

## Concept Building: A Systematic Approach for Improving Instruction

In 2017, my book *Concept Building* was published, which explores teaching based on systems theory. There are three components to concept building: concept learning, object learning, and the instructor acting as a catalyst. Each part of the system must be present for deep learning to occur. Other elements can influence concept building, such as campus support and instructor training. These elements are called outer layer issues. At the heart of my book and research is the idea that, when concept building is enacted and the outer layer issues are addressed, students reach a deeper level of understanding called *creational thinking*.

A case study was designed to observe classes and interview teachers to see if the three concept building components were present. A checklist was used during observations to record concept lessons, object lessons, the instructor (or catalyst), and any evidence of *creational thinking*. The concept-building theory is designed for all forms of instruction at all levels, but the observations were conducted on elementary school classes in various parts of the United States across a range of achievement levels defined by classroom scores.

The study examined the following questions: In high-achieving classrooms, are object, concept, catalyst, and *creational thinking* present? In low-achieving classrooms, are object, concept, catalyst, and *creational thinking* present? Which forms of instruction are more present in higher-achieving classrooms versus lower-achieving classrooms? Are all forms of instruction present in classrooms irrespective of geographic location?

Through the observations, it was found that, overall, in high-achieving and low-achieving classrooms, all three elements of concept building—concept, object, and catalyst—were observable. However, *creational thinking* was only observed in higher-achieving classrooms.

### Results Explored

We found that the “instructor as catalyst” idea is the number one factor involved in the success or failure of concept building. What materials the instructor chooses and how the concepts are developed are paramount to developing understanding. For instance, one interviewed instructor told us that her students struggled to understand the concepts taught in their

narrative writing unit. Some students still did not have a full understanding by the end of the unit. The instructor decided to continue incorporating narrative writing into her assignments throughout the term. By the end of the term, the students felt more confident writing narratives.

The second factor observed to be crucial and problematic in lower-achieving classrooms were outer layer issues. The four main outer layer issues observed in this study were time management, school or campus-wide initiatives for classroom support, classroom order, and instructor training.

All ten instructors we interviewed discussed having to take more time than planned at times to teach certain concepts. Some of the more experienced teachers described continuing the lesson while moving on so that students who needed assistance could continue to work on the concept. Developmental research shows that every student learns at their own pace. Therefore, a strictly paced curriculum will undoubtedly leave some students behind.

Another outer layer issue observed was campus-wide classroom support. Many different approaches to campus support were observed. The schools that had campus-wide support helped foster concept building, while schools that lacked this support hindered concept building.

The third outer layer issue observed was classroom order. Interestingly, we observed that classrooms that were too orderly or that had no order displayed no *creational thinking*. It was the classrooms with a modicum of order, but that had enough flexibility for students to express themselves, that had observable *creational thinking*. Classroom management is always a key to learning. However, the balance between too rigid and too flexible seems to be a determining factor in *creational thinking*.

The final outer layer issue was instructor training. During the observation, many effective teaching strategies were observed. When instructors were asked where they learned these strategies, many responded that they acquired the strategies through instructor training or professional development experiences. This observation seems to support the need for professional development experiences, especially for new instructors.

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## Conclusion

While elements of successful concept building were evident in all classrooms, the degree to which it was present varied. This research highlighted the areas involved with concept building that must be addressed in order to improve creational thinking in today's classrooms. In addition, the study indicated that in most cases, it was not the actual class work, but the teacher failing to act as a catalyst and the outer layer issues that hindered creational thinking.

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