

## Changing the Game: Activity Structures for Reforming Education

Steven McGee  
Karen C. Fuson  
Stephen T. Smith  
Bruce Howard  
Namsoo Hong  
Joseph L. Polman

### Abstract

It is often said that students who perform well in school are those that understand the rules of the game. In other words, effective participation in classrooms is as much a function of cultural "competence for interaction" as is content-based knowledge (Doyle, 1979; Mehan, 1980). In general, students need only become competent at a small number of activity structures that are repeated across subject areas and across grade levels. For example, the standard recitation is a predominant activity structure. It has been characterized as following the sequence "Teacher Question-Student Answer-Teacher Evaluation" (Lemke, 1990), or the more general sequence "Initiation by teacher-Reply by student-Evaluation by teacher" (I-R-E) (Mehan, 1979). Students must attend to procedural knowledge before conceptual knowledge can develop (Bruning, Schraw, and Ronning, 1995). Through frequent exposure to this activity structure across classroom contexts, students come to understand the nature of performance that teachers expect. Through practice, participation becomes routinized and students need not spend much cognitive energy trying to understand the procedures of participation.

Many of the current reform efforts in education are not supported by present activity structures. For example, the National Science Education Standards suggests that students should be asking and investigating their own questions. In order to successfully meet these standards, it would be necessary for teachers to use an alternative to the I-R-E activity structure. However, whatever alternative activity structure that is designed must be learned anew by incoming students (Wasley, 1994). The participants of this symposium believe that education reform projects would benefit from the development of related reform-based activity structures that are useful in different subjects and across different grades. Students could then learn new activity structures in different classes and carry this knowledge across classes (in middle school and high school) or across periods (in the elementary school). Communication among researchers involved in designing reform efforts could potentially initiate the formation of activity structures that might generalize across various disciplines, thus lessening the task of reform for teachers and students. The objective of this symposium is to take a first step in this direction by presenting alternative activity structures and how they have been applied across different settings.