Designing for Wellbeing: An Inclusive Learning Design Approach with Student Mental Health Vignettes

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ABSTRACT

Student mental health is a growing concern for universities; increasing numbers of students are experiencing wellbeing issues, and distance learners are particularly at risk. Evidence indicates that triggers for mental health difficulties can reside within higher education environments, systems and study practices, implying that a proactive, inclusive design approach should be considered to complement mental health service provision.

Student vignettes that illustrate experiences of mental health difficulties in study are a valuable learning design tool; they have potential to support more inclusive practice by informing learning design. This paper explores the role learning design can play in creating learning that supports student mental wellbeing, it shares vignettes created in the study, discusses a case study of their use, and gives examples of barriers students experience and learning design considerations that may address these. This method was found to be engaging and effective in illustrating barriers and in supporting practitioners to identify learning design considerations to mitigate these.

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INTRODUCTION

Student mental health is a growing concern for universities internationally (Evans et al., 2018; Hartrey et al., 2017; Sarmento, 2015). In campus-based universities in the USA, it is estimated that a third of students meet the criteria for a clinically significant mental health issue (Lipson et al., 2018), and research shows that mental health difficulties have a serious effect on students' likelihood of attaining their study goals. For example, students experiencing mental health difficulties are statistically less likely to complete and/or pass a course or module (Mojtabai et al., 2015; Richardson, 2015), they appear to attain lower grades, (Daniel et al., 2009), they are more likely to drop out of university (P. Brown, 2016; Mojtabai et al., 2015; Richardson, 2015) and they are more likely to experience long term consequences in terms of future employment, earning potential and overall health (Annapally et al., 2019; Arim & Frenette, 2019; Eisenberg et al., 2007). Additionally, students are more likely to experience or develop mental health problems than non-students, which would appear to imply that studying and university culture may be playing a role in the problem (J. S. L. Brown, 2018; Ribeiro et al., 2018; Tinklin et al., 2005; Winzer et al., 2018).

Furthermore, it is likely that distance learners are particularly at risk. Evidence shows that distance learning students are at least as likely to experience mental health issues that impact on their learning (Barr, 2014; Harrer et al., 2019; Richardson, 2015), and studies suggest that distance learning students are not able to access the same level of support as campus-based students (Barr, 2014). This is an additional concern due to the number of disclosures of mental health issues in distance learning students; for example, in 2017, 7.8% of UK Open University students disclosed a mental health condition; a substantially higher figure than the UK sector average of 2.02% of students disclosing a mental health condition (Higher Education Statistics Agency, 2017).

It is increasingly recognised in the sector that a responsive or service-provision approach to mental health is no longer sufficient, and that a proactive, whole-university approach is needed in order to effectively support students to succeed (Hughes & Spanner, 2019). Of course, teaching and learning is an essential part of this. This paper explores the potential for learning design to play a role in creating learning that supports student mental wellbeing, and explores a tool and method that may support this.

BARRIERS TO STUDENT MENTAL HEALTH IN HIGHER EDUCATION

Students have reported that study can have a negative effect on their mental wellbeing, and that mental ill health can have a conversely negative effect on their studies (Andrews & Wilding, 2004; Markoulakis & Kirsh, 2013; Ribeiro et al., 2018; Salzer, 2012). This situation is not new; back in 2005, Tinklin et al. found that higher education, with its 'systems' and 'structural issues', 'had exacerbated and even created some of the students' difficulties' (Tinklin et al., 2005). Markoulakis and Kirsch built on this work, locating areas where students experienced mental health difficulties, and found areas included the 'learning environment,' 'difficulties with their studies,' 'structural difficulties imposed by the university,' and 'academic outcomes' (Markoulakis & Kirsh, 2013). More recently, a dataset analysis of 80,509 students attending college counselling centres in the USA, UK and Canada confirmed this, finding that 'academic distress', including 'academic performance, pressure to succeed, and postgraduation plans', was the most unique predictor of anxiety (Jones et al., 2018).

