

Teacher Nonverbal Immediacy and Its Affects on Student Mathematics

Anxiety

Leslie Dalrymple

Nonverbal Communication

Nonverbal communication can be described as the parts of communication that are not done verbally. Nonverbal communication breaks up into 8 subcategories:

- Touch (Haptics)
- Voacalics
- Space (Proxemics)
- Time
- Smell (Olfactics)
- Body movement (Kinesics)
- Environment & Artifacts
- Physical appearance

Nonverbal Immediacy

Nonverbal Immediacy can loosely be defined as the nonverbal communication behaviors that reduce the gap between two people either physically or psychologically. It creates closeness.

Examples of NV Immediacy

- Eye contact
- Uses of gestures
- Relaxed body position
- Smiling
- Vocally expressive
- Movement

...can you think of any?

Mathematics Anxiety

Mathematics anxiety is defined as an overall fear and helplessness associated with tasks that involve math or the manipulation of numbers.

Few Quick Definitions

- Metacognition
- Social support
- Credibility: competence, perceived caring, trustworthiness
- Affect
- Recall, and learning loss are defined as students' cognitive learning, and students' perceptions of what was learned respectively.

Why does this matter?

Most math students have math anxiety

Teachers can affect students' perceptions

Difference in teaching style between someone with an education background compared to a contextual background

75% of all occupations require at least a knowledge of basic math

Studies Show...

Past math related experiences relate to math anxiety

- Past teacher insensitivity, careless and hostile attitudes, and a lack of proper pedagogy are some sources of anxiety
- Teachers with math anxiety tend to pass it to their students, and most elementary school teachers have it.
- Negative past experiences tend to lower confidence and motivation.
- It has been found that teachers are a major factor of math anxiety.

Studies Show...

ways to combat anxiety
is through social support
and cognitive learning

- Teachers can affect a student's sense of social support and this positively affects students' attitudes toward school, test scores and performance
- The more a student learns the less anxious he or she feels
- Teachers with high immediacy create better learning environments
- Students are more motivated when they have feelings of support which leads to greater cognitive learning

Studies also show...

Metacognition (thinking about thinking) is related to math anxiety

- Metacognition allows one to plan, evaluate, monitor, influences learning and performance, knowing how to complete task. All things needed when completing a mathematical task.
- Part of metacognition training is to manage confidence
- Teacher immediacy is a good way to get students to open up and discuss their problems and level of confidence with a given task. Students are more willing to talk with someone who is more immediate than someone who seems closed off and cold.

More Information from Studies...

Teacher immediacy and
credibility matter

- It was found that students are more motivated to learn, and gain more affective learning from teachers who exhibit high immediacy and high credibility.
- Positive immediacy has shown to increase student information seeking habits, cognitive affect, and lowered student apprehension.
- However, students may find a class with a more immediate teacher interesting, but this does not mean that they will learn.

Teacher Immediacy and Credibility Matter Con't

- If a student does not feel his or her teacher is trustworthy, then his or her anxiety raises
- Credible and immediate teachers were positively and significantly related to student motivation.

Studies have shown...

Immediacy affects learning outcomes, specifically learning outcomes dealing with recall, learning loss, and affective learning.

one study found that students who watched videos in which the teacher displayed high nonverbal immediacy cues learned more, learned as much from the video as they expected, and liked the material better.

Conjectures and Inferences

If a student anticipates the class to be hard and frightening then the low immediate professor only adds to the stress of the class. Students who have low motivation to study or ask questions during class will not have high affective learning or gain any motivation with a low immediate teacher. Therefore the student's math anxiety will still be present and never go away.

If students' like the class and get rewarded for their efforts and not scolded, then students' motivation to learn will raise and anxiety lowered.

Teachers with high nonverbal immediacy can aid their students that have math anxiety because if a student can better recall information and have a greater affect for the course then anxiety should lower.

References

- Erden, M., & Akgul, S. (2010). Predictive power of mathematics anxiety and predictive social support from teacher for primary students' mathematics achievement. *Journal of Theory and Practice Education, 6*, 3-16.
- Legg, A. M., & Locker, L., Jr. (2009). Math performance and its relationship to math anxiety and metacognition. *North American Journal of Psychology, 11*, 471-486.
- Bekdemir, M., (2010). The pre-service teachers' mathematics anxiety related to depth of negative experience in mathematics classroom while they were students. *Educational Studies in Mathematics, 75*, 311- 328.
- Pogue, L. L., & Ah Yun, K. (2006). The effect of teacher nonverbal immediacy and credibility on student motivation and affective learning. *Communication Education, 55*, 331- 344.
- Witt, P. L., & Wheelless, L. R. (2001). An experimental study of teachers' verbal and nonverbal immediacy and students' affective and cognitive learning. *Communication Education, 50*, 327-342.