

Creating supportive inspiring atmosphere in college mathematics classroom

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Finding strategies and approaches to overcome students' anxiety, prejudices, and misconceptions of mathematics constitutes one of the most critical challenges in collegiate mathematics education. It is obvious that improvement of students' attitudes toward the subject and therefore success in learning, as a long-term process, directly and deeply depend on their emotional motivation in mathematics classes and also beyond, while preparing assignments, reviewing work accomplished, or exploring new material.

Forming warm working relationships between teacher and student on the one hand, and creating a positive encouraging atmosphere of friendship and mutual support among students on the other hand, are two major components that bring a human dimension into the process of discovery of mathematics. It makes the class environment less threatening, which lets the minds unfold and function.

Teachers' success in making a math class feel like one big entity with strong supportive ties among caring members has far-reaching positive consequences embracing the whole process of discovery of the subject. There is no simple advice, nor a straightforward solution on how to achieve this harmony and unity. This constructive progressive effort is a long-term mission. It is teaching strategy, the teacher's method, and even more than that: it is an approach and a habit of a particular professor to deal with people in his or her life in general.

Professors are accountable for giving their students in math classes a real chance to feel, think, and act as free people, a chance to get a double benefit, as individuals and as learners. The great responsibility here falls on professors teaching freshmen: it's up to them whether the bad original feeling many students have stays or disappears.

In my classes of freshmen (up to 30 students), instead of lecturing preference is given to a lecture-discussion style of free dialog. This method allows students to discover the subject in the most natural and efficient way, and also lets them appreciate and follow the inner logic of development of historical and contemporary mathematics. This style of dialog is the working practice that keeps students "alive," fascinated, and alert; it encourages them to ask questions, and finally resolves all concerns.

The questions "why?" and "what if?" are given the highest priority, but the question "how?" also has been always welcomed and appreciated.

Students' contribution into discussions (on subject matter or on related topics) and their responsibility of choice are stimulating and inspiring. They learn how to make intelligent decisions, and how to progress to the higher steps in their intellectual journey.

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