Of Possums, Hogs and Horses:

Capturing Duality of Student Engagement in eLearning

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Please cite as:

Morgan-Thomas, A. and Dudau, A., 2019, *Of possums, hogs and horses: capturing duality of student engagement in eLearning*, Academy of Management Learning and Education, Online first.

Acknowledgements

We acknowledge the support of University of Glagsow through the Blended Online Learning Development grant scheme, particularly John Kerr and Vicki Dale who supported us unreservedly throughout the implementation stage. We also thank the students who took part in the study and did so enthusiastically. They are an endless source of joy and inspiration! Last but not least, we owe gratitude to our editor and our reviewers, who used rigour and wit to engage constructively with our arguments, ultimately enhancing the quality and presentation of this paper.

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ABSTRACT

The current preoccupation with activity and interactivity in pedagogical research on eLearning precariously elevates the importance of students' behavioural engagement and insufficiently accounts for other forms of productive involvement in learning. We argue that theoretical developments on the concept of student engagement offer a critical opportunity to revise this stance and problematize online activity. Through the lens of engagement, we depict online engagement as a multi-dimensional concept that encompasses behaviour, emotion and cognition. We further argue that the focus of online engagement may be dual in nature: engagement with online pedagogies and, separately, with the substantive knowledge being acquired. This study draws on qualitative data from postgraduate management research students in an online research methods course. To tease out the complexity of engagement, we use evidence of online activity to categorize learners into three distinct types: hogs, possums and horses. We juxtapose these behavioural categories against narrative accounts of engagement in eLearning to reveal a rich set of textures as well as misalignment among behaviour, emotion and cognition. The findings seem to question the privileged status of interactivity in online pedagogy and tentatively suggest the possibility that online disengagement may not be detrimental to learning.

Key words: student engagement, eLearning, online pedagogy, online, participation disengagement, involvement

INTRODUCTION

eLearning represents a burgeoning domain in pedagogical research in management. Despite the initial reluctance with (Proserpio & Gioia, 2007) and bias against online learning (Arbaugh, DeArmong, & Rau, 2013; Redpath, 2012), scholarly interest in the adoption and implementation of eLearning tools within management pedagogies has been steadily increasing (Alavi & Gallupe, 2003; Daspit & D'Souza, 2012). Research has made significant strides in understanding how technologies can assist teaching and learning (Marks, Sibley, & Arbaugh, 2005; Whitaker, Randolph, & Ireland, 2016), what is meant by effective instructional designs in online delivery (Arbaugh, 2000a; Daspit, Mims, & Zavattaro, 2015) and what factors ensure provision of high-quality courses (Arbaugh, 2000a; 2005b). The progress in eLearning scholarship has fostered growing acceptance and implementation of online pedagogies within management curricula (Brower, 2003; Arbaugh & Benbunan-Finch, 2006; Goumaa, Anderson, & Zundel, 2018).

Within this body of literature, productive involvement in learning is commonly depicted as online participation (Arbaugh, 2000b) and traced back to students' eLearning activity (e.g., system access, viewing, reading and writing) and interactivity (Arbaugh, 2000a, 2005b; Arbaugh & Benbunan-Finch, 2006; Huang, Lin, & Huang, 2012; Shaw, 2012). Past evidence of the effectiveness of online courses links interactivity with satisfaction and perceived learning (Arbaugh & Duray, 2002; Rollag, 2010) and shows that interactivity drives positive outcomes for learners, including persistence and attainment (Sebastianelli, Swift, &

Tamimi, 2015). Conversely, inactivity and passivity online are understood as symptoms of disengagement and predictors of negative outcomes, such as dissatisfaction and dropout (Dennen, 2008; Lee & Choi, 2011). Within pedagogical principles, the focus on what students do online translates into instructional guidelines that emphasize the scaffolding of eLearning around opportunities for online behaviours (Arbaugh, 2014; Redpath, 2012). For example, a common feature of many online courses are grading systems that reward online participation (Rollag, 2010). Therefore, fostering online activity has become the implicit aim of eLearning design and instructors are being urged to eliminate passivity to combat disengagement and disaffection in eLearning (Redpath, 2012).

Few critical voices have begun to question the focus on activity in eLearning. Some authors have argued that student modes of online learning encompass a rich and complex network of behaviours, emotions and thoughts (Delahunty, Verenika, & Jones, 2014; Goumaa et al., 2018) and, by capturing only behaviour, activity potentially deflects from other types of productive involvement in eLearning (Ke, 2010). Indeed, some empirical evidence suggests that online activity is a poor predictor of student attainment (Ke, 2010; Sebastianelli et al., 2015) and that student learning frequently occurs offline and therefore is invisible on the learning platform (Dennen, 2008; Ke, 2010). Moreover, over-participation in discussions can cause dissatisfaction among students (Goumaa et al., 2018; Rollag, 2010), as learners begin to perceive demands for activity as 'busy work' that is unrelated to the acquisition of knowledge (Cochran, Baker, Benson, & Rhea, 2016). The narrow conception of eLearning that equates it with online activity (see Hrastinski, 2009) drives instructional designs and interventions that attempt to maximise behaviour. In doing so, online pedagogies inherently elevate active involvement with online course materials, participants and instructors, and tend to downplay the importance of the substantive content of learning—namely, the skills and knowledge students should develop (Ke, 2010).

Reflecting on these points, we argue that the criticisms against activity are indicative of a more profound problem around the way in which we frame the notion of eLearning. Although over-emphasizing student activity has pragmatic consequences for online pedagogies, it also suggests an important theoretical misconception: confusion about what productive involvement in learning is and how it relates to online activity. To illuminate this issue and problematize eLearning, we use the theoretical lens of engagement (Ben-Eliyahu, Moore, Dorph, & Schunn, 2018; Kuh, 2009). We define engagement as the intensity of productive involvement with an activity, involvement encompassing behaviour, emotions and cognition (Ben-Eliyahu et al., 2018). Accordingly, engagement is a multi-dimensional concept that includes what students do, what they think and how they feel about learning (Fredricks, Blumenfeld, & Paris, 2004; Kahu, 2013; Kuh, 2009). Our conceptualisation of engagement takes into account the different foci that student engagement may have (Bryson, 2014; Furlong et al., 2003). Specifically, we argue that in the context of eLearning, students' engagement may be with the pedagogical setting in which the learning is supposed to occur (the medium of an online course) and, separately, with the substantive content of learning: the knowledge developed through the course. We maintain that this distinction has important implications for the interpretation of online activity and its relationship to learning outcomes.

Our overarching aim is to enhance the conceptual understanding of engagement in eLearning. The study draws on primary data from postgraduate research students in an online research methods course in management. Our evidence includes records of actual learning activity generated from the online learning system (Moodle) and in-depth qualitative interviews that capture students' reflections on their learning. We use evidence of online activity and categorize learners into three distinct participation modes labelled, possums, hogs and horses. We then juxtapose the behavioural categories with the narrative evidence of cognitive and emotional engagement to uncover multidimensional textualities of engagement

within a complex and nuanced theoretical network that links online activity, emotion, cognition, satisfaction and learning.

We begin with an overview of interactivity in management learning and then outline the concept of engagement and its theoretical properties. Next, we discuss the study methods, including data collection and analysis. We then present the findings within the context of the online learning literature, noting boundary conditions for generalization. Finally, we highlight our theoretical and practical contributions and discuss limitations and avenues for future research.

INTERACTIVITY IN ONLINE PEDAGOGIES

Recent years have witnessed a steady progress in the development of eLearning scholarship in management studies (Arbaugh, 2014; Rollag, 2010). Drawing on diverse perspectives and research designs, a growing body of evidence has examined a broad range of emerging technological tools in management learning (Daspit et al., 2015; Whitaker et al., 2016), the principles of online pedagogies and effective instructional designs (Alavi & Gallupe; 2003; Brower, 2003) and a range of antecedents and outcomes of eLearning in management curriculums (Arbaugh, 2005; Arbaugh and Rau, 2007). A key motivation driving much research activity is the concern that participation in online learning is not guaranteed, and disengagement in the form of non-participation, passive lurking or dropout is as frequent in management courses (Cochran et al., 2016; Ke, 2010; Rollag, 2010) as it is elsewhere (Dennen, 2008; Lee & Choi, 2011). Unsurprisingly, significant scholarly efforts in management learning have centred on preventing disengagement and ensuring that instructional designs deliver high-quality student experiences (Arbaugh, 2005b; Marks et al., 2005).

