

## **145f Improving Performance of Student Teams through Exploring Learning Preferences**

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Student awareness and understanding of their learning own skills, performance, preferences, and barriers is referred to as metacognition. This paper describes efforts to instill metacognition in engineering students at Rowan University, through writing and team-building exercises. This study examines teams of students doing open-ended research and design projects through the Junior/Senior Engineering Clinic. The Learning Combination Inventory (LCI) is a survey instrument developed by Johnston and Dainton. The theoretical basis for the LCI is the Interactive Learning Model, which posits that learning processes occur through four distinct learning patterns: sequential, precise, technical, and confluent. The LCI was used to profile the learning style of each student in the Rowan Chemical Engineering department. During the fall 2003 semester, teams of students reviewed their LCI profiles with faculty, wrote team charters and used biweekly written status reports to reflect on their progress throughout the semester. These activities were intended to further each student's awareness of his/her own abilities, heighten awareness of the variety of individuals and foster improved inter-personal and teaming skills. These activities were well received but there was no definitive test of whether they actually improved student performance. In the 2004/05 academic year, teams were divided into four groups: some went through the LCI analyses, some who did the writing exercises, some did both and some did neither. Surveys are being used to assess the attitude of students from all four groups towards their teams, and rubrics will be applied to their final project reports to evaluate the quality of the work produced by each team. This paper will present the results of this control study.