



# Adopting a framework to support the process of critical reflection and understanding of online engagement

Petrea Redmond<sup>1</sup> · Stephanie M. Foote<sup>2</sup> · Alice Brown<sup>1</sup> ·  
Deborah Mixson-Brookshire<sup>3</sup> · Lindy-Anne Abawi<sup>1</sup> · Robyn Henderson<sup>1</sup>

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## Abstract

Extensive literature within the learning sciences addresses the phenomenon of online engagement and strategies that support online learning. However, for academics, there is limited guidance to support them in the processes of reflecting on efforts to facilitate online learner engagement and, ultimately, to use those reflections to redesign approaches to teaching and learning. This paper reports on findings from an international case study that involved a group of interdisciplinary academics engaged in a process of critical reflection, which aimed to increase their understanding of the ways in which online engagement is supported in higher education. Findings from the current study suggested that reference to an online engagement framework heightens the effectiveness of critical reflection by elucidating an awareness of learning about ways of supporting student learning and online engagement to improve student success. The paper offers implications related to reflection on and of practice.

**Keywords** Online learning · Online engagement · Conceptual framework · Critical reflection

## Introduction

Online learning, with associated online teaching, continues to be a growing preference for many students in higher education, both nationally and internationally (Allen & Seaman, 2016; Australian Government Department of Education & Training, 2018; Hampton & Pearce, 2016; Muir et al., 2019). Within the online environment, student engagement in learning has been consistently identified as a critical factor of learner outcomes and success (Hampton & Pearce, 2016). Chen et al.

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✉ Petrea Redmond  
Petrea.Redmond@usq.edu.au

Extended author information available on the last page of the article

(2010) noted that engagement can be even more of a pervasive factor in student outcomes than where a student enrolls, or the type of student and his/her background.

Increasingly, students are required to balance study with a range of other competing demands, such as juggling family responsibilities, part-time and full-time work, and financial issues (Moore & Greenland, 2017; Thompson et al., 2013). Many learners come to the online environment inexperienced and often unskilled in navigating online learning platforms or using technology-based tools (Burton et al., 2015). In addition, studying online presents a number of unique challenges for students, such as having fewer sources of reinforcement, including those which prompt students to address learning objectives (Herrington et al., 2014). These types of external and internal factors contribute to the time students are able to commit to their studies, as well as the effectiveness of their efforts, and they can collectively impact on student engagement, success outcomes and levels of attrition (Lawrence and Ryan, 2015; Meyer, 2014).

Another important aspect of students' online learning and engagement success can relate to the pedagogical efforts, course design and delivery expertise provided by academics (Baik et al., 2019; Devlin & McKay, 2016). Support for an online mode of delivery requires a particular teaching and learning skill set, which includes the ability to develop a strong teacher presence (Ragusa & Crampton, 2018) and strategic design of online content, as well as the employment of multiple communication strategies and holistic support for students (Slade & Prinsloo, 2015; Stone, 2019). However, while there is an expectation for staff to embrace and deliver online education, the term online engagement continues to have multiple meanings, with a paucity of information or models to support reflection, or to guide academic practice of online learner engagement (Harvey et al., 2020; Redmond et al., 2018).

Badia (2017) stressed that it is essential to find tools to assist academics to engage in critical reflection and action research; this study explored that gap. A group of international academics sought to better understand how the key dimensions of online practice worked together to create a culture of effective online engagement in higher education across a range of different contexts. The participants in the study are academics who teach online courses. The paper begins by outlining the concepts of online engagement and critical reflection. The methodological process of the study is then outlined. Finally, the paper reports on findings from these efforts, where the academics involved, also the authors, uncovered assumptions and elucidated the practices and ways in which student learning and online engagement can be effectively supported.

## Background

### Online learning and engagement in higher education

Online student engagement continues to be an important benchmark and measure of quality learning and teaching in higher education (Australian Government Department of Education & Training, 2016; Hénard & Roseveare, 2012; The Social Research Centre, 2019). There is a growing expectation for academics, both

nationally and internationally, to employ a range of research informed techniques to support online learning and these efforts contribute to increased student engagement, student satisfaction, retention and success (Meyer, 2014; Teacher Education Ministerial Advisory Group, 2014). However, there is still confusion and a degree of ambiguity over terms such as online learning and online engagement, the determinants of online student engagement, and the practices that count as supporting online engagement (Bowen, 2005; Redmond et al., 2018).

Within the higher education sector, the term student engagement continues to be bantered around to describe a multitude of activities (Gibbs, 2014). Krause (2005) described student engagement as a “catch-all term” that refers to a “compendium of behaviours” (p. 3) related to the effort, time and resources students employ to support purposeful learning, while Muir et al. (2019) highlighted the dynamic and situational nature of student engagement occurring “along a continuum”, where student behaviour, motivation and attitudes can fluctuate over time (p. 263).

