

Coaching

Mary Lawrence
Metropolitan School District of Decatur Township

A Typical Day

The day began like many others. I arrived at one of our elementary buildings for a mentoring meeting with a new second-grade teacher. We discussed her experiences with our standards-based mathematics curriculum over the past several weeks and ideas of what she would like to do in the near future. We worked on questions and problems she had faced implementing the program. She shared ideas with me, wanting to know my thoughts.

When we finished, I stopped at a kindergarten teacher's classroom to videotape her math lesson. I was compiling a video library to make a training DVD for other teachers. I then traveled to another building to do some classroom walkthroughs, visiting several classrooms just to acquaint myself with the activities in those rooms. This was followed by a lesson I modeled for another teacher in a first-grade classroom. I ended my regular day by having a content training session for teachers on pacing and standards. That evening I went to one of our elementary schools for their Family Math Night, where I helped plan, coordinate, and carry out the activities for the families of this school.

This description of a typical day in my job as a math coach for the Metropolitan School District of Decatur Township provides some examples of what my job entails. In the following I will sketch out a rough idea of my responsibilities: the ups, downs, and successes, and where I still continue to work.

The Metropolitan School District of Decatur Township

The Metropolitan School District (MSD) of Decatur Township is located outside of Indianapolis, Indiana. We have approximately 6100 students in our district, 49% of whom receive free or reduced-price lunches. Nine percent are African American, five percent are Hispanic, and three percent are multiracial; the remaining 83% are Caucasian. (See Figure 1.) We have four elementary schools, one middle school, and one high school made up of four smaller academies.

Our district has been a part of the Indiana Mathematics Initiative (IMI), a collaboration between Indiana University and nine school districts across the state. Select teachers in each district agreed to pilot a standards-based mathematics curriculum. The curriculum chosen by the participating school districts was one funded by the National Science Foundation known as *Everyday Mathematics*. In 2004, the curriculum was adopted by the entire district.

M S D Decatur Township

5275 Kentucky Ave
Indianapolis, IN 46221-9616
Phone: (317) 856-5265
Fax: (317) 856-2156
Enrollment 2007-08: 6131

Grades: KG-12
Type: Regular, Can Levy Taxes
Demographic Type: Suburban

[Map](#)



Graduates 2006-07: 288

2007 Graduation Rate 75.4%

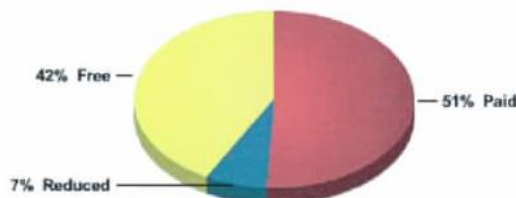
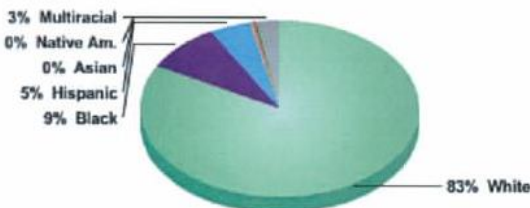
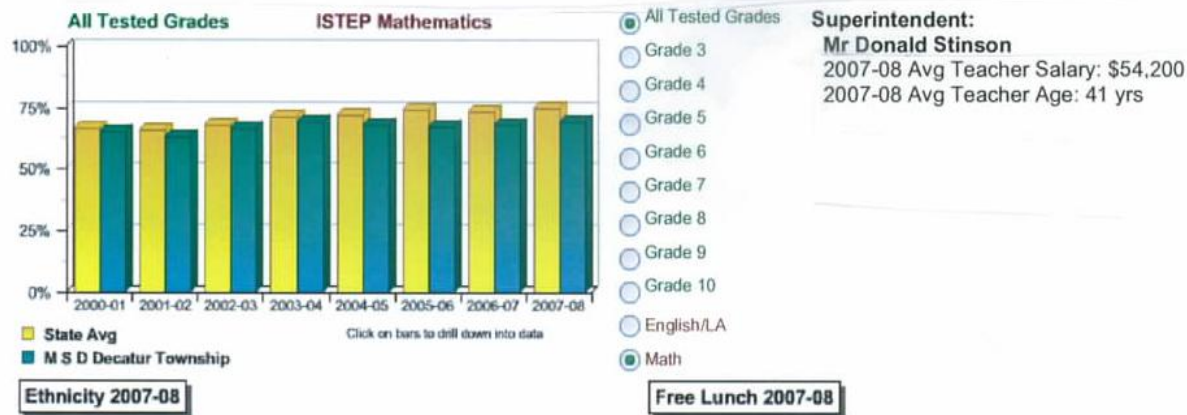


Figure 1. Demographic and ISTEP+ assessment data from the Indiana Department of Education website: <http://www.doe.state.in.us/istep/2007/welcome.html>.

