There is increased pressure on University Lecturers to incorporate audio/visual digital technologies (e.g. podcasts) into their teaching. The existing small, but growing body of published research in Higher Education is predominantly focussed on studies of perceived value, usage of the technology, and podcasts as supplementary teaching material (McGarr (2009); Baker (2008); Lazarus (2008)).

The motivation for the current research was to evaluate the academic effectiveness of digitised lecture delivery in both Real Time (Live Streaming) and Delayed Time (Podcasts). Academic Effectiveness was operationally defined as the performance on tests designed to explore the degree of academic comprehension/retention of lecture material.

The participants were first year Social Psychology students (n=157), randomly assigned to one of three conditions of lecture delivery. The three methods of delivery were live lecture (n=65), screened lecture in lecture theatre (n=69), and lecture delivered to individual work stations (n=23). The lecture was of 30 minutes duration, the topic chosen was unlikely to be familiar to the students and deemed to be conceptually difficult.

Academic performance was tested using an MCQ test with both factual (3) and conceptual questions (2) administered following the lecture delivery. Student experience of the lecture was extracted from a Learning Experience Feedback Questionnaire (LEFQ). A Kruskal Wallis test indicated significant differences in academic performance across the three delivery methods ($x^2(2, N=157) = 22.14$, $p<.001$). Examination of the descriptive statistics suggested that those students at the screened lecture had poorer results on the MCQ test than those in the other lecture delivery conditions.

The results of the study indicate that type of delivery can impact greatly on academic effectiveness. Factors to be controlled and/or manipulated in future studies include one/two way interaction with students, duration of digitised instruction, and repeat exposure.