

# Sage on the Stage

## Big Data, Customized Learning, and the Desire for Human Interaction

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### Abstract

A research question arising in academia is whether the desire by administrators to collect, analyze, and disseminate 'big data' has become a driving force in how education is delivered. One area where data is being collected on students is through the use of Virtual Learning Environments (VLEs). We wanted to explore whether students believed that the mass information collected on them would lead to improved customized education, or whether it would be used a cost-cutting mechanism to eliminate the lecturer. Lecturers salaries tend to make up the majority of academic budgets. Focus groups were conducted among first, second and final year undergraduate business students. Participants report that they do not wish to see VLEs replace traditional lectures or tutorials and there is some push-back by students in that they do not want the 'sage on the stage' to be replaced the use of data to customized student led learning. Business students in this sample view the value in VLEs to disseminate textbook and journal article information and to promote collaborative learning and contribute to employability. Implications for higher education are discussed.

**Keywords:** *Big data, VLE's, austerity, flexible learning, online learning*

### Introduction

Lectures in the thirteenth century in Southern Europe and fifteenth century at the University of Oxford and University of Cambridge came about because books were too expensive and rare to be owned by students (Moodie, 2016). The lecturer was thus a sage on the stage, and they imparted new knowledge to students based on cutting edge research. Today, in contrast,

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we are witnessing the rise of Virtual Learning Environment's (VLEs) such as Moodle to collect and disseminate information. Management tend to favor the use of VLEs as they permit the education experience to be customized. VLEs are becoming increasingly advanced in line with the development of artificial intelligence. Fry and Love (2011) suggested that lecturers had become concerned that Virtual Learning Environments (VLEs) may altogether replace them within the classroom. This is not some wild idea. VLEs are capable of collecting a range of data from demographics to psychographics on students that may one day permit the use of artificial intelligence to deliver lectures custom made directly for each individual student. One of the largest budget expenses for universities are lecturers' salaries, and thus, there is a genuine cause for concern among lecturers that universities may look to replace them with less expensive technology. Of course, this would result in less human interaction with not only the instructor, but also, fellow students as education would no longer need to be entirely delivered in a traditional classroom setting. This study used focus groups to observe business students' views as to whether the lecturer should be replaced as a sage on the stage with the emergence of better uses for 'big data'. We thought it was best to obtain the students' view as the consumer.

### **The Use of Technology in the Classroom**

In the early 1990s, the desktop computer was still the primary new technology being used for educational activities (Tak-Wai et al., 2006). However, more than a decade on, technology dissemination has undergone two great leaps forward. First, the consumer-focused internet boom fueled the rise of online learning. Second, the fast growth of wireless technologies increased the speed at which learners were able to access the internet. The current use of new advanced network technologies have enabled flexible, portable teaching and learning in the higher education sector in recent years (Hajhashmei, et al., 2014). Software developments have led to the creation of Virtual Learning Environments (VLE), and one of the most popular VLEs is Moodle. Brady et al (2010) suggests that Moodle should be seen only as a means of communicating between students and teachers as Moodle tends to be highly focused on academic work. VLEs are viewed by management in higher education as a way to reduce costs. Säljö (1999) posited that flexible learning is a promising alternative to traditional classroom learning and offers more flexible and lower cost access than traditional learning. By parity of reasoning, a lot of investment has gone into VLEs as conduits of flexible learning in order to reduce costs in an era of austerity. For example, VLEs have led to a paperless revolution in some respects, thus resulting in significant cost savings to universities.

VLEs also serve another purpose. There are an excellent venue to collect data on students. VLEs encourage blog posts, videos, and social



interaction much in the same way as Facebook, Twitter, YouTube, and other social networks. In the process, VLEs also collect the same types of demographic and psychographic data as social networks way beyond traditional databases at universities, and thus, VLEs can, in theory, be used to create individualized profiles on students as to their likes, dislikes, and optimal learning experience. Add artificial technology to the mix and VLEs might be able, for instance, to take a series of famous Ted Talks and author an entire cited lecture and deliver it a student to most fully capture the student's attention.