The literature also referred to engagement as multifaceted with multiple conceptualisations and interpretations (Dixon, 2015; Fredericks et al., 2004; Lawson & Lawson, 2013). More specifically, the literature related to online engagement refers to various types, dimensions, or aspects of engagement, the most commonly mentioned being cognitive, emotional and behavioural engagement (Kahn et al., 2017; Lawson & Lawson, 2013; Reeve & Tseng, 2011). This is supported by Pittaway (2012), Weimer (2016) and, more recently, Redmond et al. (2018) whose work mentions various elements of engagement, whilst reinforcing the interconnected, multi-dimensional and “dynamic nature of online engagement” that complements and works together to support student learning (p. 190).

There continues to be a considerable variation in how engagement is defined (Reschly & Christenson, 2012). The different definitions are backgrounded in decades of literature related to interaction and engagement in face-to-face, distance, and online education in all educational sectors. Krause (2005) defined it as “time, energy, and resources students devote to activities designed to enhance learning at university” (p. 3). Likewise, Bond et al. (2020) suggested that student engagement is “the energy and effort that students employ within their learning community” (p. 3). This second definition does not limit student engagement to engagement to their learning but includes interactions with others in their learning community, such as teaching staff and other students. Therefore, this concept of engagement is related to Moore’s (1989) early work on interaction in distance education, where he discussed three different types of interactions: Learner-Content interaction, Learner-Instructor interaction and Learner-Learner interaction. Contradicting the assertions above are views that student engagement is related to psychological investment (Wehlage et al., 1989) or state of mind (Schaufeli et al., 2002).

At this point, much of the literature about online engagement has focussed attention on student online learning, overlooking the role of academics as facilitators of effective online student engagement (Coates, 2006; Fleckhammer & Wise, 2011). Efforts to support online engagement include academics being responsible for creating online environments and their associated teaching practices, providing online learning opportunities and modelling engagement practices (Pittaway and Moss, 2014; Redmond et al., 2018). Given this, a more inclusive definition of online

engagement would encompass those ongoing and regular activities and behaviours that can involve the learner as well as the teacher within the online environment, where the goal is to support and achieve learning.

## Reflection

Ladson-Billings (2005) wrote that “I do not want to destroy teacher education, I want to strengthen it; and I do not believe this can happen until we look honestly at what we are doing” (p. 229). The need to explore learning and teaching processes has led to the need to establish rigorous reflective processes to improve learning outcomes. The strength in the reflective process lies in “uncovering assumptions, the conceptual glue that holds our perspectives, meaning schemes and habits of mind in place. People’s capacity for holding assumptions that contradict each other, and that are contradicted by events and experiences, knows no bounds” (Brookfield, 2009, p. 294). The power of collective reflection on similar experiences is the provision of a space in which to share insights and understandings that help to uncover unfounded assumptions, as well as confirm or challenge shared understandings. The meanings of terms and concepts become clearer, even if initially confusion abounds due to diverse understandings. Clarifying meanings provides the vehicle for collaborative debate, resulting in learning which may not otherwise have been experienced.

Many years ago, Dewey (1933) wrote about the need to test inferences and develop open-mindedness and habits of inquiry. Speaking further on Dewey’s influence, Taggart and Wilson (1996) concurred, noting that “reflective thinkers actively engaged in problem solving through identification of problems, contemplation of solutions, action, and analysis of the problem-solving process” (p. 7). However, in reviewing Dewey’s work, Rogers (2002) viewed reflection as meaning making through a disciplined way of thinking, requiring an open mind and happening through interaction with others.

Acceptance of the importance of reflective practice in education has been with us for many years. But it is the type of reflection that is important because, as Fox et al. (2019) metaphorically stated, “using reflection to merely affirm existing beliefs rather than engaging in confrontation and examination of beliefs is like reflecting in a hall of mirrors” (pp. 367–382). In this hall, we would see reflected back what we already know and expect to see. Even if a smudge or a detail in the reflection does surface with closer inspection, such irregularities are easily overcome, and we can then move on in confidence. This type of reflection is what Argyris and Schön (1978) would have considered to be single loop learning; however, it is their concept of double loop learning, triggered by reflection-on-action and in-action (Schön, 1983) that ultimately sees fundamental changes to practice take place. The concept of ‘deutero’ learning also emerged from their work, combining single loop and double learning and emphasising that explicitly articulating the learning from both past and present practice required the willingness to admit mistakes and embrace moving forward. Putman (2014) suggested that, simply put, “double loop learning can be seen as reframing how we define situations, how we construct our role, and what we take to be desirable outcomes” (p. 284).

Collective critical reflective practice is one effective way of enacting deuterio learning, because it allows espoused theory to be critiqued from different perspectives in light of theory-in-use. The theory of action approach—also called action science—developed by Argyris and Schön (1978), outlined four basic steps in the process: 1. identifying espoused theory and theory-in-use; 2. creating meanings; 3. developing and actioning new practice, and 4. ascertaining results to inform further action. The need is to move away from a theory-in-use that is self-fulfilling, to a position where theory-in-use is challenged and perhaps disconfirmed according to the evidence of outcomes presented (Argyris & Schön, 1978). Once disconfirmed, there is little to no choice but to reframe practice by developing an enhanced, more informed theory-in-use.

