

Building an Oasis of Calm in a Sea of Chaos: Supporting Students During Covid-19 Disruption

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The 2020-21 academic year was a year like no other. Due to the Covid-19 pandemic, many students beginning university in 2020 found themselves moving away from the support of their friends and family and starting their degree under challenging circumstances. This paper discusses the approaches taken to support more than 200 students from across the University of East Anglia's Science Foundation Year courses with their transition to university study. Never before have whole cohorts of students at UK Higher Education Institutions had to engage with their studies in a wholly virtual space, without being able to leave their homes, see their peers or meet lecturers face-to-face. Never before have we, as lecturers, had to counsel and support so many students attempting to engage whilst grieving, to learn whilst recovering and to progress whilst mentally struggling. By reimagining our role, listening to the students and being responsive to student feedback, we found that we were able to provide calm in an otherwise uncertain and chaotic world. The pandemic forced us to make changes but an unexpected result of this was that we built a collaborative learning community and started hearing our students in ways we were not experiencing when teaching primarily face-to-face.

Introduction

The University of East Anglia (UEA) has a long history of supporting learners from under-represented groups with the first Foundation Year (FY) programme having run foundation year courses for more than 16 years. In 2020-21 UEA welcomed FY students across Science, Humanities and Medicine courses with over 300 students registered on one of the 10 FY courses offered within the Faculty of Science. This paper describes the planning, delivery and continual evaluation that took place for the 2020-21 academic year of the two largest modules on the UEA Science FY programme: the semester 1 Introductory Biology module, with 215 students enrolled and semester 2 Further Biology module with 210 students enrolled.

Students studying on the UEA FY Biology modules come from a range of backgrounds with under-represented groups being specifically targeted for these courses; students from widening

participation (WP) groups are made a reduced admissions offer that is one A-level grade (or equivalent) lower than their non-WP counterparts. In addition to the cohort being from a diverse range of backgrounds, the students are also progressing to a diverse range of courses including Medicine, Pharmacy and Biological Sciences through to Environmental Sciences and Chemistry. Such diversity in the student cohort means that whilst many of the students on the FY biology modules are likely to have studied some biology recently, in any given year there are also likely to be many students who have not studied biology in the previous two years. Thus, the support needed across the module cohort varies greatly within and between years.

At the start of the 2020-21 academic year, UEA adopted a blended learning approach which ensured that whilst Covid-restrictions allowed, all undergraduate students were receiving at least two hours of face-to-face teaching each week. Planning began in earnest in September 2020 for an expected number of 220 students. Between them the authors have over 43 years of experience of teaching at level 3, both across schools, colleges and within HEIs. The teaching plan was developed drawing on this collective experience – though this experience had never been tested in a fully online setting or during a pandemic! – and the teaching team were fully prepared to adapt and evolve their approach as needed. For the two FY biology modules, the face-to-face teaching was provided in the form of laboratory practicals with all other teaching being delivered online using the UEA choice of virtual learning environment, Blackboard. Our intention was to provide well-organised content offering students plenty of opportunity for interaction with us via a range of means. In addition to the face-to-face practicals, all lectures were delivered asynchronously, workshops were delivered synchronously online and new, weekly optional question and answer (Q&A) sessions were introduced. By the time the students arrived, the first five weeks of semester 1 content were planned and recorded and there was anticipation and apprehension in the virtual air.

Semester 1 – Building the Student Collaboration

For us, semester 1 was all about gaining the confidence of the students and developing a dynamic, responsive partnership with them (Snijders *et al.*, 2020). The semester began with excitement and enthusiasm from both staff and students. But from early on, it became clear that we were fielding more than the usual number of questions from the students. There were the predictable questions from students who had, for whatever reason, missed induction sessions and were unsure about, e.g., timetabling, where to pick up lab coats, etc. But we were also fielding questions that had not come up in previous years around navigating our virtual learning environment (VLE, which at UEA is Blackboard) to find various files and information. It took a few weeks for us to realise that, for many students, the issue was that they were not scrolling down either within Blackboard or on documents that they were accessing from Blackboard, such as assignment instructions or assessment feedback. Once we realized this, we started to take a different approach. Whilst we had made relatively few assumptions about our student cohort, we had assumed that they would be tech-savvy and familiar with navigating a range of websites and online resources. But this was not the case (and this has been seen elsewhere, e.g., Corrin *et al.*, 2010; Kirschner & De Bruyckere, 2017).

