Using digital tools to encourage teamwork and establish distance learning communities

B. CHERIE MILLAR1,2, JOHN E. MOORE1,2, STEPHEN McCLEAN1 & COLM J. LOWERY1
1School of Biomedical Sciences, Ulster University, Coleraine BT52 1SA
2Northern Ireland Public Health Laboratory, Belfast City Hospital, Belfast BT9 7AD

Introduction

Ulster University provides an IBMS accredited e-learning MSc programme in Biomedical Science. Students are from varied geographical backgrounds with many in full time employment and established in their profession. The formal delivery of modules within this programme is flexible permitting students to have a bichronous experience1 i.e., blending self-learning and asynchronous approaches2 with synchronous tutorial sessions. It is reported that distance learning students can feel isolated due to minimal opportunities to interact with their peers. Cooperative learning group activities would enhance students to collaboratively apply their acquired knowledge to critically evaluate real-world problem scenarios and develop higher order cognitive skills3. It has been reported that students do not recognise creative learning opportunities in biomedical science programmes and as such educators have the responsibility to embed creative learning activities within the curricula4.

Objectives

To engage students and build online learning communities, to nurture the development of confidence in digital capabilities and gain an appreciation of digital and collaborative transferable skills, through online synchronous group activities.

Methods

Students (n=20) enrolled in a Microbiology module (30 credits) were divided into groups of four to address a problem-based assessment activity relating to current global infection topics. The online group task required the use of digital tools to critically evaluate these topics & prepare a slide deck learning resource for their peers.

Digital tools used

- Search Engines
- Microsoft Office
- Flip Gold
- Blackboard
- Blackboard Collaborate
- Blackboard Ultra

- Individual student video & written reflection.

- Students (n=14) completed a pre- and post-assessment survey to evaluate their perspectives on the development of digital skills and skills most valued by employers.(Ethical approval Biomedical Sciences Research Ethics Filter Committee, Ulster University (FCBMS-19-091)

Discussion & Conclusion

The introduction of group-based activities into a distance learning course was initially met with trepidation by students (Figure 3) On completion of the task students reported they

- enjoyed participating in the assessment task which enabled them to acquire a deeper knowledge of the subject area & create a valuable learning resource for themselves and their peers
- felt more confident in applying for jobs which required digital skills (Figure 1) having used new digital tools.
- demonstrated creativity during the group task (Figure 1)
- developed collaborative, digital, reflective skills and soft skills (Figure 2) which they could implement in their current workplace (Figure 3)
- Such online tasks helped build online learning communities and relationships which students reflected were supportive and reported these relationships will continue throughout the next stages of the MSc degree programme.

In conclusion, the use of digital skills and educational strategies to promote the establishment of online learning communities by means of group-based activities should be encouraged, particularly amongst healthcare professionals who provide online-tutor roles.

References


Figure 1: Analysis of pre- and post assignment digital skills survey

Figure 2: Student feedback (n=14) on important skills development

Figure 3: A selection of reflective comments from students following completion group task

Post-evaluation

Digital & Soft Skills

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<thead>
<tr>
<th>Skill</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Digital Skills</td>
<td>70%</td>
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<tr>
<td>Soft Skills</td>
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<tr>
<td>Creativity</td>
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Pre-evaluation

<table>
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<th>Skill</th>
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<tbody>
<tr>
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<tr>
<td>Soft Skills</td>
<td>40%</td>
</tr>
<tr>
<td>Creativity</td>
<td>30%</td>
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</tbody>
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Figure 3: A selection of reflective comments from students following completion group task

STUDENT FEEDBACK

I don’t think online learning is a good way to learn...I prefer face to face classes...but I think that online learning is a good way to learn

I think online learning is a good way to learn because you can learn at your own pace...

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