

Podcasting: A Tool for an Enhanced Learning Experience of Introductory Courses to Science and Engineering Students

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Abstract : Introductory courses such as General Chemistry I, General Physics I and General Biology need special attention as students taking these courses are usually at their first year of the university. In addition to the language barrier for most of them, they also face other difficulties if these elementary courses are taught in the traditional way. Changing the routine method of teaching of these courses is therefore mandated. In this regard, podcasting of chemistry lectures was used as an add-on to the traditional and non-traditional methods of teaching chemistry to science and non-science students. Podcasts refer to video files that are distributed in a digital format through the Internet using personal computers or mobile devices. Pedagogical strategy is another way of identifying podcasts. Three distinct teaching approaches are evident in the current literature and include receptive viewing, problem-solving, and created video podcasts. The digital format and dispensing of video podcasts have stabilized over the past eight years, the type of podcasts vary considerably according to their purpose, degree of segmentation, pedagogical strategy, and academic focus. In this regard, the whole syllabus of 'General Chemistry I' course was developed as podcasts and were delivered to students throughout the semester. Students used the podcasted files extensively during their studies, especially as part of their preparations for exams. Feedback of students strongly supported the idea of using podcasting as it reflected its effect on the overall understanding of the subject, and a consequent improvement of their grades.

Keywords : podcasting, introductory course, interactivity, flipped classroom

Conference Title : ICHE 2017 : International Conference on Higher Education

Conference Location : London, United Kingdom

Conference Dates : May 25-26, 2017