

Defining and exploring online engagement fatigue in a university context

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ABSTRACT

This paper seeks to define online engagement fatigue. The need for a definition is twofold. First, the increased reliance on the internet for the full delivery of higher education courses could result in online engagement fatigue. Second, a clear definition is required for the theoretical construct of online engagement fatigue to ensure meaningful research and to advance knowledge. Thus, the challenge is to understand what online engagement fatigue is and what are its consequences for students and educators. A social constructionist approach was used to develop an emergent definition of online engagement fatigue, which was then refined through a qualitative exploration of how it is perceived by students and educators. The perceptions that students and educators hold about online engagement fatigue were collected through interviews with 18 students and ten educators. There were differences in how the students and educators perceived online engagement fatigue, with students more likely to confirm its existence and more likely to render examples of its effect. A refined definition is offered which gives a basis upon which future research can investigate this phenomenon in divergent settings.

1. Introduction

1.1. Online education

Before the COVID-19 pandemic, digital technology was fast becoming a central aspect of higher education. Spurred on by the pandemic, the dominant mode of delivery is now through online resources where, around the world, courses are increasingly being designed to be delivered through technology — ‘digital first’ — and supplemented by face-to-face human support [1]. Affecting all aspects of the student experience, digital technologies and the move to online learning has also been linked to an increase in behavioural, affective, and cognitive student engagement [2]. During the period when universities were pivoting to online learning, research by the OECD [3] indicated that most universities were inadequately equipped for the swift shift to online teaching and learning. These institutions were poorly equipped in terms of technology and training; however, they were particularly underprepared for the changes in the format of resources and pedagogical approaches.

As learning has moved into the online context, the facilitation of

online student engagement has become a central concern of educators [2]. The ability to analyse learners’ ‘digital footprints’ (trace data from their interactions with technology) using learning analytics data also means that student access to online resources – and ‘counting clicks’ – has become a simple measure (rightly or wrongly) of their engagement [4–6]. The push to ensure students are genuinely engaged in their learning, and to show evidence of that engagement thus raises the question of whether institutions are placing too much emphasis on the importance of visible student engagement in the online environment [7]. In doing so, are these engagement practices, by consequence, pushing students to become fatigued from those very engagement strategies designed to support students’ learning?

While a large and growing body of research has explored the concept of online engagement [8–12] and the factors that may lead to increased engagement, a concept that has not been explored, and which may equally impact on student’s learning outcomes, is *online engagement fatigue*. The purpose of this paper is to explore the concept of online engagement fatigue – whether it exists, how it can be defined, what are its defining elements, and to what extent does it play a role in online student disengagement. Finding answers to these questions may

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ultimately assist educators to design and teach online courses in ways that are better able to build and maintain student engagement.

1.2. Student online engagement

Student engagement has long been seen as a precursor to learning [13], and something that is linked to improved graduation rates, classroom motivation, course achievement, retention, and persistence [14–17]. This is based on the acceptance that engagement is “a positive work-related state of fulfilment that is characterised by vigour, dedication and absorption” (Schaufeli et al., 2002 as reported in [18], p.3). In contrast, disengagement has been found to have a profound effect on student learning outcomes, cognitive development, and the quality of the student experience ([19]; Higher Education Standards [20–22]). From an online learning perspective, student engagement is recognised as crucial to student learning and satisfaction in online courses [23].

Even though the concept of engagement in education has been widely studied and written about [24–26], there remains a considerable variation in how student engagement is defined. It is therefore important for research projects to begin with a clear definition of their own understanding [27], upon which future research could contribute. In this project, the definition of student engagement offered by Bond et al. [2] was used as a starting point to understand the concept:

Student engagement is the energy and effort that students employ within their learning community, observable via any number of behavioural, cognitive or affective indicators across a continuum ([2], p. 3).

While educational technology has long been seen as a way to improve student engagement, and a well-designed online course can assist in promoting student engagement [28], there is “no guarantee of active student engagement as a result of using technology” ([2], p. 2). Online learning environments need to be intentionally designed. This is because without careful planning and sound pedagogy, technology can actually lead to disengagement and impede rather than help learning [29–31]. For example, designers of online learning environments can fail to recognise that the online space is not a classroom and fall into a content-publishing mentality [32]. In addition, some of the online learning strategies that are being used to engage students – and perhaps to also provide evidence of engagement – may have the opposite effect by negatively affecting cognitive load [33], or overwhelming students with too many learning tools, too many links [34], or too much online content.

In an academic context, students often face study stress associated with high study demands and concerns about academic progress [35]. Study stress can also develop because of excessive academic load, the classroom environment, faculty interaction [36], concerns regarding the nature of current academic and social circumstances [37], or from merely being tired of learning [38]. If study stress is prolonged and exceeds the student’s adaptive resources, it can result in high levels of *study-related fatigue* [39]. de Vries, et al. [39] found that many university students experience high levels of study-related fatigue brought about by prolonged stress due to concerns about academic achievement and the increased study demands that achievement requires.

2. Research question

While the concept of online engagement fatigue in higher education is not a term currently used in the literature, there has been some research undertaken that explores the relationship between fatigue and the academic attainment and wellbeing of students [40]. Some research has also explored the perspective of ‘learning weariness’. Wang [41] defines learning weariness as a student’s loss of interest in studying and tiredness towards learning, which can often embody indifferent attitudes, boredom, psychological conflict, and the potential for poor behaviour as a reaction to learning. Fatigue has also been recognised as

something students experience because of family responsibilities [42], employment commitments [43], academic schedule [44], or poor sleep patterns [45]. This research seeks to extend this literature by examining fatigue in an online learning context. The overarching educational problem is whether online engagement fatigue is real. Specifically, the research questions are 1. Does online engagement fatigue exist? and 2. If it does exist, what are its defining elements and effect?

