Exploring the experiences of a diverse group of learners in an online environment

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Abstract

On-line education has become increasingly important in recent months and in order to provide an engaging and meaningful learning experience, it is important to understand how learners use and experience virtual learning environments (VLEs). In this study, we explore how a diverse group of learners experience the online environment of The Study Course in Tropical Medicine & Hygiene, focusing on the active learning components embedded in the course.

This poster summarises initial findings of this study.

Introduction

The Study Course in Tropical Medicine & Hygiene is a nine months course to prepare individuals with a medical qualification for the Diploma in Tropical Medicine & Hygiene (DTM&H), awarded by the Royal College of Physicians in London (RCP).
In 2015, the course was converted to follow a blended model. Most of the content is taught asynchronously online in weekly blocks. Fortnightly live online tutorials consolidate learning. Additional active learning opportunities include case study and public health scenario discussions.

This course attracts ***a diverse and international group of students,*** with regards to age, stages of career and medical specialty. Anecdotal evidence suggested that there are significant differences with respect to the experiences of the students, including the levels of confidence with which they interact with the virtual learning environment (VLE). For example, we thought that there might be generational differences in how individuals experience online learning.

This study aims to provide evidence for these anecdotal impressions.

Methods

The design of this study follows a mixed methods approach:

An **online self-completion survey** using Jisc Online Surveys was designed to assess student experiences with the virtual learning environment (VLE). The survey consisted of a series of closed questions with a choice of fixed alternatives and a small number of open questions. Questions were not compulsory. The survey included questions about previous online learning experiences, the use of digital technologies in general, interaction with the active learning activities on the course VLE and the confidence with which students use the interactive learning activities. Closed question data data was analysed using descriptive statistics (IBM® SPSS®). Thematic analysis was used for free text responses.

Participants were invited to participate in a follow-up, **online semi-structured interview** to qualitatively reflect on their experiences. The aim was to gain a more in-depth understanding of the participants online learning experiences. All interviews were recorded and transcribed using Zoom. Thematic analysis of the interview data is ongoing

Methods - continued

Participant were asked to self-identify into generational groups: born before 1946, between 1946-1964, between 1965-1980, between 1981-1994 and born after 1994.

Data collection included three consecutive course cohorts

Results

Overall participant numbers were low, averaged at 16% across three cohorts (23.6% 2018/19 cohort, 8.4% 2019/20 cohort, 16.7% 2020/21 cohort). Data shown represents the combined responses across the three cohorts.

Figure 1 shows that the age distribution of survey participants corresponds to the age distribution of the total cohort, confirming that the sample returned is representative of the course participants.

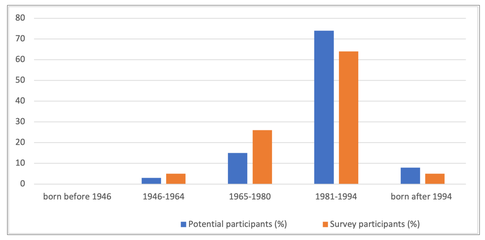

Figure 1. Graph showing % of potential participants and actual participants by age group

Figure 2 shows that overall, participants became more confident with using the VLE as the course progressed.

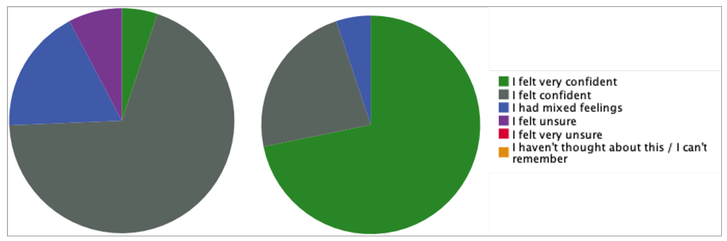

Figure 2. Pie charts showing level of confidence with VLE use at the beginning (left) and end (right) of the course.

We then analysed the same data by age group. The Chi-Square Test of Independence returned p-values greater than significance level ($\alpha = 0.05$). No association was found between age groups and levels of confidence reported by learners (data not shown).

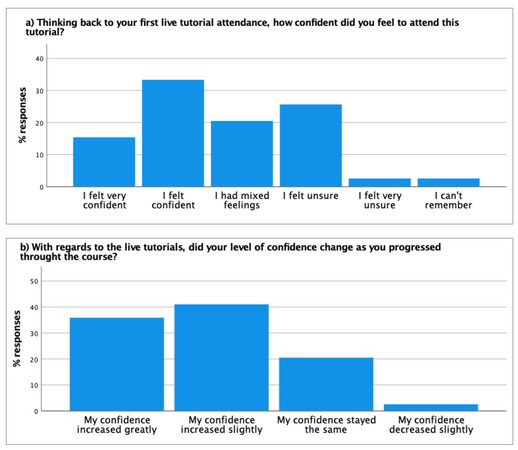

Figure 3. Graphs showing level of confidence with live tutorial attendance at the beginning (a) and end (b) of the course.

Results - continued

Figure 3 shows the levels of confidence in attending live tutorials at the beginning (a) and towards the end (b) of the course. This shows an increase in overall confidence but we could not demonstrate an association between age groups and confidence (data not shown).

Figure 4 shows how learners asked questions during a live tutorial (a) and how confident they felt using a microphone if they did (b). Most participants preferred to use the chat window to ask questions, only 20% of learners asked oral questions. Of those that did ask oral questions, most had mixed feelings about doing so. We could not demonstrate an association between age groups and types of questions asked, or confidence with asking questions using a microphone.

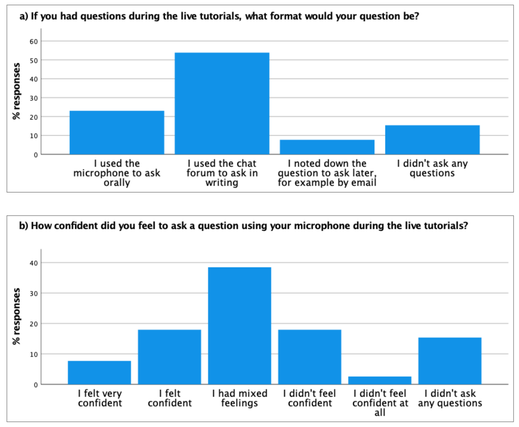

Figure 4. Graphs showing how students asked questions in a live tutorial (a), and the confidence with which learners asked oral questions (b)

Discussion & Conclusions

In this study, we are exploring the experiences of a diverse cohort of learners with the VLE of a professional course. This poster shows a small extract of data from a 36-item survey.

Based on anecdotal feedback we had hypothesized that there might be generational differences in how individuals experience online learning and differences with regards to confidence of using the VLE and of engaging with online learning activities.

Based on this survey, we cannot establish a statistically significant association between age and confidence with which participants use the VLE, or active learning opportunities on our course.

We cannot conclusively state whether this is a robust finding, or the result of a low response rate across the three cohorts.

Another explanation could be the type of active learning resources embedded in the course. These are technologically not very demanding, and it is possible that we will see generational differences if we build more technologically demanding activities into the course, for example case simulations or even game-based activities.

We have yet to complete the full analysis of this study, but we believe that the full results will add to the limited literature in this general subject area.

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Selected references/reading suggestions:

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