

1                   **Pandemic pedagogy: student evaluations of blended learning in**  
2                   **bioethics during the COVID-19 pandemic**

3                   *Jordan A. Parsons,<sup>1</sup> Jonathan Ives,<sup>1</sup> and Richard Huxtable<sup>1</sup>*

4  
5                   <sup>1</sup> Centre for Ethics in Medicine, Bristol Medical School, University of Bristol, UK.

6                   Contact: jordan.parsons@bristol.ac.uk

7  
8                   **ABSTRACT**

9  
10                   The impact of the COVID-19 pandemic has been felt in most areas of society, including higher  
11                   education. To reduce the spread of the virus on campuses, universities largely moved teaching online.  
12                   For the 2020/21 academic year – with more time to plan – various approaches to blended learning were  
13                   introduced.

14  
15                   In this brief report, we present the results of a student evaluation conducted following the introduction  
16                   of blended learning for an intercalated degree in bioethics at the University of Bristol. A survey was  
17                   designed and administered to students to understand their views and experiences. The survey comprised  
18                   two parts: a series of statements on a four-point Likert scale, followed by several free text questions.  
19                   Respondents were asked about specific teaching elements of two introductory units (modules), what  
20                   worked well or could be improved overall, and which elements (if any) they think should remain when  
21                   pandemic restrictions are lifted.

22  
23                   Respondents felt positively about blended learning overall. Nonetheless, there was a clear distinction  
24                   between the elements of units they felt should be delivered in person and those that are suitable for  
25                   online delivery. Online learning was preferred for more individual activities, with strong favouring of

26 pre-recorded lectures. Elements of the units that required synchronous interaction with other  
27 students/staff, however, were considered better when delivered in person.

28

29 Many respondents highlighted elements of blended learning that they think should remain when no  
30 longer essential, which were largely in keeping with the distinction between independent and group  
31 tasks being online and in person, respectively.

32

### 33 **INTRODUCTION**

34

35 The impact of the COVID-19 pandemic on higher education has been significant. Early in the pandemic  
36 universities had to quickly move teaching online [1], and questions were asked about whether  
37 universities were able to respond effectively to the challenges of proper online delivery [2], as opposed  
38 to simply moving existing content online [3]. Hodges and colleagues note how ‘[w]ell-planned online  
39 learning experiences are meaningfully different from courses offered online in response to a crisis or  
40 disaster’ [4].

41

42 When it became apparent that higher education would not involve business as usual for 2020/21,  
43 teaching staff had more time to plan online delivery, and the University of Bristol (UoB) adopted a  
44 blended learning strategy, with a mix of online and in-person teaching. Many institutions, including  
45 UoB, provided in-house training on new technologies and teaching staff were required to develop  
46 bespoke approaches to online delivery, informed by some level of relevant pedagogical understanding  
47 [5].

48

49 In this brief report, we present the results of a student evaluation following the delivery of two units –  
50 ‘Introduction to Bioethics’ and ‘Introduction to Medical Law’ – using blended learning as part of an  
51 intercalated degree in bioethics at UoB in the academic year 2020/21.

52

## 53 **THE COURSE**

54

55 The iBSc Bioethics [6] is a one-year intercalated<sup>1</sup> degree open to students from medicine, dentistry, and  
56 veterinary courses. It was first offered in 1998, and typically enrolls up to 20 students each year. The  
57 two evaluated units are both delivered in the first teaching block (approximately October to December).

58

59 These units were previously delivered through weekly 2-hour seminars, roughly split into a 40-minute  
60 lecture followed by group discussion (often based around case studies), alongside assigned reading.

61

62 To adapt to the needs of the COVID-19 pandemic, blended learning was introduced. Our approach was  
63 mostly online but included in-person contact hours on a weekly basis where possible to encourage  
64 community among students and improve wellbeing.<sup>2</sup> The new unit structure is detailed in **Table 1**.

65

66 Online sessions used the Blackboard Collaborate platform with functionality for breakout groups, file  
67 sharing, and polling.

