Activities, Achievements and Abilities: a model for embedding mental wellbeing in technology-enhanced learning

K. Lister

Abstract

Mental wellbeing, of both students and staff, is a significant issue in further and higher education. Increasing numbers of students are experiencing mental health difficulties, and staff are increasingly under pressure. Evidence suggests that this may be particularly critical in distance and technology-enhanced learning, as learners may be more isolated and less likely to take advantage of campus-based support. It is commonly recognised in the literature that there is a need to change the culture of post-secondary education, from a culture of competitiveness, over-work and pressure, to a culture that values wellbeing and joy, and one in which these values are embedded in teaching and learning.

This paper draws on empirical data from interviews (N=21), focus groups (N=116) and surveys (N=1250) with higher education staff and students about how wellbeing can effectively be embedded in technology-enhanced learning. Participants' positive experiences and suggestions are brought together into a model that can be easily adopted by teachers, tutors and students and can enhance wellbeing in technology-enhanced learning. The AAA model consists of three focal areas, each beginning with 'A':

- **Activities** that bring comfort
- **Achievements** that spark joy
- **Abilities** around managing and enhancing wellbeing

This paper presents and exemplifies this model, with a particular focus on how it can be used effectively in technology-enhanced learning, with a view to embedding wellbeing in teaching and learning.

Keywords: mental wellbeing, mental health, technology-enhanced learning, students, education, inclusion

1   INTRODUCTION

In recent years, higher education has become increasing aware of the importance of staff and student mental health and wellbeing. Media attention and high profile individual cases (e.g.[1]) have ensured that student wellbeing is of high priority in education sector policy and strategy [2], [3] and is increasingly high on academic research agendas [4]. Research shows that mental health can have a significant impact on students' likelihood of study success [5], [6], and also suggests that the higher education may negatively affect students' mental health [7]–[10].

Recent studies have also drawn attention to university staff wellbeing, highlighting that it is intrinsically linked to student wellbeing [11]. Higher education (HE) is known for cultivating competitiveness, potentially toxic cultures and propagating stress for both staff and students [7], [12]–[15], and it is unreasonable to expect staff to nurture student wellbeing and create positive learning environments when they themselves are not supported. In line with broader changes in thinking around mental health [16], there are calls for universities to take a more proactive and holistic approach to supporting staff and student wellbeing [2], [3], [17]. Instead of a traditional, individualistic, deficit model, where people are perceived as problems, there is a need to take a social model approach [18], focusing on *barriers* and *enablers* [19] to mental wellbeing within environments, how barriers can be removed or mitigated and how enablers can be enhanced and expanded [10], [20], [21].

Barriers and enablers to wellbeing may be environmental, physical, social or attitudinal [22]; in an HE environment they may relate to access [23], curricula and pedagogy [24], administrative processes and support [25]–[28], institutional culture and practice [12], [29], or other elements of student journeys [30]. Applying the social model to mental wellbeing means identifying and reducing systemic, environmental, and attitudinal issues that present barriers to mental health, and identifying and enhancing positive factors, or enablers to wellbeing.

This research is founded on the premise that barriers and enablers to mental wellbeing reside in cultures, practices and study environments, and that it is the responsibility of education providers to adapt to reduce these. This paper explores empirical data from a study in the UK Open University (OU), drawing on interviews (N=21), focus groups (N=116) and surveys (N=1250) with higher education staff and students. The study aimed to identify barriers and enablers to student mental wellbeing, and explore how wellbeing can effectively be embedded in technology-enhanced learning. Barriers and suggestions for solutions arising from the study are shared in [10], [20], [21], [24], [31]; this paper takes a different perspective and explores participants' positive experiences, enablers to wellbeing and suggestions for how these can be embedded throughout technology-enhanced learning.

2 METHODOLOGY

The data discussed in this publication is drawn from three distinct stages of a wider project. More information about the wider project can be found in [10], [20], [21], [24].

Stage 1: Lived experience of barriers and enablers

Stage 1 of the study aimed to explore students' and tutors' lived experience of barriers and enablers to mental wellbeing in distance learning. The methods for this stage consisted of semi-structured interviews with students and tutors, following a narrative inquiry approach [32]. Students were recruited via email invitation sent to a stratified sample, identified and conducted by the University's Surveys team. Tutors were recruited via internal email invitation.