Research interest in discovering what makes online pedagogy in management studies effective has taken one of two approaches. The first strand of research, scholarship on the quality of eLearning, takes a student-centric perspective and juxtaposes the properties of online courses against student outcomes, such as satisfaction (Arbaugh, 2000a, 2005a) or perceived learning (Cheng & Chau, 2016; Sebastianelli et al., 2015). The overarching objectives are to uncover factors that contribute to effective online provision in order to offer practical guidance on the design and implementation of online courses (Arbaugh, 2005b; Cochran et al., 2016). Empirical evidence shows that student outcomes are significantly influenced by course design, including its organization, the choice of technology and the organization of learning activities (Arbaugh, 2000a; Arbaugh & Duray, 2002); student predispositions, including learning styles, motivations and demographics and course content, including the subject matter (Ke, 2010; Kellogg & Smith, 2009; Sebastianelli et al., 2015). The key pedagogical principle arising from empirical evidence is that interactions among course participants, instructors and materials significantly affect the perceived quality of courses (Arbaugh, 2014; Marks et al., 2005).

A second strand of scholarship, research on online management pedagogies, explores how specific educational methods and theories of instruction can be implemented in online contexts to leverage the technological possibilities of online tools. Studies have examined collaborative learning frameworks (Ke, 2010), dialogism (Goumaa et al., 2018; Ivancevich, Gilbert, & Konopaske, 2009), constructivist (Arbaugh et al., 2008) and objectivist pedagogies (Arbaugh & Benbunan-Finch, 2006). For example, research has made significant headway in incorporating a community of inquiry models into online learning (Daspit et al., 2015; Daspit & D'Souza, 2012; Goumaa et al., 2018) to develop rich, dialogic, interactive experiences (Ivancevich et al., 2009). Although literature on management pedagogies tends not to refer explicitly to online activity or interactivity, the presence of both is evident in key concepts. For example, the notion of teaching presence relies on instructors' nurturing of interaction through

course design and the facilitation of dialogue and instruction (Daspit & D'Souza, 2012), and students social presence reflects personal interactions that take place on the online platform (Daspit et al., 2015). When extended to online instruction, collaborative and constructivist pedagogies encapsulate interaction as a key driver of the learning experience (Goumaa et al., 2018; Redpath, 2012).

In summary, in pedagogical management research, the intensity of online activity seems to go hand in hand with effective learning. A strong undercurrent that runs through diverse investigations of online learning is their preoccupation with students' online behaviours as a proxy for cognitive achievement in eLearning (Kellogg and Smith, 2009; Sebastianelli et al., 2015). Going forward, it seems that the emphasis on behaviours will only deepen because technological innovation in online learning systems is likely to improve the access, quality and use of computer-generated logs of learner behaviours (Ben-Eliyahu & Bernacki, 2015). After all, behavioural involvement is the only facet of learning that leaves 'visible' traces online and thus generates research data that are relatively easy to capture and incorporate in pedagogical research (Kim, Yoon, Jo, & Branch, 2018).

However, efforts to eradicate passivity are meeting with limited success (Cochran et al., 2016; Dennen, 2018; Ke, 2010) and reassessment of online activity in eLearning is urgently required for several reasons. From a normative standpoint, assumptions about the relative importance of the construct are shaping instructional designs that fashion learning as a behavioural activity (Ke, 2010; Zepke, 2014). Active online participation now constitutes a significant component of the overall grade in many universities (e.g. 20–60 percent of the overall grade at Babson College; see Rollag, 2010). This approach seems questionable because activity and cognitive learning achievement are not synonymous (Ben-Eliyahu et al., 2018). More importantly, when participation becomes a significant part of assessment, the relationship

between online activity and learning outcomes becomes a self-fulfilling prophecy. Educational provision that favours activity potentially suppresses other aspects of learning, such as emotions and cognition, and distracts from the achievement of substantive learning outcomes. Although online methods of instruction are just means to deliver curriculum content (Alavi & Gallupe, 2003; Arbaugh et al., 2013), the emphasis put on online activity potentially distracts from the content of learning and obscures students' cognitive engagement with the substantive topic of learning (Ke, 2010). From a pragmatic perspective, there seems to be an inherent conflict between the scaffolding of learning for interactivity and attending to other important skills in graduate development, such as self-directed learning (Ben-Eliyahu & Bernacki, 2015; Reeve & Tseng, 2011). Prior studies have called for more flexibility in allowing students to selectively draw on online opportunities for active learning (Cheng & Chau, 2016; Goumaa et al., 2018). In practice many students feel compelled to undertake activities they perceive as redundant (Cochran et al., 2016).

Finally, the accepted view that online disengagement is undesirable may also require revision. Non-attendance and abstaining from online activity need not necessarily signify absence of learning because learning may be continuing offline (Ke, 2010; Reeve & Tseng 2011). It is plausible that passivity within the particular context of instruction may indicate preference for other methods of learning (Kellogg & Smith, 2009) or be the catalyst for offline learning, continuation and discovery (Reeve and Tseng, 2014). The distinction between engagement with pedagogy and engagement with curriculum content may help explain why the relationship between attainment and online participation may not be as clear-cut as research implies (Reeve & Tseng, 2011, Sebastianelli et al., 2015). For all these reasons, an exploration of online activity and its relationship to other forms of productive involvement in learning is a worthwhile endeavour.

STUDENT ENGAGEMENT

The concept of student engagement attempts to capture the quality of student experience holistically (Kahu, 2013; Kuh, 2009). Academic interest in engagement stems from a key insight that positive outcomes for student learning depend on the amount of time and energy students devote to learning and on the institutional practices that foster that involvement (Kuh, 2009). Popularized by the National Survey of Student Engagement, the concept has been the focus of extensive academic research (e.g. Fredricks et al., 2004; Kahu, 2013; Mann, 2001), and multiple studies have linked engagement with desired outcomes, such as attainment, retention, persistence and completion (Ben-Eliyahu et al., 2018; Bryson et al., 2009; Carini, Kuh, & Klein, 2006; Libbey, 2004). The popularity of engagement reflects in part the increasing institutional commitment to enhancing the quality of student experience (Kuh, 2009, Man, 2001; Zepke, 2014) and in part the growing emphasis on benchmarking institutional performance (Zepke & Leach, 2010).

Engagement is typically conceptualised as a multi-dimensional concept that encompasses behaviour, cognition and affect (Ben-Eliyahu et al., 2018; Fredricks et al., 2004; Kahu, 2013). Behavioural engagement captures observable learning activity - what students engaged in learning are actually doing (Fredricks et al., 2004) - and its indicators include time and effort spent on participating in learning activities (Ben-Eliyahu et al., 2018); interaction with peers, instructors or learning materials (Marks, 2000); and asking questions or participating in class discussions (Kahu, 2013). Cognitive engagement denotes the extent to which students think about the learning activity and focus on the task (Fredricks et al., 2004). The concept captures mental investment in learning and the effort devoted to mastering the learning content through the processing of information, critical thinking, goal setting, self-

regulation, planning and monitoring of learning (Ben-Eliyahu & Bernacki 2015; Fredricks et al., 2004; Kahu, 2013; Witkowski & Cornell, 2015). Finally, emotional engagement reflects how students feel about learning and captures students' affective reactions to learning, including interest, happiness, sadness and anxiety (Ben-Eliyahu et al., 2018; Kahu, 2013). Affective reactions can encompass immediate positive and negative emotions, such as enjoyment and interest in the task (Furlong et al., 2003), boredom and tiredness (Ben-Eliyahu et al., 2018) but also higher-order affect, such as attachment, hope, pride and identification (Libbey, 2004; Lund Dean & Jolly, 2012).

In this study, we define engagement as "the intensity of productive involvement with an activity" (Ben-Eliyahu et al., 2018: 88) in which involvement encompasses behaviour, emotions and cognition. While this definition includes participation in and persistence on the task, it differs in important ways from the related concepts of commitment, motivation and attendance. For example, although commitment is a necessary precursor of engagement, it is possible to be committed to a task but be distracted or inattentive (Assor, Kaplan, & Roth, 2002). Similarly, attendance is an insufficient indicator of the quality of engagement: one can be present but disengaged (Lund Dean & Jolly, 2012). Regarding motivation, the concept captures the desire to learn and thus is different from engagement, which denotes involvement in learning. Our conceptualization of engagement conceives of motivation as a precursor of engagement (King & Datu, 2017; Lund Dean & Jolly, 2012; Reeve and Lee, 2014) and not as a separate dimension of engagement (see Fredricks et al., 2004; Zepke & Leach, 2010).

An important insight from the recent studies on engagement concerns its specificity. Regardless of the form engagement may take, 'being engaged' denotes a dyadic interaction between the learner and the learning activity in a specific context (Ben-Eliyahu & Bernacki, 2015). Capturing engagement thus necessitates a level of specificity about the focus and the

context of engagement (Ben-Eliyahu et al., 2018; Furlong et al., 2003). Concerning the focus, students can engage with subject matter, instructors or other students (Bryson, 2014; Kahu, 2013) and past research has examined engagement with a learning activity (Ben-Eliyahu et al., 2018; Marks et al., 2000; Reeve & Tseng, 2011), engagement with a course (Assor et al., 2002; Furlong et al., 2003) or engagement with an institution (Bryson & Hand, 2008; Libbey, 2004). Concerning the context of engagement, studies have examined engagement in different pedagogies, including online (Dennen, 2008; Hamari et al., 2016; Rashid & Asghar, 2016) and offline (King & Datu, 2017; Witkowski & Cornell, 2015) instruction.

