Meeting the Needs of Special Education Students:
Math Box Modification Project

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Our goal in the Vigo County School Corporation is to educate special needs students in the general classroom, using grade-level materials, whenever possible. Only in this way can students be prepared to meet the Indiana Academic Standards in the area of mathematics.

During the state textbook adoption process in the spring of 2004, Covered Bridge Special Education District, which serves the needs of Vigo County schools, chose to adopt the same mathematics curriculum as general education classrooms — *Everyday Mathematics*.

Special education teachers from Vigo County who had volunteered to participate in the Indiana University/National Science Foundation (NSF) Mathematics and Science Partnership (MSP) grant were already trained in appropriate strategies, methodology, and curriculum. Their recommendation to adopt the same mathematics curriculum as general classrooms was carefully considered and respected by their fellow teachers. Because the professional development associated with any standards-based mathematics curriculum is so important, an ongoing basis of professional development was provided to all special education teachers after the adoption. They also participated in all professional development for general classroom teachers at the corporation and school level.

Eleanor Rodie was previously a Vigo County School Corporation special education teacher in a high-risk elementary school. Her explanation of one of the accommodations that needed to be made in order to help her students participate in the general education classroom follows.

Students’ IEP [Individual Education Plan] accommodations often call for reduced assignments. I would find myself scurrying around the room after an assignment was made trying to mark everyone’s journal to reduce the assignment.

I also had to be sure that the general education teacher and my educational assistant’s books were marked as well. By the time all the books were marked, work time was over and I had not had a chance to really assist the students with content.

General education teachers were then left to assist and answer their questions, which left little time to assist the other students in the classroom.

Finally, I felt I never had time to do the modifications that needed to be done the way they should have been done.

Eleanor discussed this problem with Rex Ireland, curriculum coordinator for assessment, who prior to this year had been the mathematics coordinator. They recognized that modifications to the journal pages were primarily a reduction of the assignment, as was called for in many of
the students’ IEPs. However, there was not adequate daily time to modify the work appropriately to help the students complete the work more independently.

The forty-seven special education teachers in the Vigo County School Corporation were invited to an informational meeting to discuss the issue. At this meeting, Rex and Eleanor proposed a project wherein the teachers who chose to participate would meet bi-weekly to work on modifying *Everyday Mathematics* math box pages in the student journals to assist students in becoming more independent learners.

Examples of some modified math box journal pages were shared, and teachers had the opportunity to work with colleagues to practice modifying other pages. These practice pages were then shared with the group, so that everyone had a good idea of what the project entailed.

The teachers in attendance were told that, if they chose to participate, they would begin by modifying the math box pages for the units that remained to be taught for the 2007–08 academic year. Units were to be selected using the pacing guide for *Everyday Mathematics*. Once the journal pages were modified, proofread, discussed, and accepted by the group, they would then be copied and sent to all special education teachers in Vigo County School Corporation for use with their students.

Those teachers who were interested in participating in the project were asked to sign up along with the grade level in which they were interested in working. Sixteen teachers became the working cadre.

At the first working session in February 2008, teachers were paired up (by their grade choice) and given *Everyday Mathematics* journals to modify. Their assignment was to modify the math boxes, for each lesson and for each unit, to assist students who might have difficulty. The discussion of those modifications revolved around what to add, how much to add, what needed to be taken away, and how to write any modification. Since there is no “one size fits all,” some amount of give and take had to take place. Each teacher, in the pair, did not serve students with the same disability, so meaningful dialogue was necessary in order to find consensus. After each unit was completed, the entire group was consulted about every math box that was modified. Suggestions were discussed and changes occurred before any of these units were offered for use in any classroom. As a result of this work, current students will be accommodated, and this project will serve as a catalyst for future work in mathematics. (In fact, an in-service is scheduled for November 2008 to apprise elementary general education teachers of the existence of the modified math box pages. Also they will learn how best to assist special education and at-risk students in their classrooms.)

After four bi-weekly meetings, the first group of modified units was ready to be copied and sent out. This allowed the units to appear in teachers’ mailboxes at the conclusion of spring break and be ready for their field testing. Teachers were also provided a sheet on which to make suggestions for improvements.

Since the first units were sent to teachers, two more meetings have been held, and the modification of the remaining units completed. These modified units have been proofread, discussed, and accepted by the working cadre, and are being copied and sent out to all special education teachers in the Vigo County School Corporation for field testing. Suggestions for improvements are also being solicited.

Mrs. Rodie asked one of the special education teachers who had worked on some of the modifications if she was using the ones that had been completed. She replied that the specific modifications did not meet the needs of her particular population of students, but the examples created had given her the model to start with and the confidence she needed to create her own.
As Mrs. Rodie has traveled to various elementary schools in Vigo County, she has received feedback from many special education teachers that the modifications were helping their students become more successful and feel more confident in math. One third-grade general education teacher told her that she was using the modifications with all her struggling students. The modifications were helping them to become more self-reliant when it comes to completing the math box portion of the *Everyday Mathematics* lessons. She felt that some additional modifications may need to be made for some of her students, but that she was grateful for the work that had been done to address the needs of the struggling students. Since this is the pilot year for these modifications, feedback forms have been provided to the special education teachers, so that any further suggestions for change can be submitted for review prior to becoming part of the mathematics curriculum next year.

Eleanor Rodie has since moved into a position as elementary math liaison for the eighteen elementary schools in the corporation. She is thus able to make follow-up visits to classrooms to assist in the implementation of the math box modifications. In one building, a general education teacher, with whom the modified math boxes had been shared, thanked Eleanor and told her that this was exactly what she had needed to use with her at-risk and special-needs students.

Special education teachers will have access to these tools for differentiated mathematics instruction in grades one through five during the 2008–09 school year and will continue to make suggestions for improvements, as needed. At the conclusion of this field trial, changes will be made as necessary, and a final packet will be developed. The completed units will be available for every elementary teacher currently using the *Everyday Mathematics* program at the beginning of the 2009–10 school year, when it will become adopted as a component of the Vigo County School Corporation mathematics curriculum.

The project was supported and funded by the Indiana University/NSF MSP grant. The Indiana Mathematics Initiative has maintained a long-lasting and productive relationship with our corporation. Nine school districts in Indiana have participated in the IMI, and those nine have collectively shown greater progress than the state average in math performance.

The success of this project rests on the dedication of this working cadre of special education teachers who recognized a need and sought to find a way to meet that need. It is anticipated that this project will be the first of many corporation-wide curriculum modifications to come.

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