68

---

<sup>1</sup> Intercalation offers students the opportunity to take a year out of their professional degree programmes and study a different subject in depth. The iBSc Bioethics at UoB goes beyond the ethics ‘core curriculum’ as set out by the Institute of Medical Ethics’ [7] and the General Medical Council’s *Outcomes for Graduates* [8] and aims to furnish students with an in-depth understanding of theoretical and practical ethics, including the opportunity for in-depth independent study in the form of a research project.

<sup>2</sup> All in-person teaching was delivered in a “COVID-secure” manner, including social distancing and the wearing of masks and visors.

**Table 1. Module structures (weekly)\***

Introduction to Bioethics	Introduction to Medical Law
<ul style="list-style-type: none"> <li>▸ <b>Pre-recorded lectures:</b> up to 3, asynchronous, online, totalling a maximum of 1 hour.</li> <li>▸ <b>Readings:</b> up to 3, linked to lecture material</li> <li>▸ <b>Individual activity:</b> 1, asynchronous, linked to pre-recorded lecture(s), requiring 1-2 hours of independent work and contribution to online discussion forum (Padlet).</li> <li>▸ <b>Group activity:</b> 1, synchronous, online, linked to pre-recorded lecture(s) and/or group activity, requiring 1 hour of group work.</li> <li>▸ <b>Tutorial:</b> 1, synchronous, online, 1 hour.</li> <li>▸ <b>Journal club:</b> 1, synchronous, in person, discussing a paper that may or may not be related to the pre-recorded lecture(s).</li> </ul>	<ul style="list-style-type: none"> <li>▸ <b>Pre-recorded lectures:</b> up to 5, asynchronous, online, totalling a maximum of 1 hour.</li> <li>▸ <b>Readings:</b> up to 3, linked to lecture material.</li> <li>▸ <b>Group activity:</b> 1, synchronous, online, linked to pre-recorded lecture(s), requiring 1-2 hours of group work to prepare tutorial presentations.</li> <li>▸ <b>Tutorial:</b> 1, synchronous, in person, 1 hour.</li> </ul>

\* Elements that are listed as in person were sometimes online due to COVID-19 restrictions.

69

70

71 **METHODS**

72

73 An online survey collected the views of students about their experience of blended learning on the two  
 74 units. The survey used was first designed by JAP, before going through several rounds of revision  
 75 between all three authors. It comprised two sections: a Likert scale and free text questions.

76

77 The Likert section contained 14 items (**see Figure 1**), one of which was aimed only at respondents with  
 78 additional learning needs. A four-point scale was used, from ‘Strongly agree’ to ‘Strongly disagree’.

79 The free text questions asked for comments on specific elements of the units, i.e., what worked well,  
 80 what could be improved, and which elements (if any) they think should remain once pandemic  
 81 restrictions end. This approach generated a mixture of quantitative and more qualitative data.

82

83 British Educational Research Association ethical conduct guidelines [9] were followed and ethical  
84 approval was obtained from Bristol's CREATE Research Ethics Committee.<sup>3</sup>

85

86 The survey was administered to students (n = 20) between December 2020 and January 2021. An  
87 announcement was made in one of the final teaching sessions, and the survey was emailed to students  
88 later that day. Students received periodic reminders during teaching and by email. Responses were  
89 collected anonymously using Microsoft Forms.

90

91 Descriptive statistics were used to analyse responses to the Likert scale, highlighting the range and  
92 prominence of opinions. Free text responses were thematically analysed [10].

93

## 94 **RESULTS AND DISCUSSION**

95

96 Of the 20 students invited to complete the survey, 12 did so (60% response rate). All respondents  
97 completed the Likert scale, two of whom responded to statement 14 (specific to those with additional  
98 learning needs). 10 respondents completed the free text section, with some providing responses only to  
99 some questions.

