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Student wellbeing and technostress: critical learning design factors

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Presentation abstract

In higher education, student wellbeing is now the responsibility of all of us. During the Covid-19 pandemic, the pivot by universities to online learning positioned technology as a panacea, and saw students being signposted to digital resources for digital skills and wellbeing support. With digital wellbeing taking on new dimensions, the presentation provided a timely moment to consider how technostress impacts our students. Our use of the concept, technostress, is derived from the Student Minds report (2021) entitled 'Life in a pandemic'. It refers to the stress experienced by students when using technology within higher education, given the sector's expectations of their technical abilities. Our paper reported on the results of a digital health and wellbeing survey (n=103) with surprising responses from 80 students to the survey question about technostress.

The findings indicate students feel let down by teaching staff who struggle with the mediating tools of their online trade – technology – and show little empathy for those they teach. McDougall and Potter (2018) argue that human-centred approaches, prioritising staff and students' immediate and lifelong wellbeing rather than the mere use of digital tools, are key to success in developing policies for student wellbeing.

The presentation focused on the issues identified by students and shared their suggested solutions. The findings indicate that the formulaic approaches offered by academic staff to students in response to their digital health and wellbeing challenges, to 'go there to be fixed', will chime with learning developers championing student support as emancipatory practice. Attendees were invited to reflect on their own experience of technostress during the Covid-19 pandemic and share their considerations as to how to widen understanding

of this phenomenon. The presentation concluded by recommending an integrated model for framing student wellbeing underpinned with exceptional learning design and considered the optimum on a continuum for the use of technological tools.

Community response

David Biggins and Debbie Holley's discussion of their study stimulated attendees' reflections on multiple layers of technostress experienced by students and staff. Attendees contributed insights from their lived experiences of learning with technology and, as educators, adapting to developing and facilitating learning with technology. This led to rich responses from the community, arranged thematically, offering personal and wider considerations for learning development and higher education.

1) Lived experiences of educators' challenges in using technology for learning

A contributor offered another perspective of teachers' struggles to use technology from their earlier learning experiences:

> This presentation was of particular interest to me, especially as a student whose academic learning ran parallel to the advancement of technology. In my school years, I witnessed first-hand the issues with integrating technology into the classroom. In my first years of schooling the number of computers in our school was in the single digits, and whiteboards were the norm. By the time I left for secondary school, this had increased to a computer lab and smartboards in every classroom.
>
> This study echoes an issue that is indicative of a larger problem: often staff are not trained on the tools they are expected to use to teach. Even before the advent of touchscreens, my teachers were having issues: 'You have to press the button in the corner to make it full screen!', was something of a mantra for many of my secondary school lessons.

A learning developer empathised with students, while questioning whether academic staff do not care for their wellbeing. Contributing their own experience during the pandemic,

they highlighted the potential for misunderstandings amid the challenges of learning and teaching online:

> Technostress is something I have been acutely aware of for some time. For example, as a learning developer working with students online, four hours with the camera on me is infinitely more stressful than four hours face-to-face. So, I'm not surprised that students feel it too. The point about students feeling like lecturers care less about them and are less approachable online does feel like a fallacy – I think teachers went out of their way with what, in many cases, was a pretty poor technological skillset at the point of the 'pivot', to upskill and think about their methods of engaging students very quickly. A student at our university memorably roasted the technical abilities of the academic staff in their department while I collected my click and collect shopping from him at Asda in the height of the first lockdown. Shame that there were these feelings of 'them and us'. I wonder how much teachers appearing not to care was the result of us really not knowing what to do, or how to seem to care, when faced with a load of blank boxes on Zoom and feeling like we were talking to a void.

