breakdown. *The goal of our research was to target the break down point for each learner and provide a Tier I intervention to target that particular issue. We needed to develop one universal interviewing tool that could be given to students at*

any age or ability level to help us find those breakdown points. A secondary goal was to use the interview with advanced learners to find knowledge depth.

Action Plan

New York State has mandated each school district to have an RTI process in place by the year 2012. The reading and math specialists at Wampus have a key role in crafting and implementing this process. I worked collaboratively with my colleagues from the math department to create a tool to help us better focus interventions and assign appropriate services to students. *The focus of our action research was to create a student interview as a diagnostic and formative assessment tool inside the RTI process.* Our goal is to use our findings from student interviews about students' strengths and weaknesses to effectively drive students' interventions.

RESPONSIVE RESEARCH QUESTIONS:

- Who are the experts on using student interviews as diagnostic and formative assessment tools?
- How are interviews used to gather information?
- What information will be most valuable to target in an interview to find students' strengths and weaknesses?

PROACTIVE RESEARCH QUESTIONS:

- How will the use of student interviews as a diagnostic and formative assessment tool impact teacher selection of interventions?
- How will the use of student interviews as a diagnostic and formative assessment tool impact student performance?

Materials used to support inquiry:

Classroom Assessment For Student Learning, Jim Stiggins; habits of mind literature, and various articles and publications from Marilyn Burns; Mel Levine's *Schools Attuned* literature; analysis of state and local data; math fact fluency programs; *Growing with Math* program; and collaboration with consultants Jim Morgan and Sandy Atkins.

I began my research by referring back to materials I collected in staff development given by Jim Wright. He initially introduced members of our staff to the RTI process. Debra Cagliostro, the Principal at Wampus, has experience in RTI and she met with our RTI team to guide us through crafting our own process. She provided us with reading and reference materials which made starting the process seem less daunting.

When it was time to craft our student interview my colleagues and I went to Marilyn Burns' work to get ideas for interview questions and important concepts and skills to focus on. Number sense and numeracy became our first focus. What is it that students need to know about numbers? It's a broad question and we needed to break it down.

Referring back to Mel Levine's literature on *Schools Attuned* reminded us of the importance of getting many perspectives about a student. His work suggests finding a student's strengths and using them to strengthen a student's weaknesses.

Before long we had an initial draft of an interview. Individually we field tested the draft with one or two students and together we shared our findings. We looked for consistency among the interviewers in the administration of the interview, the length it took to ask the questions and gather the information. We also worked to review and revise questions.

Next we had the opportunity to consult with Sandy Atkins who helped to confirm that our interview draft was work in the right direction. From watching her model, we saw that the need to script the student responses was not as crucial as we had thought. Her questioning style kept the conversation moving with the student which kept the student at ease. She used their facial expressions to help guide her probes. We decided to either make an audio recording or a video tape of each interview to help us with our record keeping.

Reading about habits of mind opened our minds to focusing on the habits for Tier I interventions. Students were often placed in our remedial program due to poor test scores or inattention during lessons which lead to the inability to complete class and homework accurately. Using interventions to increase focus, accuracy, and perseverance are just a few examples to target weaknesses in particular habits of mind that may strengthen performance in math.

Jim Stiggins' *Classroom Assessment For Student Learning*, and various articles on assessment taught us the importance of helping students become motivated to set and strive to meet particular learning goals. As educators, our role in this is through constant communication, stating objectives and goals each day, and making sure assessments and rubrics are clearly written and well communicated in advance.

Results

Through a process that required us to craft and test several drafts, we created a student interview that is given in a one-to-one setting. The interview takes about 20 to 30 minutes to complete. We have a list of protocols. Some protocols include the materials needed for the interview, the background information on the student such as why the interview is being given and what assessment data has been collected. The actual interview questions are in the following areas: student disposition, numeracy, place value, operations, algebra, and language skills. Questions are asked orally. The student has the opportunity to answer each question in oral or written form. The responses could also be elicited through performance with manipulatives. The interview ends with an oral self reflection and/or questions the student may have or answers he cares to reflect upon.