Elementary Mathematics Coach Position

As part of the IMI project, the teachers who were piloting the standards-based elementary curriculum participated in several professional development opportunities. During their second year of participation in the project, these teachers also acted as mentors and led professional development sessions for teachers in their own school districts. These teachers became known as the IMI Select Cadre.

In the Decatur school district, the select cadre team was able to work with many teachers in their own schools, but they weren't able to be of assistance to all teachers in all the buildings because of their own classroom responsibilities. This led to an imbalance in the amount of support different teachers received with their lessons, concerns, and questions regarding their implementation of our standards-based curriculum. The select cadre team and the district administration felt that a full-time mathematics coach was needed to support teachers and help

with their implementation of the *Everyday Mathematics* program, since it is unique and very different from previous mathematics curricula adopted by our district.

The MSD of Decatur Township was fortunate enough to be able to create the math coach position with funding from IMI and from other grant monies. The district's goal for this position was to provide someone who could facilitate, coach, and mentor teachers, and help them rethink how they teach mathematics. I was given the opportunity to become the math coach, bringing with me leadership qualities gained through my participation in both IMI and the Teacher Leadership Academy. The Teacher Leadership Academy is a two-year professional development program for master teachers from several school districts in central Indiana, provided by the Central Indiana Educational Service Center. (Visit www.ciesc.k12.in.us for more information.) However, it was my initial work with IMI, as a select cadre member and a teacher leader in my district that opened the door for me to be selected for the Teacher Leadership Academy. The guidance and schooling I obtained through these two organizations have been invaluable in my coaching position.

Job Duties and Responsibilities: Year One

The first year of this new position, 2007–08, went at a fast and furious pace. I quickly discovered the daunting task of addressing the needs of teachers in several different buildings. I concentrated my work primarily on kindergarten through sixth grade and worked at the middle school level occasionally. The following are descriptions for some of my responsibilities during that year.

Working with Individual Teachers

Much of what my job entailed the first year was to work with individual teachers. This included visiting teachers by doing classroom “walkthroughs,” mentoring teachers by modeling lessons for them and observing them teach, and providing individual support for teachers as needed.

Classroom walkthroughs were a way to get my foot in the door with many teachers and to become acquainted with the activities in their classrooms. There were times when I stopped to visit teachers' classrooms for short periods of time. This wasn't threatening to most of the teachers, since I usually stayed no more than five minutes. While in classrooms, I would offer to make games or to do something for them, such as modeling a lesson or working with a student I noticed was struggling. This became a key factor in winning over teachers.

Modeling lessons has also been a positive point for teachers. They are able to watch me teach an entire lesson to their class. They are always very interested in my timing in a lesson, since pacing is an issue with most teachers. They often find they spend too much time on certain skills that are a part of the curriculum spiral but which aren't essential to be mastered by their students at that time. They are also curious to know how they can fit a lesson into the given time and keep the attention of the children. They feel enlightened when they learn, and validated when they realize, that they are doing a good job. As is the case anytime they observe a colleague, they obtain new ideas and strategies. We discuss what they observe, and the dialogue is helpful to them as they reflect on their practices. I also stress to teachers that while we use a standards-based curriculum, it is still their responsibility to ensure the students' mastery of grade-level state standards.

I am also available to observe teachers as they teach math and to provide support and feedback. I normally videotape the lesson so we can watch it together and discuss it. Some teachers have been surprised when the video showed both negative and positive features. For example, one teacher didn't realize the amount of “down time” many of her students had because

she had spent much of her time focusing on introductory concepts that a few children weren't understanding. She felt they needed to master everything instead of trusting that it would be presented repeatedly in our spiraling program.