It is clear that barriers to mental wellbeing do not reside solely within individuals, that they are inherent in aspects of higher education (Lister et al., 2021). Indeed, Ribeiro et al. found in a systematic review that 'psychological suffering is inherent in academic life' (Ribeiro et al., 2018). And while a certain level of stress is expected as part of academia, there is a strong case that higher education should adapt or update some of the systems, structures and academic practices that cause undue mental health difficulties. However, this recognition is not yet commonplace in the literature (Lister et al., 2021). In recent years, studies around how to better support student wellbeing have largely focused on pathologising students; for example, enhancing student resilience (e.g. Galante et al., 2018; Whiteside et al., 2017), enabling mental health-related support mechanisms (e.g. Brown, 2018; Byrom, 2018) and promoting self-care

(e.g. Ayala et al., 2017; White et al., 2019) rather than adapting university practices or systems to create learning environments that engender wellbeing. Of course, these interventions are not without use; practices such as peer support and mindfulness have been proven beneficial (Byrom, 2018; Galante et al., 2018). However, if the location of a student's distress is within academic practice, i.e. within their curriculum, assessment or learning environment, it would appear logical that the solution should focus removing barriers in that area, i.e. via inclusive curriculum, assessment or learning design (Lister et al., 2021).

DESIGNING FOR INCLUSION

In distance learning higher education, there is already a strong case for inclusion to be considered, planned for and anticipated during the learning design process (Coleman & Berge, 2018; Pittman & Heiselt, 2014). Indeed, in many universities accessibility and disability considerations are already embedded in learning design processes (Burgstahler et al., 2004; Coughlan, Lister, Seale, et al., 2019; Pearson et al., 2019). Universities have a duty to provide accessible learning content to students with disabilities, and this generally takes place through a combination of anticipatory and individual accommodations (Felsinger & Byford, 2010).

Learning designers can play a key role in designing for inclusion, and adopting student-centred, collaborative approaches to this design generates courses that incorporate a wider range of student support materials (Toetenel & Rienties, 2016). Thorpe advocates the process of creating a visual representation of the stages of a learning activity to inform and clarify choices about teaching, learning outcomes, activities and use of technology and also to define the context in which this learning takes place (Thorpe, 2008). By focusing on increasing student engagement with activities, learning tools, materials and communities, universities can incorporate a range of interventions using appropriate technology and resources. And by involving students at key points of the design process, they can anticipate potential barriers to this engagement, especially for students with mental health difficulties.

An example is the DO-IT centre in the University of Washington, which has worked for over twenty years to embed accessibility in instructional design (Burgstahler, 2009; Burgstahler et al., 2004). Other examples include the Open University, UK, where learning design workshops take place while modules are in production. In these, learning designers collaborate with module teams using a series of tools to support effective, inclusive design (The Open University, 2020; Toetenel & Rienties, 2016). Nottingham Trent University follow a similar process, using module maps and student personas to support inclusive learning design (Nottingham Trent University, 2020).

Learning analytics can also be a useful tool in designing for inclusion. Stone notes how learning analytics 'can be constructively harnessed to inform the development, personalization and appropriate targeting of interventions' (Stone, 2016). In an extension of this use of learning analytics, Nguyen et al. compared visual representations of course activities with the online engagement of students and with student responses to end of course surveys. They demonstrated how learning design 'provides educators with pedagogical context for interpreting and translating Learning Analytics findings to direct interventions' (Nguyen et al., 2017, p. 1). This link to learning analytics demonstrates a developing use of technology to support distance learning as it enables educators to track student engagement, link it to specific activities and to target interventions and support when students are perceived to be disengaged. Thus, the distance educator is able to respond to student choices about their learning in a more immediate way, assuming of course that the student is choosing to study online. A meta-analysis of student behaviour over a whole course then informs educators' decisions about adaptations to future activities, creating a virtuous circle of educator and learner choices. Thus the conclusion from Rienties et al. (2018, p. 6) in their study of language students at The Open University that learning design "has a fundamental influence on our students' learning behaviour, their satisfaction of the module, and most importantly pass-rates".

Learning design is not only important for student success and satisfaction; it can also have an important impact on student wellbeing. There is limited exploration of this in the literature, but one example is Weller et al.'s research of the complex factors affecting student retention. A key finding for them was that collaborative activities, which are effectively structured, can enable students to engage in "deep learning" via a supportive community of learners (Weller et al., 2018). Such activities tend to push students out of their comfort zone and are also associated with higher rates of success (Rienties & Toetenel, 2016). However, research shows that these collaborative activities are associated with higher levels of student anxiety (McPherson et al., 2019). Thorpe (2008, p. 59) also notes that students tend only to engage with collaborative activities which are linked to assessment, and stresses it is crucial to make the process "enjoyable as well as mandatory" to maximize effective engagement. What students want is not always what they might need and the challenge for learning designers is to find the right balance between academic success and mental wellbeing.