3. An emerging definition of online engagement fatigue

Online engagement fatigue is a phenomenon that the research team (which is mostly comprised of teaching academics) had anecdotally noticed while undertaking both their teaching responsibilities and their corresponding research addressing methods to engage students online. During their online teaching experiences, the research team noticed that at different times during the semester some online students’ engagement seemed to diminish, for example, they participated less in discussions, shared fewer posts, interacted less with peers, educators, and the Learning Management System (LMS). This led to the team asking: does this lower participation/interaction reflect students’ becoming very tired of being engaged? Or are they perhaps getting tired of showing their engagement? Maybe they are simply getting on with their work, with less evidence of engagement through the usual measures; or are they finding it very hard to keep going (for whatever reasons) and are therefore at risk of attrition? To inform the research and understanding of the phenomenon, the research team sought to first define online engagement fatigue.

The need to define online engagement fatigue was considered an important first step in seeking its existence. This allowed the development of a mutual understanding amongst the researchers of the identified factors encompassing online engagement fatigue. This definition was then used to develop the interview schedule and it was able to be interrogated during the qualitative analysis. To define online engagement fatigue the team adopted a social constructionist approach [46] that affords a subjectivist view of knowledge to be embraced, where knowledge is the result of social interchange. In this study the researchers moved through a process of filtering and adapting existing knowledge (including insights from existing research and literature) and combining this with additional contextual and experiential knowledge. The emergent definition for online engagement fatigue was based on agreed categories and themes in order to construct new knowledge [47].

The process, elaborated on in the next section and depicted in *Diagram 1*, commenced with an investigation of existing literature of key terms and phrases that the team determined to be associated with the concept of online engagement fatigue. These terms included: engagement in higher education; engagement in online learning; the concept of fatigue (fatigue, burnout, emotional exhaustion, cognitive/mental fatigue); and the effect of fatigue on online engagement (disengagement, academic achievement, interest). Once the review of the literature was complete the team moved through a constant comparison approach to collate emerging themes, key concepts, and terms [48]. Finally, the researchers individually, and then collectively, used a deductive approach to further filter concepts and implications from the literature, and identify any additional themes. This included a three stage-phase filtering process of: a) discussing shared understandings of what was meant and understood by the term online engagement fatigue; b) ensuring that the wording was succinct and relevant; and c) ensuring that the term had broad application.

The emerging definition of online engagement fatigue was defined by the research team as:

A reduction in online students’ enthusiasm and motivation for engaging in course activities as a result of overexposure to online coursework and associated interactions.

This emergent definition, developed through a social constructivist approach, was used to inform the qualitative stage of the project that

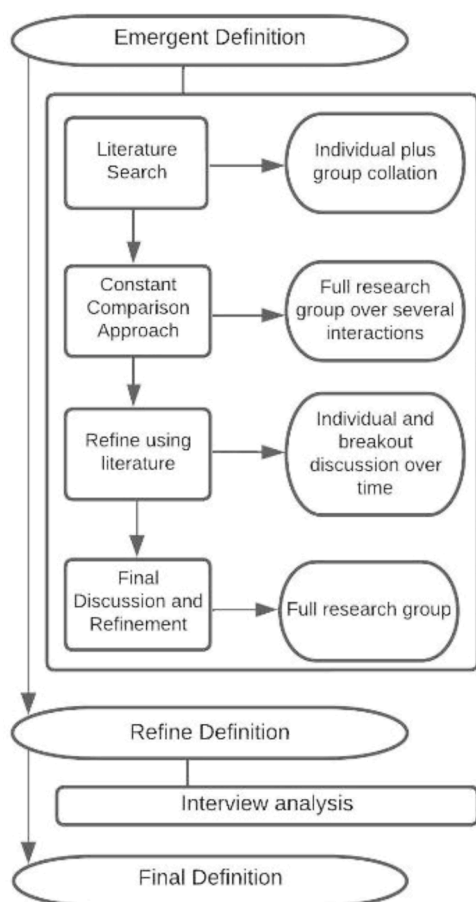


Diagram 1. Process Undertaken for Emergent Definition to Final Definition.

sought to empirically investigate the existence and defining elements of online engagement fatigue through the perceptions of students and educators.

4. Methodology

4.1. Method

The purpose of this stage was to undertake a qualitative process of interviewing students and educators to enable the research questions to be addressed. The process of developing a final definition is shown in [Diagram 1](#). This qualitative method was chosen as it was important to explore the phenomenon through those who would experience it in a learning context and those who may witness it or have an ability to affect it in some way. That is, the aim was to explore whether students and educators attributed meaning to the concept of online engagement fatigue and, if so, how did they describe it? Given the exploratory nature of the research aim, participants were sourced from multiple disciplines. This was to allow the widest capture of themes from the key stakeholders (students and educators) in which to explore the existence of online engagement fatigue and refine its definition. The study received ethics approval at the university where the study took place.

4.2. Context

The study was undertaken at a regional university that has long offered courses in both on-campus and fully online modes. Before online learning became popular and a commonplace offering in the tertiary sector, the university was a leading Australian higher education provider of distance education, and in 2019, before the COVID-19

pandemic, two-thirds of its students were enrolled as fully online students. In fact, most students enrolled at the university undertake at least some of their courses in the online mode, even if they are enrolled as on-campus students. The regional university also prides itself on delivering education to low socio economic (low SES) and regional, rural and remote (RRR) learners; and as such, the research also focussed on these students because online engagement fatigue issues could be more elevated for them given their increased vulnerability (isolation studying online, intermittent connectivity, unfamiliarity with university and discipline discourses and ongoing disadvantage in higher education). Indeed, research has found that students from less advantaged groups struggle more than students from higher economic class households to feel connected and engaged in their classes, coursework, faculty, and peers; and this disparity is heightened when it comes to online learning [49].

