

Helping Students Overcome “Math-phobia”

Teresa Fisher, Sanville Elementary School, VA, has been using LNS to help her students overcome a common problem: fear or hatred of maths.

Outline of the Problem

In surveys of elementary and junior high school students regarding most disliked subjects, Math invariably comes out top. Aside from the survey numbers, this can also be seen in students' attitude to classroom and homework tasks, interaction with the teacher, and student progress reports/grades. Many students cram to pass exams without even understanding **why math is important or necessary**, and Math still has the highest failure rate of any subject at school-leaving level.



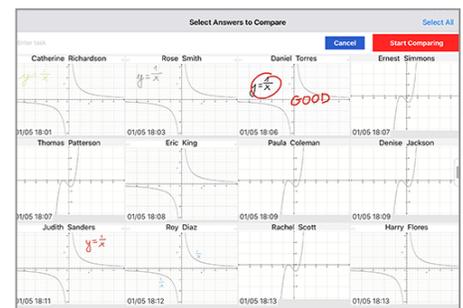
And yet, many small children are happy to profess their **love of numbers**, counting from one to hundred or singing songs involving numbers in front of others without fear of shame or embarrassment. Why does math seem to inspire fear and intimidation in so many older learners and adults? What happens to change these happy-go-lucky kids into grumbling, reluctant teenagers who roll their eyes and complain “I hate math”, “I’m not good at math” or “I don’t need to know math”?

Like language learning, math is **sequential or cumulative in nature**. This means that if students have not mastered the previous material they will have trouble progressing to the next step as it typically requires knowledge of the preceding syllabus. Then there is the ingrained belief that math is only about getting to the one “right answer”. Another common problem is the inability to connect seemingly abstract math concepts to the real world.

And yet, **math is present all around us every day!** Not only is it vital in many other school subjects such as science, sociology, and technology, but it is also connected directly or indirectly to many careers such as engineering, programming, and accounting. With this in mind, it's important for teachers to try and **help students to beat their “math-phobia” and unlock their true potential**. How can they do this?

Outline of the Problem

Teachers can help students to confront and overcome their “math-phobia” in a number of ways. For example, by using cooperative math problem-solving activities, increasing allotted time for reviewing previous material, actively **connecting math concepts to real life**, and providing a sufficient supply of specialized materials such as calculators, graph paper and scrap paper for working out. Another powerful method is to **leverage the benefits** of recent technological advances such as tablet-based apps for classroom usage.

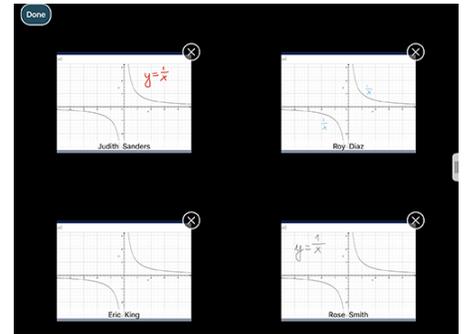


LNS can be used to set math tasks, collect answers instantly and privately, and compare multiple students' answer on a split screen while connected to a smartboard, projector or Apple TV. Teachers can also share the contents of their tablet screen with students in real time even without a projector, etc. when explaining the answer. It's also possible to conceal students' names when showing and comparing answers, so **no one will feel embarrassed or ashamed** even if they answered wrongly or couldn't answer at all.

Teresa Fisher has been using LNS for practice math problems in her class of 35 students. Teresa likes to set students a challenge using their problem-solving ability and natural curiosity, not to mention competitiveness:

"I like to put up two different answers for the students to compare and determine which is right and which is incorrect."

Students often find math theory and terminology hard to grasp, but through **"learning by doing"** they can steadily gain proficiency in basic math which will benefit them throughout their student and working life. students.



Benefits for All

- **Speed up the learning process:** Traditionally, keeping a close eye on students' math progress was a time-consuming process involving manually collecting their workbooks and individually checking each student's working out. LNS speeds up the process of setting, collecting, marking and returning work. Teachers can lighten the load by asking students to take a photo of their notes or to send their answer back using LNS's multimedia Cards or direct teacher Tunnel.
- **Know your students' needs:** In large classes it's often hard to determine and attend to the needs of individual students. For example, it's not possible to check if students actually solved the task you gave them or just waited until the correct answer was revealed. With LNS, students are "forced" to have a go, since it's immediately clear on the teacher's tablet who's submitted an answer. Regular practice and tailor-made private support will gradually **reduce the "fear barrier"**.
- **Analyse progress to motivate students:** Past student work, including answers and feedback received from the teacher, is all stored securely within LNS, automatically generating a "math portfolio". This can be referred back to by both students and teachers to review previous material and analyse progress, providing evidence for evaluation for teachers and **increasing motivation for students**.