The seminal work of Argyris and Schön (1978) and Schön (1983), as both individual and collaborative researchers, has led many subsequent researchers to look deeply at the role of reflection in improving learning and teaching outcomes. Erlandson and Beach (2008) explored Schön's work from the perspectives of "reflection as theoretical inclusion" and "reflection as open exploration" (p. 410). They concluded that Schön was primarily engaged in a "discussion about professional skilfulness" (p. 416). Assuming that reflection requires confrontation and collaboration, it also requires valuing of the perceptions of others and the ability to reframe and reconceptualise our personal teaching practices.

Following on from Argyris and Schön's (1978) work, a number of significant contributions have been made to the thinking about reflective practice. Taggart and Wilson (1996, 2005) drew heavily on the work of Van Manen (1977) and his levels of reflection (technical, practical and critical) when documenting their levels of reflective thinking. Their technical, contextual and didactical levels were aimed at making the practitioner think clearly about each in turn. At the technical level, it is about meeting outcomes, as well as about knowing and using effective tools for the teaching and learning of skills and content. It is then about contextualising this knowledge, focusing on cohort need. Ultimately, it is also about considering broader issues at an internal and external socio-political level and understanding underlying moral and ethical issues. This last level, the didactical level, is often neglected.

Brookfield's (2009) work on teacher reflection also reiterated the need to think beyond the obvious to hegemonic dimensions of practice. He argued that reflection and critical reflection are distinctly different, and that reflection is not innately critical. For Brookfield, reflection is an act that can "make a set of practices work more smoothly and achieve the consequences intended" (p. 293). There is, therefore, the need to critically reflect, "uncovering, and challenging, the power dynamics that frame practice and uncovering and challenging hegemonic assumptions (those assumptions we embrace as being in our best interests when in fact they are working against us)" (p. 293) and challenging us with "the conspiracy of the normal" (p. 301).

Exploring the conspiracy of the normal is evidence of an explicit commitment to improvement, where "individual and group meaning perspectives [are] transformed through critically reflective assessment" (Liu, 2015, p. 145). Brookfield's (1988) four components of critical reflection are useful tools for the educator: assumption analysis, contextual awareness, imaginative speculation, and reflective scepticism.

Undertaking such reflection collaboratively is more powerful and facilitates even greater learning than when undertaken on an individual basis (Durksen et al., 2017).

## Conceptual frameworks

Data for this paper were collected through written reflections by the authors, guided by a set of questions that were framed from two existing research studies on online student engagement (Foote & Mixson-Brookshire, 2014; Redmond et al., 2018). Both studies explored student online engagement in higher education contexts. In their paper, Redmond et al. (2018) introduced a framework that included five elements of engagement: social engagement, cognitive engagement, behavioral engagement, collaborative engagement, and emotional engagement, as shown in Table 1. These were considered “crucial for effective student engagement within the online learning and teaching environment” (p. 189).

**Table 1** Online engagement framework for higher education (Redmond et al., 2018, CC-BY 4.0CC-BY 4.0)

Online engagement element	Indicators (illustrative only)
Social engagement	Building community Creating a sense of belonging Developing relationships Establishing trust
Cognitive engagement	Thinking critically Activating metacognition Integrating ideas Justifying decisions Developing deep discipline understandings Distributing expertise
Behavioral engagement	Developing academic skills Identifying opportunities and challenges Developing multidisciplinary skills Developing agency Upholding online learning norms Supporting and encouraging peers
Collaborative engagement	Learning with peers Relating to faculty members Connecting to institutional opportunities Developing professional networks
Emotional engagement	Managing expectations Articulating assumptions Recognizing motivations Committing to learning

From Redmond et al. (2018), CC-BY 4.0

Social engagement, also called relational or peer engagement (Billet, 2008), refers to purposeful efforts to build rapport and respect, to build a sense of belonging, cohesion or community, or to form relationships with others, usually peers or online facilitators (Knight, 2013; Lowenthal & Dennen, 2017; Sinha et al., 2015; Wright et al., 2013). Activities aimed at building social engagement may occur within, as well as outside, the online environment, such as student participation in social forums, where students introduce themselves, network with others and build rapport and interactions through social media, as well as other forms of social engagement, such as participation in social functions and recreational activities with fellow students.

Collaborative engagement, while related to social engagement, more specifically refers to those behaviours related to relational activities that support learning in collaboration with peers, instructors, academic institution, industry, or other networks (Pittaway & Moss, 2014). Learning from or with peers may include engagement in a study group, an online activity where peer learning is facilitated, or via a group assessment task (Spellman-Cann et al., 2016). Professional learning networks that connect students to the profession and support sustained relevance to industry are also encompassed within collaborative engagement (Albion, 2014).

Cognitive engagement is where students are involved in the active process of learning and where engagement in key skills, concepts or ideas is evidenced (Greene, 2015; Ouyang & Chang, 2019). This type of learner engagement is further classified into surface and deep level engagement (Fredricks et al., 2004; Henri, 1992). An example of surface level engagement would be a student response in an online forum where a student affirmed the idea of another student or reiterated a key point from a required reading task. The nature of this type of learning behaviour is usually in the form of a lower order or more superficial way of thinking. Deep level cognitive engagement would evidence higher order intellectual thinking, such as providing a justification to a response in a forum substantiated with a key reference source, entering into a debate with peers, or employing critical thinking strategies that demonstrate metacognition and deep discipline-specific learning.