4.3. Participant selection

The university administration system was used to identify potential students for inclusion in the study and to extract contact information. Potential participants for the study were first-year students who were enrolled in undergraduate courses at the university in semester 1, 2020, who had passed at least one course previously, and who were identified as domestic and rural, regional, or remote. The research design limited the target population to this group for two reasons. First, to put a boundary around what could reasonably be achieved given the exploratory nature of the research aim. Second, to help control confounding factors that could influence the meaning, experience, and effect of online engagement fatigue across various cohorts, including post-graduate and graduate students, and of years of online study. Whilst this limits the generalisability of the findings in the first instance, it was important to gather a base line view that could be meaningfully expanded in future research. Using these parameters, the researchers identified 203 potential participants who were then contacted via text message to determine their interest in participating. Eight responses were received, each expressing interest, while the remainder were followed up via email, generating a further ten expressions of interest. These 18 students were sent a participant information sheet and consent form in line with the ethics protocol, and each agreed to participate. Hence, this was an opportunistic, or convenience sample rather than a strictly representative one. Participants were then contacted to arrange an interview time and sent a \$20 department store voucher in appreciation of their assistance.

Semi-structured, in-depth interviews, of between 40 mins and one hour duration, were conducted with all 18 student participants, who were given the choice of a face-to-face (three students) or online interview via Zoom (15 students). All interviews were conducted by one researcher not personally known to the students, using an interview schedule. All were recorded with the students' consent.

Members of the teaching staff from the host institution were also recruited for interviews, using researcher networks within the university and their teaching areas to invite staff with more than three years' online teaching experience, and from a broad range of disciplines, to participate. Those who expressed interest were given a participant information sheet and consent form, resulting in ten educators agreeing to participate. For consistency and to reduce bias, all interviews were conducted by one researcher who was external to the university and therefore not personally known to the participants. As with the student interviews, staff interviews were semi-structured and in-depth, using an interview schedule, and each was recorded with the staff members' consent.

4.4. Participant information

The students who participated in the interviews were enrolled in a range of programs, including nursing (5), education (4), business, commerce and law (3), science (3), creative arts (2), and aviation (1). All

were enrolled full-time, and most (13) of the student interviewees were aged under 25 with two aged over 55. As well as studying full-time, thirteen of the student interviewees also undertook part-time work (average of 20 h per week) and one had full-time carer's duties. Eight were male and ten were female.

The educators who participated in the interviews taught into a range of disciplines, including law, commerce, business, accounting, nursing and midwifery, engineering, computing science, food science, sport and exercise science, and education. Between them, the educators had an average of 16.5 years of higher education teaching experience. They taught an average of 3.5 courses per year which consisted of an average of 270 students per course. One of the educators taught fully online, three taught mostly online, five taught both online and face-to-face, and one taught mostly face-to-face. Seven were male and three were female. Detailed participant information is contained in [Appendix 1](#).

4.5. Interview schedule

The data were collected via in-depth semi-structured interviews as reflecting the exploratory nature of the research. This approach provided flexibility in terms of questions and prompts [50] and was suitable for uncovering perceptions of the varying elements that may shape online engagement fatigue. This was in line with the two research questions seeking to reveal the existence of online engagement fatigue and to capture its defining elements and effects.

Two interview schedules, one for students and the other for staff, were developed from the first stage of the project. Both contained initial demographic questions followed by questions to explore interviewee perceptions of their experience, as either an online learner or online teacher, and to solicit personal stories and insights regarding any experiences of online engagement fatigue from an empathetic position [51]. The student interview schedule contained questions seeking to capture their idea of 'engagement', what behaviour they perceived an engaged student would show, the types of activities that help or hinder engagement, and the extent they feel they engage. They were then given the research team's definition of online engagement fatigue, asked if they had ever experienced this type of fatigue as a result of engaging with their online studies and, if so, how frequently. They were asked to describe such occurrences, such as when it occurs, what contributes or triggers this type of fatigue, and what impact they felt it has had on them and their studies. This line of questioning helped establish whether students experience online engagement fatigue (research question one – does online engagement fatigue exist?), what characterises it, and with what effect (research question two – what are its defining elements and effect?). The educator interview schedule followed a similar development but relevant to the teacher perspective, capturing a macro-level view and giving the educators the opportunity to discuss any interventions or strategies they employed to engage students or to diminish student fatigue. They were asked if they witness online engagement fatigue in their students and, if so, to describe what they observe, such as when it happens, whether they notice it in one course more than another, and how it impacts students both individually and from a student cohort perspective.

4.6. Qualitative data analysis

In-depth interviews generally result in large volumes of rich data, and this was certainly the case in this research with 28 in-depth interview transcripts. The main purpose of the qualitative analysis of the transcripts was to identify themes that represent the ways the students describe and experience online engagement fatigue in their online studies and the ways the educators witness and describe this fatigue in their online courses.

The interview transcripts were content analysed for both semantic and latent themes (thematic analysis) [52,53] using two stages of analysis. First, the data was analysed using the computer-assisted

qualitative data analysis software, NVivo. This analysis helped to identify the explicit, surface meanings of the data, that is semantic themes. Specific phrases and words were identified using this first level of analysis. For example, for the theme *overwhelmed*, specific instances of this term were identified:

For me it's feeling overwhelmed. I mightn't have been able to get my lectures done in the previous week. The worst I've ever got behind was about six weeks behind with my lectures. (Bella)

Probably overwhelmed because everything just came at once in every subject (James)

To ensure, and increase, data dependability (i.e., by use of two analysis methods: computer software and manual) the manuscripts were then manually analysed to identify further instances where the semantic themes might be apparent in a more latent manner. As argued by Clarke and Braun [52], a common drawback of qualitative content analysis (especially when utilising qualitative analysis software) is the use of the main interview questions as the themes rather than interpreting the themes to make sense of them. The manual analysis was therefore important for looking beyond what was said [54,55] to identify and examine the underlying ideas, assumptions, and conceptualisations that informed and built upon the semantic content of the data. This manual analysis also considered the semantic themes in relation to the full transcripts, thus ensuring all instances of the semantic theme were identified. For example, using the theme *overwhelmed* again, the manual analysis identified instances where participants described feelings of being overwhelmed without the use of the word 'overwhelmed':

Then the assignments start piling up. You start stressing and then you start to overload with more information trying to catch up. (Liam)

