**Article:** Becoming More Mathematical: New Directions for Describing and Designing for Positive Dispositions Toward Mathematics

**Author:** Jennifer Langer-Osuna

What are the 3 most important takeaways?

* Osuna states that being proficient in math depends at least partially on how students’ come to see themselves as math learners, what they think it means to do math, and their patterns of engagement with mathematics
* She argues that becoming a strong mathematical thinker is as much a process of acquiring “habits and dispositions of interpretation and sense-making”
* Osuna observed 90 minute conversations between students in a small group working together on a worksheet. Students positioned with intellectual authority participate more frequently in small groups, are more able to gain access to and hold the conversational floor and decide what is correct, tend to be seen as contributing more meritorious ideas, and become more influential than students perceived as having less intellectual authority.

Which part of the article is the most confusing/hazy?

I wonder about the particular task the students were supposed to do and the method of the case study.

How does this relate to the field of statistics?

This relates to the field of statistics because it seems that those with intellectual authority whether it being in an educational or work setting often get to contribute their ideas more than others.

How does this relate to data?

The paper relates to data because Osuna conducted several of these case studies and was able to interpret the interactions among the students. Although it was mostly qualitative information.

Which references seem promising?

Nasir, Na'ilah Suad. (2002). Identity, goals and cultural practices

**Author:** Indigo Desmonde

What are the 3 most important takeaways?

* Indigo touches on the idea that some students seem unable to learn mathematics. She explores certain student intellectual abilities; abilities that might prevent them from learning mathematics.
* She argues that social and affective processes may be responsible for the collective failure of learning mathematics. She does this by focusing on the minute-to-minute interactions between a student and a teacher.
* She states this really interesting idea that some students think of mathematics in a strict and rigid way while other students objectify mathematics . Objectification is talking about mathematical objects as entities in the world, for instance, talking about “the number four” as existing on its own. She states that some students are exposed to this rigid way of learning mathematics.

Which part of the article is the most confusing/hazy?

* Indigo mentions a case study and focuses on a student who identifies themselves as good in mathematics versus someone who identifies themselves as weak in mathematics. My question would be how does self confidence play a role in someone’s ability to learn mathematics?

How does this relate to the field of statistics?

* This relates to the field of statistics because often times people who do well in statistics have a high sense of self confidence in mathematics. In addition it requres people to look at recurring themes and realize a big picture rather than memorize formulas.

How does this relate to data?

* This article can relate to data because data collection and analysis depends on marking significant events and themes. Although it may seem rigid and repetitive it requires objectification.

Which references seem promising?

Sfard, A., & Prusak, A. (2005).Telling identities: In search of an analytic tool for investigating learning as a culturally shaped activity. Educational Researcher, 34(4), 14-22.