100

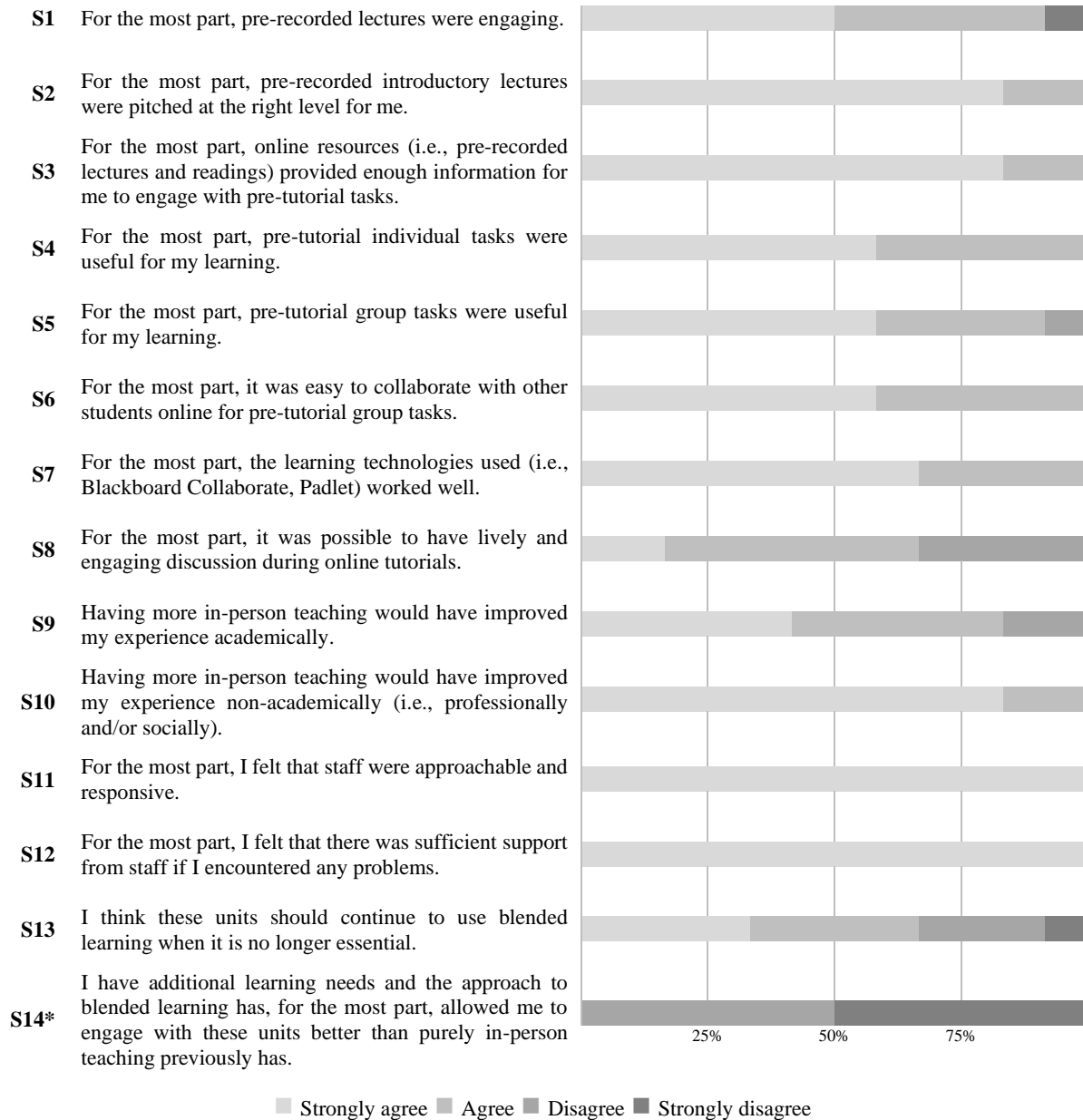
101 First, responses to the Likert scale statements. **Figure 1** shows respondents have largely positive views  
102 on all aspects of the blended learning approach, strongly agreeing or agreeing with most statements.  
103 Some statements, however, received more mixed/negative responses – notably, S8, S9, S13, and S14.

104

---

<sup>3</sup> CREATE (Cultivating Research-rich Education and Teaching Excellence) manages UoB's activities regarding Advance HE accreditation. CREATE's Research Ethics Committee reviewed this project as it formed part of JAP's portfolio for Advance HE Fellowship.