The notion of specificity of engagement highlights an important distinction between engagement with pedagogy and engagement with the substance of curriculum. Pedagogies are means by which substantive content of learning may be accessed (Zepke, 2014). Some scholars have begun to question how engaging students in pedagogical activity translates into engagement with the content of learning and effective attainment of learning outcomes (Ke, 2010; Zepke, 2014). Preoccupation with activity carries the risk of overemphasising the methods of instruction over the content of learning and the outcomes may be detrimental for the attainment of learning objectives and the acquisition of knowledge and skills (Ben-Eliyahu et al., 2018; Yates, 2009; Zepke, 2014).

In summary, the key tenet of engagement is that educational institutions and instructors can foster engagement by shaping pedagogies and their educational practice in ways that increase students' productive involvement in learning (Kuh, 2009). Much academic interest in engagement has this pragmatic focus on what can be done to develop engagement (Kuh, 2009, Zepke & Leach, 2011). Pedagogical guidelines on high impact practices are responsive to the varied requirements of specific educational activities, courses and institutions (Kuh, 2009). Effective instructional designs address diversity within student cohorts (Witkowski & Cornell,

2015), differences between subjects (Assor et al., 2002), and course delivery methods (Ben-Eliyahu et al., 2018).

Drawing on this recent scholarship on student engagement (Ben-Eliyahu et al., 2018; Kuh, 2009), the study aims to problematize and reframe the notion of eLearning. We use online activity as a point of departure and contrast the narrow behavioural notion of engagement with a broader conception that includes emotions and cognition. In the process, we ask: how may we frame eLearning to account for its substantive dimensions? What may a frame that extends beyond "what students do online" tell us about the nature of student involvement in online learning?

THE STUDY

We implemented a qualitative research design to study student engagement with an online course. The study's setting is a research methodology course aimed at postgraduate research (PhD) students at a UK Russel Group university. The course ran for more than eight weeks, was compulsory for all students and involved two assignments. The course materials included a complete set of self-directed learning resources on an eLearning platform (Moodle). The course design deliberately promoted learner autonomy[1]: participation online was voluntary, and the instructional design did not employ any compulsory mechanisms to drive online participation (e.g. grades for participation, conditional activities).

We began data collection by interviewing 24 course participants (see Table 1) using an in-depth semi-structured approach. Students noted their expectations, experience and learning

[1] The approach is largely student led, due to the nature of the degree.

of research methods online (see the appendix), and each interview lasted from 30 to 60 minutes.

[Insert Table 1 here]

We transcribed the data and created textual tables for each participant (see Suddaby & Greenwood, 2005). Each table consisted of rows of distinct text segments where a segment represented a key idea, usually a paragraph of text corresponding to a question response. Our interview data comprised 895 distinct text segments. We analysed the data progressing from within-interview to an across-interview analysis and building from first-order concepts to second-order themes and aggregate dimensions (Gioia, Corley, & Hamilton, 2013). The data analysis involved continual, iterative cycling between pre-existing theory, the data and the emerging theory (Strauss & Corbin, 1990).

We began with a preliminary, independent reading of all interviews and wrote notes to document main insights and reoccurring topics (Charmaz, 2006). We compared notes and created memos around the themes that were emerging from the data (Boje, 2001) and these enabled us to identify and agree the preliminary codes (Gioia, Corley, & Hamilton, 2013). In the second step, both researchers independently coded one interview at a time, meeting afterwards to compare codes. Through discussion, we reached agreement and made the adjustments before the next interview was analysed. We proceeded by coding the interview data separately (Creswell, 2007) and meeting at regular intervals to reach agreement over the emerging codes (Silverman, 2014). Through this process, we inferred the clustering of certain codes, which we linked with concepts from eLearning (interactivity, online participation, positive and negative emotions around eLearning, attainment, self-regulation, motivation, eLearning outcomes, satisfaction). In addition, we began to notice larger themes which led us to broader theoretical categories (see figure 1) and we linked those with the concept of engagement and its multiple dimensions and different foci. Thus, we moved from more open

to axial coding (Strauss & Corbin, 1990).

[Insert Figure1 here]

In the next step of analysis, we begun to contrast and compare the conceptual categories across different types of students. Students' anecdotes of their cognitive and emotional engagement did not follow the exact same patterns as behavioural engagement, which led to our first important insight: student engagement is a complex, multi-faceted concept that cannot be reduced to its behavioural component. This dissonance motivated us to develop our 'aggregate themes': engagement with the medium versus engagement with the subject matter. Table 2 illustrates the relative prominence of these themes in our narrative data (see table 2).

[Insert Table 2 here]

For each participating student, we collected evidence from the learning platform (Moodle) that reflected their online activity and captured the intensity of their behavioural engagement with eLearning. In line with previous studies (Huang et al., 2012; Kim et al., 2018; Shaw, 2012), the evidence included system logs (the total number of logs during the eight weeks or the number of times student entered the learning platform, the pattern of logs over time, and time on the platform) and other evidence of their activity (e.g. posts, replies, uploads of files, quizzes, downloads, video views). On this basis, we placed students into three behavioural categories (see figure 2), which we labelled using the zoomorphic metaphors of 'hogs' (indiscriminate devourers), 'possums' (discriminate grazers) and 'horses' (who can be led to water but not made to drink).

[Insert Figure 2 here]

A ‘hog’ is a student who shows regular, intensive online activity, which, as Figure 2 shows, can exceed 500 distinct logs over the length of the course. The ‘hog’ participates in almost all online learning opportunities and is highly active: replies, interacts, discusses, completes all quizzes and exercises. The ‘hog’ is an indiscriminate devourer of online content. In contrast with hogs, ‘horses’ are non-participants who completely abstain from any interaction with other participants and are largely absent from the online platform. They may have visited the course on a handful of occasions to passively browse selected content. Judging by the activity logs, the visits are sporadic and very short in duration - as if they did not like what they saw and decided to flee. We labelled these students ‘horses’ because although ‘you can bring them to water, you cannot make them drink’. ‘Possums’, the ‘discriminate grazers’, are somewhere in the middle between hogs and horses. Compared with hogs, possums display much lower intensity of online activity in terms of both the overall number of visits and maximum daily logs (a maximum of approximately 30 logs per day for a typical possum). Their pace is also slower: possums visit occasionally and undertake fewer activities during the visits, and this pattern over time marks a lurker or somewhat disengaged learner. Possums tend not to interact with instructors or other students and abstain from engagement opportunities (e.g. discussions, forums, exercises) normally associated with active participation. The label ‘possum’ reflects a solitary, perhaps shy, and somewhat lethargic participant whose online presence on the course is rarely apparent to other students or instructors.

FINDINGS

Behavioural Engagement by Possums, Hogs, and Horses

We begin by contrasting students' reflections on their own participation against the categories we allocated to system-generated evidence of their behaviour online. For each student, we collected qualitative evidence that either supported or contradicted the observed patterns of their online activity. The two extremes, hogs and horses, are highly active and largely absent learners, respectively. Possums are only moderately active when it comes to accessing online materials and largely passive in terms of interactivity (Kellogg and Smith, 2009). Hogs seem the ideal students as suggested by eLearning engagement literature (Cho & Cho, 2014; Milligan et al., 2013). Hogs access the eLearning platform almost every day, use the materials extensively (up to 100 logs per day), participate in most (if not all) activities and frequently contact other students and the instructors. In other words, hogs seem to devour online content. The illustrative quote below captures a typical hog:

> *Almost every day I think I read something related to this course … and also I reviewed the course material. I worked every day at least two hours on or more than three hours and because I needed to read through the many articles.* (F10, Hog)

Importantly, hogs eagerly engage in highly interactive and 'community-type' activities, such as discussions, forums or online submissions. In terms of their motivation to take the course, some hogs took it *'because I like the idea of training so I think it's important'* (F3, Hog); that is, they believed training was important in itself, rather than serving a specific purpose in their individual learning journey (i.e. being useful to their PhDs).

Possums display patchy behavioural engagement: they engage how and when they please.

