

## Creating a Discussion-Friendly Classroom and an e-Learning Environment through the Employment of Interactive Digital Learning Database

Project Number: 6000469

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**Grant Type: TSG** 

Abstract:

This project proposes to create an interactive digital learning database for engineering students. The interaction between instructor and students in a traditional engineering education classroom is quite limited. The students gradually become machine-like entities which only wait for the input from instructor and seldom think initiatively. This type of one-way teaching and learning will suppress the creativity of the students. To create a discussion-friendly environment, an interactive digital learning database that addresses the conceptual problems and the realistic engineering issues will be introduced. The employment of the database in the classroom will encourage the students to think, to question, and to discuss. The experience of teaching and learning from peer fellows will provide the students with the opportunity to reflect on the deficiencies of their own studies. This in turn will stimulate independent thinking and hard-working, which are two of the vital components leading toward innovation and invention.