Around the same time (approximately week 5 of the semester) we also started to notice that anxiety levels were increasing within the cohort. In week 4 we had started to use weekly check-in sessions during our synchronous workshops (Figure 1) which gave the students an opportunity to anonymously let us know how they were feeling, ranging from “I am on top of things and have energy” through to “I am worried, anxious and exhausted”. The student response to these was very positive and during the (anonymous) module review process, when

asked what they liked about the modules, comments from students included, “I really appreciate the mental health check-ins on the workshops” (Pharmacy Foundation Year student) and “I really like that you do that emoji and emotions thing at the beginning” (Medicine Gateway student). These comments seem to echo what the cohort were feeling as student engagement with the check-ins was great and we quickly were able to pick up that many students in the cohort were really quite anxious. The check-ins gave us a means of starting dialogue with our students about what was behind their increasing anxiety. To facilitate this we used the Blackboard Collaborate feature which allows attendees to write on our workshop slides and for this to be entirely anonymous. The most common answer we heard from our students was that they were feeling overwhelmed with the amount of work that they had to do and they did not know what they needed to be doing each week. This was not feedback that we had heard from our students in previous years, though it is likely that they had felt similarly (Thompson *et al.*, 2021; O’Donnell *et al.*, 2016), but the difference is that this year we were asking our students regularly, in person and by various means, how they were feeling – and this was done in a meaningful way with students appreciating the opportunity to express their concerns and they were recognising how we acted on them. From week 5 of semester 1 we changed how we signposted students to the weekly tasks and started to produce weekly checklists for our students (Figure 2). We provided these on a Sunday evening as a physical one-page Word document with an accompanying 2-minute long video of us summarising the checklist (Figure 2). We also made a few videos that recorded us showing the students where to find certain materials within the VLE and how to perform certain tasks. Scaffolding organisational skills through the use of checklists models effective behaviours and develops executive function linked to independent learning (Meltzer, 2018). Foundation level students may demonstrate less effective organisational skills than direct entry students due to lower levels of social and cultural capital (O’Shea, 2016) and a higher proportion of students with neurodivergent characteristics.

CHECK IN
Please place a symbol in the quadrant that best describes how you feel today

I am on top of things, but tired	I am on top of things and still have energy
I am worried, anxious and exhausted embedded.sci@uea.ac.uk embedded.fmh@uea.ac.uk	I am worried and anxious but still have energy

Figure 1: An example of the check-in slides used at the start of synchronous workshop sessions with students studying on the biology Foundation Year modules at the University of Anglia.