### **Research Purpose**

The literature indicates that VLEs are on the rise, but that their use in the classroom is currently limited as they are not fully integrated with social networks such as Facebook, Twitter, and Instagram. The purpose here was to conduct focus groups to obtain the students' views as to whether the lecturer is being pushed aside as an administrator and whether they want VLEs to replace lecturers altogether. We wanted to know whether students would prefer custom-tailored education from VLEs as opposed to current social interaction and the results were surprising.

### **The Study**

The study took place at a UK university. We used focus groups to examine business students' opinions. The consensus in qualitative methods is that "Focus groups enable the collection of substantive data that can be used by tutors to improve the teaching-learning environment (Bangura, 1994; Paulsen and Feldman, 1995; Hamilton et al., 2000; as cited by Love and Fry, 2006). The students reported business studies, human resources and organizational behavior, marketing, and accounting and finance as their programmes of study.

The students were asked whether they would still attend lectures if they were podcasted via Moodle, whether they thought VLEs would change classroom learning experiences, and how VLEs might be used in the future. The data from focus groups can be extensive, and thus, we deferred to the literature which suggested to search for similarities in the responses in order to focus on key themes (Lucas, 2001 as cited by Love and Fry, 2006).

### **Findings**

The focus groups revealed a major common theme. The students made clear that lecturers and human interaction should not be replaced by VLEs. Podcasts

- Podcasts. "Podcasts should not replace interaction with the lecturer."
  - Socialization. "I would still need to discuss the subject with the tutor so, the podcast would not replace the traditional tutorial sessions. I feel they are very useful to discuss your opinion with the peer group and the tutor."
- Learning Experiences

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- Training. “Some students would definitely need training due to lack of understanding.”
- VLE Features. “During the tutorials perhaps we could use VLEs to take part in subject related quiz and perhaps some interesting games should be included in the tutorials. But, not to replace the tutors.”

#### Future of VLEs

- Integrating VLEs and Mobile Technology. “Yes, we could make notes on mobile devices, do MS Excel exercises on laptops/Ipad. In general, the enrichment of university’ teaching by downloading video records of lectures, letting students do group works together via Skype would be very helpful. But, it would only compliment not replace a traditional teaching.” A separate student commented, “Employability apps would be good for use to check if there is any suitable jobs are available for us.”
- Repository. One student states that VLEs will improve in relation to “Downloading exam revisions, downloading quizzes, deadlines, online schedules, and plan projects.” Another student bluntly stated, “Virtual learning could not replace the class experience as during tutorials we can ask the tutor things that we don’t understand and ask for explanation.”

#### Discussion

Higher education is at a precipice. We are witnessing the rapid proliferation of VLEs and the collection of ‘big data’ on students. And yet we observe a very unique and highly human theme arising from the findings. Whereas the lecturers in Fry and Love’s (2011) research had fears that VLEs might replace them, the business students in this study suggested they do not want the VLEs to replace the lecturer. The sample here believes that educators have a certain knowledge to impart via lectures and tutorials which may not be replaced by current VLEs.

We briefly turn our attention to the implications for higher education institutions. Universities are heavily investing in VLEs while cutting back on academic faculty in an age of austerity. This is not what their consumers to want. The business students in this study want the sage on the stage, especially as technology is increasing the speed of learning. The sage serves as a facilitator to clear confusion among learners by responding to students in a way that a pre-recorded podcast or quiz on Moodle cannot possibly do at this stage. Therefore, higher education institutions should reconsider their budgets to invest more in human and face to face interactions rather than seeking cost-cutting methods to maximize income in the current era of austerity. The theme that emerged from these findings indicates that universities which maintain traditional lectures and tutorials will enjoy a competitive advantage over competitors who take a more flexible approach and try to replace the lecturer with VLE technology.

#### Future Research

We are witnessing the rise of artificial technology that may enable a



computer or robot to answer students' questions and clear confusion in a way that even surpasses human lecturers. Such technology will no doubt increase over the next several decades. Future experimental research might therefore want to evaluate the student experience with advanced exploitation of big data by artificial technology may still be lacking in personal connection and ability to foster face to face social skills desired by students.

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