In literature courses you have a lot of books and novels, plays, things you need to read but then you've also got extra reading activities on top of those things that you need to read. Then the education course you have lots of theorists and theories and stuff that you need to read on. So, I guess when you first start in the course it's like, oh we're going to be looking at these things but you're not actually reading them yet. But then by the time you get to the middle of semester you've got two novels you've got to finish, you've got eight theories – eight theorists you need to read up on and you've got all of the readings that you might have missed that you need to read up on. (Leah)

The manual thematic analysis also allowed the researchers to explore all the possible nuances and relationships, to view data from a variety of perspectives, and to move from micro- to macro-view in order to "support the analytic imagination necessary for understanding and theory generation" ([56], p. 12). The manual analysis was undertaken by two researchers who individually analysed the data and then compared findings to review, modify and refine the themes that emerged. This collaborative refinement of the themes was also important for identifying the 'essence' of each theme, that is, what the theme was about (Braun & Clarke, 2017), as well as to ensure the emergent findings were reliable and valid through a process of checking, discussion and agreement. A thematic map was then developed to illustrate the relationships between the themes (see the discussion).

The analysis found several themes that can be related to triggers of online engagement fatigue such as overexposure due to the quantum and timing of content and activities, as well as the effect of online engagement fatigue such as feelings of being overwhelmed, loss of motivation and reduced enthusiasm. These themes are discussed in the next section. In reporting the data, pseudonyms have been used.

5. Findings

The concept of online engagement fatigue and the way it impacts on student learning was perceived quite differently by educators and students. While the educators had mixed views about whether online

engagement fatigue was a real phenomenon, seventeen (of the eighteen) students felt that online engagement fatigue was something they had experienced in their online learning. Twelve students also indicated it was something they had noticed amongst their peers.

Interestingly, whilst the educators were uncertain about whether the phenomenon was real, they demonstrated a high level of awareness and empathy for the varying and demanding circumstances of online students and spoke of the quantum of course artefacts and related interactions. They took steps to manage and respond to the impact of this on students and spoke about ‘checking in’ with students, trying not to overload them with tasks and messages, keeping the technology demands as simple as possible, and ‘chunking content’ to make it more interesting and manageable. These are perhaps responses that can be understood as helping to prevent online engagement fatigue. So, while educators may be uncertain whether online engagement fatigue has been experienced by their students, they signalled an awareness of its possibility.

The students, on the other hand, spoke at length about experiencing the phenomenon and several themes emerged that reflect the ways students described and perceived online engagement fatigue. These showed that students defined online engagement fatigue in terms of feeling overwhelmed, as a loss of motivation, and as something that occurred when they had been online so often and for so long that it became ‘too much’.

5.1. Overexposed and overwhelmed

More than half of the students (10) described online engagement fatigue in terms of feeling overwhelmed. Mostly they spoke about feeling overwhelmed due to the amount of learning content and how much coursework they thought they were expected to complete. In feeling overwhelmed, some of the students described wanting to ‘shut down’ or quit (in response to feeling that way).

I physically could not do all of the content and that was quite overwhelming especially when you hit that week six or seven and you're just like, oh my goodness, I haven't done anything, but that's not the case. That's definitely – then it starts to feel like you're not going to do well for the next bit so I would say that is fatigue ... I just didn't do anything for about three weeks. That included my break, so I just didn't. This semester I didn't do anything because I was just like, this is too hard. (Jenny, arts student)

I shut down personally. I say, no that's it. I'm done. I'm quitting. I – there was lots of times where I actually reached out to UNIVERSITY ACRONYM and said, can I please defer? (Charlotte, aviation student)

Three of the educators also mentioned observing students become overwhelmed by content generated by communication. All three attributed this to the online learning context and the contemporary push to ‘engage’ students. As explained by the educator Rosemary when discussing the universities virtual classroom called StudyDesk:-

StudyDesk is overwhelming. The students get a million messages from the university now, like emails and messages and stuff. There's more and more stuff that we're encouraged, as educators, to put on our StudyDesk. So, they become more and more busy.

To cater to a variety of learning preferences, educators are often encouraged to provide a variety of resources on the LMS. In addition, there are online student forums, a welcome video, an orientation video, videos to encourage connection between theory and practice, course announcements, extra readings, and the standard weekly lecture recordings. The LMS can easily become a place where students might find themselves overwhelmed by the complexity and the amount of content offered. As suggested by educator William, with all the activities educators can do to try and get students engaged and involved in their online learning, it is easy to “overdo it”. Providing a semester’s worth of

online learning content from day one of semester may also contribute because students “*tend to read way ahead and then get overwhelmed*” (educator Amber).

Another six of the students suggested that being online so often became too much. The amount of time they were required to be online to complete learning tasks contributed to their propensity to suffer from online engagement fatigue and hindered their engagement with the course. They used words like ‘overloading’, ‘tiresome’, ‘too much’ and ‘sick of it’.

I found that I couldn't sit as long in front of the computer so our sessions on Monday and Tuesday would be nine till four and I couldn't cope with nine till four. [It's that long] so I would do the first lecture or even half the lecture, go and make myself a cup a tea or go for a walk and listen to another lecture. Then I wouldn't do anything for the rest of the day because it would be too much – like too overloading. (Charlotte, aviation student)

The online just started to become a little bit tiresome for me.... I think it's just having to log on, on a regular basis and just do the work, it can get a bit exhausting. (James, psychology student)

You're just too much online, at some point it just gets too much. (Bella, nursing student)

These students also spoke about specific online learning activities that contributed to their online engagement fatigue. For example, three students talked about being faced with too many forum posts; three mentioned that online lectures were too long (more than two hours); one talked of too much reading; and another of inadequate resources (due to not being on-campus) resulting in looking at a very small screen all day. A real struggle for many was spending such a significant amount of time at a computer and being required to ‘be online’ so often and so much, indicating that this in itself may be a trigger for online engagement fatigue.

