Online participation coding sheme by Cheng

Cheng, G., & Chau, J. (2016). Exploring the relationships between learning styles, online participation, learning achievement and course satisfaction: An empirical study of a blended learning course. *British Journal of Educational Technology*, *47*(2), 257-278.

Information access
Specifically, the number of summaries written about study materials was used as an indicator to measure participation in *information access*. This indicator sought to ensure that a student actually read and digested the digital materials, rather than just clicked on them.

Interactive learning

The number of interactive web pages accessed were used as indicators of participation in *interactive learning*. The online quiz activities were set up to enable multiple attempts and to offer adaptive feedback on students' answers to each question. The interactive web page activities were designed to deepen students' understanding through animations, simulations or games on the Web. As many interactive web pages were external resources that could not be tracked in detail by the built-in function of Moodle, participants were required to take screenshots at different points in time and to upload the screenshots to Moodle.

Networked learning

To measure participation in *networked learning*, the number of forums posts created and the number of wikis updated were used as the indicators. A student's participation in a discussion forum was counted only if the student created a forum post and gave someone a reply, whereas a student's participation in a group wiki was counted only if the student updated the wiki twice.

Materials development

Lastly, to measure participation in *materials development*, the number of reflective journals created and the number of presentation files completed were used as the indicators. In this study, online participation was measured by the quantity rather than the quality of students' products (eg, summaries, peer interactions in forums, multimedia presentations, etc). However, if a student created a learning product whose content was irrelevant to the requirements of an activity, his or her participation in the activity would be ignored.