

# On Strategies of Effective Mathematics Education

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**Abstract—** (In this paper, we gave some strategies, which are need, for effective Mathematics education. There are a lot of ways to effective mathematics education. Learning and using student names, improves teaching of mathematics. Effective teaching and mega mentalize (will be called EÖMHT) is key for success both from the students and instructors in front of the black-board.

**Index Terms-** Education, Learning.

## I. INTRODUCTION

Effective teaching and mega mentalize (will be called EÖMHT) is key for success both from the students and instructors in front of the black-board. When students are engaged, it means they are motivated, they want to learn and share their knowledge.

## II. STRATEGIES

### Step 1:

The first step to create engagement in the mathematics classroom is to answer to every single student's questions in front of the blackboard. This is very important! When you answer to every student you show care for their learning. Students know you are paying attention and you are expecting a well created knowledge. This encourage them to think and analyze the current topics.

### Step 2:

The second step is to add relevant external resources to the discussion. Every week we have some specific materials from the textbook we cover. When we answer to our students, bring information from other sources. You can add articles, statistics, videos and textbooks from other authors, related to the weekly topics. You can bring current information from the news. For example, if you are teaching an international business course, and you are currently discussing trade, bring information about something that is currently happening. This will motivate students, and encourage their participation!

### Step 3:

The third step is very important, too. You need to encourage and promote critical thinking. You want to make questions to your students, you want to challenge their views. This will help increase their analyzing skills, which will encourage

them to think beyond what everyone says about the topic. Doing questions about the current topic, the information the students are posting and using the "what if", will definitely warm up the discussion board and establish a positive learning environment.

### Step 4:

Establishing a relationship between students' skills is the fourth step. Instead of writing to your students "Good write", "Nice work" which doesn't encourage a discussion, tell your student about their peers imported for EÖMHT. For example, you can say: "If we look at our notes in the blackboard, we can see he disagrees with your point of view, why do you think this is?" or you can also say: "When looking at your lecture, I can see Ali and you are mentioning the same aspects. Why do you think this is so important?" Making relations between students' posts, make students read their peers. This will help increase participation. Once a student reads another student's skill, the reaction will be to agree or disagree and in order to do that, they will search for more information. The outcome will be, students' engagement with the discussion and enhancement of the learning environment.

### Step 5:

The fifth step includes establishing a connection between past and current topics. Through the term, you want to help students understand why each topic relates to the next. Helping students remember past topics is very important for a successful term and for their future careers. By mentioning what we discussed during the past week, you are helping students stay on top of the learning. This is a way of making sure they are understanding the course. Another result you will see, when connecting past and current topics, is, that, students will start doing the same thing, which means increase engagement in the classroom!

### Step 6:

Using diverse teaching methods is our sixth step. This means you should include articles, power point presentations, and videos, among others. Using info-graphics is a fantastic way of helping students understand the information. Using statistics and charts will help students visualize the material and capture the essence of the topic better. Some students prefer visual learning, include some videos! Do not limit yourself, as an instructor, to simply write about a topic. Innovate! Seek different and fun ways for students to learn. This will make students eager to read or see what you are posting and of course, you are creating engagement.

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**Step 7:**

The seventh step is being conversational. We are not machines. This means you can write your posts like if you were talking to students. The mathematics learning environment can feel “cold” sometimes for students. Remember, they are sitting down, in front of mathematics classroom, reading and writing alone. There are plenty of other students to talk to and you, as their instructor, are not in front of computer with them. Using a conversational tone, where you make the student feel good and transfer approachability will make them feel engaged with the course. Being conversational will encourage students’ participation while giving them the feel of closeness to the learning environment.

**Step 8:**

Be respectful is the eight step. Use proper language. Avoid words or terms that can be confusing. Remember, the online learning environment is diverse. We are all from different cultures and we might see and understand things differently. Never correct in public. This will make students stop answering to your questions and participating.

**Step 9:**

The ninth step is to be personal. When you communicate, with a student, use their name. This shows respect, care and that you are paying attention to who you are writing to. Think about when you receive a message and the writer is not directly acknowledging the message is for you. How do you feel? Do you feel the writer cares about you? The same thing happens with students! If you simply write a message and you do not make proper reference to who your reader will be, then, the student might ignore your comment or questions. You are not letting him/ her know you are writing to them. You are being distant. Let your students know you care! Engage them in the conversation directly!

**Step 10:**

The last step is encouraging and celebrating early posting. This tell the student you know about their efforts and compromise with their education. Thank them for taking the initiative of your notes early! Let them know their actions are helping the discussion! When students are recognized by their efforts they become more engage in their learning. If a student helps increase participation by bringing a different perspectives or a new outside resource, go ahead and praise them! Let them know you like what they did and that it was important for the whole class. Creating engagement in the mathematics classroom can sometimes be challenging. Not all courses are the same and no single student is the same. When your new course start, get to know your students. Learn about them and how they communicate. This will help you in creating an engaging environment. Remember, to create engagement, you have to be engage yourself. You need to be compromised with your students’ success.

**Step 11:**

There are so two ways a simple and personal thing like a person’s name can lead to problems.

