

## **Abstract**

Although the effect of sense of learning community on the e-learning persistence has been widely explored, most of previous research rely on the measurement of purely self-report, and few adopted the actual community engagement behavior as the indicator, especially in a natural e-learning setting. To fill this research gap, the current study directly uses behavioral data and intends to evaluate if active community engagement has effects on the length that students persist on the e-learning.

More than 30000 participants who voluntarily took part in a true online course are involved in the study. They are further divided into three groups – browsers, inactive interactors and active interactors according to their degree of community engagement on the discussion forum, by the Koller (2013) cluster method and k-means non-hierarchical clustering method (Antonenko, et al., 2012). Through Chi-square test and one-way ONVA, active interactors who are significantly more engaged in the community interactions are found to have longer persistence and a higher completion rate. The results suggest the potential importance to boost e-learners' sense of learning community and the actual community engagement on discussion forum.

*Keywords:* sense of learning community, community engagement, persistence, e-learning