For some attendees, the session was a welcome opportunity to consider how their own experiences were shared by other teaching teams within other universities, and it stimulated thoughts for how they and their university might adapt their learning design to enhance student wellbeing:

> The session highlighted several aspects for me. One was that the frustrations my students encounter with the VLE are not unique to our university. There are solutions, but with issues such as workload those changes may be difficult or take quite a bit of time to make! I really liked what was said about considering the pedagogy behind why we use certain tools online, or the impact the choices have on learning. I'm going to be keeping that in the forefront of my mind as I design an online course. The session also reminded me again of the need to personally connect with students to make them feel seen. As was pointed out, this can be difficult in large cohorts, but, for example, for an online module I teach that supports nurses with their academic English, I feel I could fairly easily make time in the schedule to meet students one-to-one earlier on to build that connection that may be harder in a group with cameras often off. Thank you!

As another attendee noted, Biggins and Holley shared their findings in a time of transition when universities are once more adapting how they use technology, and the wider ramifications this entails, following the rapid transition to online learning in 2020:

> Very useful to identify commonalities in our challenges and issues – as well as the positives that have been identified with the emergency pivot to online. It will be interesting to see how the sector and how individual institutions navigate and steer their way to a 'new normal' - and what effect their chosen 'blend' will have on recruitment.

However, it was noted that amid students' requests for assistance some academic responses long familiar to learning developers continued throughout the pandemic:

> The part about students being sent to LD to be 'fixed', vs. us wanting to badge it as emancipatory practice, is achingly familiar! I think progress is being made about it, slowly, though.

2) A need for institutional responses to balance the convenience and challenges of technology

While the study highlighted the convenience of online learning for some students, the finding that the lack of support for learning digital skills contributed to their stress had resonance for attendees' experiences of different educational settings:

> Licences for software can easily exceed thousands of pounds in costs, and often the features that are being paid for are not used to their fullest extent, if at all. As mentioned by the study, when it comes to using this software, students are often expected to just 'get on with it'. Due to the large sums of money involved, finite budgets, and licensing often being done in annual increments, it can, also, be extremely difficult to change software that is not performing adequately.

> From first-hand experience, schools can often neglect students' user experience (UX), how it feels for students when interacting with a product, and their user interface (UI), the touchpoints a student interacts with, when selecting software to

> benefit their students' learning. This study exposed an interesting split in expectations of students for software they are expected to use: students either wanted software to be intrinsically easy to use, or to be provided training on the specific software. It would be useful to know if the split varied in different courses and faculties, particularly between more technology focussed courses and courses with a non-technical focus. This split is interesting because it represents a common debate in the UX and UI communities over whether ease-of-use should be prioritised over functionality. Whilst there are no easy solutions for this split, staff responsible for the procurement of software should keep these competing schools of thought in mind.

When Biggins and Holley invited session attendees to offer their students' views of online learning (see Figure 1), attendees highlighted similar mixed perceptions. This indicates the complexity of students' experiences of technology-led learning design in many universities, and the necessity of enhancing students' wellbeing and learning experiences while offering convenience and choice:

> It was fascinating to see the student responses you had collected and shared with us. I wonder how we can balance these students' experiences of 'technostress' and potential negative impacts on their learning with their desires for the convenience of online delivery? Some institutions seem to think it's best to just take away the choice for online almost entirely, with the perspective that learning and engagement are simply 'better' in person. But as your presentation showed (and this certainly aligns with our Learning Development team's own data and anecdotal feedback from students), there is a very wide variety of student desires and needs when it comes to learning (e.g., pace/timing of course, accessibility of materials, etc.). Students want (or need) options/choice, and many want convenience even if they don't see it as best for their engagement.
>
> How can we support students to get the most out of even the most 'convenient' options without sacrificing learning, social connection, etc.?