Behavioral engagement is referred to within the literature as involving those activities that adhere to the rules or expectations of learning within a specific context, such as having a positive attitude and participating in class (Pittaway & Moss, 2014; Young, 2010). Examples of behavioral engagement may include participation in online activities, such as discussion forums, asking questions during online tutorials, or demonstrating the ability to seek help through various suggested channels. Other terms used to refer to behaviour engagement and related activities are agency engagement (Reeve & Tseng, 2011) and academic engagement (Pittaway & Moss, 2014; Young, 2010).

Finally, emotional engagement refers to the affective component of student learning, including the feelings, values, perspectives and attitudes students have related to their learning experience, the educational institution, their instructors, discipline, subject matter, required tasks or fellow students (Fredricks et al., 2004; Hewson, 2018; Özhan and Kocadere, 2020). These emotions can be both positive or negative, either inhibiting or affording other engagement behaviours (Sinatra et al., 2015). Other terms associated with this type of engagement



include psychological engagement (Vogt, 2016) and personal engagement (Pittaway, 2012). Evidence of this type of engagement could include students feeling motivated, enthusiastic or perhaps anxious, evidencing time management skills and demonstrating a strong commitment to learning.

The other framework, by Foote and Mixson-Brookshire (2014), presented a model of student learning and engagement in online and blended courses. This model, the Model of Student Learning and Engagement, is centered around the student providing opportunities for active experimentation, reflective observation, and concrete experience. The model was developed from a longitudinal study and Kolb's (1984) theory of experiential learning. Overall, the goal of the model was to provide engagement opportunities to students so they can grow personally and professionally while enhancing their skill sets. As shown in Fig. 1, the three aspects of this model—active experimentation, reflective observation, and concrete experience—offer an opportunity to engage the student with course content, peers, and instructor.

Active experimentation is when students apply the knowledge they have gained throughout a course that engages them with course content, peers, and instructor. One approach to active experimentation is to provide a four-tiered final research project with elements of discussion, research, application of knowledge, and final case analysis.

Concrete experience is evidenced when students form a part of their own learning through their experiences with course content, peers, and instructor. One concrete experience strategy is a virtual discussion providing the student with the opportunity to engage their senses, voice their opinion(s) and reply to different opinions to promote the value of diverse opinions and ideas.

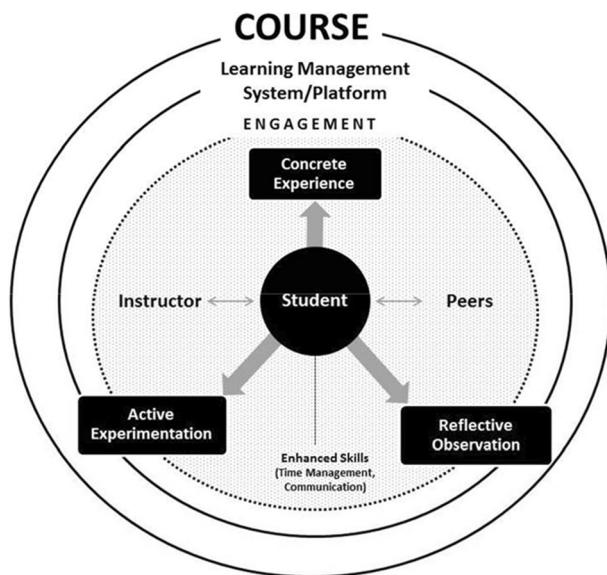


Fig. 1 Model of Student Learning and Engagement (Foote & Mixson-Brookshire, 2014, p. 38).



Reflective observation occurs when students are afforded the opportunity to create a new identity as they gain knowledge, and a higher self-esteem is a positive outcome of reflective observation. Through their personal reflections, students begin to integrate their personal experiences and learning. Reflective observations occur throughout a semester and can be through peer evaluations, discussions, instructor feedback, or written personal reflections.

## Context

The Australian members of this research team are either currently employed as education academics in a regional university in Australia or were in the recent past. Each are tertiary educators of between 10 and 20 years of tertiary teaching experience who prior to joining the university were teachers in school and early learning settings. Between them, their field of teaching experiences covers early childhood, primary (elementary) and secondary school settings, whilst currently all either do, or did until recently, teach initial teacher education students, as well as post-graduate students interested in furthering their studies in the fields of education or educational research. The university has over 25 000 students enrolled in over 700 courses, and the staff and students speak 126 different languages. Cohort data for the Australian university show that over 75% of the students studying education programs at the university are online students. Many are the first-in-family to go on to higher education and the university has pathways programs to facilitate entry into various degrees. Many of the students are mature age and are juggling work, families and study; therefore, many study on a part-time basis.

Whether students are enrolled on campus or online, they experience a blended or hybrid learning experience. This means in practice that on campus students may enrol online for some of their study programs; likewise, students enrolled as online may participate on campus if there is an on campus tutorial that fits their busy schedules. Online tutorials are available and accessed by both online and on campus students. Teaching resources, information about assessments and assessment submission portals are available to all students at all times via the online delivery platform.