**Figure 1. Likert scale results (%)**



\* Students were instructed to only respond to this statement if they have additional learning needs. This statement was included because we hypothesised that the different learning structure (smaller chunks of didactic teaching with more student control over when they did what) might better suit students with some additional learning needs.

105

106

107 Responses to S8 suggest that lively and engaging group discussion is hindered online. Perhaps relatedly,

108 most respondents indicated on S9 that their academic experience would have benefitted from more in-

109 person teaching. This suggests that whilst online learning may work for some elements – as

110 demonstrated by the responses to other statements – it is preferable to be in the same room for group

111 discussion. S10 responses further support this: respondents overwhelmingly felt that their experience  
112 from a non-academic perspective would also have been improved by more in-person teaching. This  
113 suggests that, perhaps unsurprisingly, students place importance on the social aspects of group learning,  
114 and that this cannot be replicated online.

115

116 Free text responses largely support those of the Likert statements. The overwhelming theme was that  
117 certain things are preferred online, and others are preferred in person, supported by a view that some  
118 form of blended learning – though not necessarily replicating this one – should be retained moving  
119 forward.

120

121 The aspects of the course that respondents felt worked well online were those completed independently.  
122 All respondents who commented viewed pre-recorded lectures favourably. Some highlighted how the  
123 shorter length (c.15-20 minutes), compared to what they were used to, made them more ‘manageable’  
124 and ‘easy enough to digest whilst still relaying all of the required information’.<sup>4</sup> There was also frequent  
125 mention of the personal control over learning that the pre-recorded lectures afforded, with one saying  
126 it was ‘helpful to always have them to refer back to and can digest information at your own pace’.  
127 Indeed, responding to the question about retaining elements of blended learning, there was  
128 overwhelming support for short, pre-recorded lectures replacing in-person didactic teaching.

129

130 Along similar lines, respondents considered pre-tutorial individual tasks a useful opportunity to ‘think  
131 more about their opinion themselves first’ before coming together as a group. The chance to consolidate  
132 the content from pre-recorded lectures and readings, through structured tasks, was appreciated.

---

<sup>4</sup> Our own feeling as educators was that these short introductory videos did not cover all the required material, so we had to carefully select supplementary reading to ensure that between the videos and reading all essential information was conveyed. It is noteworthy, then, that some students felt there was too much reading – though this was not a majority view.

133

134 Regarding online group activities – pre-tutorial group tasks and online tutorials – respondents had mixed  
135 views. Most reported finding both activities useful to ‘collaborate and solidify learning’. However, there  
136 was also strong preference for conducting these activities in person. Reasons included the fact that  
137 online discussion does not always flow, students not all having their cameras on, and finding it harder  
138 to ask questions when not in person. One respondent quite strongly relayed a preference for in-person  
139 tutorials: ‘Online synchronous/group tutorials were not engaging for me and should definitely become  
140 in person when possible’. Some also raised issues around certain people consistently contributing more  
141 or less than others and the challenges of arranging group tasks around everyone’s schedules, but these  
142 are common problems with group work even if in person [11]. Social aspects were also raised, with one  
143 respondent preferring the ‘Introduction to Bioethics’ module because it had more in-person sessions:<sup>5</sup>  
144 ‘I felt like I [k]new my group better’.

145

146 Overall, respondents were positive about the variety of learning opportunities. One respondent wrote:  
147 ‘Having varied tasks helps me to engage with the topic more’. Another suggested the increased use of  
148 independent learning resources, such as podcasts and YouTube videos, in addition to reading lists.

149

## 150 **CONCLUSION**

151

152 Overall, we found that student experiences of blended learning on these two units were positive. Whilst  
153 some issues were highlighted – as would be expected at the best of times – other aspects appear to be  
154 appreciated by students regardless of pandemic circumstances. Indeed, the majority indicated that they  
155 see a future for this approach to teaching and learning even when it is no longer necessary.

---

<sup>5</sup> This unit was not intended to have any more in-person sessions, but it worked out that way due to staff availability.



