Many instructors view the notion of collaborative learning as a valuable strategy intended to promote learning through multiple forms of communication and student-centered engagement. Yet pitfalls of groupwork, which include students dominating discussion, students feeling isolated, and tasks failing to elicit the participation of each group member, often prevent students and instructors from fully benefiting from activities designed to elicit collaboration. This paper describes pedagogical approaches that draw from principles of Complex Instruction (CI) (Cohen, 1994) implemented in developmental mathematics and college level liberal arts mathematics courses at a tribal college institution focused on fine arts. The author addresses how principles of CI not only address common pitfalls of groupwork, but are also designed to raise levels of engagement and expectations. A summary of these implementations include a reflection of both the effectiveness and challenges in practice. (Received September 23, 2015)