The second group of researchers were located in the United States and have 12 and 16 years experience teaching in higher education at a large southeastern university. Distance learning is not a new phenomenon on college campuses across the United States; however, it continues to grow at a rapid rate. While many of the college campuses share some common objectives, such as the goal of creating online courses that support a sense of community and engage students with course content, distance learning can and does appear in many different forms. These different forms of distance learning seek to achieve the diverse goals of the institutions.

Both US researchers have extensive experience in developing and teaching undergraduate and graduate hybrid and online courses. The hybrid courses come in different forms and can consist of 50% online with 50% face-to-face, 33 1/3% online with 66 2/3% face-to-face, or 66 2/3% online with 33 1/3% face-to-face. Additionally, the online courses come in different forms and can consist of 100% online or 95% online which allows for a face-to-face exam option.

The US university, one of the 50 largest public institutions in the country, offers more than 70 online degrees, certifications, and endorsement programs and more than 500 online courses. Additionally, the university has more than 35,000 undergraduate and graduate students representing 142 countries.

The current study sought to determine the perspectives of academics as they approach various forms of distance learning. As Pithouse et al. (2009) stated, “teaching is messy, complicated and contextualised” (p. 46), and the value in making the personal inquiry, understanding and interpretation available for other academics for debate and deliberation contributes to the understanding of the field about the ways in which online engagement may be enacted, understood and used for improving student learning outcomes. The participants strove to determine the effectiveness of these various forms of online and hybrid courses to promote a stronger distance learning experience for their students. The analyses of the data explored the commonalities and differences within the distance-learning practices and frameworks. The participants all held a strong commitment to the importance of engagement in higher education, although they came from different contexts.

Initially, the purpose of the study was to determine how the key dimensions of online practice work together to create a culture of effective online engagement, and to investigate if there was agreement or alignment between the research participants’ perspectives of online engagement. It is important to remember that this was a self-inquiry, as the research participants were also the researchers and authors of this paper. Such an inquiry was important, especially with the researchers working in different countries, institutions and educational systems. Not surprisingly, the varied approaches have many commonalities, but some distinct differences did emerge.

## Method

In conducting this qualitative research as a self-inquiry relating to the research team’s individual reflections about student online engagement, all the authors had been involved in developing a framework for thinking about student online engagement. As a result, the specific purpose of the inquiry described in this article ended up being guided by the following research question: In what ways does a framework support the process of critical reflection and understanding of online engagement?

Some researchers (And & Armour, 2006; Pithouse et al., 2009) have commented that there are issues, commonalities and contradictions between different methods of inquiry such as self-study, case study, reflective practice, guided reflection, critical reflection, autoethnography, action research, narrative inquiry, life history and critical pedagogy. As the authors grappled with selecting a methodology, the term ‘guided reflection’ (Johns, 2002) seemed to best represent the self-inquiry process undertaken, due to its reflexive narrative nature. It also allowed for the use of the engagement frameworks to guide the participants’ reflections.

The approach provided triggers to assist the development of reflective thinking because “guided reflection fuses teaching and research as one activity” (Johns, 2002, p. 3). The reflective process undertaken to collect the data was systematic and guided in that it was underpinned by the two frameworks developed from the

literature and previously discussed (Foote & Mixson-Brookshire, 2014; Redmond et al., 2018). A set of structured, reflective questions were collaboratively designed and refined. These prompts supported the participants to critically examine their values and practices related to online engagement. After ethical clearance, the participants reflected individually on all of the structured questions and captured their responses in writing. Responses were then hosted in a shared cloud space for data analysis (Lawrence et al., 2019)

The data gained from guided reflection offered critical insight into the thoughts and practices of academics from the inside. The research team then undertook dialogue and collaborative comparison, stepping back from their personal contributions and collectively exploring the reflections of self and others. Engaging with dialogue with others around the topic on student engagement in blended and online environments provided the participants with multiple perspectives. Through this process, the authors took on the role of participant researchers (Wellington, 2000).

A multi-phased process was used to gather and analyses the data, as shown in Fig. 2. These phases were iterative, moving between the original data and the data analysis (Crewsell, 2002). Firstly, the academics individually read both previous studies containing the frameworks (Foote & Mixson-Brookshire, 2014; Redmond et al., 2018). Secondly, they collectively created and refined the structured reflection questions informed by the two frameworks. Thirdly, the researchers wrote their personal reflections in isolation. Fourthly, the written reflections were collated and shared. Next, there was a collective discussion of data analysis and a priori codes. After that, two researchers discussed coding in more detail, then they individually coded the data. The two researchers then came together to discuss the coding outcomes. Rare disagreements in coding were discussed until agreement was reached. The coders found the frameworks valuable as a point of clarity for analysis. Finally, there was a collective discussion of the coding.