The combination of having multiple course activities or assessment items across several courses occurring ‘all at once’ was raised by seven students as something they felt was a trigger for online engagement fatigue. As explained by Bella (nursing student), online engagement fatigue “*especially [happens] when you see your calendar and it says, lecture, lecture, lecture, lecture, assignment due, assignment due, quiz*”. Related to this is feeling overloaded by the amount of course content or by the difficulty of that content and the perception of there being too little time.

I definitely think it is a content thing probably more than likely. They've released a bunch of – all the stuff that you need to do and then it just starts piling up at that point if you are not on top of it and no one really is. You can't be on top of everything ... (Jenny, arts student)

I was with a bunch of people and they were saying there was way too much knowledge Their brains were like – they were going gooey after – after a couple of hours they – some even said they weren't even considering coming to the last class just because there was way too much knowledge. (Liam, exercise science student)

The above highlights the enormity of the task for students in putting boundaries and strategies in place to minimise their overexposure and reduce the likelihood of being overwhelmed.

5.2. Timing

There were differing views from the students about ‘when’ during semester they most often experienced online engagement fatigue. Two students said it happened at the end of semester once the work was completed, four said it occurred when assessments were due, while seven described experiencing online engagement fatigue and a related reduction in enthusiasm around mid-semester, at which point there was also a loss of productivity. As explained by Leah (education student),

I have noticed in myself a drop in interactions within the forum posts and things like that just before mid-semester breaks. Also, after mid-semester break, I find that it just continues to trail off until the end of semester.

Of the four students who felt their online engagement fatigue occurred when assessments were due, one discussed the increase in forum posts at this point. He indicated he spent significant amounts of additional time reading all the extra posts that were put up by his fellow students in case there was something pertinent in those posts related to the assessment. He felt he was negatively impacted by this extra reading and it contributed to his fatigue. Another student felt that when assessments were due, her focus swapped to completing that assessment rather than completing coursework activities; while another felt that she experienced online engagement fatigue just after a 'round' of assessments were completed. In her words,

When my first assignments were due, and then between that and the next round of assignments I just felt really tired of how much work I put into those assignments. (Isobel, education student)

The impact of assessment on online engagement was also a theme that emerged from nine of the 10 educator interviews. While three of the educators observed increases in participation just before exams and when assignments were due, six noted the opposite, perceiving that participation drops off when assessments are due. These six also noted the need to be mindful that students will often have multiple assessment items for multiple courses, impacting their level of observed involvement in a course and potentially leading to online engagement fatigue. As William commented,

This is a student I know, a really good student, very committed and doing quite well, but they said they were so tired because they just had all these assignments in this one week.

Nine educators spoke about witnessing a 'drop off' in engagement at specific points in the semester, but many questioned whether this was due to online engagement fatigue. They also noted that the drop off in engagement was generally only an issue they witnessed in first-year students; for students in subsequent years of study, engagement was more stable throughout the semester, and this was especially the case for post-graduate students.

5.3. Other factors driving reducing involvement

There was uncertainty amongst educators about whether the drop off in participation they witnessed occurred because of online engagement fatigue or was simply an indication that students' involvement was impacted by other factors. Five of the educators suggested this drop off reflected the impact that outside influences (such as work, family, health) had on students' time. Interestingly, the impact of outside influences on students' propensity to engage with the course was also discussed by half (9) the student participants. These students described outside influences as something that both impacted on their ability to engage with their learning and something that triggered their online engagement fatigue. As explained by Emily (education student), "I was so busy with work, where I'd get home from work, and I'm like I'm so tired, I really don't want to do uni. I really don't want to have to talk to people on the screen". Outside influences mentioned by the students included family or caring commitments, work, health-related issues, and lacking the technological skills required to study fully online.

Four of the educators suggested the drop off in engagement they witnessed was perhaps an indication that students were simply getting on with the work and being "quite strategic about what they do and don't do" (Rosemary). To provide students with a flexible study environment that might support their ability to undertake their studies in a manner that enables lifestyle integration, it is now policy at the university where this research took place that all course materials (for the entire semester) are available to students on the LMS from day one of semester. The

provision of all online course resources from day one means that students often do not need to engage with the course or their educators and can be 'strategic' about those learning activities in which they engage. As observed by educator Simon, many students do not necessarily want to interact with anyone and are quite happy to undertake their learning independently. Spoken by Simon from a student's voice:

I just want to get my course curriculum, submit my whatever I've got to submit, get 100 per cent, because that's what I like to do in these courses, and to heck with having to interact with anyone.

Simon also noted that for these students, there may be little evidence of their engagement with the learning materials online through the LMS; however, as the quote below indicates, he felt that this does not mean the student is not engaged:-

You can't make the universal assertion that a non-clicking student is a poor student ... Universities have this nasty habit - well, not a nasty habit, but I routinely see it where they consider a student with only 10 clicks on your page for a semester a poor student. [Whereas] the student just doesn't want to have anything to do with you. They're a high-performing student who's got their act together, and they just want the curriculum, the assessments, and then put their assignments back into the system. There's nothing wrong with that.

5.4. Reduction in enthusiasm and motivation

In describing online engagement fatigue, seven of the students associated it with a loss of motivation. All these students described feeling enthusiastic at the beginning of the semester when everything is novel and new but then losing motivation as the semester progressed. As articulated by Amelia (nursing student), "you reach the point where you go, I think I've had enough of this". Many of the students could not articulate why this loss of motivation occurred but suggested it could have been a result of feeling 'stretched' by the amount of work they had to do and thus feeling online engagement fatigue.

While the educators all spoke about strategies they use to motivate students (e.g., designing authentic learning tasks and activities [mentioned by 8 educators]; being responsive to students [35]; and providing support to struggling students [50]), there was no consensus about how things could be done better to prevent students from disengaging or losing motivation. Ideas suggested by individual educators (note, there were no consistent ideas) included improving university communication strategies so students are not overloaded with repeat messaging, improving transition to university (and hence student expectation management) through preparation programs, and trialling a block teaching approach where students focus on one course/subject at a time before moving onto the next one.

