An active learning approach produces the same student learning outcomes in both flipped and nonflipped classrooms, according to new research from Brigham Young University (BYU).

In the flipped classroom model, students watch video lectures outside of class time and participate in active learning activities during class time. The approach has been growing in popularity, so researchers at BYU decided to test its effectiveness.

They created two freshman biology classes, one that used the flipped model and one that didn't. Otherwise, the classes were nearly identical. They had the same instructor, lectures, assignments and activities. There were 55 students in one class and 53 in the other. They were taught one after another at the same time of day. And they used the same level of active learning in and out of the classroom, according to information from BYU. At the end of the semester, the exam results of both groups of students were equivalent.

The researchers concluded that the flipped classroom doesn't produce higher student learning outcomes than a nonflipped classroom when both use an active learning approach. Whether instructors flip their classrooms or not, the key to improving learning outcomes is to involve students actively in the learning process, constructing their own knowledge rather than just passively listening to lectures.

"If you're not using a model with active learning already, then the flipped classroom is certainly a viable alternative," said Tyler Kummer, one of the authors of the study, in a prepared statement. "But if you are, you're already going to be seeing the learning advantages in your course."

The study was conducted by Jamie Jensen, a professor of biology and discipline-based educational researcher at BYU; Tyler Kummer, a biology PhD student at BYU; and Patricia Godoy from Universidade Potiguar in Brazil.

The full study, "Improvements from a Flipped Classroom May Simply Be the Fruits of Active Learning," was published in the March issue of CBE-Life Sciences Education.

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