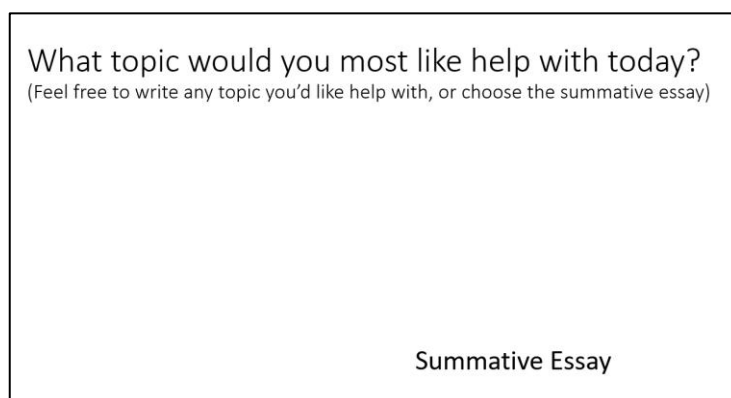
Week 9 Check List		✓
Disease & Immunity Learning Strip (Materials for these are available in Learning strip)		
Week 9	Lectures	3. Innate Immunity
		4. Inflammatory Response
	Enhancement materials	
Workshop (Attend your timetabled session)		How to Improve Your Essay Make sure you have the feedback from your formative essay with you
Summative Assignment		
Check the Summative Assessment folder for details of this assessment		
View resources at the end of Evolution Learning Strip for additional materials on this topic		
Exam Preparation		
Attend your timetabled live Q&A session to get practice MCQs, ask us questions and get help with any troublesome topics		
Make sure you look at the "What to Know" documents that Kelly has posted as an announcement		
Important University Announcement		
At 1:45pm on Friday 20/11 all students were sent an email containing very important information. Please make sure you have read this email by the end of this week.		

Figure 2: An example of the weekly checklists that were emailed out on a Sunday evening, to all students studying on the biology Foundation Year modules at the University of Anglia.

A second common topic that the students fed back to us in these early, anonymous discussions was that they wanted synchronous lectures. We had a few discussions about this both with each other as the main teaching team, but also involving the students, and ultimately we decided to hold firm on our decision to keep these asynchronous, placing faith in our gut feeling that this was not the best use of synchronous time. We felt strongly that given the upheaval, frequently changing plans and circumstances (for students and staff), we wanted to keep the lecture format and delivery as constant as we could. This ensured that the students were able to engage with the main subject content at a time and place that was convenient for them, rather than at the time that had been dictated by a space in the schedule and that they could re-watch any parts of the lecture that they felt they needed to. Interestingly, by the end of semester 1, requests for synchronous lectures were rarely being made and when invited to suggest improvements that could be made for their second semester module, no students asked for synchronous lectures to be considered, but we did receive several comments such as the below about the asynchronous lectures: "You guys know you are doing well when we are struggling to think of improvements [to suggest]" (Medicine Gateway student), and "Kelly has a way of making the lectures so engaging and you can tell she really enjoys teaching us about it" (Biological Sciences Foundation Year student).

Towards the middle of the semester we were starting to feel that we were making great progress in terms of the rapport we were building with the students and they were starting to show that they were comfortable with us by the questions they were asking and the insights they were giving us into their lives. Much of this support and particularly answers to questions, was coming via the weekly synchronous workshops rather than the weekly optional Q&A sessions. Timetabling may have influenced this as the workshops were always on a Monday and the Q&A sessions were always on Thursday and Fridays. But we wanted to encourage the students to access all of the support available to them and ensure that we could devote as much time as possible to answering their questions, without taking time out of the workshops to do that. So we changed our approach to the Q&A sessions and started offering five to six multiple-

choice questions at the start of each session. Within a week we saw attendance at the Q&A sessions go from two to four students attending to 25+ students attending each session, with one session regularly having 50 attendees. The sessions always began with a blank slide being offered which asked the students what topic they needed help with that day (Figure 3). Once the students started attending these sessions more regularly, this opening slide quickly also became the source of interesting conversations encouraging both the students to interact with us but also with each other. We were often asked when students were entering the session how a practical session had gone or whether certain students were feeling better or had enjoyed watching a particular documentary. We also found ourselves receiving unsolicited comments on how the students found the sessions valuable, such as “These workshops make me feel less stressed” (Biological Sciences Foundation Year students). This relaxed start to these sessions certainly helped with fostering the feeling of community and togetherness that many of the students said that they valued, as evidenced by comments such as this from a Pharmacy Foundation Year students: “I really love that you are building a connection with us and make it a lot easier to talk to you.”