My colleagues and I gave the interview to several students throughout the drafting process. One student, Annie, is a fifth grader who was recommended by her homeroom teacher for remedial math services due to poor performance on assessments and lack of performance and participation in class. Her multiplication fact fluency is about 16 to 18 facts per minute. Fluency records show that her fluency for a measure does not increase the second or third time she is tested.

Annie was unable to define the following words: expanded form and operations. She had difficulty recalling words to describe position, size, and description words for division, multiplication subtraction and addition. She was quick to respond using general words: like, stuff, thing. She could self-correct when given the opportunity.

Based upon Annie's data I've concluded that her fact fluency is slightly below average based upon the standard used at Wampus. Her fact fluency based upon any given measure is inconsistent. She has a weakness in vocabulary recall. She was unable to recall words to indicate operations, but could accurately infer the operation when hearing a word problem which indicated that she does understand the meaning of the words she could not recall.

Her behaviors during the interview were impulsive. She had difficulty maintaining focus during the interview as she would make comments that were off task between questions.

Tier I interventions I may propose to Annie's teacher include those to strengthen recall and active working memory. Annie could be given activities which will make her aware of particular habits of mind such as *striving for accuracy* and *maintaining focus*.

In each case, students were chosen to be interviewed because they were not performing well in math class. In three out of four of the last interviews I completed, there was not an academic math deficit that needed intervention. The three students had other behaviors that weakened their math performance. These behaviors included inattention, lack of persistence, impulsivity and anxiety. The one student with a math deficit was a third grader, Victor, who had weaknesses in place value and numeracy. Victor did not realize that if a rod was added to a given number that it always increased the number by ten. He did not recognize that if you drop down one row on the hundreds chart, that the number always increased by ten. One intervention asked Victor to use a dry erase marker on a hundreds grid to circle a given number and find the number ten *more* and ten *less*. When this was done with confidence, Victor was asked to circle a number to find the numbers 20 *more* and *less* as well as 15 *more* and *less*.

My colleagues and I agreed that having a script and protocols is crucial. However it is not necessary to follow the script to perfection. The script is there as a jumping off piece and something to fall back on or to keep the interviewer focused. This was evident in my interview with Victor. I noticed a weakness in an answer he provided to a scripted question so I probed further by asking a related question using the hundreds chart.

I have found the use of an individual interview to be incredibly powerful. As the interviewer, I've gained insight into each student's thinking process. I can easily catch misconceptions and sense anxieties. I can evaluate responses to get a feel of particular habits of mind a student has come to use and habits that need to be strengthened. I have also been surprised by strategies various students used to solve problems and I have been awed by advanced thinking processes from students who are not high performers.

Implications

The collaborative environment gained from both the action research community and my K-5 colleagues has been the most impactful professional experience I have had in many years. The sharing structures learned though action research were invaluable and are ones I can turn key with others in my field.

Early on in the action research process, I took the opportunity to work with colleagues from K-5 to look at the NYS Standards and our *Growing with Math* program to identify age appropriate skills and content for our young learners. Benchmarks for mastery were created and shared among colleagues and parents. If students are not performing, results from an interview will best indicate or pin point an area where a breakdown has occurred.

For example, if a student is having difficulty with partial products, it's important to look back at fluency rates for + and - as well as examine responses to the questions on place value. An intervention may include 30 minutes of place value regrouping during the course of 3-5 weeks.

Results from the interview help us to better choose focused Tier I interventions; we have more information to better differentiate instruction and assign appropriate support services to students who are actually in need of them. My research also showed that we have uncovered behaviors that disguise themselves as math issues. These behaviors are ones that are currently difficult to provide services for in our building. I am interested in researching interventions to address these non academic behaviors that have such a negative influence on classroom learning and community.

The process of creating the interview opened our eyes to work done by others in our field. I connected with the work I studied from Jim Stiggins, seeing first hand the magnitude of assessing student dispositions and the importance of communicating goals with individuals to motivate the student in the learning process.