VIGNETTES AND PERSONAS IN LEARNING DESIGN

Persona are fictional but realistic characters that are intended to represent, to some extent, the audience being designed for, thus aiding user-centred design (Miaskiewicz & Kozar, 2011; Pruitt & Grudin, 2003). A typical persona contains basic information about the character (e.g. name, age, gender, geographical location, employment status etc.) and additional narrative that can inform design choices, such as their likes and dislikes, goals, experiences, abilities, preferences, needs, motivations and other things that may act as barriers or blockers for that character (Miaskiewicz & Kozar, 2011).

Although personas may contain a short narrative, they generally represent a snapshot of what and who the fictional person is at a particular moment in time, and do not generally provide deeper insight into their history or experiences. However, Grudin and Pruitt advocated for the power of personas when they are combined with more detailed information, including life stories and goals (Grudin & Pruitt, 2002). Here they overlap, to some extent with vignettes. Vignettes are short, fictional stories about a person or an experience; they can be presented in 'written or pictorial form', or a combination of these (Barter & Renold, 1999). Commonly used in social sciences research (Barter & Renold, 1999, 2000; R. Hughes & Huby, 2012), they can complement personas and add more detail, background and nuance. This is particularly relevant when considering complex issues such as student mental health in learning design, as a story depicting past barriers, triggers and experiences will be more meaningful than a snapshot.

Personas and vignettes can support distance learning practitioners to make student-centred learning design decisions. However, there is a need to ensure that personas and vignettes are evidence based, that they represent a diverse spectrum of real student needs and circumstances. This can be particularly challenging in a distance learning environment, where students are less visible. Stone advocates for the need to 'know who the students are' (Stone, 2016), identifying that assumptions made in lieu of knowledge can increase barriers to learning. Learning analytics offers the opportunity to analyse and understand the learning behaviour and engagement of students, and this can inform the development of evidence-based student personas and vignettes that discourage stereotyping of students. Additionally, informed, qualitative information about specific student needs and barriers they have experienced can complement learning analytics and demographic data. In this study we adopt a mixed-methods approach, combining qualitative data from interviews with learning analytics and demographic data to create vignettes for learning designers.

VIGNETTE DESIGN AND REPRESENTING STUDENT JOURNEYS

An important factor to consider is vignette design; how best to represent a student journey, and how to make it engaging for participants using it.

Institutions frequently represent student journeys as a process flow, depicting the university's view of a typical student journey and key milestones. Examples are shown in *Figures 1* and *2*.
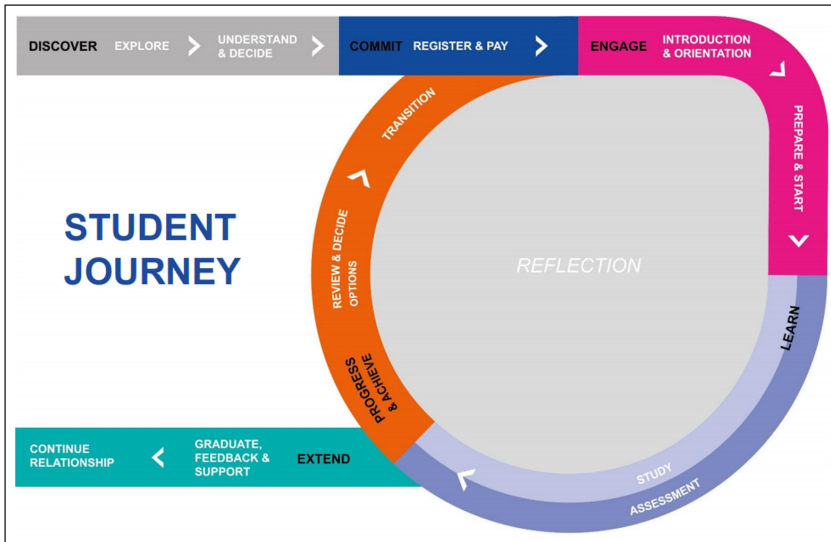
Figure 1 An Open University representation of a study journey (Open University, 2017).
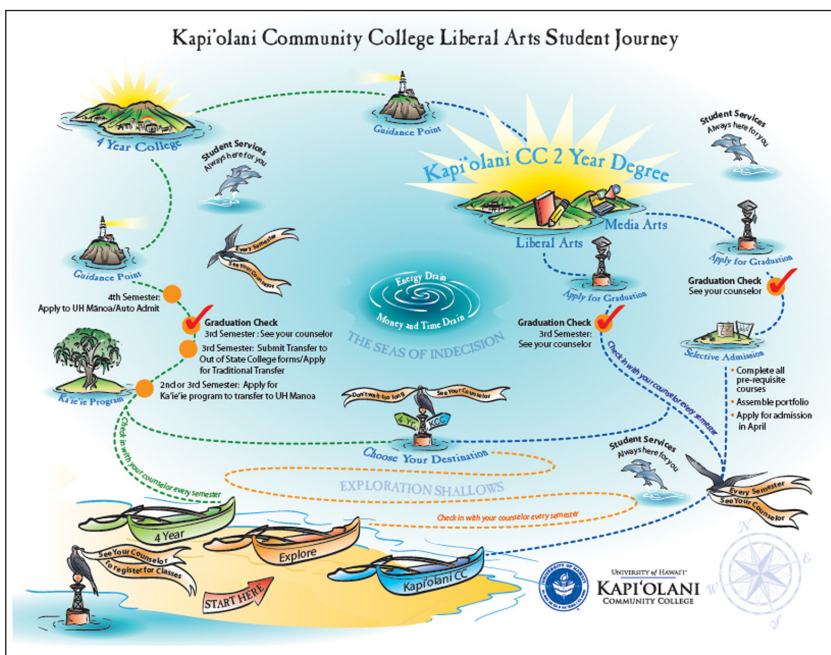

