Teaching in the classroom IS dependent on the level of students’ abilities. The extent to which students’ abilities have an effect on a teacher’s pedagogy is dependent on the subject being taught. I believe that English and Mathematics are the two subjects where students must come to you with the appropriate level of background knowledge in order for you to be able to take them to where they need to be by the end of the school year. For example, there is no way I can teach a student how to solve equations that require 4 or 5 steps if he/she doesn’t even know what I mean when I say “Solve the equation for x” and/or cannot solve one step equations. Therefore, I definitely have a constructivist view. Students DO build new knowledge on previous knowledge.

Teachers and students should have different types and levels of classroom interactions. Teachers should stand at the door and greet students as they enter the room. Teachers have to maintain a professional relationship between themselves and the students. However, students also need teachers to take a personal interest in their home lives, their schools lives, their extracurricular activities, their hobbies, etc. Sometimes it is hard to find a way to balances those two totally different ends of the spectrum.

I love to use technology. I use a notebook computer attached to a projector for a lot of my instruction. Being able to find interesting applets, videos, and practice simulations on the internet to add to instruction keeps the students interested. This internet is also a wonderful place to find real world applications for topics. Students have to be able to see how the topics covered in class relate to their lives. However, there is some content that has to be taught and has to be grasped by students (because of state mandates) that really have no application to students’ lives unless they are going on to college to take higher math level classes. I have used manipulatives some (like Alge-Blocks). Manipulatives are good to use with your lower achieving students because it gives them a visual sense of more abstract topics. However, the practical use of manipulatives in the classroom is sometimes lacking. Things like classroom set up, time restraints, and student personalities in a classroom hinder the ability to use manipulatives at times. For example, for a 45 minute class, 5 to 10 minutes is bell-ringer time. Add in time to hand out the manipulatives and take them back up at the end of class, little time is left for actual instruction with them.

The Kentucky Department of Education has developed a couple of different sets of documents for us to follow: the Program of Studies and the Core Content. The Program of Studies is a list of what is legally required to be taught in all public schools in Kentucky. The statements in this document tend to be vague and I believe there are more topics listed in the program of studies. However, the core content document lists all of the topics/items that are tested on the state assessment. The statements in this document are less vague. I believe that both of these documents take into account the standards put out by the national council of teachers of mathematics. Sadly, instead of focusing on what is legally required, most schools only focus on the core content (tested) materials. Do I blame the schools? No. The state bases everything about school (including financially) on those test scores. Schools HAVE to concentrate on them in order to survive.

All students should be partially responsible for their own learning. The extent of this responsibility does depend on the class being taught. A college bound class should definitely have more independent learning taking place. This independent learning can be in-class discovery/research or outside homework. All students need to practice what is taught in their math class. Ideally, the amount of homework shouldn’t be different for a slower student versus an advanced student. The types of problems and application should be varied based on ability level. However, realistically, it is difficult to do that everyday and the amount of problems are adjusted for slower learning students many times. For exams, I typically do both types of adjustments (levels of problems and number of problems).

Parental involvement in a student’s academic career has a large impact on the classroom. If a student hasn’t had a lot of parent input on their learning and/or grades, then that student typically has less interest in school and less of a motivation to try his/her best. I’ve even noticed that if that same parent all of a sudden decides to have an interest in late middle school or early high school, then their sudden concern doesn’t have much
impact on the student. The student has already (most of the time) developed the passiveness. However, if a student has had (and continues to have) a lot of parent input, then that student is usually one who tries to excel in his/her studies. Depending on which students are in your classroom, your teaching (as well as your rules, policies, and consequences) does change. It has to.

I struggle with the role that the textbook plays in a classroom. Most literature you read or hear about says that a textbook driven classroom is a bad thing. The thinking here is that if students read a chapter, answer questions, and take a test then real learning doesn’t take place. I do agree with this thinking. However, I also agree that the use of a textbook is vital. Regardless of what we, as educators, think, parents and students have a different view. If you send work home with a student without a textbook for them and their parents to use, then parents get very upset. The textbook can give visual representation (in pictures and examples) as well as another way to explain ideas in words. These different ways of explaining/showing are something that students and parents both need. Now, do I think that the book should be followed page by page? Not necessarily. In science for example, a lot of topics can be taught in different orders and those topics can pop up in different places in different textbooks. In math, it is more important to tackle topics in order. Math is more of a stair-step subject. Mastery of each topic depends on the topic before it. For that reason, math has a little room for flexibility, but most math topics must come in a certain order.

I think that there must be time for all types of learning in the classroom. Individual work time and group work time are both important. Can both of them be done everyday? No. Can both of them be used in all situations? No. Can both of them be used to teach any topic? No. Are both of them essential? Yes. Knowing when and where to use each type of learning is a skill that comes with time and experience.

Classroom management and discipline issues are always at the forefront of teaching. Classroom management and discipline are not the same things. Classroom management includes rules and procedures for the proper running of the daily classroom. Discipline is what you do when those rules and policies are not followed. No matter what students are placed into a classroom, a teacher with good classroom management has fewer classroom interruptions and higher learning taking place. The rules and procedures put into place by that teacher, however, may vary depending on the types of individuals in the class.

Is there such a thing as “rural math education” or even “rural education” in general? That is a hard question. Most students who grow up in rural Kentucky have different mindsets when it comes to education and their futures than students who grow up in the city. Now, that difference doesn’t have anything to do with income. Rural and Urban areas both have families who are wealthy, families who are considered middle class, and families in the poverty levels. The differences in the mindsets come from students’ daily lives/responsibilities and the employment opportunities available in the area. We have some students who will go to college and other further education. However, because of family background, a lot of our students will go into fields like factory jobs, farming, construction, etc. These students are not going to need things like advanced algebra topics, etc. These students need to know more practical things about math procedures (sales tax, income tax, sales discounts, financing, etc). These students are not benefiting from learning about factoring equations or long synthetic division. But, when you think about it, there are students who grow up in urban areas who are in the same situation. Farming may not be in the picture, but because of different things, they are not going to be attending any kind of higher education and need to learn the same things I mentioned above. So, I guess my answer to the question is: No. There should not be a difference in rural versus urban education. There should, however, be a difference in math education depending on the students’ ideas and plans for the future. Unfortunately, because of state mandates and state testing procedures, all students have to be taught (and have to show proficiency in) those math topics that will really mean nothing to them. The government really contradicts itself when it comes to education. In one sentence, the powers that be say that we are supposed to vary and differentiate because all students are different and require different things to learn. Then, in the next
sentence, those same powers that be say that all students are required to take the same state test and are required to do the same types of math problems with the same scores (proficiency).