The Mentimeter poll of potential solutions to technostress (Figure 2), completed by the session attendees, indicates that rather than students needing to go 'over there to be

fixed', staff and institutional leadership should take a positive lead on enhancing their skills and provision:

> As you suggested in your presentation, this will come down to learning design – but as the Menti poll was, I think, getting at, we need institutional leadership to see the value in up-skilling both students and staff in the areas of digital competencies, and, I would say, digital learning/teaching skills, rather than seeing those areas as something temporary and restricted to 'Covid times'.
>
> Whilst students may have an environmental advantage over staff, this is by no means an excuse to be complacent. Based on the results of this study, it is clear to me that staff need more training to increase their digital confidence and technical proficiency. As stated in the study, too much training revolves around specific actions within software. I believe a more holistic and pedagogic approach is necessary, one that teaches these underlying transferable technical skills that students will have picked up. Training materials and tutorials make assumptions about a user's underlying knowledge of the technical aspects of the software and will skip over fundamentals to teach the software-specific knowledge. This is not the responsibility of the software vendors to fix, in fact the opposite is true, education providers should be sure that their staff demonstrate a baseline level of technical proficiency and knowledge.

3) Next steps and additional questions

The presentation raised a number of questions from attendees for further research:

> Another interesting point highlighted by the study was that staff consistently believe that students are more technically proficient than them. Again, this would be useful to see broken down by subject area to see how specific courses affect this perception. I believe this to be a side effect of many current students having grown up with technology, it being an inherent part of their lives throughout their developing years. However, I would be interested to see if current teenagers show less transferable technical knowledge due to the increased prevalence of closed-box technology with simplified optioneering that allows only for limited (mostly cosmetic) user changes. Technology available throughout the 2000's and early

2010's was on the whole much more open to user changes and promoted a technical curiosity that leads to the development of these transferable skills.

Overall, I found this presentation extremely interesting; it raised several very good points about technology's integration into education that, as of yet, the majority of education providers have failed to solve. The transition to remote learning has been challenging on all fronts, and both students and staff are continually learning new ways to use technology to their benefit. However, this presentation correctly identifies a long-standing problem with staff proficiency that has been exacerbated by the current conditions. To further build on this study, a per-subject breakdown of their results would be interesting to see, and I believe could lead to some interesting conclusions about different subject areas. Additionally, a larger sample size would lead to further useful conclusions being drawn.

Authors' reflection

The content for our presentation came from a student questionnaire. This is a link to an empty version of the questionnaire so that you can see what was asked: https://bit.ly/aldinhe22. The link is active until the next ALDinHE Conference in 2023 or by request to the authors.

The questionnaire consisted of six sections, with the main headings derived from the literature we summarised in our presentation. The six sections focused on:

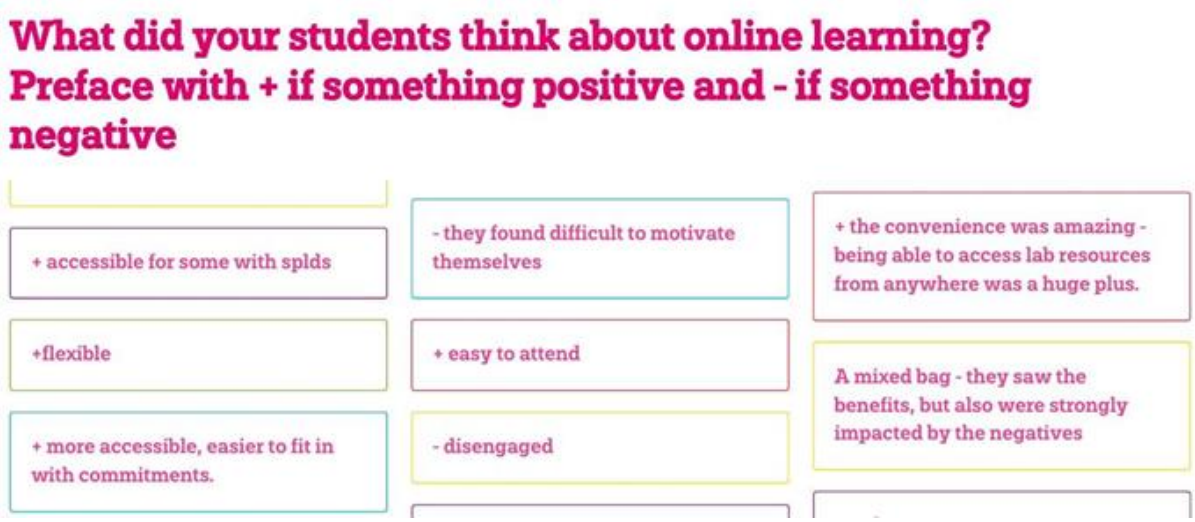
1. Student demographics: for example, year of student, sex, and faculty.
2. Technology access and awareness questions, using five-point Likert-type response questions: for example, phone, social media, and the VLE.
3. Ease of access to VLE components, using five-point Likert-type questions.
4. Where students accessed learning materials.
5. An open-text question about how staff could better support students.
6. A section on learning during a pandemic, asking how students had been affected, their response to technostress, and the extent to which the institution supported students. Students were also asked if they had accessed the institution's wellbeing resources.