Figure 2 A Kapi'olani Community College representation of a student journey (Kapiolani College, 2017).

These can be practical and visually appealing, but do not adequately represent diversity in students, variation in student journeys or the contexts that affect them (Coughlan, Lister, & Freear, 2019). In contrast to this, vignettes used in research contexts are often text-based; an example is shown in *Figure 3*.

> *I'd now like to tell you a story about a pregnant woman called [Flora] and her experiences in trying to access antenatal clinic (ANC), delivery and infant health services. I will tell you part of the story, then I would like you to help me complete the story.*
>
> Flora lives in a remote village in Welamasonga, she is 27 years old. She is married to Paulo and she has 3 children. She becomes pregnant and after a few months decides to attend an antenatal clinic by herself. At the ANC she receives a test for HIV. The nurse tells her that she is HIV-positive but explains that there are medicines that she can take to save the baby from being infected with HIV. She also tells Flora that it is important that she delivers the baby in the health centre so that it can also receive medicine to reduce the chances of it being infected. She gives the woman the medicines to take during her pregnancy, and also tells her to persuade her husband to come for an HIV test. She also discusses options for feeding the infant, and advises Flora to breastfeed the child for 6 months without any replacement food. The nurse explained all this information very quickly.
>
> *What do you think happens next? Please think for Flora, as a woman in your community, and imagine what she would be thinking and feeling at this time.*

Figure 3 An example of a text-based vignette (Gourlay et al., 2014).

This style is clearly capable of representing greater depth and individuality of circumstances, and thus greater student diversity in a learning design context. However, it is less visually engaging, and more difficult to draw comparisons between vignettes, which can be useful for learning designers. A balance is needed between ensuring vignettes are aesthetically appealing and ensuring they represent diversity in student journeys.

To address this need, we used an online platform called Our Journey (available at *https://ourjourney.ac.uk/*) to represent student journeys and form the basis for the vignette design. Our Journey uses a mixture of text and pictorial elements, adopting a board game aesthetic with cards for different events in the journey, and using emojis and icons to accompany text descriptions (see *Figure 4*.) It was developed in an attempt to give students agency and choice in how they represent their study journeys, providing a flexible structure that is engaging for user and viewer. This work originated from a participatory research initiative with disabled students, and the tool was co-designed with students and student support stakeholders throughout the development process. It is currently openly available as a free online platform, supporting students to capture and reflect on their journeys, and share them with their institutions or support networks if they choose (Coughlan, Lister, & Freear, 2019). This study aimed to trial its use as a tool for representing fictional journeys, or vignettes, in a way that is accessible and engaging. More information about the platform can be found at *https://ourjourney.ac.uk/*.
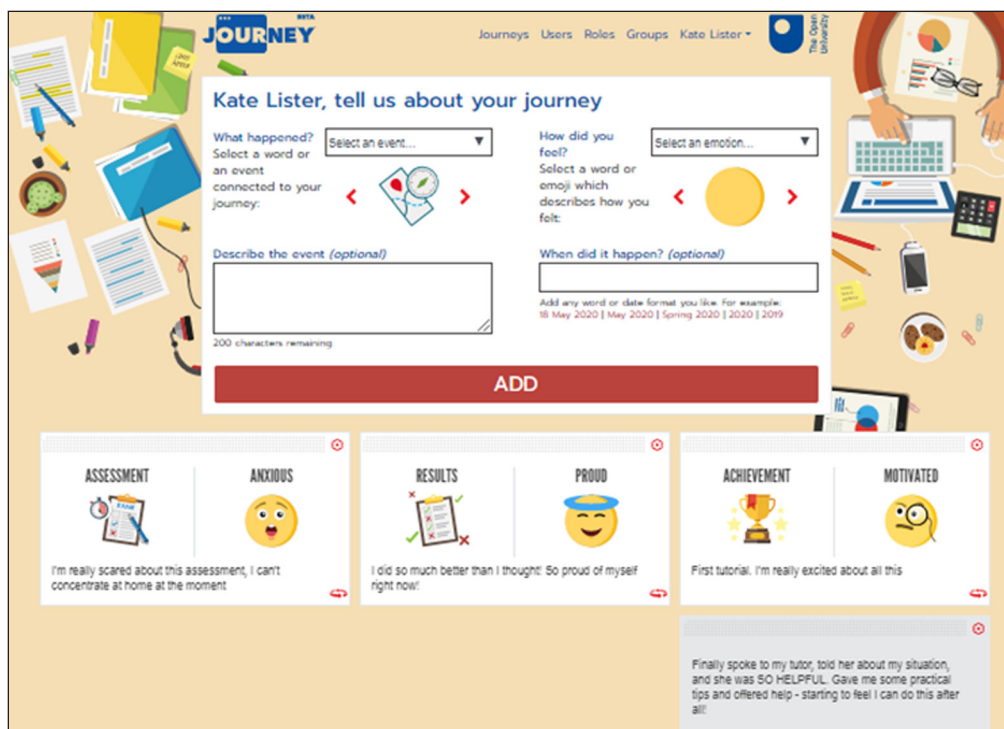
Figure 4 The Our Journey tool, available at *https://ourjourney.ac.uk/*.