Two of the researchers then undertook a deep analysis of the data thought an iterative process. Firstly, using a priori coding (Johnson & Christensen, 2008) based on the elements of both frameworks. These were some of the expected themes from the

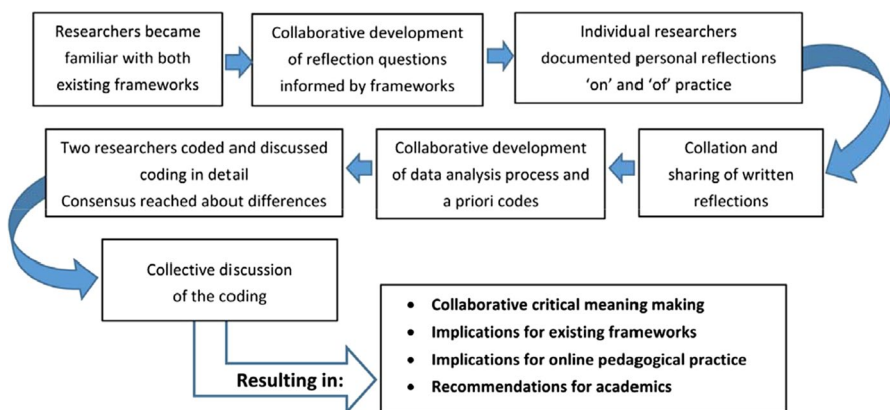


Fig. 2 Summary of the Research Process

data as they created the reflective questions to frame the reflective data collection. Secondly, open coding (Strauss & Corbin, 1990) was layered on top of the a priori coding, exploring similar or repetitive phrasing, metaphors, and outlier terms (Ryan & Bernard, 2003) to investigate if additional themes could be found in the data.

Although when collected the data were highly individualised, after data analysis the authors believed that the research had both personal and public application, with clear resonance between the personal accounts and the broader field of practice. Schön (1987) has suggested that the reflexive process of guided reflection is of value to both self and others.

## Findings and discussion

The current study sought to examine the understanding of online engagement through a process of collective critical reflection involving six academics, four from Australia and two from the United States, all of whom were teaching different courses at different levels and across different disciplines when the data were collected. Qualitative analysis of the participant responses revealed consistency of reflections across many of the codes and engagement examples, but six of the examples had frequencies of 10 or more. These are listed in Table 2. These topics resonated beyond the individuals to become important to the collective, and it is those six indicators that are discussed here. Sample data representing each indicator are included.

### Social engagement: building community

The social engagement element and building community indicator provided insight into the ways in which the participants in the study approached building a community of learners in their online courses. While the course content, level, and discipline varied, there was consistency in the approaches taken to build community, in the context of the courses. For example, the use of discussion boards and introductory or “getting to know you” activities and assignments were described as vehicles to foster community in the online class environment. At the same time, the participants all spoke about the importance of community, but foundational to creating community was the need to establish an environment of trust and respect. For example, one participant said, “It is important to help students understand and respect that their fellow learners are all coming from differing perspectives and starting points—just as in the classroom and society.”

Establishing guidelines for communication and engagement was also important to the participants, with multiple reflective examples referring to the importance of modeling behaviors for online engagement as part of course orientation. Participants described how these intentional approaches fostered trust and created a space “where students feel comfortable sharing these stories.” To further feelings of trust, the participants also described using the introductory discussion boards to invite students to share aspects of their personal identity. For example, one participant

**Table 2** Data Summary Showing Engagement Indicators and their Frequency

Code	Online engagement element	Indicators	Frequency
SE	Social engagement	Building community (SE-1)	11
		Creating a sense of belonging (SE-2)	5
		Developing relationships (SE-3)	5
		Establishing trust (SE-4)	9
CogE	Cognitive engagement	Thinking critically (CogE-1)	23
		Activating metacognition (CogE-2)	9
		Integrating ideas (CogE-3)	1
		Justifying decisions (CogE-4)	3
		Developing deep discipline understandings (CogE-5)	4
		Distributing expertise (CogE-6)	1
BE	Behavioral engagement	Developing academic skills (BE-1)	5
		Identifying opportunities and challenges (BE-2)	1
		Developing multidisciplinary skills (BE-3)	1
		Developing agency (BE-4)	2
		Upholding online learning norms (BE-5)	8
		Supporting and encouraging peers (BE-6)	2
ColE	Collaborative engagement	Learning with peers (ColE-1)	37
		Relating to faculty members (ColE-2)	1
		Connecting to institutional opportunities (ColE-3)	3
		Developing professional networks (ColE-4)	9
EmE	Emotional engagement	Managing expectations (EmE1-1)	17
		Articulating assumptions (EmE1-2)	2
		Recognizing motivations (EmE1-3)	4
		Committing to learning (EmE1-4)	3
ActE	Active experimentation		16
Ref	Reflective observation		20
ConE	Concrete experience		4

described inviting students “to share photos, and videos,” and at the same time, they used that medium to share details about their own personal and professional experiences and identities.

Brown and Reushle (2010) found that the principles of connectivity, humanness and empathy (CHE) were important to activate online learning. Stone’s (2019) exploration of online learning reinforced the importance of social engagement starting early. The findings also reflected existing literature that referred to the importance of decoding explicit communication expectations as an essential element for enhancing student engagement (Clark & Mayer, 2016).