Another teacher really struggled with the standards-based curriculum last year. She was very resistant to my help, and I could sense her reservations each time I came in her room. I approached her about having a meeting to discuss her instructional practices. She became very defensive and upset during this meeting. I offered her all the support I could give her, assuring her that she was a good teacher. I visited her classroom to teach lessons while she observed, worked with a few of her students who were struggling, and did classroom walkthroughs. We also met to discuss her progress and how she felt things were going. As a result, she has done a complete turnaround, and the difference between how she was teaching mathematics last year and this year is truly inspiring. She realizes now that she was making more work for herself by conducting her math class as she was, only to obtain poor results. She has blossomed over the last year, and the positive attitude shows in her face. She was a good teacher previously, but now she has rekindled her enthusiasm and passion for teaching.

I have stressed to teachers that I am a coach, my purpose is to help them, not to evaluate their teaching styles. Most teachers were wonderful in allowing me to visit their classrooms to watch them weave their craft. A few, however, were resistant, and others have been suspicious of my intentions. Generally, those are the teachers that I have found aren't using the program as it was meant to be used or need to have more mentoring than I am able to give. However, now that I have been in this position for a year, teachers are willing to accept my help, suggestions, and attend my training sessions.

Content Training Sessions

Along with working individually with teachers, I provided group sessions for professional development. The main foci of these content training sessions were to broaden the teachers' knowledge of mathematics and to encourage them to rethink the way they teach math using our standards-based curriculum. For example, I began one of my training workshops by sharing background information on *Everyday Mathematics* and allowing the teachers to see through a video what they should see in a classroom. This was followed by having the teachers look at what their pacing schedule should be and the Indiana Academic Standards that are aligned with each lesson. The teachers had time to go through their manuals tabbing the sections for pacing and marking them with the standards. One new teacher told me that he "got more from the two hours I spent there than from the entire new teacher training I took through the district."

Other sessions have begun with mathematical activities intended to nudge teachers out of their comfort zones, so that they might better understand what a struggling student experiences. I have also taught sessions on using literature in the math classroom, which allowed me to share with teachers the picture books I had been able to purchase and catalog for the district. I had several sessions on using a software program that was available for teachers to develop their own math assessments.

The trainings were very well received, and there has been only one drawback. I discovered that the teachers who attended the after-school workshops I offered were eager to learn about any initiative I suggested, but often the teachers who I felt most needed to be in these optional workshops did not attend. Therefore, I have begun meeting with teachers during their contract time in order to reach everyone. I have also found that, if I offered food, the teachers were much more willing to attend.

Family Math Nights

Over the years, we have had several Parent/Family Math Nights in our district. We have had different formats and have built a large following of families for these events. As with the teacher workshops, we have found that if we offer a light meal, served by the staff at each school, families are more likely to attend. Family Math Nights occur once in the fall and once in the spring at each elementary school. The IMI Select Cadre team plans the evenings together and then travels to the schools to facilitate the sessions. We have had “Make It Take It” sessions for parents, when they could put together materials for mathematics activities to keep at home or in the car. We have also had game nights, during which the children could play math games with their parents.

Since becoming the math coach, I have done all the logistical planning for these evenings, including making the arrangements for food and taking care of making most of the games and activities. However, the select cadre team has continued to help a great deal as well to make these nights a success.

The Family Math Nights we had last year had the best attendance. The first night in the fall was titled “Traveling in Math,” and the team and I had planned many “stations” for the families to travel to. The main focus for this particular evening was on problem solving, and the families earned tickets at each station for completing the activities, whether correct answers were obtained or not. The families participated in a variety of sessions, such as following directions to make a paper box, finding magic numbers using dice, and estimating the circumference of a pumpkin. We then gathered together about five minutes before the end of the evening to draw tickets for door prizes. The prizes were donated by companies in the area or by the staff of the building. We gave away gift cards, food such as frozen turkeys and hams. Every family also received a deck of playing cards, directions for adapting the cards to make an *Everyday Mathematics* deck, and instructions for playing several age-appropriate games with the cards. This was one of our most successful parent nights, and we used this theme at all of our elementary buildings.

The Family Math Night we had in the spring had the same format except we focused it on activities involving money for most schools. We also had a Pajama Puzzle Party — everyone wore pajamas and slippers, and all the math activities centered around puzzles such as tangrams, earning puzzle pieces by completing math problems, or figuring out toothpick puzzles.

Bringing Teachers Together

Bringing teachers together to improve our math instruction is a major focus of my position. I have facilitated meetings with teachers across the different buildings as well as across grade levels to work with articulation and transitions between the grades and schools. Our goal was to help students build upon their math knowledge with our spiral program and make a smooth transition to future grade levels. This communication has been invaluable in helping students achieve success in math.