METHOD

This study takes place in the Open University (OU), a large distance learning institution in the UK. In March 2020, it had 15,941 students disclosing a mental health condition, 12.2% of its total cohort of 129,641 students. It also had a module completion gap of –16 percentage points between students with and without a disclosed mental health issue, and student mental health was considered a strategic priority in the institution.

In order to investigate barriers to mental wellbeing and inform vignette design, semi-structured narrative inquiry interviews were carried out with students and tutors. Students were recruited via email invitation sent to a sample of students disclosing mental health difficulties to the institution, while tutors volunteered in response to an internal advertisement seeking tutors with experience of supporting students with mental health difficulties. Overall, 16 students (10 female, 6 male) and 5 tutors (4 female, 1 male) were interviewed.

This study was approved by the OU's Human Research Ethics Committee, and the study is recounted in greater detail in Lister et al. (2021).

RESULTS

Interviews were recorded and transcribed, and the transcripts were analysed in NVivo using thematic analysis (Braun & Clarke, 2006, 2019). A range of barriers and enablers to education were identified; these will be reported more fully in a subsequent publication, but *Table 1* shows examples of recurrent barriers that were selected to be represented in the vignettes. These have been classified as barriers relating to student development of skills, the course they were studying or the broader learning environment.

SKILLS-RELATED BARRIERS	COURSE-RELATED BARRIERS	ENVIRONMENT-RELATED BARRIERS
Low level of study skills, e.g. referencing, time management	Assessment stress, especially exams and presentations	Feelings of not belonging
Managing high expectations and disappointment	Working to deadlines	Environments where not safe/in control (i.e. hallways, classrooms)
Feeling out of depth	Anxiety around using forums	Feeling powerless
Lack of skills in managing mental health	Collaboration and groupwork	Comparing self to others
Difficulties concentrating	Cognitive load and frustration of not understanding	Stigma and fear of speaking out
Low self-esteem	Distressing/triggering curriculum content	Isolation

Table 1 Barriers arising from interviews.

These themes were combined with institutional demographic data (i.e. diversity in student age, ethnicity, disability disclosure, mental health conditions and faculty distribution) and with learning analytics data (i.e. typical challenge points or pinch points in modules.) This combination of data was used to create fictional student vignettes that illustrated the barriers identified without compromising the anonymity of the interview participants. A disguise approach was used, with stories woven together from different student sources, to ensure no vignette could be identified via jigsaw identification (Saunders et al., 2015). However, to maintain the authenticity of the vignettes, participants' own words were used as far as possible to illustrate the themes and barriers identified (Barter & Renold, 1999, 2000; Hughes & Huby, 2012).

VIGNETTES CREATED

Ten vignettes were created in total using the Our Journey approach of cards, events and emojis. To maintain the authenticity of the vignettes, students' own words were used as far as possible to illustrate the themes and barriers identified (Barter & Renold, 1999; R. Hughes & Huby, 2012), but were edited for clarity. For example, an interview participant said, 'I couldn't sit in class without getting like a panic attack, um, or like walking in hallways;' in the vignette for Vanessa this was edited to read 'I just got so anxious in classes, walking in the halls, etc.'