> *I went through it once … some parts I went through more than once … sometimes a question can pop up in your mind during the video…. I have to keep the question and send it to the chat…. And I was lazy about that -when I had questions I just kept them in my mind and forgot all about them after that.* (F1, Possum)

Possums do not disengage, but neither do they fully participate, as evidenced in their selective adherence to the activity schedule and spectrum of activities prescribed by the course: completing online tasks, positing, responding to tutors or taking part in discussions. For example, participant F1 reflected on her lack of communication in the course, despite her activity in other aspects of the course:

> *'I should communicate in this [online course] community more. But my friends are filling this gap for me…. I saw the tutor's emails and I didn't engage with them but I used them to monitor my progress.*

This student went so far as to suggest that she got enough interactivity from watching the videos and that more interactivity would turn her learning experience into a stressful one:

> *The narration [the videos] … made it feel interactive. [But] too much interactivity, or too much live interactivity in this course might have made it more stressful…. Time is the enemy any PhD student has…. This is what I try doing to beat the time during the course.*

The suggestion here is that the teacher's presence alone (possible online through videos) can satisfy the need for interactivity for some students. Comments from other students also suggest that the opportunities for online interactions on the learning platform rarely met with response from the course participants. One reason was students' preference for other communication platforms:

> *I think on the Moodle the discussion was like not active I think, many students mostly didn't use this forum. But since we have social media, like Facebook…we have a Whatsapp group, and even in the time when we were going to the lectures, and when we were working on assessments, we were basically communicating … yeah, it was very helpful because we sort of…if anyone had any questions, we just asked, and then we discussed, and debated, and yeah, well if anyone couldn't find any material, or couldn't access any material or whatever – then we also helped each other.* (F8, Possum)

> *We just, we've set up a Whatsapp group, but we didn't do anything online. Yeah, we just…mostly it was over lunch, talking about what we've learnt and stuff, but yeah we just – we set up a Whatsapp group after the module, to kind of discuss the assignment, you know all that kind of stuff. But we didn't really use Moodle to communicate or anything.* (F5, Possum)

That preference for other communication tools was predicated on the experience with the eLearning platform but also convenience and habit, as illustrated by the comment below:

> *Well, I can't really work it haha for starters, I find it really confusing. I can find the materials, and that's fine. But yeah, unless it's like in that little side-bar at the side, like there's been an announcement, or here for you, upload this, it takes me ages to find things. Yeah. But yeah, I think we just, yeah none of us really have it as a way to communicate or anything like that. It's fine like for the lecturer to communicate to us, send stuff and all that, but yeah, there is a lot of chat in the Whatsapp group…. I don't know if it's just my technophobe as well, or that I'm not used to like…* (F5, Possum)

Horses tend not to view materials, do not engage in any activity and certainly do not take part in any interaction opportunities. They are non-participants in terms of both the online content and the online platforms. Yet, unlike students referred to as 'disengaged learners' (Lund Dean and Jolly, 2012), horses do not seem frustrated or dissatisfied. For example, participant F4 explained:

> *Going back to [lecturer's name's] module… I think it's amazing. I have so much time for her, I think she's brilliant. I saw the reading list for qualitative methods… it's really interesting.*

Horses disengage from the online course but do not seem to take issues with the perceived quality of the course or the instructor. Rather, their problem seems to be about the timing of the course (for participants M6, M8, M9 and F12), who said they would access the course materials when the time was right for them). In addition, the students may believe they know the course content well enough and are only taking it to certify existing knowledge (participant F4).

Behavioural Passivity versus Emotional and Cognitive Engagement for Possums, Hogs and Horses

Although the behavioural differences among the three engagement modes are clearly discernible in our empirical material (see Figure 2), the variations in cognitive and affective engagement are less apparent and, at times, counter-intuitive (see Table 3 below). Indeed, our analysis of the interview data reveals that behavioural categorisation inadequately explains differences in emotional and cognitive engagement. In fact, our categories seem to overlap on both emotional and cognitive dimension with evidence running counter behavioural categorisation. This seems to be particularly apparent for the two student categories that avoid online activity, whether entirely (horses) or partially (possums).

[Insert Table 3 here]

Possibly the most striking feature of our interviews was the abundance of positive emotions that did not translate into online participation. Student interactions with online resources seemed to generate experiences that were highly rewarding and enjoyable, and the interviews reveal strong positive emotions that may be immediate and short-term (e.g. happiness, enjoyment, pleasure, curiosity, interest in the task) but also persistent (e.g. the feeling of being in control, gaining confidence, being empowered by knowing what to do and how to do it):

> *I think that there were things that … were just so incredible, like going through those articles that I've just never seen, for me (the course) is just amazing.* (F7, Possum)

> *Oh '…'oh nice, interesting, different modules', and I was clicking at stuff and I thought: 'Ooh there are videos attached, oh great!'. And then I watched a video … and I was*

> *just like, ah it's just 3 minutes – alright, let's watch the next one. So I think I watched 3 or 4 videos… yes so I was playing with the Moodle website actually a bit because it was so attractive. '…* (M7, Possum)

Yet these emotions, reflecting high affective engagement, seem not to be closely related to the behavioural mode of engagement: our data do not seem to reveal a marked difference between the emotional engagement of hogs and possums. Regardless of their participation in the course (i.e. behavioural engagement), students spoke fondly of their experience with the course. All the students used words such as 'really liked', 'loved', 'absolutely loved', 'fantastic', 'oh', 'incredible', and 'couldn't stop' when describing particular aspects of the course that worked well for them.

Furthermore, as Table 3 illustrates, our data did not reveal much evidence of negative emotion, even from students who did not engage with the course (horses). That is, non-participation in and disengagement from eLearning did not seem to be motivated by frustration or dissatisfaction with the course. Horses seemed passively absent or undecided but did not feel strongly against the course; they merely 'kept an eye' on it. Some students attributed this to the lack of familiarity with the program requirements, which resulted in poor time management and inability to engage in all their tasks:

> *Students have lots of things to do, lots of tasks, so when they think in advance, they will say: 'I will do that, I would do that' but in practice, when they are running out of time they would change their mind. (F12, Horse)*

Misalignment also involves the relationship between behavioural and cognitive engagement, and a key insight is the differences between hogs and possums. Hogs appear to be indiscriminate consumers of any learning material. For example, the student who took the course because she liked the idea of training 'devoured' all the offered materials out of passion for learning, but she was not necessarily applying it to her own research (the particular interviewee was in her first year of doctoral training). Far from economising on her efforts, the

student sought ever-more course material and more time to learn it:

> *I'd rather that I had five or six more sessions, maybe like having it more spread [out]…. I might still go to specific sessions [from other research methods courses] because I know they might be useful later.* (F10, Hog)

By contrast, possums seemed to be selective, discriminating and very much in control of their own learning, deciding what to do and when to do it. Many possums were adept at selecting 'useful' information and 'beneficial' aspects of the course while discounting the material with lesser immediate utility to them. Underlying the selectivity and utilitarianism was a sense of 'economy' that some students classified as 'possums' appeared to embrace, for example, by putting emphasis and value on compressed information in the course material:

> *[The course] was very good because the videos were very short.… [T]hey were specific to the actions that you needed to take … and after watching the videos … it was clear in my head what I needed to do.* (F8, Possum)

This 'efficient' approach to presenting information on the course seems to have been conducive to clarity for this student and, indirectly, to enabling action. It is not that such students required compressed information but that they seemed to want to go beyond that themselves and learn in their own time, rather than receiving it passively through teaching:

> *I think it was just enough information [in the videos] and you could go further and look for additional sources. But you had a skeleton, you know.* (F5, Possum)

Finally, the data also indicate accomplishment and achievement of learning goals, in reference to a standard against which students evaluate their own progress. This is evident in this student's reflection on his own course activity:

> *[The course] made me really much more confident –it's now I feel relatively confident when it comes to interpreting other people's research, and when I read a paper that is quantitative. I actually have an idea of what they are trying to say, which is for the first time in my life.* (F2, Possum)

Thus, hogs 'consumed' more material, but possums were more selective and pragmatic in their approach to the course material. This denotes selectivity and, therefore, learning strategies and enhanced skills in planning, managing and evaluating own learning. In contrast with the indiscriminate devouring by hogs, possums' strategic and self-regulatory cognitive engagement suggests confidence—the ability to understand the material and create connections between ideas. Thus, the relatively passive possums, and not the very active hogs, seem ideal students because they appear to enjoy learning by developing deep learning strategies.

Dual Focus of Student Engagement

Our findings regarding misaligned behavioural and emotional engagement, on the one hand, and behavioural and cognitive engagement, on the other hand, generate several puzzling questions: why are the seemingly more passive students (possums) at least as cognitively engaged than the more behaviourally engaged hogs? Why are hogs and possums equally satisfied with the course and equally emotionally engaged (see Table 3)? Why are horses not dissatisfied with, not disaffected by and not negatively disengaged from the course (see F4's quote)?