Sixteen students told stories of their experiences, and five tutors shared experiences of students they had supported (participant details are shown in table 1). Interview transcripts were analysed using reflexive thematic analysis [33], and barriers and enablers identified were structured into a taxonomy [10] and vignettes [21] that were used in other stages of the study.

Table 1. Interview participant demographics.

Participant characteristics		Number	%
Role	Student	16	76.2%
	Tutor	5	23.8%
Age (students only)	21-30	6	37.5%
	31-50	6	37.5%
	51-70	4	25%
Mental health disclosure (students only)	Yes	15	93.7%
	No	1	6.3%
Gender	Female	14	66.7%
	Male	7	33.3%

More detailed information on the methods used in this stage can be found in [10].

Stage 2: Stakeholder perceptions of barriers and enablers, and ideas for solutions

Stage 2 of this study aimed to explore wider university stakeholder perceptions of barriers and enablers, and to identify their ideas for solutions. The method for this stage consisted of collaborative focus group events; three events were held in total with 107 staff and nine students (participant roles are shown in table 2). Staff participants were recruited via internal calls for participants, both via email and a news item on the intranet. Students were recruited via a Students Association call for participants and by an email to stage 1 respondents who had expressed an interest.

In the focus groups, participants analysed vignettes created from the stage 1 narratives, identified barriers and enablers to wellbeing, and co-constructed ideas for solutions that may reduce barriers and enhance the impact of enablers. Their responses and ideas were captured in writing (via worksheets) and discussions were recorded and transcribed. The resulting data was analysed using reflective thematic analysis [33].

Table 2. Focus group participant roles.

Participant role	Number	%
Lecturers and curriculum managers	23	19.8%
Tutors	20	17.2%
Learning technologists	12	10.3%
Student support staff	18	15.5%
Students	9	7.8%
Strategy/leadership	7	6.0%
Others (Library, Careers, inclusion and equality staff)	27	23.3%

This paper shares the findings that related to enablers to wellbeing, or aspects of courses, modules and study environments that participants believe contribute positively to student mental health. More detailed information on the methods and tools used in this stage, as well as broader findings, can be found in [20], [21].

Stage 3: Wider experiences and perceptions of barriers, enablers and solutions

Stage 3 of the study aimed to gather larger-scale data on barriers and enablers to mental wellbeing, solutions that may address barriers, and ideas for how solutions and enablers can be embedded in technology-enhanced learning. Using surveys as a method, this stage aimed to build on the findings from previous stages with a larger and more diverse group of participants. Samples of participants were invited to complete the survey via email invitation; both staff and student samples were selected by teams within the university. Detailed results can be found in [31].

This paper shares the qualitative analysis of one open question from each survey in order to add additional insight to the findings from stages 1 and 2. Students were asked in an open question to share examples of things that helped their mental health while studying; the resulting comments were analysed using reflexive thematic analysis [33]. Staff were asked in an open question to share what thoughts they had on how mental wellbeing could be embedded in learning; resulting themes from these comments are shared with the view that they can be applied to a model of wellbeing.

Responses were received from 584 students and 666 staff. Student respondent demographics are shown in table 3 and staff respondent roles are shown in table 4.

Table 3. Student survey respondent demographics.

Participant demographics		Number	%
Age	<25	120	20.5%
	26-35	155	26.5%
	36-45	115	19.7%
	46-55	121	20.7%
	>56	73	12.5%
Mental health disclosure	Yes	340	58.2%
	No	244	41.7%
Gender	Female	432	73.9%
	Male	152	26.0%

Table 4. Staff survey respondent roles.

Participant role	Number	%
Academic/faculty	196	24.5%
Tutors	274	34.3%
Learning technologists	54	27.0%
Student support staff	116	38.7%
Library	26	37.1%

More detailed information on the methods and instruments used in this stage can be found in [31].

3 RESULTS

The enablers of positive mental wellbeing that were identified in each of the three stages are described in the following subsections.

3.1 Stage 1: Lived experience of enablers

Positive activities, such as hobbies, volunteering or raising awareness of causes emerged as key enablers for mental wellbeing in study. Taking part in positive activities outside of the course provided 'escapism', 'made me feel like a real person' (student 10) and had a substantial impact on wellbeing. Souvenirs, reminders and outputs from positive activities were also mentioned as beneficial for sustaining mental wellbeing; 'it was just like I can remember exactly those feelings and that is something that I can, I can use' (student 10). These included photo albums ('to sort of treasure' – student 10) and social media pages. Another student said 'I'm currently producing a Facebook page, and it's being rolled out. Which makes me feel whole again, because I feel like I'm helping people' (Student 11).