6. Discussion

The purpose of this research was to define online engagement fatigue by addressing the educational problem of whether online engagement fatigue is real; and commenced with developing an emergent definition. The first research question sought to confirm the existence of online engagement fatigue using the emergent definition and the qualitative evidence shows that from a student perspective, online engagement fatigue is a recognisable phenomenon. The second research question sought to understand the defining elements of online engagement fatigue and consider its effect. While the aspects developed in the emergent definition were present, the evidence points to a refinement in the definition. This is depicted in [Diagram 2](#).

There were two aspects to the emergent definition developed in the first phase of the research process. The first aspect was the overexposure to course activities and related activities, and the second aspect was its consequence – that of a resultant loss of motivation and enthusiasm. According to the students, their experience of feeling overwhelmed is a

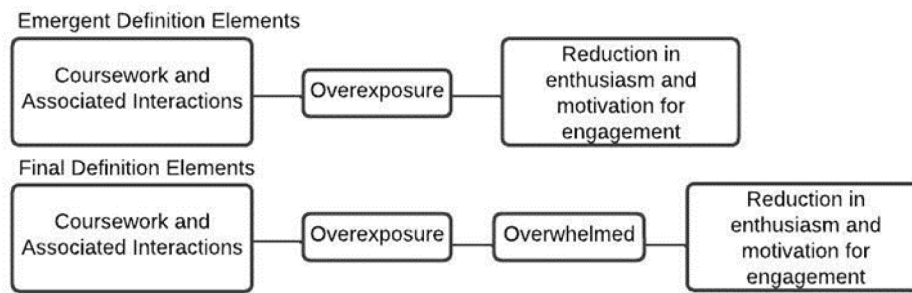


Diagram 2. Elements of Online Engagement Fatigue.

key characteristic of online engagement fatigue and therefore needs to be incorporated into the definition. Interestingly, although the educators overall were less inclined than the students to view online engagement fatigue as a phenomenon, many related observations of students being overwhelmed and shared strategies they used to overcome this, thus indicating that both students and educators agree that this is a risk factor for disengagement. Being overwhelmed is different to being overexposed. Overexposure is the repeated contact with little respite that may eventually lead to being overwhelmed. Overexposure could be managed with student psychological capital [18] to mitigate becoming overwhelmed; however, those students who became overwhelmed attached to it a strong emotional effect. This led to the final definition for online engagement fatigue:

A reduction in online students' enthusiasm and motivation for engaging in course activities as a result of overexposure to online coursework and associated interactions that lead to strong feelings of being overwhelmed.

The findings here also suggest that some students may be discerning about the types of online artifacts and interactions they engage with, while others are not. Other researchers also report that some students learn to be selective with, or economise, learning resources [57]. With the increase in students juggling dual demands of work, study, and other responsibilities [18], the ability for students to be discerning in how much of the online material they actively engage with may help prevent online engagement fatigue. In a report by KPMG [1], it was suggested that in the future, as the higher education sector is increasingly disrupted by contemporary forces (technology change, demographic change, consumerism, competition), more students will be working part-time, undertaking family responsibilities, and wanting to integrate learning into their lives rather than interrupt their lives for an immersive university experience. This means the potential impact of these outside influences will increasingly become important considerations in online course design, as will be the student skill of discernment in navigating the institution's learning management system.

The findings also suggest that the timing of course activities and assessment was seen as a trigger for online engagement fatigue, as is the quantum of online communication. There are clear implications for appropriate online course design given that in online learning contexts the content and communication generated may increase rapidly, thus increasing pressure on students. This supports previous research warning of the use of technology to encourage student engagement [2, 28–31]. This means that as every educator in every course increasingly communicates through written, online channels – and as students respond via their own 'posts' (i.e., texts and messages) – the volume of content and associated messages that students are required to read in their courses correspondingly increases. As such, it is not surprising that students are feeling overwhelmed. As articulated by educator Simon, the consequence is "a standard fight or flight response ... where some people just [say] *it's too much trouble, and they turn off*". Further, the increased online activity from every section of the university wanting to engage with students and the pressure for educators to conform to 'online study desk' minimal requirements could lead to behavioural change in the teaching

team at the course level. This research contributes to this literature by uncovering the existence of online engagement fatigue in the perception of students and suggesting that further research is needed. In particular, what are educators currently doing to reduce the risk of online engagement fatigue in students; is facilitation and content changing as a result; and are educators themselves at risk of online engagement fatigue?

Emerging from the exploratory findings are several factors that improve our understanding of antecedents and consequences of online engagement fatigue and point to future research. This is presented in Diagram 3. Care should be taken in interpreting the diagram in relation to the direction of influence. Whilst arrows have been included to help understanding, it is acknowledged that the direction of influence could be bi-directional. For example, being overwhelmed could be an antecedent and a consequence of online engagement fatigue. Future research could explore these relationships as the inherent limitation in the research design of this project, exploratory qualitative analysis, reduces any claim to causation between factors.

There are several limitations of this study. Firstly, the students were first year students from regional, remote, or rural areas. While this restricts generalisability, it did provide a relatively homogenous group within which to examine the concept. Future research can seek to investigate whether the risk of online engagement fatigue changes as they progress through the years of their degree, and whether there are remedies being employed by more experienced students. Secondly, the opportunity sampling used in this research (students recruited via a general call through text messages and emails and educators approached by other academics) means that we cannot claim that the samples were representative of the wider body of students and educators. While this does not invalidate the findings, it needs to be acknowledged that these cohorts and their experiences may be different from their counterparts at other universities. Further research is needed to determine to what extent these findings are transferable to other cohorts. A broader study could further develop the concept of online engagement fatigue and the factors contributing to it, perhaps enabling the concept to be operationalised on a wider scale for future research. Finally, the normal caveat of researcher bias needs to be acknowledged. The researchers came to the project with their own experiences and understanding of student engagement that could influence their interpretations.