We suggest that the answers to these questions may lie in the different foci of engagement. On the one hand, eLearning activity involves engagement with the eLearning platform and the various digital learning objects that compose it (e.g. videos, online text, PDF files of articles, discussion forums, online exercises). Engagement thus involves behavioural 'attendance' to the eLearning medium and its content:

> *I went through it once.… [A]ctually there are some parts that I went through more than once. I was able to go through it again and again. I kept on repeating the videos … some videos –I played them only once. The ones that were interesting for my research*

> *–I played them more than once. And … I did everything as explained.… I have a word document for every exercise that was asked from us.* (F1, Possum)

On the other hand, the object of students' online activity is not the platform itself but mastery over the subject matter—in our case, research methodologies. For the students, the eLearning platform is a tool that serves a particular purpose: to gain better knowledge of research methods. That is, engagement with the eLearning platform is but a tool that they use to achieve the actual desired outcome. A good analogy of this is a picture emerging from a jigsaw game:

> *[T]he broader picture was given to me during the videos, but then if you compare it to a puzzle then you know very little –the edges of the puzzle will then be, you know, there will be more detail, and will really be visible to me [if] I continue with my research, with my methods chapter.* (M7, Possum)

> *Of course (the course) requires that you to able to use the sources, use the videos and not just watch them and leave them. I mean, I have like 30 pages of notes of the courses and, I mean, for one hour of video material, I needed about four hours to write all the notes down, because it was so much information in a very short period of time, which is, again, very good* (F6, Possum)

Sometimes, engagement with the subject was a precursor for engagement with the platform:

> *[W]hen I was interested in the topic, I just went to the section, and I watched the video, and I was looking for more information about [the topic]…. I made my own research methods course so to speak –agenda, my own agenda.* (M3, Possum)

Horses did not mind the online course, possibly because they were permitted to disengage. The permission not to have to engage with the eLearning platform but to engage with the research methods, through whatever means they wanted, contributed to their neutral attitude towards the platform. The absence of coercion or rewards of any type (i.e. grades for participation) seemed to have prevented negativity that can accompany disengagement from eLearning platforms.

In summary, our data reveal a level of misalignment between student engagement with the subject matter and their behavioural engagement with the eLearning platform, with a key insight the duality of engagement locus. Our data show that students of online courses concurrently engage with the eLearning platform (Moodle) and the substantive subject matter (research methods). Furthermore, the findings indicate that passivity in behavioural engagement on the eLearning platform (possums) does not necessarily correlate with disengagement at the emotional and cognitive levels. Rather, online passivity may actually obscure high emotional and cognitive engagement with both the learning platform and the subject matter.

DISCUSSION

As do Lund Dean and Jolly (2012), we question the privileged status of behavioural over other types of engagement in management learning. Indeed, although extant research reports that productive involvement in eLearning is a complex and multifaceted concept (Cho & Cho, 2014; Lund Dean & Jolly, 2012; Goumaa et al., 2018), the treatment of online activity and interactivity as the dominant marker of involvement continues to prevail in empirical research on eLearning pedagogies (Rollag, 2010; Sebastianelli et al., 2016). In our review of the literature, we exposed how this is problematic and claimed that, essentially, it is illustrative of a semantic misconception that places student online activity at the heart of a nomological network that represents productive involvement in learning. Our findings challenge this misconception by unpacking three dimensions of engagement (behaviour, emotions and cognition) to offer a richer and more nuanced conceptualisation of online engagement that acknowledges student reflexivity and meaning-making processes. This notion also advances a more positive view of passivity in eLearning: behavioural passivity *on the online learning*

platform, which does not necessarily imply cognitive or emotional disengagement *with learning content*. These findings offer several implications for theory and practice.

Our first theoretical contribution relates to the apparent misalignment between behaviour, cognition and emotion. On examining students' engagement with the online research methods course, we found that the three engagement dimensions did not appear neatly aligned. This runs counter to studies claiming congruence among all three engagement modes (Cho & Cho, 2014; Kahu, 2013). As the possums illustrate, high emotional engagement does not seem to necessarily equate with high behavioural engagement, and similarly, cognitive engagement can follow from partial and selective participation in online activities. Despite behavioural disengagement, dissatisfaction and negativity are virtually non-existent across all our student participation categories, including the absent horses. In contrast with previous research (Ben-Eliyahu et al., 2018; Kahu, 2014; Lund Dean & Jolly, 2012), our data indicate that behavioural engagement can be a poor predictor of cognitive engagement with the subject matter. This misalignment potentially questions the current grading practice of allocating marks for participation online (Rollag, 2010). The possums seem to have liked both the platform and the course, but this positive emotional engagement did not translate into a high level of online activity. Moreover, students who behaviourally disengaged from online activities, whether partially (possums) or entirely (horses), showed high levels of cognitive and emotional engagement. These findings resonate well with Lund Dean and Jolly's (2012) conclusions that cognitive and emotional engagement types do not necessarily overlap. A key implication is that further research into the quality of productive involvement is needed. A fruitful avenue for research would be to systematically investigate the three dimensions of student engagement by employing learner analytics as proxies for behavioural engagement, using grades for cognitive engagement and only drawing on interview data to assess emotional engagement with an online course.

Our second contribution concerns the specificity of effective involvement in eLearning. Our insights into the relationship among behavioural, emotional and cognitive engagement uncovered seem to challenge the notion that eLearning activity may serve as a proxy for positive emotions, learner satisfaction and cognitive achievement. We argue that the duality of engagement focus may explain this misalignment: students engage *with the eLearning platform*, and, separately, *with the subject matter* and the two foci of engagement remain distinct. Thus, behavioural engagement with the platform provides only partial and, at times, inevitably erroneous insights into students' engagement with the subject matter. Yet, the principal aim of any learning, including eLearning, is to broaden knowledge and understanding of the subject being taught (Yates, 2009; Zepke, 2014). eLearning platforms are only technological tools that can help students attain learning outcomes (Arbaugh et al. 2013). While online activity and 'doing' things (e.g. following lecture schedule, viewing materials, taking part in exercises, participating in discussions) can help achieve that, excessive behavioural engagement may be indicative of instructor-led learning, blind followership and indiscriminate and shallow engagement with the platform may not translate into engagement (Reeve & Tseng, 2011). As Redpath (2012) notes, in online learning contexts students have more responsibility for their own learning. The emphasis on interactivity online can lead to an overwhelming volume and length of online posts (Cochran et al., 2016; Rollag, 2010) with which students cope, to the detriment of their learning (Ke, 2010). Our findings contribute to the literature on online learning and teaching (e.g. Arbaugh et al., 2013; Redpath, 2012; Whitaker et al., 2016) and online engagement (e.g. Robinson & Hullinger, 2008), by challenging the privileged status of active participation as its central parameter and questioning the assumption that the engagement with the taught subject can be reliably inferred from the engagement with the teaching medium.

Our third contribution concerns a revised view of student disengagement. The example of our horses shows that disengagement with (some) learning materials does not seem to equate with "antilearning", dissonance or rejection that is disruptive (Lund Dean and Jolly, 2012). The type of abstaining we observe does not seems to be either a fight or flight response (Lund Dean and Jolly, 2012). On the contrary, lurking may be suggestive of higher cognitive engagement, self-regulation and self-determination in learning (Ben-Eliyahu & Bernacki, 2016). Our findings seem to suggest that online activity only partly explains engagement with the research methods and that, surprisingly, a level of inactivity may leave room for reflexivity and a high level of emotional and cognitive engagement with the subject, which, from our perspective, is an important goal of learning. The findings therefore align with recent calls for a greater emphasis on self-regulation in learning (Ben-Eliyahu & Bernacki, 2016) and strongly support calls for greater attention to agency in engagement (Reeve & Tseng, 2011). Of course, we recognise that not all students may be as autonomous as the postgraduate research students (Lovitts, 2005) in our case study, but we reason that online engagement theories need to be extended through evidence from such student cohorts.

Implications for Practice

The study offers several implications for pedagogical practice. The findings tentatively suggest that behaviour may not be a sole marker of productive involvement and thus may not serve as an effective proxy for cognition and affect. Moreover, engagement with a tool or medium (e.g. the online learning platform) may not be a reliable a proxy for engagement with a subject delivered through that medium. An important insight from this study seems to be that moderate online passivity (the online behaviour of possums) may be beneficial to learning and may not require a cure. Previous eLearning studies have tended to assume that online passivity

denotes disengagement with learning and that instructors should strive to eliminate it using various interventions that foster activity and interactivity (Kellogg & Smith, 2009). By contrast, we argue that moderate online passivity (possums) may be a reflection of students' higher learning strategies and of their ability to engage with the subject matter selectively, critically and independently. Paradoxically, a level of disengagement may create cognitive spaces where reflection, affect and confidence may flourish (Reeve and Tseng, 2011). Our finings call for further research to explore learners' autonomy in eLearning. Avenues for future study also include provocative questions on how to demonstrate learning and determine learning progress in the absence of behavioural engagement. Moreover, future research could address the notable lack of evidence about non-interactional aspects of course design, such as course aesthetics, and their implications for satisfaction and learning outcomes.

Limitations of the Study

This study has several limitations that need to be acknowledged. The student cohort we examined contains postgraduate students who arguably have very different characteristics than undergraduate students (Arbaugh, 2010a). For example, these students tend to have higher learning skills, are more adept at independent learning (Cantwell et al., 2017) and may be more likely to embrace the autonomy provided by our instructional design. Therefore, generalization of our findings requires caution, particularly with regard to the autonomy, ownership and cognitive maturity (Reeve and Tseng, 2011), which may be under-developed in undergraduate students. Our subject matter is also not neutral; research methods are one of the more challenging subjects and one that does not frequently generate positive emotions; the topic is a subject taught for 'mastery' (Block & Burns, 1976), and learning it means having the ability 'to do' rather than 'to understand' (Arbaugh, 2005a). This may explain our learners' utilitarian

approach in studying the subject leaving, however, unanswered questions concerning the relationship between the nature of subject taught and student engagement with eLearning. Finally, our qualitative findings set pathways for follow-up quantitative analyses aiming to examine the separate effects of affective, cognitive and behavioural engagement on eLearning outcomes.

