



Finding Teaching Opportunities Using Realistic Situations to Teach Math Skills with Adult ELLs

By Naseem Kapdi

Baking and cooking lend themselves to providing rich opportunities to enhance learning. It allows me to dig deep and think creatively and outside the box when planning my English as a second language (ESL) lessons. As the program instructor at a not-for-profit bakery that teaches women how to make bread and find jobs in the culinary industry, my instruction is guided by and must adapt to this environment while keeping in mind the specific needs of students also known as baker-trainees. Therefore, I strive for incorporating hands-on learning as much as possible, which allows for students to actively participate in and improve both their English and bread production skills.

Math, the teacher, and the language learner

Math causes anxiety in many students, myself included, irrespective of whether they are a native speaker or not. Anxiety increases stress and the affective filter. If it is high, language acquisition becomes much more difficult (Robertson, 2011; Vasquez, , 2017). Keeping in mind my own math phobias and that of my students as well as the fact that they come from varying educational and language backgrounds and levels, I face many challenges in how I can present the content across all spectrums and address these fears. By designing lessons that do so, both my affective filter as the teacher and those of my students are lowered so that I can teach the content and they can absorb it. I find that by finding creative ways to teach the content and decreasing the affective filter, the baker-trainees respond positively and, believe it or not, take risks which promote learning (Du, 2009). All of this increases confidence within them, in and out of the classroom, and I can see their math and language growth, both informally, through observations, and formally, through tests and other assessments.



As part of my work, I create the curriculum and lessons that are taught to the baker-trainees. Last year, I had to flesh out a math curriculum for the program. Though, it was mostly basic math with some bakery-specific math thrown in, I was a little panicked about teaching something I had feared for so long (Robertson, 2010 for math strategies). I decided to embrace it and treated math as a language. By viewing it in this way, I could overcome the first hurdle: creating lesson plans by breaking down the vocabulary and concepts into smaller chunks to build on. This, along with a dash of patience, spoonfuls of visuals (anchor charts, etc.), and hands-on activities allowed me to embrace math with a small hug and present it in a way my

students could begin to understand.

Rulers, Tea, and Downton Abbey

Born from this, was a lesson plan which incorporated my love of tea and *Downton Abbey*, a British period show centered on a wealthy family and their staff. During this time, formalities were maintained to the highest degree through strict rules and traditions especially for the upper class, where formality was a sign of social status. For example, when setting the table, a butler's stick was used to ensure the proper placement of plates and other utensils as well as the space between each item. The stick was a measurement tool about twenty-four (24) inches long.

I translated the idea of a butler's stick to help my students use a ruler correctly. In addition, I was able to include elements of grammar, via prepositions of place, as well as listening skills and following directions. Basically, students were each given items that they would place in a particular place (using direction vocabulary with prepositions of place) and a specific distance (from other objects or the table as reference) using a ruler. The use of realia, the tea set, further enhanced the lesson by providing a low-stress environment to reduce students' frustrations with math (Berwald, 1987).



I built up to this activity with each previous lesson. Setting the table for tea was a culmination of everything they learned thus far presented in a fun, non-threatening way. As a treat, I made scones for them to have the full experience of attending an afternoon tea. To close out the activity, we discussed what we did and related it to other math lessons. Light bulbs of comprehension dawned on baker-trainees as they were able to make connections to other lessons

and feel empowered that they were able to tackle math and come out on top.

Embracing math with a small hug

My goal was to make learning math as fun as possible and I think I accomplished that. Though I have a new appreciation of it, I still have plenty of math-phobia to work through. However, by exploring topics outside the box of traditional math instruction, I was able to lower the affective filter for my students and myself. Empowered with a new understanding of math, they were able to increase their knowledge and apply it to their work in production; while I was able to learn something more about math that I struggled with understanding before.

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