What topic would you most like help with today?
(Feel free to write any topic you'd like help with, or choose the summative essay)

Summative Essay

Figure 3: An example of the opening slide used in the optional question and answer sessions run on the semester 1 Introductory Biology Foundation Year module at the University of Anglia.

Winter Was Coming – Reflecting on Semester 1

Throughout semester 1 we had developed a lovely rapport with the majority of our students. They had shared their challenges with us and we had not hidden the challenges of the pandemic from them. Together we had endured a lockdown, multiple stints of self-isolation, positive Covid test results, poorly family members and countless PCR tests. The students had (virtually) met our pets, small children and heard about our near-obsession with particular loose leaf teas. Throughout all of this, we were open and honest with them and for the most part, they were responsive and engaged well with us and our sessions. We had managed to meet many of them in face-to-face laboratory sessions and these had gone incredibly well, but the pandemic was taking its toll on us all.

When the winter break arrived, staff and students alike were mentally drained. Academic fatigue was setting in and the break was welcomed by many, but not all. We were acutely aware that for some of our students the winter break brought additional challenges such as even more upheaval, a return to a stressful “home” environment and the lack of much-needed structure. For the teaching team the break from timetabled teaching meant an opportunity to pause and reflect on what we had learned from the previous 12 weeks and we took time to appreciate

what we had achieved throughout the semester. We discussed what we thought needed to change and put plans in place to expand on certain aspects of our approach and to streamline others.

Semester 2 – Strengthening Our Sense of Community

There were key differences between the start of semester 2 compared to semester 1. We entered semester 2 in a national lockdown. This meant we knew that there would likely be no face-to-face teaching at all before the Easter break, 12 weeks later. Like us, the students now had some experience of blended learning and learning via virtual teaching spaces, and thus we all entered semester 2 with a better idea of what to expect. For some this prior knowledge gave them some reassurance; for others it meant increased uncertainty and anxiety. There was also the added boost that for most of the students on the module, their end of semester 1 exam had gone well (mean mark \pm standard deviation = $84.7\% \pm 10.4$, $n = 200$) – for most, well enough that they knew they were on track to progress to their chosen degree programme at the end of the year. Not only did this give a boost to the students' self-esteem and belief in themselves, but it also gave them faith in us and the approach that we were taking.

The January 2021 lockdown also meant that many of our students had opted not to return to their term-time accommodation and thus our students, whilst receiving all teaching virtually, were more geographically spread out than they had been in semester 1. For those students with a disrupted or unsettled home environment, this meant additional stresses in an already challenging time. UEA repeatedly encouraged students that if they needed to return to campus for their own well-being, to access our support services or to access a better work environment that they would be supported to do so. As the semester went on, we saw more students returning to campus for their own well-being and to enable them to focus on their studies.

The January lockdown also meant for us that we knew with certainty that we would have to juggle our teaching around supporting our own children with their home learning. The foundations that we had laid in semester 1 when building our student learning community became more important than either of us had expected. Thus with a few less known unknowns than in September, so began semester 2. Far more than in previous years, online learning had enabled us to regularly engage our students in informal feedback during teaching sessions (Figure 4) as well as conducting mid-module reviews (Figure 5). The student voice was amplified by these regular opportunities for feedback, with a greater proportion of the student cohort sharing their voice with us. We knew that our students were feeling positive about the approach we were taking and the strategies put in place but we also felt that we could do even better. From semester 1 we continued providing the weekly checklists, the regular well-being check-ins and the optional weekly Q&A sessions with MCQ starters. The changes that we brought in for the second semester all related to how we presented information to the students and improved signposting to further sources of support.