CONCLUSION

Building on the broader literature on student engagement (Kahu, 2013; Kuh, 2009) and using a qualitative research design, we explored multiple dimensions of eLearning engagement from a learner's perspective. In doing so, we focused on a narrow student population (as called for by Kahu [2003]) to examine the multifaceted nature of student engagement in a way that only a *zoomed-in* perspective could unravel. Rich qualitative data enabled us to offer a finer-grained view of engagement with online management courses, where behaviours, cognition and emotion move in surprising ways (Lund Dean & Jolly, 2012) which do not always seem consistent with each another. To explain these complex textures of engagement we distinguished between (1) engagement with the eLearning platform and (2) engagement with the substantive subject of learning. This distinction challenges the privileged position of activity and interactivity in online learning and highlights online passivity that is conducive to learning. These findings pave new pathways for research on engagement, disengagement and instructional design in online learning.

REFERENCES

Alavi, M., & Gallupe, R. B. 2003. Using information technology in learning: Case studies in business and management education programs. ***Academy of Management Learning & Education***, 2: 139–153.

Arbaugh, J. B. 2000a. Virtual classroom characteristics and student satisfaction in internet-based MBA courses. ***Journal of Management Education***, 24: 32–54.

Arbaugh, J. B. 2000b. An exploratory study of the effects of gender on student learning and class participation in an internet-based MBA course. ***Management Learning***, 31: 533– 549.

Arbaugh, J. B. 2005a. How much does "subject matter" matter? A study of disciplinary effects in on-line MBA courses. ***Academy of Management Learning and Education***, 4: 57–73.

Arbaugh, J. B. 2005b. Is there an optimal design for on-line MBA courses? ***Academy of Management Learning and Education***, 4: 135–149.

Arbaugh, J. B. 2010a. Do undergraduates and MBAs differ on- line? Initial conclusions from the literature. ***Journal of Leadership and Organizational Studies***, 17: 129–142.

Arbaugh, J. B. 2010b. Sage, guide, both, or even more? An examination of instructor activity in online MBA courses. ***Computers and Education***, 55: 1234–1244.

Arbaugh, J. B. 2014. What might online delivery teach us about blended management education? Prior perspectives and future directions. ***Journal of Management Education***, 38: 784-817.

Arbaugh, J. B., & Benbunan-Finch, R. 2006. An investigation of epistemological and social dimensions of teaching in online learning environments. ***Academy of Management Learning & Education***, 5(4): 435-447.

Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swain, K. 2008. Developing a community of inquiry instrument: Testing a measure of the Community of Inquiry framework using a multi-institutional sample. ***Internet and Higher Education***, 11: 133–136.

Arbaugh, J. B., DeArmond, S., & Rau, B. L. 2013. New uses for existing tools? A call to study on-line management instruction and instructors. Academy of Management Learning & Education, 12(4): 635-655.

Arbaugh, J. B., Desai, A. B., Rau, B. L., & Sridhar, B. S. 2010. A review of research on online and blended learning in the management discipline: 1994–2009. ***Organization Management Journal***, 7: 39–55.

Arbaugh, J. B., & Duray, R. 2002. Technological and structural characteristics, student learning and satisfaction with web- based courses: An exploratory study of two MBA programs. ***Management Learning***, 33: 231–247.

Arbaugh, J. B., Godfrey, M. R., Johnson, M., Leisen Pollack, B., Niendorf, B., & Wresch, W. 2009. Research in online and blended learning in the business disciplines: Key findings and possible future directions. ***Internet and Higher Education***, 12: 71–87.

Arbaugh, J. B., & Rau, B. L. 2007. A study of disciplinary, structural, and behavioral effects on course outcomes in online MBA courses. ***Decision Sciences Journal of Innovative Education***, 5: 65–95.

Assor, A., Kaplan, H., & Roth, G. 2002. Choice is good, but relevance is excellent: Autonomy-enhancing and suppressing teacher behaviours predicting students' engagement in schoolwork. ***British Journal of Educational Psychology***, 72: 261-278.

Ben-Eliyahu, A., & Bernacki, M. L. 2015. Addressing complexities in self-regulated learning: a focus on contextual factors, contingencies, and dynamic relations. ***Metacognition Learning***, 10: 1–13

Ben-Eliyahu, A., Moore, D., Dorph, R., & Schunn, C. D. 2018. Investigating the multidimensionality of engagement: affective, behavioral, and cognitive engagement across science activities and contexts. ***Contemporary Educational Psychology***. Forthcoming.

Block, J. H., & Burns, R. B. 1976. Mastery learning. ***Review of Research in Education***, 4(1): 3-49.

Boje, D. M. 2001. ***Narrative methods for organizational and communication research***. London: Sage.

Brower, H. H. 2003. On emulating classroom discussion in a distance-delivered OBHR course: Creating an on-line learning community. ***Academy of Management Learning & Education***, 2(1): 22-36.

Bryson, 2014. Clarifying the concept of student engagement. In C. Bryson (Ed.), **Understanding and developing student engagement**: Chapter 1. New York: Routledge.

Bryson, C., & Hand, L. 2008. An introduction to student engagement. In L. Hand & C. Bryson (Eds.). **SEDA special 22: Aspects of student engagement:** Chapter 1. Nottingham: Staff and Educational Development Association.

Bryson, C., Hardy, C., & Hand, L., 2009. Student expectations of higher education. ***Learning and Teaching Update: Innovation and Excellence in the Classroom***, 27: 4-6.

Cantwell, R. H., Bourke, S. F., Scevak, J. J., Holbrook, A. P., & Budd, J. 2017. Doctoral candidates as learners: A study of individual differences in responses to learning and its management. ***Studies in Higher Education***, 42(1): 47-64.

Carini, R. M., Kuh, G. D., & Klein, S. P. 2006. Student engagement and student learning: Testing the linkages. ***Research in Higher Education***, 47: 1-32.

Charmaz, K. 2006. ***Constructing grounded theory: A practical guide to qualitative analysis***. Thousand Oaks: Sage.

Cheng, G., & Chau, J. 2016. Exploring the relationships between learning styles, online participation, learning achievement and course satisfaction: An empirical study of a blended learning course. ***British Journal of Educational Technology***, 47: 257–278.

Chickering, A. W. 1969. ***Education and identity***. San Francisco: Jossey-Bass.

Cho, M.-H., & Cho, Y. 2014. Instructor scaffolding for interaction and students' academic engagement in online learning: Mediating role of perceived online class goal. ***Internet and Higher Education***, 21: 25-30.

Cochran, J. D., Baker, H. M., Benson, D., & Rhea, W. 2016. Business student perceptions of online learning: Using focus groups for richer understanding of student perspectives. ***Organization Management Journal***, 13(3): 149-166.

Creswell, J. W. (2007). Five qualitative approaches to inquiry. ***Qualitative inquiry and research design: Choosing among five approaches***, *2*: 53-80.

Daspit, J. J., & D'Souza, D. E. 2012. Using the community of inquiry framework to introduce wiki environments in blended- learing pedagogies: Evidence from a business capstone course. ***Academy of Management Learning & Education***, 11: 666–683.

Daspit, J. J., Mims, T. C., & Zavattaro, S. M. 2015. The role of positive psychological states in online learning: integrating psychological capital into the community of inquiry framework. ***Journal of Management Education***, 39(5): 626-649.

Delahunty, J., Verenika, I., & Jones, P. 2014. Socio-emotional connections: Identity, belonging and learning in online interactions. A literature review. ***Technology, Pedagogy and Education***, 23(2): 243-265.

Dennen, V. P. 2008. Pedagogical lurking: Student engagement in non-posting discussion behavior. ***Computers in Human Behavior***, 24(4): 1624-1633.

Dermentzi, E., Papagiannidis, S., Toro, C. O., & Yannopoulou, N. 2016. Academic engagement: Differences between intention to adopt social networking sites and other online technologies. ***Computers in Human Behavior***, 61: 321-332.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. 2004. School engagement: Potential of the concept, state of the evidence. ***Review of Educational Research***, 74: 59–109.

Furlong, M. J., Whipple, A. D., Jean, G. S., Simental, J., Soliz, A., & Punthuna, S. 2003. Multiple contexts of school engagement: Moving toward a unifying framework for educational research and practice. ***California School Psychologist***, 8: 99–113.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. 2013. Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. ***Organizational Research Methods***, 16(1): 15-31.

Goumaa, R., Anderson, L., & Zundel, M. 2018. What can managers learn online? Investigating possibilities for active understanding in the online MBA classroom. ***Management Learning***. (Forthcoming).