For this presentation we chose to focus on student wellbeing and the impact technostress had on their learning experience. Our research reported nuances in students' responses to technostress. Respondents showed a clear understanding of the dangers of technostress and gave examples of actions taken, for example, taking walks, breaks, days away from the computer, and designated time off-screen. The negative effects of technostress were reported to be low motivation, difficulty focusing, an increased tendency to procrastinate, isolation, anxiety, and a great deal of frustration.

Students' expectations were not met in terms of the institution's ability to respond effectively to the pandemic; a particular area of concern was the impact on their learning. In common with all institutions, our own institution ramped up the resources available to students and signposted them to staff and students in many places and on many occasions. Our findings showed that students in general ignored the available resources, with 68% reporting that they did not access the wellbeing resources.

We were keen to engage with our attendees and selected the audience response application, Mentimeter, a tool used by many institutions to gather instant feedback about the positive and negative aspects of online learning. Figure 1 shows an extract of some of the responses.

Figure 1. Students' thoughts on online learning.



From research undertaken by the authors into the use of learning in a digital environment, a digital learning maturity model (DLMM) has been developed (Biggins, Holley and Supa,

2022). From this model and its research, we extracted seven factors that were perceived to be important in order to gain the view of the attendees on their relative priority.

The attendees were asked to rank the seven factors by priority (Figure 2). The items are listed in descending order of priority.

Figure 2. Ranking of the factors in digital learning.

Reflecting on the attendees' ranking of the seven factors, it was not surprising that the least important factor was technical training for students. There is a belief that students have a broad range of well-developed technical abilities and the attendees' responses reflected this. However, our survey of students demonstrated that their digital skills are often strong **only** in certain areas such as social media and the use of mobile technologies. In areas where higher education staff think students are strong, for example in the use of the VLE and the tools typically deployed in learning environments, this is not the case, and it is in these areas that students report technostress.

Ranking staff training as a priority is an interesting priority, and we think this is due to the comments we identified as student frustration with us being unable to effectively use the tools which we ask them to use! Many surveys, including the JISC student survey (2021) and the NSS's free text comments (2022), flag up student dissatisfaction. However, many institutions do not offer staff the time to develop enhanced skills, and there are many

demands on staff time. The other responses and their ranking broadly reflect the priorities from our questionnaire.

The learning development community have the student experience central to their whole ethos, and where this presentation can assist is by offering a student experience evidence base with which to underpin the excellent, locally contextualised initiatives as we start a new academic year. It is clear that students value academic expertise and guidance yet find it frustrating that we are unable to use the digital tools we advocate. In terms of digital health and wellbeing, students display a mature appreciation of the potential hazards of technostress and the care of their own wellbeing; they are partners in their learning, and there is much to be learned from their experiences. The most requested feedback item from students completing the survey was a call for academic staff to ‘listen better, empathise more, and provide more support for students’.

Collaborative research

We would be interested to talk to any institution willing to run the same/similar survey at their own institution and to use the information collected in collaborative research or a future ALDinHE presentation.

Acknowledgments

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Further reading

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