The first student quoted above felt more like a number than a person because she felt none of her professors bothered to learn her name.

The second is an international student who was used to mispronunciations and questioning looks and appreciated a professor’s extra effort. Mishandling names can lead to awkward moments. For many students, name problems come on the first day of class. Here’s a tweet with the hashtag #GrowingUpWithMyName. “Knowing the pause on roll call in school was my name. I would just start saying ‘Here’ before they even tried.” Everyone knows what it is like to have their name mispronounced sometimes. But imagine what it is like to have it happen almost every time—and with an audience of new peers. While some students might offer a name that they feel will be easier to remember or say, it is not OK for instructors to rename students to make it easier to call roll. There are those times when the professor calls a student by another student’s name. Somehow, the professor has made a connection. Maybe these are the only students of their race or ethnicity in the class. It seems like a little thing, but it carries big implications and it can make others in class feel uncomfortable. One American college student reported feeling uncomfortable for Asian students when professors stumble over their names—and then turns the mistakes into jokes or ditties. It can humiliate the student and, if they are new to U.S. culture, it can be bewildering. International names do not have universal spellings or pronunciations across cultures and societies. The student who appreciated a professor’s patience in learning the pronunciation of his name is French African. Where he is from, his name has a different intonation and spelling. The student felt very good about his class after this encounter because he perceived that his professor took the time to be personal with her students. One international student said that she can always sense when professors are about to make a funny attempt at pronouncing her name. “They never ask first but they want to act like they know already, which doesn’t usually always end well.” Because names are an important aspect of our identity, acknowledgment of a person’s name and its correct pronunciation can signal acceptance of that person into a new culture. Since acknowledgment leads to acceptance, many international students adopt English names to better assimilate. By doing so, they avoid the potential mispronunciation of their names and feel like they fit in. Fitting in can enhance learning. There are almost as many reasons why it is hard to get names right as there are students in a class. Professors have scores or hundreds of students in a term, and new ones every term. Some professors have more than a thousand students in one term. There are a lot of names to learn. But learning and using student names improves teaching. Daniel F. Chambliss, Eugene M. Tobin Distinguished Professor of Sociology at Hamilton College, wrote “the best thing I do to improve students’ work in my courses is ... I will learn and use their names. It’s easy, and it works. Using those names in class is uniquely powerful.” Here are some strategies: Read a class roster out loud before meeting the class. Note potential difficulties. If the class list

has photos, try to match them with the names. Print out the pictures and bring them to class. Take attendance on the first day in a consistent way with each student, even the ones with seemingly easy names. Use a standard question such as, "What do you like to be called?" One professor sends out a survey before classes begin and asks students for their name preferences. One student seemed delighted when, at the first roll call, she was called by her preferred name, which was not the name on the attendance list. Write phonetic spellings down when you need to. When you get to a name that might be difficult, ask the student to say it, using the part of the name you feel more comfortable with. Don't joke. Don't rush. Spend a little extra time if you must to understand, but don't make a big deal. If you need to ask the student for more help, do it after class. If you make a mistake, apologize but don't make an excuse.

Many international students adopt American names to fit in. But at the same time, there are also instances where foreign students have American names. Whatever the case may be, University of Wisconsin-Eau Claire professor Phil Huelsbeck in the department of International Education, advises that professors be actively aware of these differences. He wrote, "Without an audience, ask (repeatedly if necessary) how to pronounce the international student's name and make a note of the proper pronunciation. Some international students take on an 'American name' but it is often appreciated if the instructor takes the time to learn the student's native name, as well." It can also teach classmates something. Marian Kisch, a freelance writer in Maryland, wrote in the November/December, 2014 issue of the International Educator: "Even a short conversation after class about the student's home country can help the student feel more comfortable and can build rapport. Do your best to learn how to pronounce students' names, even if it takes a few attempts. Dustin Carnahan, who teaches in the Michigan State University College of Communication Arts and Sciences, suggested customized rosters, which can accommodate extra columns for chosen names and pronunciations. Students should be able to tell the professor what they want to be called, "no questions asked," he said. In "Learning Student Names," posted on the National Teaching and Learning Forum, Joan Middendorf and Elizabeth Osborn at Indiana University wrote: "A professor who does not know his or her students' names may be perceived as remote and unapproachable. ... In large classes, the task of learning student names can seem daunting, but even if the professor learns the names of only a portion of the class, a caring, inclusive atmosphere will be established." They gathered more than 25 strategies for learning and retaining students' names. They included name tags, tent cards, flashcard drills for the instructor, association and student introductions. There is probably something for most circumstances. At the end of the day, it is always better to call students by the names they like. As Czech-born writer Milan Kundera wrote in his novel "Immortality," "We don't know when our name came into being or how some distant ancestor acquired it. We don't understand our name at all, we don't know its history and yet we bear it with exalted fidelity, we merge with it, we like it, we are ridiculously proud of it, as if we had thought it up ourselves in a moment of brilliant inspiration."

**Question:** Do you use other methods to create engagement in the mathematics classroom?.

In forthcoming paper, we will find out other methods to create engagement in the mathematics classroom.

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