Positive activities within a course were also enablers for mental wellbeing. For example, although groupwork was generally challenging for students, group activities in forums were highlighted as positive for wellbeing. Student 1 said 'there's a lot of support as well, you know, on the forums' and student 14 said 'the student forums are fantastic, and the moderators they know their stuff, they really do.' Exciting or highly relevant curriculum content could also enable positive mental health. Student 7 said: 'I find that my mental health has improved massively since I've been doing the modules…. And it's just kind of benefited me to learn coping mechanisms, as well.' Study could also provide escapism or a distraction from mental health issues; student 10 said 'it completely takes me away from how I feel, and I feel like a different person while I'm studying' and student 4 said 'it kept me distracted from my mental health… You could just kind of lose yourself in it.'

Achievements and progression were also strong enablers for student wellbeing. One tutor recounted the 'tremendous sense of achievement' students can feel at the end of a module (Tutor 3); another talked about the 'small triumphs and the small things' that can mean so much (Tutor 4). Student 14 said: 'you've got to celebrate achievements, every distinction, you've got to take that minute to go, oh my God, look at me, I did that!'. When asked what helped their mental wellbeing most in study, one student said 'the sense of achievement I get when I've got a good score' (Student 6), and another said: 'I feel like you keep evolving and you know that literally every year you're gonna evolve. Yeah. That's how it feels. So amazing.' (Student 3)

Abilities, skills and strategies were a vital part of development in study, and were both a key enabler when present, and a clear barrier when not. Tutor 1 told the story of a student where 'it wasn't a problem with the material, it was needing help learning how to study effectively... Once we'd addressed those, that student flew.' Student 1 also referenced this; 'in the early days people were trying to work out how to study. That's my experience of it.' Student 2 gave specific examples of learning how to take notes, and how to revise, student 3 talked about learning to concentrate for longer, and student 7 talked about learning time management skills. All three students talked about the barrier it created for them until they learned these skills, but how gaining confidence in these abilities was an enabler for mental wellbeing.

Participants also talked about study abilities they had learned that they could also use to manage their mental health. Student 2 talked about how she breaks 'activities down into tasks. One is it helps motivation, two is I pace myself so I don't overwork…. Studying helps my mental health... And I will break it down. I'll remind myself where I'm going to be…. I'm learning my skills as it's going on.' Student 10 talked about 'using your research skills to pick apart your self-criticality', i.e. to critically analyse his

own negative thought patterns. Student 11 talked about applying mental health related skills to help her succeed in education; 'It's good to have a plan. Very structured, I like a structure. I suppose it actually helps. It's a strength. And I've learned to channel that into my education.' Students 12 and 3 used music to 'keep me feeling human' and motivate them to study. Student 13 talked about learning how to detach; 'you need to get to a point where you need to go, right. Stop. Walk away.' Student 15 talked about learning to prioritise: 'What I've learned to do is on those times, and you know they're not as often as they used to be, is I kind of go, what do I need to know right now?... Do I need to know that right now? Because if I don't, what I will do is I'll then skip that.' He also talked about starting to use a diary to organise himself, having 'never used the diary in my life' and the difference it made to his studies and his life. Student 3 shared some study organisation worksheets she had found on social media and talked about the difference it made to her studies and her wellbeing, as they made her stay hydrated, 'you can like, um, colour in how many cups of water you drink' and accept when she hadn't finished everything, 'there's an area for procrastination.' These skills were learned through studying, but all had a sustained positive impact on their lives and their wellbeing.

3.2   Stage 2: Stakeholder perceptions of enablers

In contrast to the stage 1 results, the findings from stage 2 (stakeholder workshops) focused on enablers to wellbeing found within courses, modules and study environments.