The cards were combined with short persona descriptions featuring a pseudonym and stock photo or AI-generated image. Five of these vignettes are shared in the following pages (*Figures 5, 6, 7, 8* and *9*) in the hope that they may be of use to institutional designers, either in their existing format or as a template to inform the creation of institution-specific vignettes. The other vignettes are available for download at *https://wellbeinginthecurriculum.weebly.com/*.

These vignettes were created for an internal audience, and there are references to acronyms that may not be meaningful in an international environment. These are explained below:

OU: Open University
TMA: Tutor-marked assignment (a standard mid-module assessment in the OU)
EMA: End of module assessment
GCSE: School leaver exams, usually taken at 16 years old
A-levels: Further education exams, usually taken at 18 years old

Vanessa

I'm Vanessa, I'm 21 years old and I've been an OU student for 2 years. I'm doing a degree in business; I've completed 4 modules. I have social anxiety, sometimes to the point where I can't leave the house, and periods of severe depression.

I grew up in a poor neighbourhood. A lot of the people I went to school with are unemployed, I don't think they're going to do anything with their lives. I don't want to be like that, I want to get a job and do something with my life.

My mum is schizophrenic, and my dad isn't around. I've had mental health issues as long as I can remember. I get anxious, especially in public. Sometimes I'm afraid to go out. And I get very depressed.

I got through school, but I had problems at college. I wanted to get A-Levels, but I just got so anxious in classes, walking in the halls, etc. I dropped out because I just couldn't bring myself to go, the thought of classes was too much.

BARRIER

I tried different courses, but the same thing kept happening. Some of my friends went off to uni but I started thinking I'd never amount to anything after all.

I'd always been good at learning and got good marks in essays and things, so I was really confident and looking forward to starting university study. Finally, I could tell my friends I was a student too!

My sister found the Open University online and showed me the website! There were no entry requirements!! I could just sign up, without having to go to college!

I got very low and started thinking about suicide. What was the point of living if I would never amount to anything?

My first TMA set me straight! Turns out I knew nothing about being a university student. I'd never heard of referencing! But I passed with 49% so it was okay.

I found I had problems motivating myself to study and learning to concentrate. In a classroom you're told when to start and stop studying, it's easy to get distracted at home!

I discovered an OU student on Instagram who makes study session worksheets, where you log your time, goals, playlist and stuff. I started using them all they time, they helped loads!

I'm doing well now. I still have dark times and I feel very isolated sometimes, I wish someone would check in from time to time. But I love how I'm growing and evolving, and I'm full of hope for the future.

Figure 5 Vignette representing Vanessa's journey.

IDENTIFYING LEARNING DESIGN CONSIDERATIONS

Focus group events were held with staff and students with the aim of analysing the vignettes and identifying considerations for module design, tuition and student support. Two in-person events were held, one in England and one in Scotland, and a further online event was held. 116 staff attended in total; a breakdown of their roles can be found in *Table 2*.

In the events, participants were first given an overview of mental health in higher education in order to set the context. This was followed by a plenary discussion with opportunities for questions. Next, they were asked to work in small groups of 6–8 participants. They were given the vignettes and invited to choose three or four of them with the aim of identifying the barriers to mental wellbeing the students experienced. Finally, they were asked to identify considerations for learning design and other areas of practice that could have a positive impact on students' wellbeing in distance learning.

Andrew

I'm Andrew, I'm 67 years old. I've been doing a STEM degree for 6 years. I have severe claustrophobia and I've had attacks of something like anxiety, I'm not really sure what they are.

I was going to go to university when I left school, but then my father lost his job so I had to go out to work instead. It was fine, I went into industry and had a good career, but I always felt something was missing.

Years later… My mother got dementia, but I didn't realise how badly until my father died and I realised how much he had been doing for her. She died a couple of years later, at the same time as my divorce went through.

I retired at 60, and life became rather quiet as I don't have any family. It was an opportunity to right the wrong I'd always felt by not getting a degree. I signed up for a STEM degree; finally, I was back on track.

It started out really well. I loved the science modules and I was getting good grades on all my assignments. I signed up to do 90 credits and was on track to get a first. Workload was heavy but it was fine.

Somehow, I got to the end of the modules, but then I had 2 exams within 2 days. I did well on one but only scraped a pass on the other. This really knocked my confidence; I felt I wasn't on track anymore.