### **Cognitive engagement: thinking critically**

Foundational to cognitive engagement and the act of critical thinking is personal reflection. One participant shared an approach to engaging students in reflection at the beginning of the course by asking “students to track their learning starting with a KWL [know, want to know, learn] at the beginning of a course and then filling in the columns throughout the course.” Similarly, the idea of reflecting on and connecting prior knowledge to new knowledge was important to the participants and they used activities and exercises like mind and/or concept maps and scenarios to engage students in this type of reflection. Summarizing key meanings and engaging in sharing with or teaching peers were also strategies the academics used. While one participant discussed how to encourage deeper learning by “seek[ing] to engage students in learning by challenging their thinking and scaffolding their learning so that some answers to questions are provided but in other cases the answers are used to provoke more questioning.” Another participant explained how assignments and lectures involved “prompts for them [students] to think critically, integrate ideas, justify decisions, and activate metacognition.”

These findings align with Garrison et al.’s (2000) practical inquiry model which can begin through a shared triggering activity. Triggering events are those tasks, stimuli or questions which encourage inquiry and require clarification. They are the situations where learners recognise a problem or have a sense of dissonance or puzzlement, and they are like Brookfield’s (1987) starting point for critical thinking.

### **Collaborative engagement: learning with peers**

The collaborative learning with peers indicator demonstrated the greatest frequency and, based on the responses, was a priority in the design and delivery of the courses the participants in the study were teaching. Online interaction with peers can occur in many forms, including ice breakers, group discussion, group assessment, online discussions, wikis, blogs and peer review. Indeed, other research has found that when learners connect with peers it has been found to reduce boredom and isolation and increases student satisfaction (Martin & Bolliger, 2018; Meyer, 2014).

Personal reflection and interaction with peers, namely through discussion boards, peer review and online tutorials, were all noted as examples of learning with peers. The use of messaging or chat spaces, both in and beyond the learning management system, was also described as a way to foster collaborative engagement with peers. Creating collaborative assignments and the use of peer learning groups were also outlined. One participant stated, for example, that “I have tried group work where learners working in 2s, 3s, and 4s (depending on overall student numbers) are allocated with a section of the learning module and are asked to summarise the key messages shared with peers.”

Several participants discussed how these peer collaborative experiences focused on fostering professional connections. For example, one participant said: “I develop innovative learning experiences and provide and promote opportunities for students to regularly engage in conversation and practice ... and those from industry

facilitating collaborative learning and authentic engagement.” Engagement with industry and with others in the same professional field can become a professional learning network that is useful for ongoing learning after graduation (Albion, 2014; Pittaway & Moss, 2014).

### **Emotional engagement: managing expectations**

The participants described a number of ways they fostered emotional engagement in the courses they taught, and how they managed student expectations. For example, several participants described engagement protocols that helped to communicate expectations they had for engagement in the course, while underscoring their commitment to be responsive to student needs in the course. One participant said, “The protocols are important, the warming up, getting to know you activities are important and ongoing responses to concerns are important to show that this involvement is appreciated.” Another participant described the significance of establishing boundaries in the online learning environment: “Online learners have to be provided with clearly articulated boundaries for their expectations (e.g., questions will be answered within a particular time frame).” Interestingly, not every participant in the study agreed that this particular form of engagement was important. For example, one participant explained that “I would say that this is the least type of engagement that I would support in my courses.”

It has been recognised that, in any higher education course, managing expectations can be a challenge. However, in an online course, that challenge is often amplified because instructors may not be able to get a good sense of students’ expectations for the course, especially if many students are unfamiliar or unskilled with navigating online learning management systems (Burton et al., 2015; Lawrence et al., 2019). Emotional engagement is linked to student expectations, student assumptions and student satisfaction, particularly in terms of realistic goals regarding the nature of online learning, the time required, and balancing lifestyle commitments. It has been argued that an element missing from existing online practices are strategies and considerations for communicating course expectations to students (Burton et al., 2015; Stone, 2016). However, communicating this type of explicit information at junctures throughout a course is a powerful strategy for increasing emotional engagement, positive learning, and student and course satisfaction (Clark & Mayer, 2016; Lawrence & Ryan, 2015).

### **Active experimentation**

Active experimentation in the data collected in the current study took a number of different forms, but all represented aspects of active and engaged learning. The participants in the study described ways they used active experimentation to help students form personal connections to the course and the course content. For example, one participant said,



The role of these practices or approach, which includes resources and tools such as real-world videos, stop and pause and reflections junctures and forums posts, are my efforts to make connections between what they are reading/learning and real world scenarios/practices. In making or seeing these connections, students increase their engagement as they see relevance between what they are learning and the real world/practice.

This type of practice reflects research that reinforces the importance of cognitive realism and immersing students in the doing, rather than just the knowing, the intent being to enhance authenticity by demonstrating practical examples for the theory praxis nexus (Herrington et al., 2014).

This element links closely with the thinking critically indicator of cognitive engagement from the framework by Redmond et al. (2018). Active experimentation is a learner-centered approach where students apply new knowledge in different contexts (Kolb, 1984). This can be enacted individually or in collaboration with others, and it is a key part of a learning cycle where learners act on their growing knowledge and experiences (Kreber, 2001).