Hamari, J., Shernoff, D. J., Rowe, E., Coller, B., Asbell-Clarke, J., & Edwards, T. 2016. Challenging games help students learn: An empirical study on engagement, flow and immersion in game-based learning. ***Computers in Human Behavior***, 54: 170-179.

Hawk, T. F., & Lyons, P. R. 2008. Please don't give up on me: When faculty fail to care. ***Journal of Management Education***, 32: 316–338.

Hrastinski, S. 2009. A theory of online learning as online participation. ***Computers & Education***, 52: 78–82.

Huang, E. Y., Lin, S. W., & Huang, T. K. 2012. What type of learning style leads to online participation in the mixed-mode e-learning environment? A study of software usage instruction. ***Computers & Education***, 58: 338–348.

Ivancevich, J. M., Gilbert, J. A., & Konopaske, R. 2009. Studying and facilitating dialogue in select online management courses. ***Journal of Management Education***, 33: 196–218.

Kahu, E. 2013. Framing student engagement in higher education. ***Studies in Higher Education***, 38(5): 758-773.

Ke, F. 2010. Examining online teaching, cognitive, and social presence for adult students. ***Computers & Education***, 55(2): 808-820.

Kellogg, D. L., & Smith, M. A. 2009. Student-to-student interaction revisited: A case study of working adult business students in online courses. ***Decision Sciences Journal of Innovative Education***, 7: 433-456.

Kim, D., Yoon, M., Jo, I. H., & Branch, R. M. 2018. Learning analytics to support self-regulated learning in asynchronous online courses: A case study at a women's university in

South Korea. ***Computers & Education***, 127: 233-251.

King, R. B., & Datu, J. A. D. 2017. Materialism does not pay: Materialistic students have lower motivation, engagement, and achievement. ***Contemporary Educational Psychology***, 49: 289–301.

Kuh, G. D. 2009. What student affairs professionals need to know about student engagement. ***Journal of College Student Development***, 50(6): 683-706.

Lee, Y., & Choi, J. 2011. A review of online course dropout research: Implications for practice and future research. ***Educational Technology Research and Development***, 59: 593–618.

Libbey, H. P. 2004. Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. ***Journal of School Health***, 74: 274–83.

Lovitts, B. E. 2005. Being a good course-taker is not enough: A theoretical perspective on the transition to independent research. ***Studies in Higher Education***, 30(2): 137-154.

Lund Dean, K., & Jolly, J. P. 2012. Student identity, disengagement, and learning. ***Academy of Management Learning & Education***, 11(2): 228-243.

Mann, S. J. 2001. Alternative perspectives on the student experience: alienation and engagement. ***Studies in Higher Education***, 26(1): 7-19.

Marks, H. M. 2000. Student engagement in instructional activity: patterns in the elementary, middle, and high school years. ***American Educational Research Journal***, 37(1): 153-184.

Marks, R. B., Sibley, S. D., & Arbaugh, J. B. 2005. A structural equation model of predictors for effective online learning. ***Journal of Management Education***, 29(4): 531-563.

Milligan, C., Littlejohn, A., & Margaryan, A. 2013. Patterns of engagement in connectivist MOOCs. ***MERLOT Journal of Online Learning and Teaching***, 9(2): 149-159.

Proserpio, L., & Gioia, D. A. 2007. Teaching the virtual generation. ***Academy of Management Learning & Education***, 6(1): 69-80.

Rashid, T., & Asghar, H. M. 2016. Technology use, self-directed learning, student engagement and academic performance: Examining the interrelations. ***Computers in Human Behavior***, 63: 604-612.

Redpath, L. 2012. Confronting the bias against on-line learning in management education. ***Academy of Management Learning & Education***, 11(1): 125-140.

Reeve, J. & Lee, W. 2014. Students' Classroom Engagement Produces Longitudinal Changes in Classroom Motivation. ***Journal of Educational Psychology***, 106(2): 527–540.

Reeve, K., & Tseng, C. 2011. Agency as a fourth aspect of students' engagement during learning activities. ***Contemporary Educational Psychology***, 36: 257-267.

Robinson, C. C., & Hullinger, H. 2008. New benchmarks in higher education: Student engagement in online learning. ***Journal of Education for Business***, 84(2): 101-109.

Rollag, K. 2010. Teaching business cases online through discussion boards: Strategies and best practices. ***Journal of Management Education***, 34: 499-526.

Sebastianelli, R., Swift, C., & Tamimi, N. 2015. Factors affecting perceived learning, satisfaction, and quality in the online MBA: A structural equation modeling approach. ***Journal of Education for Business***, 90(6): 296-305.

Shaw, R.-S. 2012. A study of the relationships among learning styles, participation types, and

performance in programming language learning supported by online forums. ***Computers & Education***, 58: 111–120.

Silverman, D. 2014. ***Interpreting qualitative data***. London: Sage. Fifth edition.

Strauss, A. L., & Corbin, J. M. 1990. ***Basics of qualitative research***. Thousand Oaks: Sage Publications.

Whitaker, J. J., Randolph, N., & Ireland, R. D. 2016. MOOCs and the online delivery of business education: What's new? What's ot? What now? ***Academy of Management Learning & Education***, 15: 345–365.

Witkowski, P., & Cornell, T. 2015. An investigation into student engagement in higher education classrooms. ***InSight: A Journal of Scholarly Teaching***, 10: 56–67.

Yates, L. 2009. From curriculum to pedagogy and back again: Knowledge, the person and the changing world. ***Pedagogy, Culture and Society***, 17(1): 17–28.

Zepke, N. 2014. Student engagement research in higher education: Questioning an academic orthodoxy. ***Teaching in Higher Education***, 19(6): 697–708.

Zepke, N., & L. Leach. 2010. Improving student engagement: Ten proposals for action. ***Active Learning in Higher Education***, 11(3): 167–179.

Tables and figures

Table 1: List of participants and their behavioral classification

No	Original code	Participant code used in the paper	Cohort	Behavioral Category Possum / Hog / Horse
1	250317	F1	2	Possum
2	050417	F2	2	Possum
3	050417	F3	2	Hog
4	060417	F4	2	Horse
5	060417	F5	2	Possum
6	030517	F6	2	Possum
7	270317	M1	2	Possum
8	300317	M2	2	Possum
9	030417	M3	2	Possum
10	060417	M4	2	Possum
11	140417	M5	2	Possum
12	030517	M6	2	Horse
13	121217	M7	1	Possum
14	121127	F7	1	Possum
15	121127_1	M8	1	Horse
16	121127_2	M9	1	Horse
17	121126_1	F8	1	Possum
18	121126_2	F9	1	Possum
19	121126_3	F10	1	Hog
20	121126_4	F11	1	Possum
21	121211	M10	1	Possum
22	121220_1	M11	1	Hog
23	121220_2	M12	1	Hog
24	131220_1	F12	1	Horse

Table 2: Counts and relative proportion of text segments coded into six intermediary themes:

		Relative proportion of text units coded into each theme	Text segment count
Behavioural engagement	**With platform**	32%	289
	With course content	15%	130
Affective engagement	**With platform**	18%	160
	With course content	5%	43
Cognitive engagement	**With platform**	11%	100
	With course content	19%	173

Table 3: Engagement narratives across participation categories

		Possums	Hogs	Horses
Behavioural engagement	**Positive accounts**	*'some videos –I played them only once. The ones that were interesting for my research– I played them more than once'* (F1)	*'Almost every day I read something related to this course… because I needed to read through the many articles'* (F10)	***None identified***
	Negative accounts	*'I was lazy about that – when I had questions I just kept them in my mind and forgot all about them after that.'* (F1) *'Definitely not more [exercises].' (F1)* *'Too much interactivity, or too much live interactivity in this course might have made it more stressful.'* (F2)	*'We were so busy, and I didn't have time to read everything that she proposed, or that she said, or that she suggested – so that was the only…that was my sin.'* (M11) *'...it was such a lot of materials in such a short time, so I don't think that I did as good as I should have done, I had so much on my plate.'* (F3)	*'… [I'm not up to date with the course] now because I have so many courses and it does not seem relevant to me at the moment'* (M9) *'...we have a lot to do with our supervisors and there is always a deadline. If there is more training, then those things will be held back...[it's] a trade-off.'* (M8)
Affective engagement	**Positive accounts**	*'I absolutely loved it... made me so much more confident'* (F2)	*'The course was just incredible… just amazing… it was exciting, we had a lot of examples, I really wanted to read them all… was one of the classes I was always excited to go to'* (F3)	*'Going back to [lecturer's name's] module… I think it's amazing. I have so much time for her, I think she's brilliant.'* (F4)
	Negative accounts	***None identified***	***None identified***	***None identified***