Disaster struck. I got some kind of bug and couldn't do anything for 2 weeks. Suddenly I was behind, and I couldn't catch up. I thought I'd have to defer, but I managed to pull something together and scrape a pass.

I love the practical activities. There's one with a telescope in the Canaries; I've never travelled because of my claustrophobia but suddenly I was mapping the galaxy with people all over the country. It was amazing.

At the 3rd TMA on my next module, it all went wrong. Suddenly I couldn't do it. I can't explain, it felt like an unseen hand on the back of your shoulder saying you can't do it, don't try. I had to defer.

I started to study again, I had assessment banked so less pressure. But then I had a dispute with my neighbour that went to court and I couldn't concentrate. I deferred again, no assessment banking this time.

I started a different module. But the joy was gone, I was full of fear and I felt I was doing everything badly. I had no confidence to do the activities and I couldn't face the TMA. I got an extension but finally had to defer.

I feel so off track. This wasn't how it was supposed to go! But I don't know how to ask for help, or who I can ask. I keep thinking of registering for another module, but I just can't. I feel like such a failure.

This vignette is fictional, although based on real events that different students have experienced. The picture is a stock photo and the name is made up. Contact kate.lister@open.ac.uk for further details.

Figure 6 Vignette representing Andrew's journey.

During the focus groups, staff identified 278 barriers to mental wellbeing in distance learning. Furthermore, they identified 94 considerations for practice, support and learning design that may mitigate these. These will be reported in detail in a subsequent publication, but examples of considerations that relate to learning design are summarised in **Table 3**.

To illustrate how the vignettes were instrumental in drawing these conclusions, a comment from a participant is given in full below:

"I looked at John's vignette and one of the barriers he raised was around being isolated and wanting to make friends and feel part of a community and the fact that he was scared at the end of the module as he didn't have anything to study and focus on until the start of the next module. Bridging materials could be really useful here together with opportunities to engage with other students and OU staff via the

Figure 7 Vignette representing John's journey.

forems on the subject/Study Home website. This may help with providing a sense of community and connection which is broader than the module for students who experience this barrier."

These design considerations are currently being adopted as part of the standard learning design recommendations for new modules, and it is hoped this will shortly begin to have an impact on student experience, wellbeing and success.

PARTICIPANT FEEDBACK ON VIGNETTES

Following the event, staff participants were asked to feed back on their experience of the event and using the vignettes. 20 participants did so; 10 completed a survey and 10 elected to send comments by email.

Survey results indicated that using the vignettes was a positive experience. In response to the question 'How usable did you find the vignettes?' all staff responded they had found them very or reasonably usable, with no staff selecting neutral or negative responses. When asked if they had been able to identify barriers and possible solutions from the vignettes, all staff responded positively, again with no staff selecting neutral or negative responses.

Open comment boxes and text-based email feedback were almost entirely positive. Positive comments included:

'Worked really well, I'd like to see this across the faculties'
'Excellent activity – need to get this online'
'It was very interesting to look through these vignettes. I think it would be helpful for these to form part of staff induction, particularly those who have interactions with students.'
'I found these vignettes so interesting to read.'

EVENT	LECTURERS	TUTORS	LEARNING DESIGN	STUDENT SUPPORT	STUDENTS	LEADERSHIP	EQUALITY & DIVERSITY	OTHER	TOTAL
England	13	6	6	7	5	1	4	6	**48**
Scotland	0	4	0	0	2	1	2	0	**9**
Online	10	11	6	11	1	5	2	13	**59**
Total	**23**	**21**	**12**	**18**	**8**	**8**	**7**	**19**	**116**

There were three constructive comments. One was a request for a larger font (this has since been addressed) and two related to the use of emojis in the design:

'I like the format, apart from that I found the emoticons and symbols a distraction.'
'Less emojis – format is quite busy'

BARRIERS	CONSIDERATIONS
Cognitive load of studying when in low mental health	Breaking up heavy reading with multimedia, graphics and frequent activities
Distressing or triggering content	Embedding activities to teach emotional resilience in studying distressing subjects
Isolation in between modules and study activity	Modules signposting to 'bridging materials', accompanied by community forums
Anxiety around using forums	Including in module material activities to build confidence using forums
Stress and time management at the end of modules	Signposting in module materials around which sections can be skipped or skimmed if short of time
Anxiety around groupwork	Activities and training in modules about how to collaborate
Low confidence in study skills	Explicitly teaching study skills such as time management, referencing, note-taking and essay writing
Exam stress	Embedding material and activities on managing exam stress in modules

Table 3 Mental health barriers and learning design considerations.