### **Reflective observation**

The participants in the study described several different approaches to fostering reflective observation in their courses, including opportunities for students to pause and reflect within a course module, and asking students to create and respond to mind maps. A key aspect of reflective observation, identified in the current study, is that it involves personal reflection and interaction, around that reflection, with peers. One participant explained:

I believe it [reflective observation] involves a personal reflection, and peer review with feedback. Their personal reflection can entail a list of questions to reflect upon. The peer review would be a part of the assessment at the end of the term but could be provided midterm to gauge effectiveness.

Another participant described how forums provided “an opportunity for students to view the thinking and reflections of others,” which can become “a tool for strongly consolidating thinking on a particular practice/concept.” It was obvious that the participants valued reflective observation, and they found ways to intentionally design and deliver aspects of their courses to help engage students in this form of “deeper” learning. Despite this, reflective observation can be difficult to achieve in an online environment. As one participant explained, “The deep level of self-knowledge and reflection needed though is more difficult to develop in the online space, due to the nature of the intermittent engagement around other priorities.” Providing multiple opportunities for reflection in various aspects of the course, including in course content and assignments and activities, were all described consistently as approaches taken to overcome some of the potential barriers to reflective observation in online classes.

According to Kolb (1984), learners “must be able to reflect on and observe their experiences from many perspectives” (p. 30). Learning through reflection requires learners to consider new knowledge in relation to prior knowledge, by looking for inconsistencies and similarities and then testing and refining their understanding. Brookfield (2001) has suggested that, for effective reflective observation, learners need to be critical in their reflection to make meaning and relate new learning to previous knowledge, which aligns with the concept of deep learning that the participants discussed.

## Implications, limitations and future research

Two key implications come out of the findings. Firstly, the findings revealed that there is value in using a framework as the basis for academic reflection. Reflective practice is a key part of the work of academics. A reflective framework provides a structure for reflection. It guides users to consider the elements of their practice which promote online student engagement and it also reveals those areas that academics have not yet considered. It increases awareness of individual engagement priorities, as well as those elements or practices that are not emphasized in a specific course design and might not be suitable. Reflection, along with increased sensitivity of engagement practices, helps to support continuous improvement and refinements on ways in which academics can support student engagement.

Secondly, this study provides evidence to support the concept of collective reflection. There is value in reflection, both in writing and thought, as a process for higher educators, both at the individual level in isolation and also as collective research in teaching teams or with peers. A reflective framework supports collective understanding of key terms and concepts and it provides a meta or shared language for reflective discussions. The participants found value in collective reflection after individual reflection; the value was in the process of stepping back and critically thinking and then translating meaning for others.

This study was limited by self-reflection data across two geographic and educational contexts. There were only six participants, who were all from a western culture. This makes it difficult to generalise to other higher education institutions. Having said that, the participant responses were remarkably consistent given the contextual differences amongst participants. These included different international contexts, different disciplines and subdisciplines, and courses with diverse student cohorts and wide variations in student numbers.

Future research could include a larger number of participants, from different universities, cultures and disciplines. The frameworks could also be strengthened through research where participants complete an online survey based on the key ideas, in order to complete a factor analysis to statistically validate the elements and indicators from the frameworks.

## Conclusion

The purpose of this study was to explore how online engagement frameworks might be used to scaffold individual and collective reflection. The use of a framework to guide critical reflection highlighted areas where attention could be further focussed, but it also mapped and affirmed strong engagement practices. The participants found it a valuable experience to explore common practices and uncommon practices, and to recognise their own strengths as well as the strengths of others in engaging students in the online environment.

In today's educational climate, where an emphasis on student success and student engagement is paramount, academics need to develop a range of pedagogical strategies to promote student engagement. For the academics involved in this study, critically reflecting on their practice provided data that confirmed that the frameworks they had previously published were also useful tools for unpacking online teaching practices and understanding how such practices relate to student engagement. The data might also be used to inform teaching practices and to explore the effectiveness of the strategies being used.

This paper, therefore, has provided insights into tools that could be used for critical reflection on online engagement in higher education. It has illustrated that adopting a framework can be useful for meeting both theoretical and practical purposes: for understanding student engagement in the online environment, and for ensuring that a range of practical suggestions are on offer for enhancing student engagement and promoting student learning.

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## Authors and Affiliations

**Petrea Redmond<sup>1</sup>**  · **Stephanie M. Foote<sup>2</sup>**  · **Alice Brown<sup>1</sup>**  ·  
**Deborah Mixson-Brookshire<sup>3</sup>**  · **Lindy-Anne Abawi<sup>1</sup>**  · **Robyn Henderson<sup>1</sup>** 

Stephanie M. Foote

foote@jngi.org

Alice Brown

Alice.Brown@usq.edu.au

Deborah Mixson-Brookshire

dmixson@kennesaw.edu

Lindy-Anne Abawi

Lindy-Anne.Abawi@usq.edu.au

Robyn Henderson

Robyn.Henderson@usq.edu.au

- <sup>1</sup> School of Education, University of Southern Queensland, QLD, West Street, Toowoomba 4350, Australia
- <sup>2</sup> John N. Gardner Institute for Excellence in Undergraduate Education, 123 E. Main Street, Suite 201, Brevard, NC 28712, USA
- <sup>3</sup> First-Year and Transitions Department, Kennesaw State University, University College Building, 430 Bartow Avenue NW, Room 118, Kennesaw, GA 30144, USA