

Using Smartphone Instant Messaging (IM) App for Academic Discussion in an Undergraduate Chemistry Course

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Abstract : Academic discussion during and after instructional teaching is an integral part of learning. Such discussion between the instructor and student or peer-to-peer discussion can be in several different forms. It could be face-to-face discussion, via email and use of online discussion forum. In this study, the effectiveness of using WhatsApp for academic discussion for a first year half-credit Chemistry course was examined. This study was run over two years with two different batches of students. Participation in the study was voluntary and student volunteers were recruited within the first week of the term. The activity in the WhatsApp group was monitored by two instructors teaching the course. At the end of the course, the students participated in an online survey to evaluate their experience of using WhatsApp for academic discussion. There were a total of 26 questions. The survey had a total of 4 sections with regards to the use of WhatsApp for academic discussion: 1) Familiarity with WhatsApp, 2) Effectiveness of using WhatsApp for discussion, 3) Challenges and 4) Overall experience. The main purpose of using an IM platform for academic discussion was to encourage after-class discussion amongst the students. 32% of the participants had used other online platform, such as Piazza and forums in Learning Management System (LMS), for after-class academic discussion with their instructors and peers. This was a low percentage considering that some courses use such online platform as their main forum amongst instructors and students. At the end of our study, over 83% of the participants felt that WhatsApp was a more effective platform compared to other online forum. One interesting finding was the effect of WhatsApp discussion on face-to-face interaction with instructors. 28% of the students agreed that the use of WhatsApp as a discussion forum had encouraged them to approach their instructors during or after class. 51% of students answered neutral. This could be interpreted that the use of WhatsApp had not affected the frequent (or lack of) face-to-face interaction with their instructors. A second survey question, similar but phrased differently from the first, was also asked to evaluate the aspect of face-to-face interaction with instructors. 34% disagreed that the use of WhatsApp had reduced the frequency of face-to-face interaction. This could imply that the frequency remained the same or might have increased. The 38% who agreed to a decrease in face-to-face interaction have either asked the questions in WhatsApp or had their questions answered by a query from another student in the group chat. These outcomes suggested that the use of technology aided and complemented face-to-face interaction between instructors and students. The study also looked at the challenges of using WhatsApp for academic discussion. Some challenges included difficulty in referring back to previous discussion and students finding some discussions irrelevant to them. In conclusion, the use of IM platform for academic discussion was desirable for the students, but it should not be the only channel as face-to-face consultation and online forum for lengthy discussion are still important for after-class learning of students.

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