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# Knowledge Catalysts: A Structure to Promote Incorporation of Active Learning Techniques

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## Abstract

Active learning techniques enhance understanding, boost engagement, and increase a sense of belonging in the learner. However, these techniques can be difficult to teach to instructors because the pedagogy of active learning often describes relatively abstract concepts, or it relies heavily on case studies of what other instructors have created. Without a concrete structure for active learning techniques, it can be difficult for interested instructors to put theory into practice and it can be daunting to implement these ideas in the classroom or other instructional spaces. Behaviorism, cognitivism, constructivism, and connectivism can be used to describe ideas about how learning is occurring, but they do not accurately categorize commonly used teaching activities, which often contain combined elements of multiple educational learning theories. I propose a novel functional categorization of active learning techniques that is both brain-based and student-centered, placing emphasis on the knowledge journey. This work describes seven evidence-based “knowledge catalysts” as a new user-friendly framework for both understanding, using, and teaching active learning techniques.