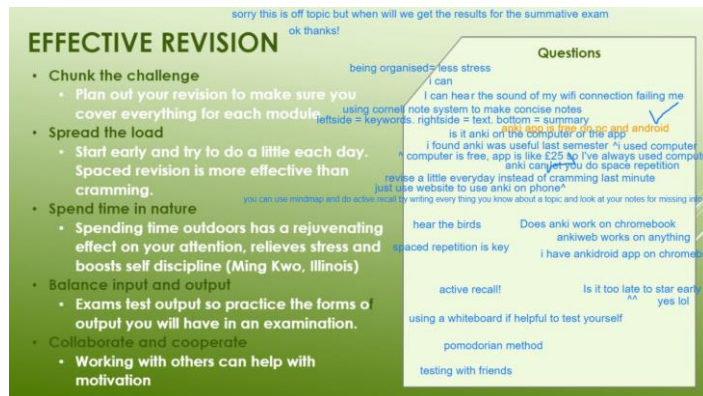
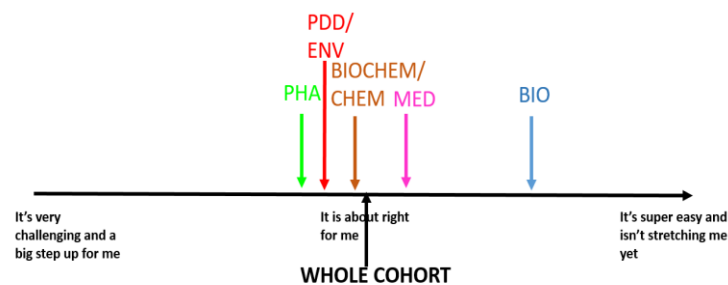


Figure 4: An example of the approach taken to obtaining regular informal feedback for students studying on the biology Foundation Year modules at the University of Anglia.

- a) On the scale below please mark how you are finding the level of the content of this module



- b) How satisfied are you with the delivery of this module?

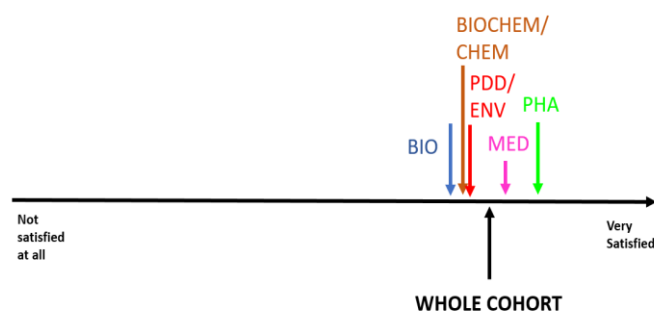


Figure 5: An example of the entire cohort mid-module review summary for students studying on the biology Foundation Year modules at the University of Anglia. a) is from the semester 1 Introductory Biology module and b) is from the semester 2 Further Biology module.

During the first semester, we had been using online discussion boards within Blackboard as an opportunity for students to ask us questions as well as for them to be able to see the answers to previously asked questions. Engagement with these discussion boards was, com-

pared to previous years, pretty poor (Table 1). Low numbers of students were using the boards but those who were, were accessing them repeatedly (Table 1). This suggested that perhaps students just were not really aware of the boards and/or their purpose. So we started enthusiastically signposting students to the discussion boards. If questions were asked in a teaching session which we had recently posted an answer to on the boards, we directed the students to the board to find the answer. If a question was asked right at the end of a session as we were due to teach elsewhere, we posted the answer in the discussion board later that same day. When assessment deadlines were approaching, we set up specific boards for questions about them. Within a few weeks we saw an increase in traffic to the boards; though, it was still relatively few students engaging with the boards, they were doing so far more frequently than had been seen in semester 1 (Table 1). There is some evidence from within our department that suggests that students who use discussion boards most frequently are those who are engaging with their studies and seeking help, typically those students who are achieving marks approximately around the 2:i/2:ii classification (Gulliver, 2021). So it may be that students achieving marks outside of this range are comfortable with the marks they are achieving or perhaps are lurking on discussion boards or seeking support by other means (Arnold and Paulus, 2010; Dened, 2008).