It was interesting to find that educators and students had conflicting perceptions and expectations concerning online engagement and what they consider 'enough' engagement. While several educators felt that perhaps students were just not engaging enough with online materials, the students strongly agreed that online engagement fatigue was a real phenomenon and something they regularly experienced. This leads to a likely expectation gap which could benefit from future research. This is especially important given that many higher education institutions are expanding online education and, in some cases, the move online that occurred because of the pandemic has intensified the integration of digital technologies and online education experiences for the long term [3]. This study emphasises some areas that those educators new to online learning should consider, such as ensuring suitable activities and

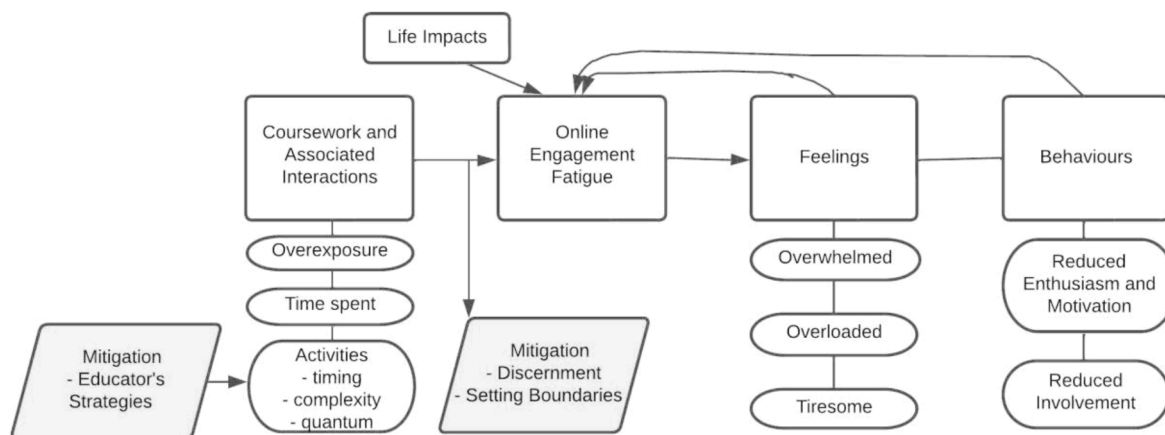


Diagram 3. Map of Elements and Factors of Online Engagement Fatigue.

facilitation to support student engagement while also ensuring online engagement fatigue is reduced. Future research could explore how the learning management system design and content impacts on students' propensity to experience online engagement fatigue.

As the emphasis on student engagement and observable engagement outcomes is currently high on the agenda in higher education, it is timely to consider whether students are being provided with too much learning content, whether educator expectations are too concerned with what is visible online, and whether an emphasis on course learning analytics is realistic? Alternatively, perhaps students are simply getting on with their work offline, rather than disengaging with the online content. Future research could examine student strategies for coping with the increasing pressure to visibly engage online, including the extent to which they are able to discern between the various demands and become more selective about when and with which to engage.

If, as indicated by the students in this research, online engagement fatigue is a phenomenon that students experience because of the way online learning content is structured and the time they are required to spend online, then this is important information for educators. Recognition of this phenomenon has potential implications for the ways educators design their online learning environment, perceive student engagement/non-engagement and the ways they communicate with students. It also has implications for how support is designed for students in the online learning context. These are important areas for future research into online pedagogies that support student engagement and success.

7. Conclusion

The student participants in this research almost unanimously agreed

Appendix 1. Participant Information

| Student Interviewees | | | | | | | |
|----------------------|---------|-----------------|-----|--------------------|--------------|--------------------------------|------------|
| Pseudonym | M/ F | Degree Program | Age | Lives with | Paid Work | Unpaid Work | Study Load |
| Jenny | F | Creative Arts | 26 | Alone | 20 hrs pw | 1 day per week | F/T |
| Gary | M | Nursing | 53 | Elderly parents | Nil | Daily | F/T |
| Amelia | F | Nursing | 55 | Husband & children | 30 pw | 3 h per week | F/T |
| Mark | M | Health Science | 19 | Parents & siblings | Nil | | F/T |
| Olivia | F | Nursing | 37 | Alone | 30 hrs pw | 2 hrs per week | F/T |
| Sophie | F | Nursing | 20 | Sister (older) | 20 hrs pw | Nil | F/T |
| Liam | M | Health Sciences | 19 | Parents | 12-20 hrs pw | Yes | F/T |
| Bella | F | Nursing | 22 | Aunt & her family | 20 hrs pw | 1 day per week & some evenings | F/T |

(continued on next page)

(continued)

| Student Interviewees | | | | | | | |
|----------------------|---------|----------------------------|-----|----------------------|--------------|------------------|------------|
| Pseudonym | M/ F | Degree Program | Age | Lives with | Paid Work | Unpaid Work | Study Load |
| Lesley | M | Health Sciences | 25 | Friends | Nil | Nil | F/T |
| Mia | F | Creative Arts | 62 | Alone | Nil | Nil | F/T |
| Charlotte | F | Aviation | 19 | Parents | 20–25 hrs pw | Nil | F/T |
| Harry | M | Business, Commerce, Law | 23 | Share house | 25–30 hrs pw | Nil | F/T |
| Leah | F | Education | 22 | Mother & grandmother | 25 hrs pw | Nil | F/T |
| Claudia | F | Business, Commerce, Law | 20 | Share house | 10 hrs pw | Nil | F/T |
| Emily | F | Education | 19 | Friends | 12 hrs pw | 2.5 hrs per week | F/T |
| Isobel | F | Education | 18 | On campus | 5–15 hrs pw | Nil | F/T |
| Eve | F | Education | 18 | Friends | 20 hrs pw | Nil | F/T |
| James | M | Health Sciences | 18 | on campus | Nil | Nil | F/T |

