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Stephen Max Lancaster* (slancaster@fullerton.edu), Dept of Mathematics, CSU Fullerton, P.O. Box 6850, Fullerton, CA 92834-6850. *The potential of Cognitively Guided Instruction facets in the preparation of under-prepared and anxious students in 7th to 12th grades.* Preliminary report.

Can we borrow from a teaching model designed for K-6 students to facilitate mathematics learning for under-prepared and anxious students in 7th to 12th grades?

Almost twenty years ago, Fennema, Carpenter, and Franke began building the constructs that would develop into what is now referred to as Cognitively Guided Instruction (CGI). The basis of this teaching model is that students learn best in discovery learning and open-ended problem solving environments. The CGI model helps K-6 teachers to facilitate learning by developing strategies for helping students learn in the prescribed environments.

Unique to CGI is the blending of (1) teacher understanding of how age-specific students learn and think about mathematics and (2) teacher understanding of how to observe individual students to recognize special mathematics learning idiosyncrasies. The goal is to develop teacher understanding of individual student math thinking and learning styles to facilitate better mathematical understanding from the students.

Could a similar teacher development system be used with 7-12 grade teachers to improve the mathematics learning of under-prepared and anxious students?

Potential benefits and concerns will be presented with an open-ended discussion at the end. (Received September 17, 2007)