	Semester 1 (Introductory Biology, 215 students enrolled)	Semester 2 (Further Biology, 210 students enrolled)	Change across semesters
Total number of posts	196	455	+132%
Total number of participants	47	57	+21%
Proportion of enrolled students using the boards	21.9%	27.1%	+5.2%
Average number of posts per participant	4.17	8	+91.8%

Table 1: The number of interactions with and frequency of use of discussion boards employed on the Blackboard VLE for two biology Foundation Year modules at the University of Anglia, one module in semester 1 and the second in semester 2.

The final change that we made for semester 2 was to streamline and simplify a few aspects namely the preparation and delivery of the practical sessions, the organisation of the VLE and overall the delivery of important messages and signposting to information. For the pre-practical materials we continued to provide materials via Padlets but with a clearer and simpler flow of tasks and information. Whilst the practicals in semester 1 were able to take place face-to-face, we knew that the semester 2 practicals were going to be virtual, at least until the Easter break. We planned for at least two members of staff to be involved in each practical, one to be on screen and another to manage the questions coming in via the chat function (for more detail on this see Gulliver & Edmunds, 2021).

Lessons Learned for Future Planning

The last academic year saw a seismic shift in Higher Education and the sector will never be the same again (Hillman, 2020; Witze, 2020; Dormehl, 2021). The academic year 2020-21 was unrelenting. Personally, we threw everything we had into supporting the students, constantly evaluating and reflecting on the regular feedback coming from our students. But as the pandemic continues and as we face yet further uncertainty around future restrictions and social distancing measures, we look ahead to at least another academic year of uncertainty, fire-fighting emerging and re-emerging issues and providing increasing levels of support to our students. How many years can we keep up that momentum for? What support will we need to enable us to keep on effectively supporting our students and each other? And if and when we reach a point where we can't continue, be that through the direct or indirect impacts of the pandemic then who will provide the support for the students because this year, more than ever, the students have needed the support that came from us, as outsiders to their inner circle. Together with our students we built a community based on openness, honesty, shared experiences and empathy. Whilst we were not all weathering the same storm, we were all in a boat on rough seas but we were in it together and there are many important and valuable lessons that we learned along the way.

Looking ahead to the next academic year and beyond, we are taking with us lessons about the importance of building a strong rapport with our students early in the semester. Through gaining the confidence of our students, we were better able to support them through an incredibly challenging academic year as they made their transition into university. Key to gaining their trust was our approach to regularly asking for and providing feedback (i.e., our anonymous feedback slides offered in almost all live sessions) and clear guidance to support their learning (i.e., the weekly checklists). And these, combined with our strategies to support their wellbeing (i.e., our check-in slides and informal weekly Q&A sessions) are what we will take forward into our future planning.

In summary, the tools and techniques adopted during the 2020-21 academic year for two biology Foundation Year modules at the University of Anglia, each with an enrolment of a little over 200 students were:

1. Weekly checklists which were uploaded to our Blackboard VLE and emailed to all students at the start of the week with the aim of supporting students in managing their studies and planning their self-study. These checklists were both a physical checklist (one table in a Word document) and a short (approximately two minutes long) explanatory video.
2. The opportunity to provide feedback on any aspect of the course and to do so anonymously. These were typically in the format of blank slides which the students could write on or, in some cases, to circle options to indicate their confidence with or feelings about a topic or situation. These were offered in almost all synchronous, online teaching sessions.
3. Check-in slides offered at least once a week at the start of a synchronous workshops in which all students were on the same or closely related courses. A variety of formats were used for these to minimise respondent fatigue, but all formats had a common approach of asking students to anonymously circle or mark on a slide to indicate their current levels of anxiety and energy. These slides were then always discussed and where needed, appropriate support signposted.

4. Informal, online weekly question and answer sessions. These were optional sessions but were best attended when added to student timetables and when practice multiple choice questions were included as part of the session, usually five to seven questions per session. These practice questions motivated students to attend and also acted as ice breakers and opportunities to identify confusion and misconceptions.

Acknowledgments

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