| Educator Interviewees | | | | | | | |
|-----------------------|---------|-----------------------------|---|--|----------------------------------|----------------------------------|---------------------------------|
| Pseudonym | M/ F | Discipline Area | Higher Ed. Teaching Experience (yrs) | Experience Across Universities (number) | Mode of Teaching | No. Students per Study Period | No. Courses per Study Period |
| Jonathan | M | Law | 30 | 2 | Online | 120 | 2 |
| William | M | Business | 20 | 1 | Online and on- campus | 200 | 3 |
| Matthew | M | Education | 15 | yes (15 years as primary school principal before) | Online and on- campus | 700 | 3 |
| Rosemary | F | Nursing & Midwifery | 13 | 1 (TAFE teaching previously) | Mostly online, some on-campus | 500 | 3 |
| Elizabeth | F | Accounting | 10 | 3 | Online and on- campus | 200 | 4 |
| Geoffrey | M | Commerce | 25 | 2 | Mostly | 300 | 3 |
| Simon | M | Engineering | 25 | 1 | Online and on- campus | 80 | 2 |
| Sam | M | Computing | 5 | 1 | Mostly online, some on-campus | 150 | 2 |
| Amber | F | Food Science | 15–20 | 2 | Mostly on-camps, some online | 300 | 9 |
| Bob | M | Sport & Exercise Science | 6 | 1 | Online and on- campus | 130 | 2 |

Appendix 2. Interview Schedule

Student Questions

Demographic, personal circumstances & general engagement questions:

1. What is your age?
2. Who lives with you in your household? (e.g. partner, children, any others; relationships and ages of any children)
3. Do you live in a city, regional town or a rural environment?
4. Are you employed in any paid work? How many hours per week?
5. Are you employed in any unpaid work (e.g. volunteer work and/or unpaid caring work outside the immediate household, such as caring for parents)? How many hours per week?
6. Are you studying full- or part-time? (if part-time, what load?)
7. As an online student, what does 'being an engaged student' mean to you? How would describe the behaviour of an 'engaged' online student?
8. To what extent do you feel that you are an 'engaged' online student? – please describe.
- 9a. What types of things within your studies help or hinder your online engagement (e.g. teacher behaviour, study load, content, delivery, etc.)
- 9b. What types of things within your studies help or hinder your online engagement (e.g. teacher behaviour, study load, content, delivery, etc.)
- 10a. What types of things outside of your studies help or hinder your online engagement (e.g. work, family, paid/unpaid work etc.)
- 10b. What types of things outside of your studies help or hinder your online engagement (e.g. work, family, paid/unpaid work etc.)

CVExtra1: This was your first year at university and it may have been different than you had expected due to covid-19. Looking back how do you see your year compared to what you thought it would be?

CVExtra2: Assuming that all goes back to normal, how do you envision 2021? What do you see in your mind's eye for your studies next year? Much the same, better, worse?

Engagement fatigue questions:

We would like to talk with you now about something that we are calling 'online engagement fatigue'. What we mean by this is that we have noticed that at different times of the semester, some students seem to be less engaged, e.g. participating less in discussions, fewer posts, less interaction. One of the things that we are wanting to explore in this research is the notion of 'engagement fatigue' – i.e. whether online students ever find that they get very tired of being engaged or maybe showing engagement. We wonder if they are simply getting on with their work; or are they are finding it very hard to keep going? If so, we wonder what are the types of things that are contributing to engagement fatigue - making it very hard for them to keep going. I would be very interested in hearing your thoughts about this. E.g.

11. Do you think that you ever get tired of engaging with your studies online? If so, could you please tell me a little more about this?

If yes,

12. How frequently have you experienced 'online engagement fatigue'?
 13. Does it tend to happen at any particular times of the semester more than others?
 14. What tends to contribute to or trigger your online engagement fatigue?
 14. What other circumstances – either within your studies or external to these - contribute to this?
 15. How do you tend to respond to online engagement fatigue? E.g. not engage at all with your studies? Work on assessments instead of engaging with teacher/other students/ other activities?
 16. What impact does this have on your studies more broadly?
 17. Is there anything that helps to diminish online engagement fatigue? Something you do? Others do?
 18. Is there anything that you think the university – your teachers or others – could do to help students avoid/diminish online engagement fatigue? (What activities do you find most useful in your studies; what do you find least useful?)
 19. Any other general thoughts on what we have discussed?
- If no,
11. How do you manage to keep yourself energised with your studies? What helps/hinders this for you?
 12. What other circumstances – either within your studies or external to these – help you to maintain your energy/motivation for your studies?
 13. Is there anything that others do – within university or outside of it – that contribute to this?
 14. Any other general thoughts on what we have discussed?

Educator Questions

1. Gender?
2. Discipline/Faculty?
3. Years teaching experience?
4. At what institutions?
5. Do you teach only online or face to face and online?
6. How many students do you teach at present and across how many courses?

For your undergraduate courses...

7. Are you the only academic involved in the course/s or is there a larger teaching team?

Online Engagement fatigue questions:

Within this research we are wanting to explore the notion of 'online engagement fatigue' – defined as:

A reduction in the enthusiasm and motivation of online students for engaging in course activities as a result of overexposure to online coursework and associated interactions.

We are exploring whether online students become fatigued by the demands of the online environment and, if so, how is this related to their engagement. For example, at different times of the semester, some students do become less engaged, e.g. participating less in discussions, fewer posts, less interaction. We wonder if they are simply getting on with their work; or are they becoming fatigued by too much emphasis/expectations on and about online interactions? Or are finding it very hard to keep going for other reasons? I would be very interested in hearing your thoughts about this.

8. Have you witnessed a drop-off in student online engagement?

If yes,

9. Does it occur at a particular point in the semester?
10. Does it tend to happen across the whole student cohort or just a subsection of students?
11. To what extent do you think that this may be related to online engagement fatigue?
12. Do you notice it in one course and not another?

If yes,

13. Why do you think that is so? (type of course, number of activities, type of students, etc.)
14. What circumstances – either within the course or external to the course – contribute to this?
15. How do you respond to a drop in student online engagement?
16. Do you think a drop in student online engagement affects a student's outcome?

If so, how?

17. Is there anything that helps to diminish student online engagement fatigue? Something you do? Others do? Have you witnessed an intervention or action or behaviour of others?

18. Any other general thoughts.

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