59 references were made to positive activities within a course that could support or enable wellbeing. These were coded to the following themes:

- Community, 8 references (e.g. 'Interaction with course community')
- Curriculum, 18 references (e.g. 'Enjoyed the material given')
- Forum engagement, 7 references (e.g. 'Discussions with tutor and students on forums')
- Interacting with others, 5 references (e.g. 'Interacting with other students helped')
- Module activities, 7 references (e.g. 'Videos and multimedia' and 'Practical activities')
- Social media, 11 references (e.g. 'Social media contact to build support network')
- Having a study buddy, 3 references (e.g.' Study buddy - talking things through')

19 references were made about the positive impact on student wellbeing of recognising study-related achievements. These references were coded to the following themes:

- Assessment-related achievements, 10 references (e.g. 'Distinction on first assignment')
- Recognition of success by others, 7 references (e.g. 'Support from friends, celebration of results together')
- Marking progress, 2 references (e.g. 'studying bite-sized chunks online and seeing progress being ticked off on the study planner')

22 references were made about study-related abilities and skills, and the positive effect of those on wellbeing. These references were coded to the following themes:

- Communication skills, 1 reference ('Learned that he needs to conduct himself carefully on forums')
- Resilience, 6 references (e.g. 'She is able to bounce back after setbacks' and 'Able to move through rough patch to complete')
- Self-awareness, 6 references (e.g. 'Reached out for support when she needed it', 'Knows what she's good at' and 'Recognises condition')
- Study skills, 9 references (e.g. 'Developing study skills', 'Time management' and 'Organisation tips')

3.3   Stage 3: Wider experiences of enablers and suggestions

3.3.1   Student survey findings: enablers to wellbeing

The students were asked an open question, 'Please tell us more about anything that helped your mental health while studying at the OU.' 170 open comments were coded to the themes of activities, achievements and abilities, in order to align with findings from previous stages.

90 comments were coded as 'Activities' that could support wellbeing; 80 of these referred to university-related activities:

- Curriculum, 31 comments (e.g. 'learning new and interesting things helps not to ruminate on negative things' or 'Learning new material was exciting. I found the readings and activities very interesting')
- Community and peers, 18 comments (e.g. 'zoom meeting with some of my peers. Facebook page for peers' or 'the positivity of other students')
- Study routine,15 comments (e.g. 'Routine helped me stay on track and something to focus on.')
- Tutorials, 6 comments (e.g. 'Tutorials give me a boost to re-engage with studying')
- Study buddy/mentor, 4 comments (e.g. 'being able to find study buddies and people I could discuss things with' or 'Having a mentor')
- Extra curricula support, 3 comments (e.g. 'The Student Hub Live events. They really help as it's connection and less pressure as it's not my tutor.')
- Forums, 3 comments (e.g. 'OU forums have been great for me, I can read what others are thinking or doing, even if I don't want to post myself, it helps keep me motivated to see that others have similar issues and are keeping going')

A further 10 comments referred to activities that were not related to the university:

- Hobbies, 6 comments (e.g. 'Playing football twice a week' or 'I learnt to crochet in the holidays and I crochet when I'm stressed or unable to focus on studying. This clears my mind and soothes any anxiety I may have.')
- Pet, 2 comments (e.g. 'My dog, even though not an officially recognised support dog, he is my biggest source of support and strength')
- Social media, 2 comments (e.g. 'Creating a study Instagram helped me')

67 comments were coded as 'Achievements':

- Developing confidence and identity, 26 comments (e.g. 'I feel proud that I'm studying and getting good marks. I'm possibly a lot smarter than I think I am. I've more confidence in my own abilities' or 'the status of being a postgraduate student instead of a crazy benefit claimant')
- Assessment or marks, 14 comments (e.g. 'Good results have boosted my mood during modules. Something to get up for.')
- Sense of achievement, 13 comments (e.g. 'Sense of achievement and self worth')
- Having a purpose or goal, 8 comments (e.g. 'Having a purpose to improve my life and future has had major effect on the way I look after myself')
- Positive feedback, 3 comments (e.g. 'The positive feedback I received for my work really boosted my mental health.')
- Family proud, 3 comments (e.g. 'I feel that my dad and stepmum and mum have been very proud of me')

13 comments were coded as 'Abilities'

- Study skills, 6 comments (e.g. 'my abilities to study' or 'Relocating my studies to my local Cafe, taking breaks, listening to (quiet) music while studying')
- Self-awareness, 3 comments (e.g. 'Switching off mentally for a while to refresh' and 'Self awareness')
- Employability, 2 comments (e.g. 'Career prospects change the closer you get to the end of your studies')
- Communication skills, 1 comment ('Being able to talk to my tutor about my difficulties')
- Digital skills, 1 comment ('Being able to study online without feeling anxious')