156

157 That respondents appreciated the range of learning activities – including more independent work – may  
 158 be indicative of them favouring a more active role in their learning than the programme has traditionally  
 159 offered. Bioethics teaching (at least at intercalation level) may, then, consider striving towards Trigwell  
 160 and colleagues’ ‘student-focused strategy’ [12].

161

162 Whilst this small evaluation cannot be used to make generalised claims about bioethics teaching, it  
 163 provides some insight into student experiences of blended learning and may prove useful in the design  
 164 of bioethics courses going forward. The COVID-19 pandemic forced a huge scale pedagogical  
 165 experiment, which we ought to learn from. Whether or not online or blended learning is required in  
 166 future years, we have certainly discovered that there are elements of a blended learning strategy (which  
 167 we may not have engaged with had we not been forced to) that students prefer and benefit from – and  
 168 this should give us pause.

169

## 170 REFERENCES

171

172 [1] Staton B and Jack A (2020) UK universities suspend face-to-face teaching. *The Financial Times*.  
 173 Available at: [www.ft.com/content/f325ed7e-6862-11ea-800d-da70cff6e4d3](http://www.ft.com/content/f325ed7e-6862-11ea-800d-da70cff6e4d3) [accessed 4 February  
 174 2021].

175 [2] Houlden S and Veletsianos G (2020) Coronavirus pushes universities to switch to online classes –  
 176 but are they ready? *The Conversation*. Available at: [https://theconversation.com/coronavirus-pushes-](https://theconversation.com/coronavirus-pushes-universities-to-switch-to-online-classes-but-are-they-ready-132728)  
 177 [universities-to-switch-to-online-classes-but-are-they-ready-132728](https://theconversation.com/coronavirus-pushes-universities-to-switch-to-online-classes-but-are-they-ready-132728) [accessed 4 February 2021].

178 [3] Sieber JE (2005) Misconceptions and Realities about Teaching Online. *Science and Engineering*  
 179 *Ethics* 11:329-340.

180 [4] Hodges C, Moore S, Lockee B, Trust T, and Bond A (2020) The Difference Between Emergency  
 181 Remote Teaching and Online Learning. *EDUCAUSE Review*. Available at:  
 182 [https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-](https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning)  
 183 [online-learning](https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning) [accessed 4 February 2021].

184 [5] Rapanta C, Botturi L, Goodyear P, Guàrdia L, and Koole M (2020) Online University Teaching  
 185 During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity.  
 186 *Postdigital Science and Education* 2:923-945.

187 [6] University of Bristol. Intercalated BSc in Bioethics. Available at: [www.bristol.ac.uk/population-](http://www.bristol.ac.uk/population-health-sciences/centres/ethics/courses-programmes/bsc.html)  
 188 [health-sciences/centres/ethics/courses-programmes/bsc.html](http://www.bristol.ac.uk/population-health-sciences/centres/ethics/courses-programmes/bsc.html) [accessed 4 February 2021].

- 189 [7] Institute of Medical Ethics (2019) *Core Curriculum for Undergraduate Medical Ethics and Law*.  
190 Available at: <https://ime.datawareonline.co.uk/Resource-Centre/Id/316> [accessed 4 February 2021].
- 191 [8] General Medical Council (2018 [updated 2020]) *Outcomes for Graduates*. London: General  
192 Medical Council.
- 193 [9] British Educational Research Association (2018) *Ethical Guidelines for Educational Research*, 4th  
194 edition. London: British Educational Research Association.
- 195 [10] Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in*  
196 *Psychology* 3(2):77-101.
- 197 [11] Turner Y (2009) “Knowing Me, Knowing You,” Is There Nothing We Can Do? Pedagogic  
198 Challenges in Using Group Work to Create an Intercultural Learning Space. *Journal of Studies in*  
199 *International Education* 13(2):240-255.
- 200 [12] Trigwell K, Prosser M, and Waterhouse F (1999) Relations between teachers’ approaches to  
201 teaching and students’ approaches to learning. *Higher Education* 37:57-70.