Another responsibility of my position is to schedule the use of the district’s math substitute. We were fortunate to obtain the services of a certified teacher, who substitutes for a classroom teacher for one or two hours, enabling her or him to observe in another classroom. It was my job to create a schedule and set up the visitations, using a core group of teachers who welcomed visitors into their classrooms on a regular basis. The observing teacher was also required to submit an observation feedback form. This allowed me to see how the observation

went and alerted me to any follow up questions or concerns. It also let me know if there were any problems with the math substitute, since I couldn't always check on her in a classroom. It was a time-consuming task that was extremely rewarding to the numerous teachers who were able to participate. Teachers were able to visit classrooms at grade levels other than their own, which is another way to help them to see and understand the true spiraling nature of our curriculum.

I also made arrangements for groups of teachers to visit schools in other districts affiliated with IMI, to observe and gain knowledge about their implementation of the standards-based math curriculum. Two other teachers joined me in Hammond, Indiana, to observe kindergarten teachers using the new revision of the *Everyday Mathematics* curriculum. We were interested because our district had begun having all-day kindergarten classes, and the teachers felt that the version of the curriculum that we were using wasn't meeting their needs. We then reported back to our Early Childhood Center teachers with our findings. Another group, made up of special education teachers, our director of curriculum and instruction, our director of special services, and me, visited Vigo County schools to look at ways to differentiate our instruction and make modifications in instruction for our special needs students.

Videotaping Lessons — DVD

Another project I worked on during my first year as the math coach was to set about making a DVD that I could use with teachers and administrators. I recorded many classroom sessions to compile enough material. The easy part of this task was the taping, but it was a slow process to work on the editing and making of the DVD. Originally, I had planned to have a section for each grade level, but after rethinking the design, I decided to have short excerpts of the different components of our mathematics program. For example, if teachers needed to learn how to best use the Student Reference Book in their class, I would be able to go directly to that part to share it, and they could see a teacher using it with a class of students. I plan to use it to train teachers on the use of the *Everyday Mathematics* curriculum. However, another purpose of the DVD is to assist teachers with becoming more effective classroom facilitators and to motivate them to accept new ideas and strategies to benefit their students.

Current and Future Work: Year Two

As I write this, it is the beginning of my second year as the math coach in Decatur Township. This year will bring new opportunities, and I will have more secondary school involvement. I have already begun meeting with middle school teachers. We have had articulation and transition meetings as well as meetings to rework our math classes to benefit our students. We modified the classroom offerings for students to facilitate learning for not only our special needs students but also our high ability students. At both the middle and high school level, I have facilitated professional development sessions on motivating students in math, and we were able to include other subject areas in these trainings as well. Teachers were able to create activities to help students “hook” the information in their memories and be more active in math lessons. We also had sessions with software programs available to our middle and high school math teachers to support geometry and algebra concepts.

Another plan for the future will be to help facilitate preparations for our new math textbook adoption. This process has already begun in our district. A committee has been formed to look at the Indiana Academic Standards and create a list of Power Standards. These are the standards that we, as a district, feel are crucial for our students to master to prepare them for the future. Our committee has also worked extensively on mapping our math curriculum to ensure

these standards are our primary focus. This work is laying the foundation for our future math curriculum.

In addition, our teachers and I will be working on common math assessments and benchmarks for the primary grades to promote cohesiveness across our four elementary buildings.

Reflections

Becoming the math coach for our district was a ground-breaking move. It was a newly formed position last year, and although I was excited to have this duty, it was a daunting responsibility. Being a part of the IMI partnership has enabled me to grow in my math content, professionalism, and knowledge in how to help others learn and teach math. I learned about leadership and how to work with teachers in a non-threatening and non-judgmental manner. Not only have I learned more on how to work with others, but I have become much more comfortable in working with my peers and conducting professional development sessions.

The school district I work for has been a driving force in the success of the math coaching position. They have fostered the leadership role I have taken and given me the support to carry out my responsibilities. I have been encouraged by the administration to grow through readings and professional development. My confidence in fulfilling my responsibilities with this position has developed through the encouragement and nurturing of the administration.

I quickly learned with this position that the enjoyable tasks far outweighed the unpleasant. Working with teachers and helping them gain content knowledge about math has been very rewarding. All the more so, to see that as teachers gain confidence in teaching the standards-based curriculum, their students achieve greater success!

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