3.3.2 Staff survey findings: embedding wellbeing in technology-enhanced learning

Finally, staff were asked what thoughts they had on how mental wellbeing could be embedded in technology-enhanced learning. They commented on the need for wellbeing to be:

- Situated in practice, e.g. 'Consider having a section on mental wellness for studying each module embedded into the module handbook with a system of ensuring that this is actually read by every student.'
- Modelled in learning design, e.g. 'Providing learning materials in smaller chunks so that they don't feel too overwhelming and building in more flexibility in assessment deadlines.'
- Tailored to student needs, e.g. 'Students face vastly different problems, so a one-size fits all approach seems unlikely to be successful. Support that is tailored to individual student needs that's delivered by well-trained and supported staff would seem most likely to succeed.'

- A ubiquitous, holistic approach, e.g. 'It's a whole system review'
- Inherent in values and culture, e.g. 'Understanding mental health and ill-health needs to become part of the culture, so that we move toward being student driven rather than systems driven'
- Built into institutional resource and strategy, e.g. 'we need to be given time and resource', 'A working group (if one does not already exist) who will continually review and keep on top of this' and 'utilising a digital first strategy'
- Embedded through partnerships, e.g. 'Have disability experts/disabled students and graduates present at a strategic level when constructing modules' and 'Encouraging AL participation in the process.'

These suggestions are applied to the 'Activities, Achievements, Abilities' model in the Discussion.

4   DISCUSSION

4.1   Activities, Achievements, Abilities

Participants' positive experiences and suggestions for wellbeing in technology-enhanced learning, drawn from the interviews in stage 1, focus groups in stage 2 and student survey in stage 3, can be brought together into a model consisting of three focal areas:

- **Activities** that bring comfort, both within and outside of the educational context

- **Achievements** that spark joy, pride and confidence

- **Abilities** around managing studies and enhancing wellbeing

These may be conceptualised as a Venn diagram, as shown in figure 1.

Figure 1: Activities, Achievements and Abilities model

Broader research has found the different elements of the model to be successful in supporting wellbeing. Positive activities have been found to be 'protective factors against mental health conditions' [34]; activities such as social media and online sharing (in particular circumstances) have been shown to support mental health [35], creative activities have been shown to be therapeutic [36], and sport and leisure activities can be protective factors [37]. Achievements that lead to improved confidence, self-esteem and stronger sense of identity have, unsurprisingly, been linked to improvement in mental health [38], although it is important that participants make time to recognise and reflect on them [30], [39]. And

of course, the link between development of abilities and skills is clear, both in a study context [40] and more broadly in life [41]. If students and staff take part in positive activities, reflect on their achievements and develop new abilities, it is likely that this may have a positive impact on their wellbeing.

4.2 Embedding wellbeing in technology-enhanced learning

The responses to the staff survey in stage 3 provide insight into how the AAA model may be embedded in technology-enhanced learning to enhance wellbeing. All three elements of the model should be:

- Situated in practice, with positive pedagogical activities, building of skills and abilities, and reflection on achievements included regularly in tutorials and classes [29]
- Modelled in learning design, with positive activities, skills building, and space for recognition of achievements baked into curricula and virtual learning environments [21]
- Tailored to student needs, e.g. via a differentiated or universal design for learning approach with additional adjustments as necessary [42], [43]
- A ubiquitous, holistic approach, where the entire university adopts an inclusive and positive culture, and staff are supported by training, guidance and expert assistance [44]–[47]
- Inherent in values and culture, so that this activity is valued, shared by staff and students, and is not tokenistic or individualistic
- Built into institutional resource and strategy, so staff have sufficient time and support to undertake this work [11]
- Embedded through partnerships with staff, students and other stakeholders, so this is a shared concern and no party is unduly burdened [2], [24]

5   CONCLUSIONS

This paper has presented a model to enhance wellbeing in technology-enhanced learning that can be adopted by teachers, tutors and students. The AAA model consists of:

- **Activities** that bring comfort, both within and outside of the educational context

- **Achievements** that spark joy, pride and confidence

- **Abilities** around managing studies and enhancing wellbeing

This paper has explored how this model can be used in technology-enhanced learning to enhance staff and student wellbeing.

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