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Group Work: Collaborative, Cooperative, or Problem- Based?

By Maryellen Weimer, Ph.D.

Recent interest in using group work to promote learning and develop important interpersonal skills began in the late ’80s, and since then various types of group work have been promoted, researched, and implemented. Among the most widely used and best known “brands” are collaborative learning, cooperative learning, and problem-based learning. An outstanding article in a recent issue of the Journal on Excellence in College Teaching devoted to exploring group work looks in detail at these three approaches.

Despite widespread familiarity with the terms, collaborative, cooperative, and problem-based learning have been consistently muddled, mixed up, and used imprecisely to describe what students are doing in small groups. This inaccurate use of the terms has confounded practitioners’ understanding of these forms of group work and the relationship between them.

Added to this definitional confusion is the fact that each of these forms of group work has had loyal advocates who’ve trumpeted one of the three over the other two. As a result, those who use cooperative learning or problem-based learning know little about collaborative learning. And those devoted to the collaborative approach don’t use the other two. Few with an affinity for one of these three have much familiarity with the other two, and this exclusivity is one of the motivations for this article. Authors Neil Davidson and Claire Major wonder whether it’s time for those using these three types of group work to start learning from each other. Their aim is not to be prescriptive, but descriptive. “What makes this article unique is its invitation to practitioners to cross traditional boundaries, to consider similarities and differences of these approaches, and to begin productive conversations that can advance the field of small-group learning.” (p. 11).

These three approaches to group work do share certain features. Each starts with a common task or learning activity that can be completed by students working together in a group. Students talk (face-to-face or online) to each other about the task or activity they’ve been assigned to complete in each approach. They work together cooperatively. In each of these group structures, students are individually accountable for what they learn and what they contribute to the group’s learning goal.

But each of these forms of group work has distinct features not shared by the others, and these differences are explored in lengthy detail in this article. Here’s a nutshell summary of some of features that make each unique. “Cooperative learning is more structured and employs more active teacher

Collaborative learning groups are mostly self-managed. Problem-based learning groups tend to be larger than the other two.

The use of these three forms of group work has followed disciplinary lines. Collaborative learning has been mostly used in the humanities and some in the social sciences but rarely in the sciences or professional programs. Cooperative learning has been mostly used in the sciences, math, engineering, the social sciences, and professional programs. PBL has been used across disciplines but was developed for use in medical education, and it is still most commonly associated with the health professions. The match between group structure and discipline has not received much attention in the literature. One could conjecture that the association derives from how knowledge in these disciplines is organized, how it is discovered, and how it advances.

The association between group work type and discipline has had other implications as well. Collaborative learning has not been studied much empirically, whereas cooperative learning and PBL have received extensive empirical attention and with generally impressive results. The article highlights “strong evidence ... that students working in small groups outperform their counterparts in a number of key areas. These include knowledge development, thinking skills, social skills and course satisfaction.” (p. 7)

In addition to the slim analysis of collaborative learning, the authors point out that research has not explored the optimal sequencing of group experiences. “We argue that exposing students to problem-solving learning in sequence from more structured to less structured will provide scaffolding to prepare them to succeed.” (p. 45). They then offer a variety of ways this sequencing could be investigated.

Possibly the most compelling part of this article is how its analysis of the evidence clarifies the long-debated relations between these three forms of group work. “The cooperative learning approaches all employ certain elements which are not used by the collaborative teachers and which are not accepted by them. Hence, cooperative learning is not a form of collaborative learning (and vice versa). Likewise, PBL is not a form of either. Cooperative learning, collaborative learning, and PBL are all forms of small-group learning and have some major points in common. However, none of the approaches is a special case of any of the others.” (p. 32) Table 2 on pages 33 and 34 lays out the differences and similarities that make each a related but separate form of group work.

The article reviews the literature and research of those who have advocated and studied each of these forms of group work. Ironically, many faculty who use group work are not familiar with either the advocates or the research. These are faculty who have learned to use group work the same way they learned to teach: by trial and error. They are using group work in ways that creatively integrate and combine these three (and other) approaches to group work, providing real-world examples of just how much advocates of a particular form of group work could be learning from each other.

Reference: Davidson, N., and Major, C. H. (2014). Boundary crossings: Cooperative learning, collaborative learning and problem-based learning. Journal on Excellence in College Teaching, 25 (3 and 4), 7-55.

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