Cognitive engagement	**Positive accounts**	*'When I was interested in the topic, I just went to the section, and I watched the video, and I was looking for more information about… I made my own research methods course so to speak –my own agenda' (M3)* *'It didn't make sense to me until [lecturer's name] course... at some point it clicked' (F2)*	'When I took her class, it was eye-opening' (F3) *'Ok, now things have changed since I have learned more. I feel stronger, but I would not say that I'm 100% confident... it will take me maybe twice as much to other people who already have experience, but I'm not afraid … I'll take the challenge'* (M11)	*'I feel I'm having to unlearn everything that I got to know in my [previous academic] job to get through this PhD' (F4)* *'These lectures are very, very helpful. They provide all sort of guidance.'* (M8)
	Negative accounts	*'oh, that's two of us now who are behind.'* (M1 speaking about peer-group members comparing notes on the course and supporting each other)	*'[Some] things [have been] more challenging than others… Social Theory … is something I never experienced before, I didn't know about the philosophers… I didn't know that… all of those words… ontology… existed'* (M11)	*'[my research] is so much more qualitative than everybody else's and that put me in a niche anyway … [so] I found it quite difficult to really explain what it is I was trying to get at…'* (F4)

Figure 1: Data structure and sample of codes for engagement

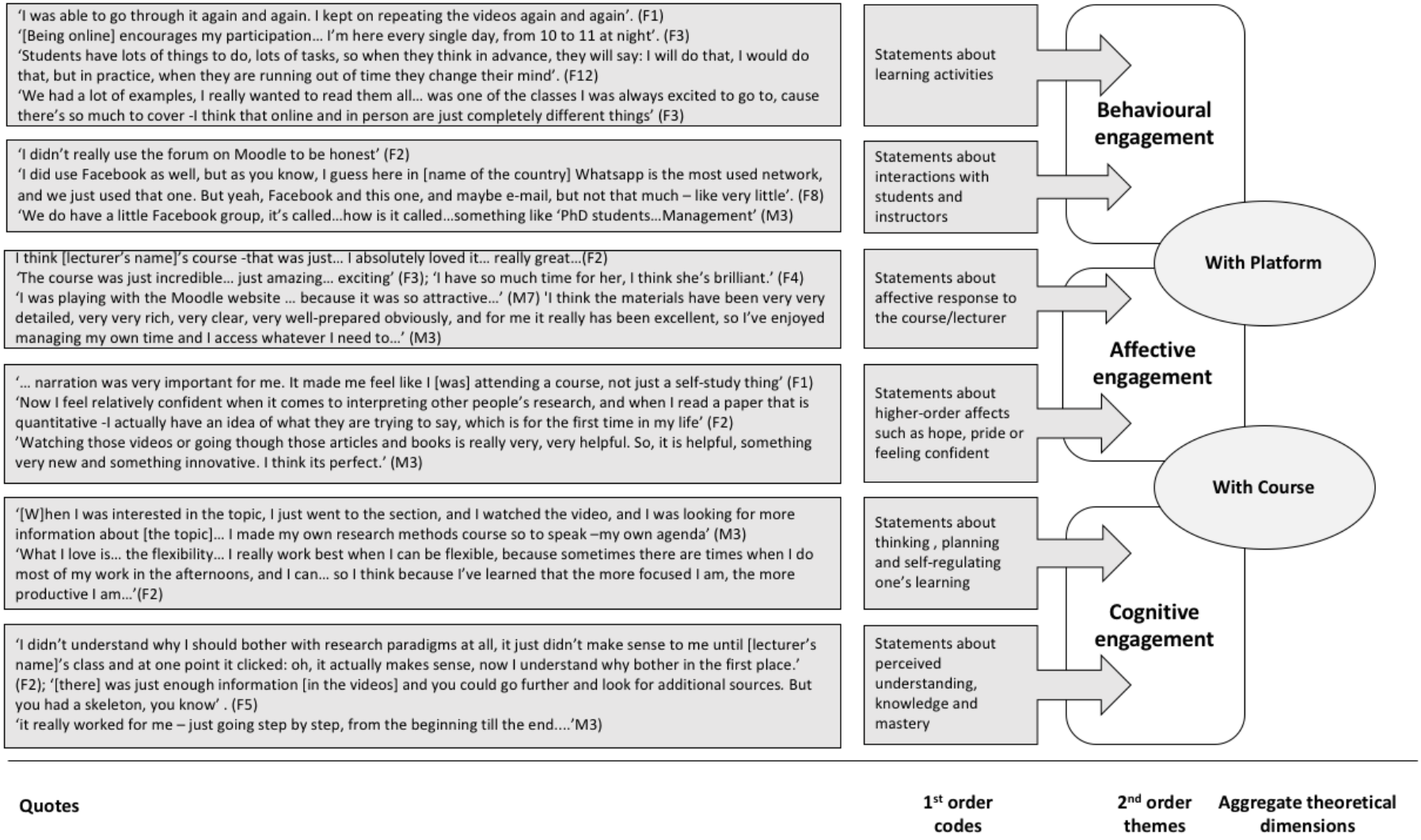
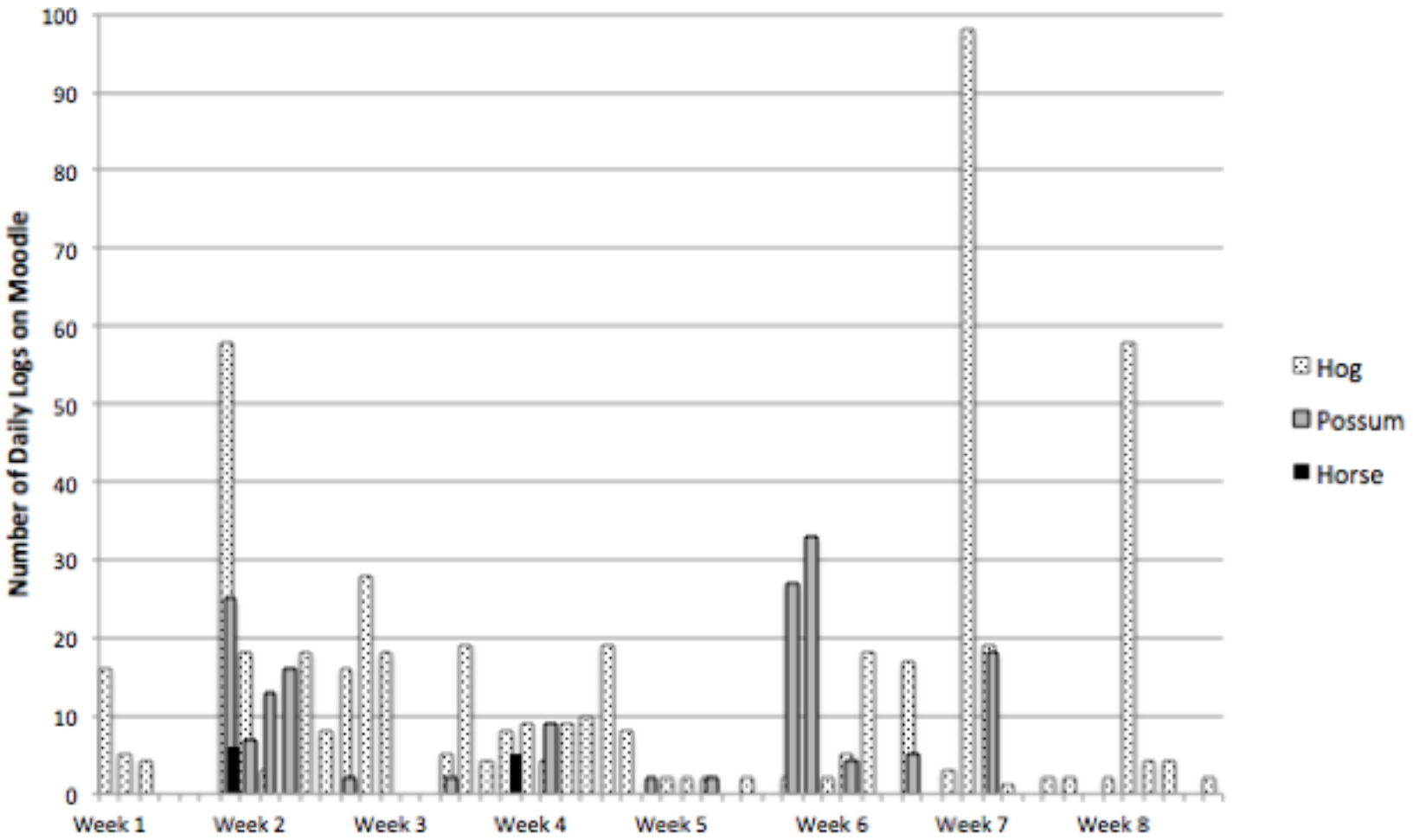


Figure 2: The intensity of online participation for the three types of students: possums, hogs and horses


Number of Daily Logs on Moodle
100
90
80
70
60
50
40
30
20
10
0
Week 1
Week 2
Week 3
Week 4
Week 5
Week 6
Week 7
Week 8
Hog
Possum
Horse