These comments have been taken into account and will be considered for future iterations of the vignettes.

DISCUSSION

The interviews with students and tutors indicated a variety of areas in which studying had directly affected student mental health. These barriers are explored in more depth in a different publication (Lister et al., 2021), but the examples given in this paper do support the broader literature in this area. For example, the barrier presented by the 'Cognitive load of studying when in low mental health' aligns with Weller et al.'s findings about students withdrawing from study due to feeling 'overwhelmed' by curriculum content (Weller et al., 2018); studies have linked distressing curriculum content with mental health challenges for students (Bentley, 2017; Slavin et al., 2014); 'anxiety around groupwork' is a theme in the literature (McPherson et al., 2019), and there are many studies aiming to understand or alleviate stress around exams or assessment (Jones et al., 2020). This supports research contentions that triggers for mental health difficulties can reside within higher education environments, systems and curricula as well as within the individual (Lister et al., 2021; Markoulakis & Kirsh, 2013; Tinklin et al., 2005).

The results of the focus group events imply that vignettes are a useful tool in identifying barriers in mental wellbeing and learning design considerations that can lead to more inclusive practice. By analysing the vignettes in a collaborative environment, participants were able to identify a series of barriers to mental wellbeing in learning, and the discussion around these led to a range of learning design considerations that could mitigate these barriers. The solutions and ideas resulting from the workshop are explored in greater depth in a subsequent paper, and most are specific to the OU teaching model and distance learning context (i.e. modules signposting to 'bridging materials', accompanied by community forums.) However, some examples given in this paper do appear to support or build on interventions identified in broader literature in this area. For example, the explicit teaching of study skills to build confidence and support mental wellbeing has been explored with Law students by Hewitt and Stubbs (Hewitt & Stubbs, 2017), and teaching students skills for collaborative activities that support wellbeing and compassion has been explored extensively by Gilbert (Gilbert, 2017; Gilbert et al., 2018).

The broad range of learning design considerations identified through use of student vignettes supports the contention that use of personas and narratives can lead to user-centered (or student-centered) design (Miaskiewicz & Kozar, 2011; Pruitt & Grudin, 2003). Participant feedback following the event implies that the vignettes were engaging and enjoyable for participants to use, although larger-scale evaluation is needed in order to definitively draw this conclusion. Furthermore, additional work is needed in order to explore how to optimise the efficacy of the vignettes. For example, with regard to authenticity of student voice, these vignettes were paraphrased by the researcher; this means the student voice was mediated to an extent, although efforts were made to use participants' own words as far as possible. Seale

discusses the way that mediating marginalised voices can be problematic in higher education (Seale, 2006), but there are tensions between authenticity of voice, participant anonymity and the design aesthetic of printed word as opposed to spoken word that require additional exploration.

In this study, student vignettes have clearly been an effective way for student voice to influence learning design. However, more work is clearly needed in this area. This paper aims to open the door for other institutions to expand on this method and identify ways to improve or scale it up, in order to identify the barriers to mental wellbeing students experience in distance learning and to explore proactive, whole-university approaches to reduce or mitigate these through inclusive learning design (Hughes & Spanner, 2019). For example, learning analytics data used in collaboration with student reflective journeys could provide insight at greater scale; or collaboration between students and learning designers to form a community of practice (Lave & Wenger, 1991) could provide more nuanced, participatory design considerations to be piloted and scaled up. This study has begun to lay the groundwork for new methods towards more inclusive practice, but more work is needed, and technology may afford exciting opportunities to build upon it.

CONCLUSION

In recognising that barriers to mental wellbeing can reside within university environments and study practices, this paper aimed to explore the potential for learning design to play a role in creating learning that supports student mental wellbeing, and to trial a method by which students' experiences of mental health difficulties in study can play a role in the learning design process. The vignettes used in this study were effective in illustrating barriers and enablers to mental wellbeing in study, and in supporting practitioners to identify learning design considerations. Additionally, this paper shares examples of student vignettes created with the hope they may support learning designers, and introduces an online platform that institutions can use to create vignettes with their own students.

There were several limitations to this study. The qualitative nature of the study meant it was conducted at small scale, with only 21 participant interviews contributing to the creation of the vignettes. Furthermore, it takes place within one distance learning institution, and more research is needed to identify its relevance to other institutions. However, student mental health is a global issue, and one in which student voice and lived experience is sorely needed. Therefore, the successful use of vignettes to communicate student mental health difficulties, engage practitioners and inform learning design considerations is a step towards more inclusive distance learning environments.

COMPETING INTERESTS

The authors have no competing interests to declare.

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